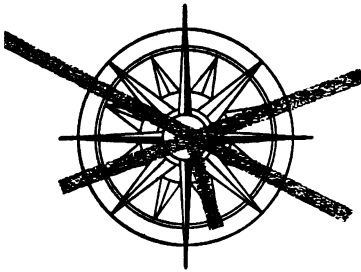

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**HISTORY OF
THE SECOND WORLD WAR
UNITED KINGDOM CIVIL SERIES
Edited by SIR KEITH HANCOCK**

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INLAND TRANSPORT

BY

C. I. SAVAGE

*Lecturer in Political Economy
in the University of St. Andrews*



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CONTENTS

	<i>Page</i>
EDITOR'S NOTE	xiii
PREFACE	xv
PART I: BEFORE THE WAR	
CHAPTER I: BRITISH INLAND TRANSPORT, 1914-1939	
i. The Railways and the First World War	3
ii. The Era of Road-Rail Competition	9
iii. Roads and Canals between the Wars	19
iv. Coastal Shipping	22
v. Inland Transport on the Eve of the Second World War	29
<i>Appendices I-III</i>	34
 CHAPTER II: THE PREPARATIONS FOR WAR	
i. The Assumptions made before Munich	37
ii. Plans for the Control and Preparation of the Railways and Road Transport up to Munich	50
iii. After Munich—The Railway Preparations	58
iv. The Emergency Road Transport Organisation	75
v. Highway Precautions	80
vi. Canal Control	82
vii. Coastal Shipping Preparations	85
viii. Conclusions—Government dependence on the Railways	91
<i>Appendix IV</i>	96
PART II: AUTUMN 1939 TO SUMMER 1940	
CHAPTER III: THE OUTBREAK OF WAR, 1939-1940 (I)	
i. Outline	101
ii. Railway Capacity in the First Year of War	106
iii. The Railway Priority Machinery	115
iv. Government Control of the Railways	119
v. Conclusions: Railways in the First Year of War	129
<i>Appendix V</i>	142

	<i>Page</i>
CHAPTER IV: THE OUTBREAK OF WAR, 1939-1940 (II)	
i. Road Transport.	145
ii. Coastal Shipping up to the Fall of France	154
iii. Canals: War Conditions and Government Policy	170
iv. Summer 1940: Retrospect and Outlook	174
<i>Appendices VI-VIII</i>	181
PART III: THE CRITICAL YEAR	
CHAPTER V: THE RAILWAYS AND THE TRANSPORT CRISIS, 1940-1941	
i. The Nature of the Railway Problem	191
ii. Air Raid Conditions and Railway Working	196
iii. The Railways and Port Clearance, 1940-1941	202
iv. Internal Traffic on the Railways, 1940-1941	214
v. The Burden on the Railways	221
<i>Appendix IX</i>	<i>facing</i> 226
CHAPTER VI: THE RAILWAY CRISIS—REMEDIES AND RECOVERY	
i. Identifying the Railway Problems	227
ii. Re-organising the Movement of Government Traffic	230
iii. Remedies at the Operational Level	240
iv. The Need for Additional Railway Facilities	247
v. Conclusion	255
<i>Appendix X</i>	257
CHAPTER VII: ADMINISTRATIVE RE-ORGANISATION, 1941	
i. The Transport Situation at the Beginning of 1941	263
ii. The Central Transport Committee	271
iii. The Formation of the Ministry of War Trans- port	279
iv. Railway Control and the Second Financial Agreement	283
<i>Appendix XI</i>	297

CONTENTS

vii

Page

CHAPTER VIII: ROAD TRANSPORT IN 1940 AND 1941	
i. The Motor Fuel Situation	299
ii. Road Haulage: The Evolution of Positive Control	304
iii. Road Passenger Transport	322
CHAPTER IX: COASTAL SHIPPING AFTER THE FALL OF FRANCE	
i. Outline	343
ii. The Capacity of the Coastal Shipping Fleet and the Demands on it	345
iii. The Dangerous Waters	364
<i>Appendix XII</i>	372
PART IV: THE YEARS OF AUSTERITY	
CHAPTER X: RISING DEMANDS ON TRANSPORT, 1941-1944	
i. The Railway Traffic Forecasts	375
ii. The Size of the Task	381
<i>Appendices XIII-XIV</i>	389
CHAPTER XI: THE SUPPLY OF TRANSPORT SERVICES, 1941-1943	
i. Introductory	398
ii. Locomotives and Rolling Stock	399
iii. Railway Labour	418
iv. Line Capacity	424
v. Motor Fuel and Tyres	430
vi. Canal Policy and Control	443
vii. Coastal Shipping, 1942-1943	449
viii. Conclusion—Transport Performance, 1941-1943	453
<i>Appendices XV-XXII</i>	459
CHAPTER XII: RATIONALISATION OF GOODS TRANSPORT	
i. Early Developments	487
ii. Progress towards Transport Rationalisation, 1941-1944	493
iii. The Economies Achieved	506
<i>Appendix XXIII</i>	510

	<i>Page</i>
CHAPTER XIII: PASSENGER TRANSPORT PROBLEMS, 1941-1943	
i. Restricting Passenger Travel by Train	511
ii. Bus Services after 1941	519
<i>Appendices XXIV-XXV</i>	531
CHAPTER XIV: THE ROAD HAULAGE ORGANISATION, 1943-1945	
i. The Failure of the 1942 Scheme	533
ii. The Origins of the 1943 Road Haulage Organ- isation	538
iii. The Administrative Framework	541
iv. The Operation of the Scheme	545
v. The Control of Road Haulage Rates	547
vi. Criticisms of the Road Haulage Organisation	549
<i>Appendix XXVI</i>	554
CHAPTER XV: THE MACHINERY OF INLAND TRANS- PORT CONTROL, 1943-1945	555
CHAPTER XVI: PREPARING FOR OVERLORD, 1943-1944	
i. The Outlook for the Railways: Winter 1943-1944 and beyond	569
ii. The Inland Transport Situation: Winter 1943-1944	574
iii. Preparing Inland Transport for D-day	587
iv. D-day	603
<i>Appendix XXVII</i>	609
CHAPTER XVII: THE FINAL YEAR OF THE WAR, 1944-1945	
i. The Railway Traffic Situation after D-day	610
ii. Coastal Shipping, 1944-1945	614
iii. Road Transport and Canals, 1944	618
iv. Traffic Demands and Railway Resources, 1944-1945	622
v. Railway Performance and the Coal Transport Problem, 1944-1945	627

CONTENTS

ix

	<i>Page</i>
vi. The Closing Months of the War	632
vii. Retrospect and the Post-War Problems	634
<i>Appendix XXVIII</i>	640
STATISTICAL APPENDIX	641
INDEX	661

APPENDICES

I. The Net Revenues of the Four Main Line Railways, 1928-1939	34
II. Number of Vessels employed in the Coasting and Home Trades on 15th June, 1938	35
III. The Volume of Traffic handled by Coastal Ships	36
IV. Transport Conditions during First Three Months of War	96
V. A Note on Railway Performance, 1939-1940	142
VI. Issues of Motor Fuel Rations	181
VII. British Cargo Vessels 750-5,000 d.w.t. (excluding tankers): Employment as at 31st January, 1940	182
VIII. A Note on Coasting Freight Rates	183
IX. Analysis of Reports of Damage and Delay to Railways by enemy action, July 1940-June 1941	<i>Facing</i> 226
X. List of Important Railway Schemes carried out on Ministry of War Transport Account during the War	257
XI. Future Functions and Procedure of the Railway Executive Committee	297
XII. Oversight Discharge	372
XIII. Estimates of Railway Freight Traffic, 1941-1944	389
XIV. Transport Position—Winter 1942-1943	391
XV. Summary of Locomotive Statistics	459
XVI. Trains delayed on Account of non-availability of Locomotives, 1942-1943	460
XVII. Summary of Railway Wagon Statistics	461
XVIII. Central Transport Committee: First Report of Allocation of Traffic Sub-Committee: South Wales Traffic	462
XIX. Central Transport Committee: Second Report of Allocation of Traffic Sub-Committee: North East Area Traffic	473
XX. Arrivals of Tankerborne Petroleum Products, 1939-1944	484
XXI. Tyres (including repair materials): Civilian Requirements, Materials Committee allocations from United Kingdom sources and actual usage from United Kingdom sources	485

	<i>Page</i>
XXII. Tonnage employed in Coasting and Short Sea Trading (cargoes other than coal) at 15th December, 1942, and 15th June, 1943: Tramps and Liners	486
XXIII. Principal Commodities or Services subject to some form of zoning, October 1944	510
XXIV. Railway Passenger Traffic Statistics	531
XXV. Mechanically Propelled Road Vehicles registered for the First Time, 1939-1945	532
XXVI. Total Tonnage carried monthly by Road Haulage Organisation, November 1943-October 1945	554
XXVII. D-day Railway Labour Requirements	609
XXVIII. Railway Freight Traffic, 1944-1945	640

STATISTICAL APPENDIX: LIST OF TABLES

RAILWAYS:

1. Four-weekly statistics of tonnage of freight traffic originating	643
2. Four-weekly statistics of ton-miles	644
3. Four-weekly statistics of loaded and empty wagon-miles	645
4. Monthly statistics of passenger journeys originating	647
5. Four-weekly Returns of Locomotive operating stock and numbers available	648
6. Railway Wagon Stock—4-weekly returns	649
7. Railway Staff Return, 1939-1945 (annual)	651

COASTAL SHIPPING:

8. Four-weekly Employment Returns, April 1941-September 1945 (tonnage of shipping in coasting service, tonnage employed, tonnage of cargoes carried)	652
9. Losses of Coastal Ships during the War	654

ROAD TRANSPORT:

10. Consumption of Fuel by Goods and Public Service Vehicles (weekly averages based on calendar months)	655
11. Fuel Consumed by Goods and Public Service Vehicles, 1940-1945 (annual totals)	656

L. P. T. B.:

12. Annual Passenger Statistics, 1939-1945	657
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LIST OF ABBREVIATIONS

A.R.P.	Air Raid Precautions
B.B.C.	British Broadcasting Corporation
Bolero	The movement and reception of American forces in Britain
C.S.A.B.	Combined Shipping Adjustment Board
G.P.O.	General Post Office
G.R.C.	General Railway Classification
G.W.R.	Great Western Railway
I.C.I.	Imperial Chemical Industries Ltd.
L.M.S.	London Midland and Scottish Railway
L.N.E.R.	London and North Eastern Railway
L.P.T.B.	London Passenger Transport Board
M.A.P.	Ministry of Aircraft Production
Overlord	The invasion of North West Europe
R.A.F.	Royal Air Force
R.A.S.C.	Royal Army Service Corps
R.E.C.	Railway Executive Committee
R.O.F.	Royal Ordnance Factory
R.T.C.	Regional Transport Commissioner
S.H.A.E.F.	Supreme Headquarters, Allied Expeditionary Force
S.R.	Southern Railway
W.S.A.	War Shipping Administration

EDITOR'S NOTE

AS WAS EXPLAINED in the Preface to *British War Economy* the histories in this series deal with subjects rather than departments. The Ministry of War Transport's activities covered two main subjects—shipping and inland transport—and a volume in this series has accordingly been devoted to each of them. Some problems of demarcation and overlap between the volumes were inevitable. Shipping and inland transport met in the ports—indeed it was the threat of congestion in the ports that led to the amalgamation of two separate ministries of shipping and transport into the Ministry of War Transport—and discussion of port problems was therefore necessary in both volumes. Coastwise shipping was another difficulty. Coastal ships are part of the Merchant Navy no less than deep sea ships but their functions made it necessary to consider them primarily as part of the inland transport system; they have their place in the shipping history but the main discussion of their war-time experience will be found in Mr. Savage's book.

W. K. HANCOCK

PREFACE

THIS VOLUME describes the British Government's inland transport policy in the Second World War. In a modern economy at war, the inland transport system plays an indispensable role both in the process of war-time production and in supplying the military machine. The way in which inland transport is organised and managed therefore bears directly on the success or failure of the country's war effort. This narrative is not simply a list of war-time administrative decisions; rather it attempts to describe the evolution of war-time inland transport policy and to show the process of trial and error which contributed to the working out of that policy. The dominant theme is the war-time scarcity of inland transport and the means by which the Government tried to overcome it—the economic problem of organising inland transport for war. While it has been necessary to consider the many technical, administrative and political questions which influenced war-time inland transport policy, the main emphasis in this narrative is on the economic problem.

The industries which comprise the British inland transport system are four: the railways, road transport, coastal shipping and the canals. These industries provide a diversity of services, some of which are complementary and others normally competitive. Each industry, in a sense, has its separate story, because many of the war-time problems of each individual industry were not shared by the others. All, however, have something in common since they form part of the general inland transport system.

The arrangement of this volume has required some care. On the one hand it was desirable to identify the individual problems of the four inland transport industries and to tell the war-time story of each. On the other hand, it was obviously necessary throughout to keep a clear view of the inland transport situation as a whole. To reduce the problem of arrangement to manageable proportions and to enable the reader to see the shape of the wood as well as the trees, this history has been divided into four periods. These are not completely self-contained, but the main landmarks seem to be the significant ones for inland transport. The first period provides historical background and describes the pre-war preparations. Part II covers broadly the period of 'twilight war' from September 1939 to the summer of 1940, before inland transport felt the main impact of war. Part III is properly called 'The Critical Year' and covers the period from September 1940 until the summer of the following year, during which inland

transport policy was severely tested, found to be weak in certain respects and reconstructed. Part IV takes the story from the autumn of 1941 to the end of the war. The third Part of this volume, covering only one year in time, occupies a more than proportionate share of the space. This is because the first impact of total war was a period of trial and error, during which many of the most important lessons of war-time transport policy were learned. This contrasts with the period covered by Part IV, which was marked by fewer important changes in inland transport policy and administration than occurred in the early war years and occupies proportionately less space in relation to the period of time covered.

This narrative has been based in the main on the evidence contained in the war-time files of the Ministry of War Transport (up to 1941 the Ministry of Transport). Those files are voluminous and the historian's time and resources limited. The writer cannot, regrettably, claim to have worked through every file that might conceivably have helped him compile an official history of inland transport. Nevertheless, after some experience in handling official papers the researcher acquires a surprising facility in distinguishing what is likely to provide useful historical evidence from that which is not. While there may be subjects in this volume on which further research could be pursued to yield a greater wealth of detail, it is unlikely that any of the broad conclusions reached here would need modification as a result. The author has studied the valuable evidence contained in the minutes of the Railway Executive Committee, but information from files of individual transport concerns has not been available to him. Transport statistics are of course an important source of historical evidence, especially as they become more plentiful for the later war years. They do, however, need careful handling and it has usually been found preferable to examine both the statistical and the documentary evidence side by side. For transport statistics, especially if they deal with broad aggregates of intangible services such as ton-miles or wagon-miles, can sometimes conceal important points of detail. The author has tried, as the reader would be well advised to do in interpreting the statistical tables in this volume, to observe the golden rule of transport statistics that 'statistics by themselves prove nothing; their true function is to direct enquiry—they are the means and not the end'.¹

In conclusion, the writer wishes to acknowledge his indebtedness to those civil servants, who must remain anonymous, who have helped him towards a better understanding of some of the technical problems of inland transport and towards a clearer appreciation of

¹ Foreword by Sir R. Wedgwood to A. E. Kirkus, *Railway Statistics—Their Compilation and Use* (1927).

PREFACE

xvii

official war-time policies. He also wishes to acknowledge the co-operation and assistance of Mrs. M. A. Ogilvy-Webb, who wrote drafts for the sections of this volume dealing with coastal shipping, railway labour, fuel rationing and tyres, road transport after 1940 and bus services after 1941. Finally, the author must record his appreciation of the frank and constructive criticism and advice, which he has received at all stages in the preparation of this book, from Mrs. M. M. Gowing.

C. I. SAVAGE

St. Andrews,
January 1955.

PART I

Before the War

CHAPTER I

BRITISH INLAND TRANSPORT, 1914-1939

(i)

The Railways and the First World War

INLAND TRANSPORT policy in the Second World War was strongly influenced both by the system of transport control developed in the war of 1914-1918 and by the economic developments in the transport industries between the wars. Some account of the events and experience of the 25 years before 1939 is therefore indispensable for an understanding of inland transport between 1939 and 1945.

The dominant fact about British inland transport on the eve of the First World War had been the supremacy of the railways as a means of long-distance transport. In 1913, the British railway system had enjoyed three-quarters of a century of steady and almost unrivalled expansion. The main trunk of the system had been constructed between 1825 and 1848, during which time more than 4,600 miles of line had been opened for traffic. Continued and rapid expansion had followed in the next twenty years, so that by 1870 the 1848 mileage of line had been trebled. After 1870 had come the period of consolidation, the new mileage of 1870-1886 being 'almost all branch, link, or local', and by the 1880's the British railway system was all but complete. The period from the 1880's to 1913 was remarkable chiefly for the great technical and engineering developments on the railways. There were however in that period a few small extensions and by 1913 'geographically, the British railway system was about finished'.¹

The growth of the railway system and the speed with which it established its superiority over the older methods of transport by land are among the most striking facts of British economic development in the nineteenth century. Long before 1850 the railway had beaten the stage coach. By the mid-century, the once prosperous canals were being driven into stagnation 'because of the sheer superiority of the

¹ This and other quotations in these paragraphs are from J. H. Clapham, *An Economic History of Modern Britain*, Vols. 1-3, to which reference should be made for a full account of British transport development in the nineteenth and early twentieth centuries.

railway as a means of transport',¹ while in the second half of the century, coastal shipping declined relatively though not absolutely. Transport by road after the brief era of the stage coach had dwindled away to little or nothing except for local traffic,² and no fresh developments in road construction occurred until the twentieth century. Although motor traction came rapidly into use after 1906, 'no long-distance transport worth mentioning, either of passengers or of goods, was done by road in 1913-1914'. Thus, at the outbreak of the First World War, the railways had established clear superiority as land carriers and stood at the peak of their development. Their only serious competitor for the long haul was coastwise shipping; the days of long-distance road motor transport were yet to come.

A few statistics will complete the picture of inland transport on the eve of the First World War. In 1913 the railways carried some 375 million tons of freight traffic annually, of which about 225 million tons was coal. The total number of passengers originating annually on the various railway systems amounted to about 1,200 millions.³ The total mileage of 'first track' on the railways in 1913 was 19,250.⁴ There appear to be no reliable statistics of the contribution of coastwise shipping to the inland transport system in 1913, but it may be estimated that in all about 35 million tons of commodities were shipped coastwise in that year, of which coal accounted for about 20 million tons.⁵ The 1913 mileage of railway and non-railway owned canals in Great Britain was 3,800.⁶

The assumption of control over the railways for war purposes in 1914 was the first experience in British railway history of complete state control. Yet the principle of control was hardly new. True, in the nineteenth century the trend of British Government policy towards trade and industry had been against state interference. But the railways had always been regarded as something of an exception,

¹ J. H. Clapham quotes a Committee of 1872 as stating 'that canals could not compete for the long haul, or for valuable cargoes, though they were efficient carriers of things like London dung'. *Ibid.*, Vol. 2, p. 200.

² In 1864, a witness had told a Committee of the Commons that in its usage the Great North Road was as local as any 'ordinary parish highway'. During the next twenty years a little, a very little, non-local road traffic had been created by venturesome touring cyclists; but even in the late 'eighties 'the cyclists were neither very numerous nor taken very seriously'. *Ibid.*, Vol. 3, p. 374. Not until the years immediately before the First World War did road traffic show any sign of large scale development.

³ See *Railway Returns*, 1913. The 375 million tons of all traffic and the 225 million tons of coal traffic represents *tonnage originating*. The statistics of passenger traffic exclude season ticket holders and represent the numbers of *passengers originating* on the various systems.

⁴ These figures have been worked out for Great Britain. They differ from the figures in the *Railway Returns*, which include Ireland.

⁵ This is the figure quoted in E. A. Pratt, *British Railways and the Great War*, p. 263. It refers only to those ports included in the *Annual Statement of Trade and Navigation of the United Kingdom*. The tonnage of commodities carried coastwise is not a completely accurate guide as it ignores the important factor of distance.

⁶ E. A. Pratt, *op. cit.*, p. 742. The above figure refers to Great Britain, and not, as in Pratt, to the United Kingdom, which includes Ireland.

as the large volume of Victorian railway legislation bears witness. Because of their inevitably monopolistic nature and their position as carriers of the public, some degree of public supervision of the railways had been regarded as inevitable from their earliest days. Indeed since the days of the young Mr. Gladstone at the Board of Trade in 1844, the Government had actually possessed powers—though they were never in fact exercised—by which railway lines built after that year might, after 21 years, be bought out by the Government.¹ But the state had never gone so far as to buy out the railway monopoly. Instead, it had been content to exercise a minimum of ‘superintendence and correction’ mainly in two directions: firstly in regulating the safety of travel, secondly in controlling rates and charges and the facilities provided for the public. Beyond this, the nineteenth century Governments—never quite sure whether competition would work or to what extent monopoly existed on the railways and therefore rarely consistent in dealing with railway questions—were unwilling to venture. Indeed, in some aspects of British railway development the absence of state regulation was conspicuous. ‘There had been no serious attempt to guide the territorial development of the railway system . . . (and) no considered attempt to guide its technical development—even on the vital question of the gauge.’ Unlike the railway systems of France, Belgium and Prussia, where the state had, in one way or another, reserved its ultimate rights over the railways, the British railway system had developed according to no carefully thought out plan. Dominated by the ‘fashionable economic philosophy, which had no respect for the principles of France or Prussia’, Britain had never seriously considered the question of developing a railway system with an eye to military needs. Thus, control of the railways in 1914, while in one sense only an extension of the well-established principle of state supervision, promised in many other respects to be a new and radical departure from existing British practice, dictated by the exigencies of war.

Control of the railways took effect immediately war was declared in 1914 through an Order made under the *Regulation of the Forces Act, 1871*. Control was vested in a committee of General Managers, known as the Railway Executive Committee. It consisted of the President of the Board of Trade (the official chairman), Sir Herbert Walker, the General Manager of the London and South Western Railway (the acting chairman), and the General Managers of the ten leading railway companies. The purpose of Government control was to ensure that the railways, locomotives, rolling stock and staff should be used as one complete unit in the best interests of the state.

¹ J. H. Clapham, *op. cit.*, Vol. 1, pp. 418–419; Vol. 2, pp. 188–189.

One hundred and thirty separate lines were taken over in 1914, including the twenty-one leading companies. Forty-six very small lines were not taken over.

The Act of 1871 provided that compensation should be paid to the controlled railway undertakings. An agreement between the Board of Trade and the Railway Executive Committee was reached by which the Government guaranteed the railways an annual sum equivalent to their net receipts in the year 1913. No charge was to be made for most Government and military traffic. Several modifications were later made to the original agreement, with the main purpose of providing the railways with sufficient funds to meet their day-to-day commitments. Ultimately, in 1921, claims by the railway companies for arrears of maintenance and for damages—such as abnormal wear and tear—due to control were met by a compensation payment of £60 million. During the war no increase in railway charges was made, except to discourage passenger travel in 1917, and no account was taken of the rising price level. Apart from financial control, the responsibility for working the railways was largely left in the hands of the Railway Executive Committee and the companies.¹

It must be remembered that, in the war of 1914, neither the Government nor the railways enjoyed the advantage of previous experience in the movement of traffic on the scale which a modern war demands. For with the war came a big increase in rail traffic of many kinds. Heavy coal, munitions, military and naval traffic, in addition to traffic diverted from coastal shipping, put a heavy burden on railway capacity. As a result, line capacity on some routes was inadequate to enable traffic to move freely over them. There were frequent reports of shortages of various types of wagons, wagon sheets and insulated vans; many terminals and goods yards became congested. Railway performance was severely limited by a scarcity of materials for the maintenance of railway equipment and permanent way. Railway workshops were largely employed on the manufacture of munitions. Added to these difficulties were the traffic congestion caused by air raids and the difficulties of railway working in the blackout.²

Various methods were devised to ease the burden on the railways. In November 1915 a joint committee of the Service and Supply departments and railway officials was appointed to 'deal with matters

¹ For a full account of the control of railways in the First World War, see E. A. Pratt, *op. cit.*, especially Chapters VIII-XI; and W. E. Simnett, *Railway Amalgamation in Great Britain*, Chapter II.

² These conditions are outlined in the 1919 Report of a committee set up to examine the practicability of the diversion of shipping from East to West coast ports. See also E. A. Pratt, *op. cit.*, *passim*. There is unfortunately no statistical evidence to show how railway traffic developed during the First World War.

affecting the delay in unloading and transport of Government and contractors' traffic, and to secure the co-operation of the various Departments in obviating unnecessary haulage'. In 1918 a Home Trade Transport Control Committee was set up with the aim of making the best possible use of all the forms of inland transport and relieving the burden on the railways. A wagon pooling arrangement, established in 1917, extended to about three quarters of railway owned wagon stock, and a common user scheme was also introduced for wagon sheets and ropes. But a much-discussed pooling scheme for privately owned railway wagons never took effect.¹ The Coal Transport Reorganisation Scheme, designed to eliminate cross hauls, was made effective in 1917, but its advantages do not appear to have been great.² Severe restrictions were imposed on passenger services in 1917, and in that year fares were increased by 50 per cent. These measures were, however, only partly successful in reducing the numbers of passengers travelling by rail.³

While railway traffic increased during the years of war, traffic moved coastwise and by canal fell heavily. Coastal shipping will be more fully treated in a subsequent section of this chapter,⁴ and it will suffice to mention here that by 1918, largely because of rapidly increasing operating costs and consequent high rates, the coasting trade had fallen to only one third of its pre-war volume. Since railway rates had been pegged at their 1914 level, coastal shipping rates were no longer competitive with them and much traffic formerly shipped coastwise now went by rail, adding greatly to the burden on the railway system on account of the long hauls. The Home Trade Transport Control Committee did try, with some success, in 1918 to divert traffic back to the coasters, but it was then too late to provide much help to the coastwise trade or much relief to the railways. The thousand miles of railway owned canals were automatically taken under Government control in 1914 and were thus enabled to keep their labour force more or less intact. The independent waterways were not controlled on the outbreak of war and lost labour to the armed forces and to the munition industries where wages were higher. Faced with rising costs, the independent canal carriers took advantage of their freedom to raise charges. This disturbed the pre-war balance between rail and canal charges and caused traffic to drift away from the waterways to the railways, which were already overburdened. Not until 1917 were the non-railway owned canals taken under the control of a Central Canal Committee appointed by the Government. The purpose of this

¹ E. A. Pratt, *op. cit.*, Chapters XLVII and XLVIII.

² *Ibid.*, p. 727.

³ E. A. Pratt, *op. cit.*, Chapter XV.

⁴ See below, Section (iv) of this chapter.

committee, which was assisted by three sub-committees, was to re-organise canal traffic so as to relieve congestion on other means of transport. Steps were taken to protect canal labour and Transport Workers Battalions were organised for the loading and unloading of barges and for maintenance work. These measures came too late to transfer traffic back from rail to canal, but they did arrest the decline in canal traffic.¹

Thus, in the First World War, by far the heaviest part of the burden on the inland transport system fell on the railways, and in consequence railway resources and capacity were severely strained. From this short survey of railway experience in the First World War, certain broad trends may be observed. Firstly, new demands arising directly from the war, coupled with traffic diverted from other forms of transport, added considerably to the volume of railway traffic. Secondly, this increased traffic came at a time of growing scarcity of railway resources of all kinds, which made railway operation abnormally difficult and caused much traffic congestion. Thirdly, since railway rates remained fixed and those of other forms of transport were left uncontrolled and free to rise, the pre-war equilibrium of rates and charges was disturbed. In the absence of any other form of control, the consequence was an unwelcome diversion of traffic to the railways at a time when the latter were already overburdened. These general trends suggest that the primary functions which a war-time system of control of inland transport should aim to fulfil are: first to allocate scarce transport resources so that the least essential demands for transport do not interfere with the most essential; second to ensure that the materials and resources needed to provide transport services do not become so scarce as to interfere with the efficiency of the transport system; third to maintain an even balance of traffic between the different forms of transport. These functions were not adequately fulfilled in the First World War and only came close to fulfilment in the tight system of controls existing at the close of the Second World War. But before we attempt to link the railway and transport problems of the 1914 war with those of the war of 1939, we must turn to see what happened to inland transport in the years between.

E. A. Pratt, *op. cit.*, Chapter L; and G. Cadbury and S. P. Dobbs, *Canals and Inland Waterways*, Chapter X.

(ii)

The Era of Road-Rail Competition

THE RAILWAYS ACT, 1921

Within a year of the ending of the First World War, an Act was passed setting up a Ministry of Transport.¹ The new Ministry began its active life on 23rd September, 1919, with Sir Eric Geddes as the first Minister. Hitherto, Government powers over inland transport had been scattered among several Departments, the chief repository being the Board of Trade. They were now centralised under one new Ministry.² At the same time the work of the Railway Executive Committee ceased and its functions were transferred to the Minister of Transport, who was to retain possession and control of the railways for two years while a new policy for transport was worked out. The Ministry of Transport Act therefore had two main objects: first, the appointment of a Minister to be concerned with the Government's relations with inland transport permanently; second, the granting of two years for the discussion and preparation of a new railway policy.³

After two years of political controversy, the Government decided against the nationalisation of the railways. This decision was embodied in the Railways Act of 1921.⁴ This comprehensive measure was divided into six parts,⁵ of which Parts I and III were the most far-reaching. Under Part I, the railways of Great Britain—about 120 undertakings—were to be organised into four groups. These were to be formed by the amalgamation of 27 'constituent' companies, which, in turn, were to absorb the remaining 'subsidiary' companies. Part III introduced new provisions relating to railway charges. A Railway Rates Tribunal was to be established to supervise the fixing of 'standard charges', to be submitted by the railway companies on the basis of a prescribed classification.⁶ The charges to be fixed for

¹ Ministry of Transport Act, 1919 (9 & 10 Geo. 5, c. 50).

² The powers and duties of any Government department in relation to: (a) railways; (b) light railways; (c) tramways; (d) canals, waterways and inland navigations; (e) roads, bridges and ferries and the vehicles thereon; (f) harbours, docks and piers were now transferred to the Ministry of Transport.

³ E. A. Pratt, *op. cit.*, Chapter LXXIV; W. E. Simnett, *op. cit.*, Chapter II.

⁴ Railways Act, 1921 (11 & 12 Geo. 5, c. 55). For a discussion of the Act and its consequences see *inter alia* H. C. Kidd, *A New Era for British Railways*; W. M. Acworth, 'Grouping under the Railways Act', *Economic Journal*, 1923; W. E. Simnett, *op. cit.*; K. G. Fenelon, *Railway Economics*; G. Walker, *Road and Rail*, 2nd edn. 1947.

⁵ The six main parts of the Act were: Part I, Reorganisation of the Railway System; Part II, Regulation of Railways; Part III, Railway Charges; Part IV, Wages and Conditions of Service; Part V, Light Railways; Part VI, General.

⁶ Known as the General Railway Classification of Goods by Merchandise Trains, containing 21 classes.

the amalgamated companies were to be such as would, with efficient and economical working and management, yield a 'standard revenue'¹ broadly equivalent to the aggregate net revenues earned by the railways in 1913. To this end, provision was made in the Act for the annual review of the charges by the Tribunal. Although the Act was framed with the intention that Standard Rates should be charged, it left the railways with a large measure of freedom to grant 'exceptional' rates between 5 and 40 per cent. lower than standard.²

The formal amalgamations proceeded smoothly and were completed almost without any pressure from the Government. The work of the Railway Amalgamation Tribunal, the body responsible for supervising the amalgamation and the settlement of claims was completed by October 1923. Not until 1st January, 1928, however, the date named as the 'Appointed Day', did the new rate structure come into force. Broadly the hopes which lay behind the Act were that the four groups would achieve economies from being organised on a large scale, that they would be able to pass on these economies to the consumer and that they would earn their Standard Revenues. Each of the groups contained a proportion of the relatively poorly paying lines as well as the more prosperous, in the expectation that the profits of the latter would help offset the possible losses of the former. As for the dangers of monopoly, the powers of the Ministry of Transport and the Railway Rates Tribunal were thought to be sufficient to safeguard the interests of the public and ensure that adequate services were provided.

The hopes which inspired the promoters of the Railways Act were not fulfilled. At no time between 1928 and the outbreak of the Second World War did the four groups earn their Standard

¹ Namely £51,400,000 annually.

² Railways Act, 1921, Sections 36-39. A later variant, the Agreed Charge, was legalised under the Road and Rail Traffic Act, 1933. A full discussion of the implications of Part III of the Railways Act is beyond the scope of this volume. It may, however, be mentioned that, previously, the railways had been subject to maximum charges (fixed by Parliament) within which they had freedom to charge, subject to certain limitations. Alteration of the maxima required elaborate Parliamentary procedure, but this did not matter in times of stable costs. In view of the greater fluctuations in costs likely to occur after the First World War, some more flexible machinery was required. Hence the transfer of control from Parliament to a judicial tribunal and provision for standard charges, adjustable periodically, instead of maximum charges with substantial 'head-room'. Moreover, it was considered that the amalgamation of the railways into four groups would extend the railway monopoly, making it possible for the railways to make unduly high charges to users as a whole, or to particular users. To meet the first point, provision was made for adjusting all railway charges (standard and exceptional) so that, with other sources of revenue, standard net revenues should be produced. To meet the second point, provision was made for reviewing the many millions of exceptional merchandise rates in existence, and for controlling the grant of future exceptional rates (by requiring the approval of the Tribunal to rates less than 5 per cent. or more than 40 per cent. below the standard: the 5 per cent. limitation went under the Road and Rail Traffic Act, 1933).

Revenues¹; instead their revenues fell. To some extent this was due to depression in the staple trades. But there was another cause: the emergence of a new competitor in the rapidly growing road motor transport industry was a development hardly foreseen and still less taken into account when the Railways Act was passed into law.

COMPETITION BETWEEN ROAD AND RAIL

The growth of road motor transport was unquestionably the most remarkable development in land transport between the wars. Between 1921 and 1928 the number of motor vehicles in Great Britain more than doubled; the number of commercial goods vehicles alone increased at a rate of between 20,000 and 30,000 a year from 1922 onwards.² These developments were bound to threaten the old established forms of transport. The railways, which for almost a century had enjoyed all but a monopoly of inland transport facilities, probably suffered most. Apart from the increasing numbers of private cars and tradesmen's delivery vehicles which doubtless caused them some loss of traffic, the railways were now faced with competition from two new branches of the transport industry, the motor bus and coach business and the road motor haulier. These industries undoubtedly created much new traffic for themselves, but they also gained considerably at the expense of the railways. Local omnibus and long-distance coach services helped to cause a fall in railway passenger traffic, while the relative cheapness and convenience of the services offered to traders by the road haulage business brought a decline in many types of goods traffic by rail. The road haulage business grew up almost free from restriction and as an internally competitive industry containing a large number of small independent firms. Although all firms did not make the same charges nor provide the same service, charges for road haulage, unlike railway charges, were generally determined in a highly competitive market on the basis of cost plus profit.

Although there were several investigations into the subject, there exists no official estimate of how far the growth of road transport between the wars really injured the railways. It would be impossible to make an estimate of this kind with any claim to accuracy though it is safe to assume that the railways did suffer considerably. The loss of railborne traffic to the roads was encouraged by the existing basis of railway charges. For railway rates³ have traditionally been based

¹ See Appendix I to this chapter.

² *Royal Commission on Transport, Final Report* (1931), Cmd. 3751, p. 81.

³ The principles upon which the railway rates classification is based are set out in the Railways Act, 1921, Section 29 (2). In determining the class into which any particular merchandise shall be placed, regard is to be had, in addition to all other relevant circumstances, to value, bulk in comparison to weight, to the risk of damage, to the cost of handling, and to the saving of cost which may result when merchandise is forwarded in large quantities.

not on the cost of carrying particular commodities by rail, but primarily on the value of the goods. Railway undertakings may be described, in the technical language of the economist, as 'discriminating monopolists', their rates being fixed not on a strictly cost basis but on 'what the traffic will bear'. Discrimination has favoured the least valuable commodities, such as coal and minerals which are charged at the lowest rates, while charges for the commodities of the greatest value are much higher than would be justified by cost alone. Moreover, a fundamental principle of the grouping under the 1921 Act was that the more prosperous lines should help to balance possible losses on the badly paying lines. Competition from road hauliers upset this regulated monopoly rate structure. For the road hauliers, working on a cost plus profit basis could offer lower rates than the railways for the more valuable commodities, especially those in Classes 7 to 21 of the General Railway Classification, leaving the railways to carry the cheaper merchandise which tended to earn the lowest revenue in relation to the cost of carriage. Thus road haulage was able to cut into the revenues of the more profitable railway traffics and the more prosperous lines and make no contribution to the deficits of 'unprofitable' traffics and badly paying lines.

The railways were unable to meet competition effectively by granting low 'exceptional' rates since they were compelled by law both to publish their rates and to carry goods anywhere on their system without showing 'undue preference' to one trader or a particular group of traders. In view of the great size of railway undertakings, these obligations made it difficult for them to meet competition in any particular locality from the road hauliers who were unhampered by such restrictions. The rate structure of the 1921 Railways Act, which assumed that the railways would operate under 'monopolistic' conditions, became manifestly unsuited to the competitive conditions which the development of road transport created. Competition from road transport was undermining the whole system of railway regulation imposed by the 1921 Act.¹

From 1928 the Government took a number of steps to help the railways. Firstly, the railway companies were allowed, by the Railway (Road Transport) Acts of 1928, to operate road transport services of their own. They at once displayed 'almost feverish activity in acquiring existing road transport undertakings, or, at least, a substantial interest in them', and by 1931 they had invested nine and a half million pounds in road passenger transport alone.²

¹ G. Walker, *op. cit.*, for a full discussion of this question.

² *Royal Commission on Transport, Final Report* (1931), Cmd. 3751, p. 41; D. N. Chester, *Public Control of Road Passenger Transport*. For some details of the extent of railway interests in road transport in the inter-war years, see *The Economist* February 1934.

Secondly, the Local Government Act of 1929, by derating railway properties to the extent of 75 per cent., provided the railways with a 'Freight Rebates Fund' out of which they were obliged to grant rebates on certain agricultural, coal and other industrial traffic. Thirdly, the railways were relieved of an old minor grievance, a tax on passenger fares amounting to about £400,000 a year, first introduced by Mr. Gladstone.¹ But more far-reaching measures were to come. In the nineteen thirties the British Government followed a policy of deliberately restricting the growth of the road transport industry and trying to substitute 'co-ordination' for competition between road and rail.

THE GROWTH OF PUBLIC CONTROL

In 1929 a Royal Commission on Transport was appointed. Its terms of reference were:

To take into consideration the problems arising out of the growth of road traffic, with a view to securing the employment of the available means of transport in Great Britain (including transport by sea coastwise and by ferries) to the greatest public advantage, to consider and report what measures, if any, should be adopted for their better regulation and control, and, so far as is desirable in the public interest, to promote their co-ordinated working and development.

The Royal Commission published three Reports between 1929 and 1931 covering many aspects of the inland transport question.² One important proposal was contained in the Second Report; this advocated the setting up of a licensing system for public service vehicles to be administered by Area Commissioners. The aim of the proposed scheme was to supersede the existing archaic licensing system for motor buses and coaches, to help to promote 'co-ordination' and to eliminate alleged 'wasteful competition'.

These proposals became the basis of the Road Traffic Act of 1930, which set up Area Traffic Commissioners, directly responsible to the Minister of Transport. The Commissioners were empowered to control, through a licensing system, public service vehicles, road passenger services and employees engaged in the industry. Previous legislation for the licensing of public service vehicles was repealed.³ Twelve Traffic Areas were established and three types of licence were

¹ R. Newton, *Railway Accounts*, pp. 114-120.

² The First Report was entitled *The Control of Traffic on Roads*, the Second, *The Licensing and Regulation of Public Service Vehicles* and the Third, *The Co-ordination and Development of Transport*.

³ D. N. Chester, *op. cit.*, for an account of the system of public control and its economic consequences; R. P. Mahaffy and G. Dodson, *Road Traffic Acts and Orders* for the legal problems.

to be issued. Public service vehicle licences were to be granted subject to the safety and fitness of the vehicles. Drivers' and conductors' licences were to be granted subject to the fitness and satisfactory conduct of the holder or applicant. Road service licences were to be granted to operators of stage carriage, express and excursion services where passengers were carried at separate fares, after taking into account the suitability of the routes, the extent to which the needs of the proposed routes were already adequately served, the extent to which a proposed service was necessary or desirable in the public interest, the needs of the area as a whole in relation to traffic and the co-ordination of all forms of passenger transport, including transport by rail.¹ Road service licences were to be granted or refused after the applicants and objectors had been given an opportunity of presenting evidence and being cross-examined before the Area Traffic Commissioners at a public sitting, with the right of appeal from the Commissioners' decision to the Minister of Transport.

The Final Report of the Royal Commission on Transport appeared in 1931. The Royal Commission was somewhat critical of the railways for showing insufficient enterprise in attracting customers, but nevertheless recommended the licensing of all road hauliers carrying for hire or reward. It considered that the road haulage industry, which it described as 'lacking all unity', could only be 'organised' by a system of licensing.² No immediate step was taken to carry out these proposals, but in 1932 a Conference on Rail and Road Transport was set up under the chairmanship of Sir Arthur Salter to consider:

- (a) the incidence of highway costs in relation to the contributions of different classes of mechanically-propelled vehicles;
- (b) the nature and extent of the regulations which, in view of modern economic developments, should be applied to goods transport by road and rail; and
- (c) in general, any measures which may assist the two sides of the industry to carry out their functions under equitable conditions, which adequately safeguard the interests of trade and industry.³

The Conference recommended an increase in the registration duty paid in respect of goods motor vehicles, and proposed that a licensing system be applied to all goods motor vehicles used by hauliers and ancillary users operating on public highways to eliminate the alleged 'evils of overcrowding and unbridled competition in the transport

¹ Road Traffic Act, 1930 (20 & 21 Geo. 5, c. 43).

² *Royal Commission on Transport, Final Report* (1931), Cmd. 3751, p. 92.

³ *Report of the Conference on Rail and Road Transport*, 29th July, 1932, Part I.

industry'. These general recommendations were at once adopted and passed into law. The Finance Act, 1933, levied higher duties on goods vehicles; Part I of the Road and Rail Traffic Act, 1933, established a licensing system for goods vehicles; Part II made certain changes in the law regulating railway charges and legalised 'agreed' charges—or flat rates; Part III set up a Transport Advisory Council for the purpose of giving advice or assistance to the Minister of Transport.¹

The licensing system for road goods transport was to be administered by the paid chairmen of the Area Traffic Commissioners appointed under the 1930 Act. Licences were to be of three kinds: the 'A', or public carrier's licence for those who carried exclusively for hire or reward, namely general hauliers; the 'B', or limited carrier's licence for those who carried partly on their own behalf and partly for others; and the 'C', or private carrier's licence issued on request to the trader carrying his own goods. The 1933 Act made it illegal for any person to carry goods except under licence. It also laid down the conditions under which licences were to be held, namely that vehicles were maintained in a fit and serviceable condition, that regulations as to speed limits, loading and the weight of goods vehicles were complied with, and that the regulations relating to hours of duty and rest for drivers were observed. 'A' and 'B' licences were to be granted only where hauliers could prove that 'suitable transport facilities' were not already available; specific evidence in support of applications had to come from the trader or customer of the applicant, who must appear in person in the Court of the Licensing Authority to be examined by railway companies or other interested parties objecting to the application. Appeal from the decision of a licensing authority was to the specially constituted Road and Rail Traffic Appeal Tribunal.²

Such were the restrictions placed on the motor bus and coach business and the road haulage industry in the early nineteen thirties. Restriction under the 1930 Road Traffic Act was imposed partly through a desire to increase road safety and reduce road congestion. But it was mainly an attempt to substitute 'co-ordination' for competition in a branch of the road transport industry where competition was not recognised to be an unqualified public advantage. On the score of safety, reliability and regularity of services, public control of road passenger transport may be judged to have been beneficial.³ On the score of enterprise and convenience to the public, restrictive licensing had disadvantages. Protected monopolies were created in

¹ Road and Rail Traffic Act, 1933 (23 & 24 Geo. 5, c. 53).

² G. Walker, *op. cit.*, Chapter VII, for this information and a critical account of the 1933 Act and its economic consequences.

³ Reports of the Area Traffic Commissioners, 1931-1937, *passim*.

the industry and new enterprise severely restricted. Moreover the need to prove existing facilities inadequate before new ones could be provided meant that public inconvenience preceded the provision of new services.¹ The Road and Rail Traffic Act, 1933, as interpreted by the Licensing Authorities and the Appeal Tribunal, imposed perhaps more severe limitations on the development of the road haulage industry. For here too, public need could only be proved by the existence of inconvenience and the cheaper rates offered by road hauliers compared with those of the railways were not accepted as evidence from traders for preferring road transport. The economic consequences of the 1933 Act were to inhibit change and enterprise in a highly-competitive industry.² Yet although the railways were thus enabled to retain some traffic they might otherwise have lost, the problem which lay at the root of the trouble, the two widely-differing systems of rates and charges for road and rail, remained virtually untouched. Neither did the 1933 Act appear to help in 'organising' road haulage into larger operating units.

The other important development in the extension of public control over inland transport in the inter-war years was the creation of the London Passenger Transport Board in 1933. London's transport problem had become particularly acute with the advent of motor transport as was apparent in the serious congestion on the streets and roads, the variety of competing agencies serving the public and the need to develop the tube railways. The London Passenger Transport Act, 1933, set out to solve this problem of providing public transport services in the London area. A public authority, the London Passenger Transport Board, was set up, consisting of a chairman and six other members appointed by a body of 'Appointing Trustees', independent of the Government. The Board was charged with the duty of 'securing the provision of an adequate and properly co-ordinated system of passenger transport for the London Passenger Transport Area and, while avoiding the provision of unnecessary and wasteful competitive services, to take such steps as were considered necessary for extending and improving the facilities for passenger transport in the area'.³ Within the 'special area' allotted to the Board, no stage or express service might be operated except with the Board's written consent. Within a somewhat wider area, known as the London Passenger Transport Area, the Board was permitted to operate stage and express services subject to the licensing requirements of the 1930 Road Traffic Act. In effect, the Board was given a monopoly of road passenger transport in London and its suburbs.

¹ D. N. Chester, *op. cit.*

² G. Walker, *op. cit.*

³ London Passenger Transport Act, 1933 (23 & 24 Geo. 5, c. 14), Section 1.

All passenger transport undertakings in the L.P.T.B. Area, apart from main line railways and taxicabs, were acquired by the Board and fused into a single unified system.¹

A Standing Joint Committee with representatives of the four main line railway companies was set up to arrange for co-operation in the London area, and a scheme was framed for the pooling of the whole receipts of the Board with those receipts of the railway companies attributable to the conveyance of passengers on journeys between any two stations on suburban lines within the L.P.T.B. Area, and in certain cases outside it.

In the first year of the Board's operations, it carried 3,396 million passengers, of whom 88 per cent. travelled by bus, tram and trolley-bus. While the L.P.T.B. largely achieved the objects for which it was created, no similar scheme was carried out elsewhere. Tentative proposals for the formation of regional boards in some of the larger conurbations like the Potteries, Merseyside and Tyneside went no further.² But the London problem was unique.

THE SQUARE DEAL

If the restrictions of the nineteen thirties helped to relieve the railways of some of the severity of road competition, they provided no permanent solution to the problem. The intention of the 1921 Railways Act that each amalgamated company should be assured the degree of prosperity achieved in 1913 came no nearer fulfilment. Railway revenues consistently remained below standard.³ Even if account is taken of trade depression in the nineteen thirties, many of the railways' continued losses may reasonably be ascribed to road competition.

The problem of road and rail competition before the Second World War was a problem of competition between two industries with different economic and physical characteristics and incompatible systems of rates and charges. In road haulage, there was a relatively large number of small undertakings, each of which had to cover its own costs or go out of business. The railways, on the other hand, were organised into a few large undertakings, whose rates and charges were controlled by law and determined on the basis of the average costs of working the undertakings as a whole.⁴

¹ The items to be charged against the revenue of the Board were specified in the Act in an order of priority which made provision for the rate of interest to be paid on stocks exchanged for the stocks and shares of the undertakings taken over. A 'standard' rate of interest was fixed for Class 'C' stock, which was the name given to stock issued in exchange for the ordinary stocks and shares of the undertakings acquired by the Board.

² Sir Cyril Hurcomb, 'The Co-ordination of Transport in Great Britain during the years 1935-1944', *Journal of the Institute of Transport*, May-June 1945, Vol. 22, No. 3.

³ There was some recovery of traffic in 1936 and 1937, but in 1938 net revenues fell to a figure little more than half the standard revenue offered by the Act. See Appendix I.

⁴ G. Walker, *op. cit.*

In 1937 the Transport Advisory Council, which had been set up under the Road and Rail Traffic Act, 1933, published its first report, in which it made the following recommendations:

- (a) that, with a view to avoiding unnecessary overlapping of services, it is desirable to establish as great a degree of co-ordination as possible among the various forms of transport engaged in the carriage of goods, so as to ensure that each form of transport is used to the greatest national advantage.
- (b) that the best line of approach is to aim at securing for traders adequate alternative facilities, care being taken that the resultant competition is on fair terms, and
- (c) that there should be an unfettered right on the part of the trader to select the form of transport which he approves and which is the most convenient and economic for his purpose.

To achieve these difficult objects, it was proposed that all transport interests should work out rate structures over which they should agree among themselves.¹ These recommendations did little more than set out the broad aims of a policy. For whereas the railways had a rate structure enforced by statute and coastal liners and canals had a looser form of rate structure, the road hauliers had none. Moreover there was so little organisation in the industry that it was doubtful if an agreed rate structure could have been reached or enforced.

In November 1938 the railway companies presented a memorandum to the Minister of Transport setting out the inequitable conditions under which they were required to compete with other forms of transport. They requested that:

- (a) the existing statutory regulation of the charges for the conveyance of merchandise traffic by railway, together with the requirements attached thereto, including such matters as classification, publication, and undue preference should be repealed.
- (b) the railways, exactly like other forms of transport, should be permitted to decide the charges and conditions for the conveyance of merchandise which they were required to carry.

These proposals formed the basis of the 'Square Deal' campaign of 1939. In referring the problem to the Transport Advisory Council for consideration, the Minister of Transport told them that:

as at present advised he (was) inclined to the view that in the existing circumstances, there (was), *prima facie*, a case for some material relaxation of the existing statutory regulations, provided due regard (was) had to the ultimate objective of the co-ordination of all forms of transport.

¹ Transport Advisory Council: *Report on Rates and Service*, 1937.

In spite of the veil of official caution, it is evident that the Minister was impressed by the railways' argument. Before the Government could take any action, however, war had broken out.

It is not possible, within the scope of this history, to examine these controversial matters which were under consideration on the eve of the outbreak of war and which to some extent have been revived since the war ended. It will suffice to say that these proposals for 'co-ordination' were being discussed with tepid governmental approval at a time when the Government was working out its particular plans for controlling transport in war. It is reasonable to suppose that the Government would not have stood idly by and watched the continued decline of the railways at a time when it was making plans for war-time transport that depended primarily upon them.

(iii)

Roads and Canals between the Wars

The development of mechanically-propelled vehicles brought about the need for improved roads, and with the improvement in the condition of the country's roads, motor transport development itself received a new stimulus. There can be little doubt that the rapid and successful development of motor transport between the wars was aided by improvements in the national system of roads. Indeed, the railway companies frequently complained, although their view was not sustained by most impartial authorities, that they were handicapped because they had to maintain and pay interest on their permanent way, whilst the road transport industry was provided with its 'permanent way' at the expense—at least in part—of the taxpayer and ratepayer.

In December 1918 a special Fund of about £10,500,000 was set aside to help highway authorities to overtake the arrears in road and bridge work which had accumulated during the war. With the passing of the Ministry of Transport Act in 1919, the duties of the Road Board—set up in 1909—passed to the new Ministry, and in 1920 the Roads Act¹ was passed; this provided for the establishment of a Road Fund, the revenue of which was to be raised from the proceeds of the excise duties on mechanically-propelled vehicles (the horsepower tax and taxes on seating capacity and unladen weight). The creation of the Road Fund was an attempt to transfer a substantial part of the cost of the highways to the user, the intention being that the revenues collected should be devoted exclusively to expenditure

¹ 10 & 11 Geo. 5, c. 72.

on roads. One of the first duties of the Ministry of Transport was to classify the highways of the country: class I included the main traffic arteries; class II included the traffic routes of less importance; relatively unimportant roads were left unclassified. The purpose of the classification was to provide a basis for the system of grants from the Road Fund to highway authorities. Originally the basis of these contributions from the Fund was 50 per cent. for class I and 25 per cent. for class II roads, while grants were also made towards the upkeep of specified unclassified roads.

Until 1929 the responsibility for the highways fell primarily on the local authorities of the counties and districts into which England and Wales were divided for local government purposes. With the passing of the Local Government Act of that year, however, the county councils became responsible for all roads outside the metropolitan and county boroughs. In the same year the percentage contributed to the costs of the highway authorities from the Road Fund was raised to 60 and 50 per cent. for class I and class II roads respectively. From 1926 onwards the Road Fund was 'raided' by the Exchequer and in 1936 the Fund ceased to have an independent existence. Instead, expenditure on highways was voted annually by Parliament in the same way as other Supply service funds.

An impulse was given to the improvement and development of traffic roads by the Restriction of Ribbon Development Act, 1935, and the Trunk Roads Act, 1936. The former, from the transport point of view, prevented main 'arterial' and 'by-pass' roads from being damaged for traffic purposes by housing and industrial development on the immediate margins. For the highway authorities, with the approval of the Minister, could make it unlawful to erect a building within 220 feet of the middle of the road. The Trunk Roads Act listed thirty main roads in England, Scotland, and Wales for which the Minister of Transport became the sole authority from 1st April, 1937, although he could delegate to local authorities his powers over their maintenance, repair and improvement.

In 1939 there were 4,456 miles of trunk roads for which the Ministry was responsible, 23,089 miles of class I roads, and 17,634 miles of class II roads. The total mileage of public roads in Great Britain was 180,527.¹ After 1930, 'block grants' had been allotted to local authorities towards their total expenses, out of which subsidies for the cost of unclassified roads had come, but grants were still made from the Road Fund for class I and class II roads. It is a matter for debate whether British road development between the wars was adequate for the needs of the expanding road transport industry.

¹ *Basic Road Statistics, Great Britain and Northern Ireland* (1954) published by British Road Federation.

Road safety and traffic congestion in built up areas had become serious problems in the nineteen thirties. However, except for some bad 'bottlenecks', the road system of Great Britain compared favourably with that of most European countries, including Germany. The Minister of Transport pointed out in his speech on the Estimates of June 1939 that Britain possessed a greater mileage of roads in proportion to its area—though not to its population—than any other country in the world; secondary roads were of a high standard and the effective road space was being increased by widening and improvement. Following the recommendations of the Royal Commission on Transport of 1929, attention had been paid to the development of by-passes and the widening of existing roads. But no attempt was made to emulate the German motorways.¹

While Britain's road system continued to develop between the wars, the canals continued their decline. After the First World War the canals were returned to their owners, but it soon became apparent that their difficulties were even greater than before 1914, for arrears of maintenance had to be made good and repairs and improvements carried out. The Departmental Committee on Inland Waterways—the 'Chamberlain' Committee—was therefore appointed to consider the question of inland waterways and to recommend improvements. The Reports of the Committee, issued in 1921, favoured the amalgamation of the various undertakings into a series of groups to be owned and administered by public trusts. No official action was in fact taken, though improvements were carried out independently in the case of the Trent Navigation, and in 1929 five separate undertakings were amalgamated by agreement to form the Grand Union Canal Company.

The Royal Commission on Transport, in its Final Report of 1930, was of the opinion that while certain canals had considerable value as a means of transport, amalgamation was a necessary preliminary to any development programme.² No further improvements ensued during the nineteen thirties and, in spite of limited improvements on certain waterways, the traffic carried by British inland waterways continued to decline steadily. The tonnage of traffic *originating* on both railway and non-railway owned canals in 1938 amounted to just over 11 millions compared with almost 16½ millions in 1924.³

¹ For this section see *Royal Commission on Transport, Final Report* (1931), Cmd. 3751, Chapter III.

² *Ibid.*, Chapter VI.

³ *Railway Returns*, 1938, p. 25. Figures exclude Manchester Ship Canal and Lee and Stort Navigations. For a full discussion of the history of canals see G. Cadbury and G. P. Dobbs, *Canals and Inland Waterways*.

(iv)

Coastal Shipping

Until the early nineteenth century coastal ships and light river-craft provided most of the transport for the commercial life of Britain.¹ Coastal shipping began to feel road competition in the movement of light traffic when macadamised roads were introduced at the end of the eighteenth century. Competition for heavy traffic then followed, first from the canals and then from the railways. Moreover the proportion of overseas trade carried by deep sea ships increased; after 1845 coastal shipping carried a diminishing proportion of the total volume of seaborne traffic. Until 1913, however, the volume of coastal trade² continued to expand. Thereafter it declined and did not begin to expand again until the nineteen thirties.

Coastal ships of today use all methods of propulsion, steam, motor and sail,³ and they are divided into all classes of ships—passenger liners travelling between Liverpool and Dublin, or London and Margate; cargo liners trading on regular routes, for instance from Leith to London; coastal tramps carrying bulk cargoes; and coastal tankers. Our concern is chiefly with the cargo-carrying ships. Before the war over 75 per cent. of them were tramps and about 20 per cent. were liners. Liners are usually built with a definite trade in view and are specially constructed to carry it, whether it is passengers or dairy produce or live cattle; they require more specialised terminal equipment than tramps at the ports they use. Coastal tankers represented about 3 per cent. of the pre-war coastal cargo fleet and less than 1 per cent. were small specialised craft (estuarial craft, salvage vessels, etc.).

The coasting trade is defined as 'trade wholly between ports within the United Kingdom, the Channel Islands, the Isle of Man, and Ireland';⁴ but enterprising masters have always taken advantage of favourable weather to slip across the Channel with their cargoes, even before Julius Caesar first noticed them. Ships built for the Leith to London route for example can and do trade to Rotterdam, Rouen, or any other near continental ports. It is impossible to differentiate between the coasting and the 'continental' (or 'home')

¹ See e.g. the statement placed before the Royal Commission on Transport by the Shipowners' Parliamentary Committee, November 1929. See also *Report of the Fact Finding Committee on the Coastal Trade, Fact Finding Enquiry on Shipping Policy*, published by the Chamber of Shipping of the United Kingdom, December 1938.

² Measured by entrances and clearances of shipping with cargo.

³ In the 1938 *Census of Seamen* (H.M.S.O) 186 sailing vessels are shown, although only 27 were over 100 gross tons. Many were Thames sprit-sail barges trading to Yarmouth or carrying cattle cake from Rochester to Ipswich.

⁴ e.g. Control of Trade by Sea (No. 2) Order, S.R. & O. 1939, No. 1671.

trade because the same ships, especially in the case of tramp ships, are used in both trades. The generally accepted estimate is that about one-third of coasting ships' time is normally spent in the home trade, and two-thirds in the coasting trade. The 'continental' or 'home' trade is usually defined as trade between any United Kingdom port and any European port between the River Elbe and Brest.¹ This definition was not altogether appropriate to war-time conditions, however, and during the war it was altered and expanded to include those continental ports with which the United Kingdom could still trade. Non-coasting voyages were usually in war-time referred to as short sea voyages, which meant any voyage made between any United Kingdom port and ports on the continental coast between St. Jean de Luz and Narvik including the Baltic.²

It may seem that the dividing line between coasting and deep sea ships is not very easy to draw. And indeed during the war there was some interchange between the two categories. Sometimes coasters, because of their shallow draft, were wanted for deep sea voyages, such as iron ore from Spain or phosphates from the Mediterranean; or the foreign going ships might be needed, because of their greater size, for short sea employment such as iron ore from Narvik. Broadly speaking, of course, the division between the two categories of ships is governed by size; but there is no hard and fast dividing line. For example, the Ministry of War Transport ocean going employment returns refer to ships of 1,600 gross tons and upwards (roughly 2,500 deadweight tons).³ But a substantial portion of the coasting fleet

¹ R. H. Thornton, *British Shipping*, p. 126.

² In the Control of Trade by Sea (No. 2) Order, S.R. & O. 1939, No. 1671, where short sea voyages were defined as 'any voyage . . . from a port within the limits 69 degrees North and 43 degrees North latitude and 11 degrees West and 31 degrees East longitude not being a port in the Mediterranean, Adriatic or Black Sea or a port in Spain, to any other port within such limits'. After 1940 ports in Iceland and the White Sea were specifically excluded.

³ It may here be best to deal with the complication of 'tonnage', which is a capacity measurement, rather than a weight. The size of ships can be expressed in three ways. On the Register of Shipping maintained by the General Register and Record Office of Shipping and Seamen, Ministry of Transport, two are shown. One is the ship's gross registered tonnage; that is the cubic capacity of the whole ship's enclosed space reckoning 100 cubic feet to the ton. This gross registered tonnage is the tonnage usually quoted to describe a ship's size. The second shown on the register is the net registered tonnage which is the gross registered tonnage minus the non-earning space, i.e. minus crew's quarters, engine room, etc., also reckoning 100 cubic feet to the ton. The net registered tonnage is therefore used by Government and Harbour Authorities who wish to levy dues on the ship's earning capacity. There is a third tonnage measurement, the deadweight tonnage which is that used by the shipowner who wants to know how much, either in bulk or in weight, his ship can carry, i.e. the deadweight tonnage is a measurement-plus-weight figure with 40 cubic feet reckoned to the 20 cwt. ton (roughly 1 ton of coal occupies 40 cubic feet). Rates of freight are quoted 'per deadweight ton weight or measurement'. Some cargoes such as ores and minerals are heavy in relation to their bulk, and load at less than 40 cubic feet to the ton. Others like oilseeds, are bulky in relation to their weight and load at more than 40 cubic feet to the ton. The best cargoes are a combination of heavy and bulky cargoes. Deadweight tonnage gives the closest indication of how much a ship can carry. It will be used in this history to describe the size of the coasting fleet

was always well over that size.¹ In fact, although a ship of over 1,600 gross tons can be a deep sea ship, it can also be a coaster. For working purposes the Ministry of War Transport frequently defined coasting ships as those of 4,500 d.w. tons and under although the coasting shipping employment returns show no upper limit of size, and a few were over 4,500 d.w. tons. The way of life on a coaster and a deep sea ship show considerable divergence. For coasting ships, unlike deep sea ships, are in and out of port every few days and the men who sail in them are dominated by the tides.²

The tonnage of coasting shipping is small compared with the shipping employed on foreign trade. In the 1938 Census of Seamen there were 1,613 ships in the home and coasting trades adding up to 1,023,311 gross registered tons,³ compared with 2,268 ships, adding up to 13,084,957 gross registered tons, employed in foreign trade. The amount of cargo lifted by coasting ships per annum is, however, higher than the comparison of tonnage implies. A deep sea cargo ship of about 6,000 g.r. tons may for instance make three or four voyages a year to South America, whereas a coaster of about 1,000 g.r. tons may make about 50 voyages a year, and in addition it has to use comparatively little space for coal.

Calculations of the volume of cargo carried by coastal ships before the war varied.⁴ In 1935 it was estimated that coastal ships carried a

whenever possible. Very roughly, gross tonnage is to deadweight tonnage as 5:7 in the coasting trade. This is true both of the pre-war and the war-time coasting fleet. See L. Isserlis, 'Tramp Shipping Cargoes and Freights', *Journal of the Royal Statistical Society*, Vol. CI, Part 1, 1938.

¹ The first coasting shipping employment returns to divide the coasting and short sea fleet according to size were on 15th May, 1941:

NON-TANKERS (EXCLUDING SAILING VESSELS) AVAILABLE FOR COASTING
AND SHORT SEA TRADING ON 15TH MAY, 1941

Tonnage group	Total ships (British and Foreign)	
	No.	d.w. ('000)
Up to 499 tons d.w.	387	120·7
500-799 " "	206	128·6
800-1199 " "	160	156·8
1200-1999 " "	215	326·3
2000-2499 " "	88	196·7
Total under 2,500 d.w.t.	1,056	929·1
2500-2999 tons d.w.	47	125·0
3000-3499 " "	36	113·9
3500-4499 " "	38	153·8
4500 tons and over	18	86·4
	139	479·1

Until D-day upset the proportions of large and small ships trading round the coast, the above figures are roughly valid for 1942 and 1943. They show that in 1941, 1942 and 1943 over 10 per cent. by number, and about one-third in tonnage of the coasting fleet was always over 2,500 deadweight tons.

² For an account of life in the coasting trade, see The Central Office of Information, *The British Coaster 1939 to 1945* (H.M.S.O., 1947).

³ See Appendix II, p. 35.

⁴ See Appendix III, p. 36.

total of about 33 million tons of freight a year¹ round the British coasts. Of this figure, very roughly about 20 million tons was coal, 7 million low value bulk cargoes like cement, stone, grain, iron and steel, slag and ore carried by coasting tramps and the remaining 6 million tons was general cargo of higher value carried by coastal liners. On the other hand a later estimate suggested that in 1936 the total cargo carried was 38 million tons, 24 million of which was coal.

COASTAL SHIPPING BETWEEN 1914 AND 1939

We have seen that ships trading in coasting waters and across the narrow seas to the continent were carrying a diminishing proportion of United Kingdom trade during the latter half of the nineteenth century. Deep sea ships were moving more and more export and import goods, and internal trade was depending to an increasing extent on the railways. The First World War brought about a much more rapid decline in the movement of goods coastwise, partly because many coasting vessels were requisitioned for direct war service by the Admiralty and partly because of a considerably increased diversion of traffic from coaster to rail.

Before 1914 coasters had been able to quote rates low enough to compete effectively with the railways, but rapidly rising operating costs and risk of attack from enemy submarines made it impossible for them to retain traffic. Railway rates were maintained by the Government at a fixed level (port to port traffic rates remained unchanged from 1914 to 1920 on the railways), and little could be done, short of an increase in railway rates or an order enabling the railways to refuse traffic, to prevent the strained railway system from taking over traffic formerly carried by coasters—traffic that involved the railways in exceptionally long hauls. Many coasting services were therefore being provided where there was little traffic being consigned to them. The total departures of coasting ships with cargoes (excluding trade with Ireland) had amounted to 22·3 million net tons in 1913; they fell to only 7 million net tons in 1918. For a short time a subsidy was granted to the coasting trade in 1919 to assist in the recovery of its former traffic, but the total departures with cargoes had only risen to 12 million tons by 1926. Not until 1937, in fact, did the departures equal the 1913 peak figure.²

Large new power stations on the Thames and South coast and

¹ For purposes of comparison the average annual United Kingdom imports carried in deep sea ships for 1927, 1928 and 1929 amounted to 58·3 million tons (50 million excluding petroleum). This is not meant to suggest that coasters were almost as important as deep sea ships in our pre-war economy, but it indicates that they were moving a considerable tonnage of goods before the war.

² *Report of the Fact Finding Committee on the Coastal Trade*, pp. 12 and 43. It should perhaps be emphasised that departures with cargo are a measurement of the activity of coastal ships, not of the weight of cargo moved. See Appendix III, p. 36.

increasing gas consumption helped to create new demands for sea-borne coal and assisted the coasting trade to recover from its excessive decline during the First World War. But like the railways and deep sea shipping, coastal shipping also suffered from depression in the inter-war years. For example it suffered from the decline of coal exports from the United Kingdom to France which fell from 13 million tons in 1929 to 8·8 million tons in 1937; this especially affected the ships trading between the Bristol Channel and the North French Ports. Moreover, political disturbances caused a steep fall in the trade between the United Kingdom and the Irish Free State; this also seriously affected coastal shipping.

In addition to the general trade depression, coastal shipping suffered from competition and from a decline in port facilities. There was serious competition from the railways. There were 'conference' arrangements between some liner companies and some railway companies against their common competitor, the road haulier, although agreed charges (whereby the whole of a trader's traffic was carried at a flat rate by the railways) remained outside 'conference' arrangements and inevitably diverted some traffic from coastal liner to rail. In 1934 the railway companies agreed to 'do all that was reasonably possible to preserve the interests of the ship companies' in regard to agreed charges, but no very satisfactory arrangements were made.¹ Even more serious, however, was the competition between rail and coastal tramps for bulk traffics such as coal, bricks, fertilisers, iron and steel, etc. which constitute the coastal tramps' trade. In these classes of goods the railway standard rates could very often offer a cheaper throughout haul than the coasters could—partly because in most cases sea transport requires a railway haul at the beginning and end of each voyage, and the railway rates for these short hauls were high. For example, the standard rate for a throughout haul of coal by rail might average less than a 1d. per mile, whereas the short haul from colliery to ship and from port to destination might cost as much as 3½d. per mile, all to be added on to the ship's freight charge.² In addition the railways were free, under the Railways Act, 1921, to quote exceptional rates between 5 and 40 per cent. below the standard rate. According to the Ministry of Transport Railway Returns, in a test week in March 1935 only 16 per cent. of the goods traffic was in fact carried at the standard rate and 83 per cent. was carried at exceptional rates.³ These concessions bore heavily on coastal shipping. The 1921 Railways Act did indeed permit coastal shipping representatives to appeal to the Railway Rates Tribunal

¹ Sir Cyril Hurcomb, *op. cit.*, p. 98.

² *Report of the Fact Finding Committee on the Coastal Trade*, p. 20.

³ *Ministry of Transport Railway Returns for 1935*, Table CXXI, p. 124.

for a review of exceptional rates, and the 1933 Act permitted the Tribunal to review agreed charges, where they were 'detrimental to the public interest'.¹ But in March 1937 a decision went against the coasting interests when it was held² that it was not a relevant ground of objection to the granting of an exceptional rate that such a rate should have a prejudicial effect on a competing carrier.

Meanwhile coastal shipping costs³ and therefore freight rates continued to climb in the inter-war years. For example, coal freights from the Tyne area to London rose from 2s. 8½d. per ton in 1932 to 4s. 2d. in 1937.

During the Square Deal negotiations in 1938 it was suggested that there should be reference to arbitration between the railways and the coastal shipping companies on the subject of comparative freight rates, that Conference arrangements should be extended, and that the Railway Rates Tribunal should consider coastal shipping complaints about excessive short haul charges, etc. Even so, the principle was maintained that representations concerning the effect of railway rates could only be considered after their effect had been tested, i.e. after the traffic had been lost. This might still have proved unsatisfactory to the coastal shipping interests, but the outbreak of war temporarily postponed these problems.

Road haulage also competed successfully with the coastal ships, especially with coastal tankers, but there was not much negotiation between the two industries during the inter-war years, because the road haulage industry was unorganised.

Foreign competition, especially from shallow draft small Dutch motor craft of less than 500 tons, was also serious in the inter-war years. In the total United Kingdom coasting trade only about 2 per cent. was foreign carried in 1935, but in the tramp trade in vessels under 750 tons, 7 per cent. was foreign carried and in vessels under 500 tons, 13 per cent. was foreign carried (although these figures include purely local trade like ferry services where there was no foreign competition).⁴ Foreign ships could compete successfully partly because their wages bill tended to be lower and partly because

¹ The 1933 Act not only enabled coastal shipping interests to appeal for a review of agreed charges, but also altered the basis of appeal in relation to exceptional rates provided for in the 1921 Act. Compare Railways Act, 1921, Section 39, and Road and Rail Traffic Act, 1933, Section 39.

² By a decision of the Railway Rates Tribunal and upheld by the Court of Appeal (1937 2 K.B., C.A. 30 and L.L. Rep. 57) in the case of the Great Western Railway v. The Chamber of Shipping of the United Kingdom.

³ It was claimed that between 1935 and 1938 the wages bill in coastal shipping had increased 40 per cent., repairs and new building costs had increased 50 per cent., and that bunkers had increased 40 per cent. The last item was a particular grievance because the price for bunkers for coastal ships was 6d. to 1s. per ton more than for vessels in the foreign going trade because they were excluded from railway freight relief under the Local Government (Derating) Act, 1929.

⁴ *Report of the Fact Finding Committee on the Coastal Trade*, pp. 14-15 and 34.

trade between two United Kingdom ports was often one leg of a triangular trip for them and they could afford to carry freights between them at low rates. Between 1930 and 1936 the total departures from United Kingdom ports of foreign ships engaged in the United Kingdom coasting trade was nearly doubled, and the number of foreign ships increased fourfold.¹ To set against this the total British gross tonnage in the home and coasting trades had fallen by 10 per cent. in 1938 compared with the figure in 1933.²

The second subject of complaint by coasting interests in the inter-war years was the decline in port facilities. Little was done to improve facilities for coasting vessels at the larger ports and to modernise the smaller ports. Harbours and channels were allowed to silt up and cranes and other mechanical appliances used by the coastal ships were not kept up to date.³ Fifty United Kingdom ports were controlled by the railway companies who also owned docks and harbour property in about 100 other ports. The coastal shipowners complained that in these ports the railway companies had proved especially reluctant to provide additional facilities or adjust their charges to coastal ships (as opposed to facilities for foreign going shipping, which did not compete with the railways). In 1936 the movement of coastal shipping at railway owned ports had fallen by 16 per cent. compared with the 1913 figure.⁴ In all the United Kingdom ports on the other hand the movement of coastal shipping had increased by 2 per cent. compared with 1913. The Royal Commission on Transport regarded the improvement of the ports used by coastal shipping as the first step to be taken to assist the coasting trade.

Between 1930 and the outbreak of war, the activity of coasting ships appeared to be increasing rather than decreasing,⁵ although the total British owned gross tonnage employed had fallen over the same period. Nevertheless, in December 1938 the Chamber of Shipping asked the Government for a subsidy of £5,000,000 a year for a minimum of five years for coasting tramps and a similar one for

¹ *Report of the Fact Finding Committee on the Coastal Trade*, pp. 16-18.

² Although the activity of coasting ships may not have declined, departures of British ships with cargoes in 1933 amounted to 18·8 million net tons and were 18 million for the first nine months of 1938.

³ Statement placed before the Royal Commission on Transport 1929 by Shipowners' Parliamentary Committee. See *Royal Commission on Transport, Final Report* (1931), pp. 136 *et seq.*

⁴ *Report of the Fact Finding Committee on the Coastal Trade*, pp. 16 and 42 (figures taken from Board of Trade Annual Statement of Navigation and Shipping of the United Kingdom).

⁵ In 1930 departures with cargoes amounted to 18·3 million net tons and in 1937 had risen to 22·2 million tons. In the first 9 months of 1938 they were 18·3 million tons. These figures however are not necessarily indications of increased volume of traffic. They could partly be accounted for by more frequent calls into port.

liners, and for protection from competition whether from railways, road hauliers or foreign owned vessels.¹

By the end of 1938, however, the most pressing problem of coastal shipping was not the granting or withholding of a subsidy, but how to make the best use of coastal shipping when the expected war came.

(v)

Inland Transport on the Eve of the Second World War

It remains to summarise briefly the general inland transport position immediately before the outbreak of war in 1939. To begin with the railways: in spite of their worsening financial situation in the nineteen thirties, they still had the biggest share of all the traffic moved by the inland transport system. In 1937 and 1938, goods, mineral and livestock traffic on the railways amounted to 298.7 and 265.7 million tons respectively. Slightly more than 60 per cent. of this traffic was coal, coke and patent fuel. In terms of ton-miles, total freight traffic on the main line railways was 17,935 millions for 1937 and 16,266 for 1938, about one half being coal class traffic in each case. 1,295 million passenger journeys were made on the railways in 1937 and 1,237 millions in 1938.² The operating stock of locomotives amounted in 1937 to 19,800 and in 1938 to 19,700, while the stock of railway owned and privately owned railway trucks and wagons was slightly less than 1,300,000 in 1937. The total length of 'road'—or first track—on the standard gauge railways in 1938 was almost exactly 20,000 miles and about 60 per cent. of this was double line road.

Because of their financial position in the inter-war years, the main line companies were not able to carry out many improvements in capital equipment and services which might otherwise have been possible. Moreover, since Britain had been the pioneer in railway construction in the nineteenth century, much of the railways' capital equipment was now old and badly laid out for the needs of modern traffic. The survival of a large number of private owner wagons and of goods wagons smaller than their European or American counterparts prevented, to some extent, the development of faster and better freight services.

¹ *Annual Report of Chamber of Shipping of United Kingdom 1938-1939*, pp. 126 *et seq.*

² Since the main purpose of these figures is to indicate relative quantities and in order to facilitate comparison with the war-time years, these figures have been taken from Table 165 of the *Statistical Digest of the War*, in this series (H.M.S.O. 1951), and from the *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944*. More complete information may be found in the *Railway Returns* for 1938, though the figures there are not readily comparable with those in the *Summary Table* or the *Digest* because of certain differences in the method of calculation explained in the Prefatory Notes to the *Summary Table*.

On the other hand, the spur of road competition had compelled the railways to maintain efficient services, while Government help enabled the railways to modernise some of their capital equipment in the late nineteen thirties. A large programme of railway and dock extensions was launched in 1935, following the Railways (Agreement) Act,¹ which set up the Railway Finance Corporation to arrange, under Treasury guarantee, a loan of £26,500,000 for this purpose. A number of electrification schemes were carried out in these programmes, while passenger and goods stations, marshalling yards, relief lines, signalling installations and dock equipment were modernised at many key points. Improvements were also made to locomotive power and rolling stock. Although the number of locomotives in use was declining during the nineteen thirties, this was partly due to the introduction of more powerful modern engines and to increased electrification. The 1935 programme was not undertaken with any strategic object in view but for normal peace-time traffic. The improvements were, nevertheless, a valuable asset in war.

Thus, while traffic and revenues had declined in the inter-war years, the railways had largely maintained their essential capital equipment intact. On some routes, declining traffic had resulted in surplus capacity. On heavily loaded routes, on the other hand, there were some 'bottlenecks'; new works, such as additional running lines or loops for freight trains to keep them out of the way of faster ones, had however been provided where they were most needed, and marshalling yards and signalling had been modernised. Instead of undertaking capital improvements where these could not be financially justified by normal peace-time traffic, the railway companies regularly employed another method of dealing with temporary or seasonal traffic gluts. Additional shifts were worked in marshalling yards normally idle at week-ends; mineral traffic which had accumulated during the week-end was worked forward, especially on Sundays; intermediate signal boxes, normally closed for part of each day and on Sundays, could be kept open continuously to shorten 'block' sections. In short, a balance was struck between fresh capital expenditure and overtime working when conditions demanded it. At the same time there were many sections of line on which the working came under review periodically to determine whether desirable capital improvements could be financially justified.² As will be described below, many of these projects, the cost of which was not

¹ Railways (Agreement) Act, 1935 (26 Geo. 5 & Edw. 8, c. 6).

² Examples of such pigeon-holed projects were the quadrupling of the line between Gloucester and Cheltenham, the provision of loops on the L.N.E.R. (formerly Great Central) line to deal with the growth of traffic between North Eastern England and South Wales, and the quadrupling of the G.W.R. line between the Welsh end of the Severn Tunnel and Newport.

quite justified by peace-time traffic, were put forward for execution fairly early in the war when the need for them became more urgent.

Generally, the British railway system immediately before the war of 1939 was, despite its handicaps as a competitor of road transport, an efficient machine. It compared favourably with systems abroad, particularly those of Europe and the high standard of speed and safety of British passenger trains was universally recognised. The amalgamation of the railways into four large groups and the comprehensive pooling arrangements made between the groups in the nineteen thirties had practically eliminated competition on formerly competing routes. While much remained to be done to make the 'co-ordination' of the services of different companies a reality, amalgamation had resulted in greater standardisation of locomotives, rolling stock and equipment, and had facilitated through working in some parts of the country. While the peace-time regulation of railways did not extend to the management of the companies, the General Managers of the four groups met regularly to discuss matters of common interest and these meetings provided a ready-made instrument of control when war came. The existence of four unified systems in contrast to more than a hundred separate companies in 1913 provided a railway system much more adaptable to Government control in war-time.

Yet in judging the adaptability of the pre-1939 British railway system for war, it must be remembered that the system had been laid out not for war but for the normal needs of peace. While the British railways carried, in 1938, less traffic than they had moved in certain previous years, it must not be supposed that surplus capacity—where it existed—alone provided a sufficient margin to meet all the requirements of war. While many lines and junctions may have been working at well below their potential capacity in peace-time because of declining traffic, there may equally well have been cases where existing capital equipment had not been renewed and rolling stock had been withdrawn where traffic had fallen off. In short, it was not immediately obvious what spare capacity the British railway system possessed to meet the uncertain needs of war. Since however the railway system was thought to possess an element of flexibility, since it was still the principal means of transport in peace and since it could be run on home-produced fuel, railways were given the dominant role when the inland transport preparations for war were drawn up.

In addition to the railways, Great Britain now possessed a new arm to its inland transport system—a modern and efficient system of road transport. In 1938 there were over three million mechanically propelled road vehicles in Britain, of which about half a million were engaged in the transport of goods, and almost 50,000 were public

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service vehicles. It is not known how much and what types of traffic were carried by road goods transport in the nineteen thirties, but approximately 6,700 million passenger journeys amounting to 1,460 million vehicle miles were taken on public service vehicles in 1937.¹ Generally, the resources of both sides of the road transport industry were up to date, and relatively efficient. Standards of vehicle construction and maintenance had improved with the imposition of public control. While it is arguable that road development had not kept pace with the rapid growth of road transport between the wars and while road congestion remained a great problem in Britain, the standard of road construction was good.

The road goods transport industry still contained a large number of independent competing operators who owned on the average less than three vehicles each and who did not possess an effective system for clearing traffic. Moreover, the industry largely lacked any central organisation. For this reason, unlike the railways, it presented a difficult administrative problem when its adaptability for war had to be considered. Yet whatever disadvantages the system of public control might have had in peace-time, the Area Licensing Authorities did form a ready basis for any prospective scheme of Government control in war. The road passenger transport industry, on the other hand, was on the whole well organised. A high proportion of its vehicles were owned by large undertakings, many of which had close financial relationships or were publicly owned. This, together with the existence of the Area Traffic Commissioners' organisation, made the industry adaptable to Government control in war. Both sides of road transport were, however, bound to be at a serious disadvantage in war-time because of their dependence on imported fuel.

In the London Passenger Transport Board, there was a ready instrument for maintaining passenger services in the capital in the event of war. The Board was already publicly owned and centralised, while the standardisation of vehicles and equipment had contributed to its efficiency. In the year 1938-1939, the number of passenger journeys originating on the railways, buses and coaches, trams and trolleybuses of the Board was 3,782 millions, representing an estimated passenger mileage of 8,648 millions.²

As for coastal shipping it had, in the years immediately before the war, returned to a level of prosperity comparable to that of 1913. It is probable that the capacity of the trade was about the same as it had been before the First World War. In terms of commodities, coasters probably carried between 33 and 38 million tons in 1935

¹ For these figures, see *Census of Mechanically Propelled Vehicles, 1938, Fourth Annual Reports of the Licensing Authorities, 1937-1938, and Seventh Annual Reports of Traffic Commissioners, 1937-1938.*

² *L.P.T.B., 12th Annual Report and Accounts, p. 29.*

and 1936. The coastwise coal trade down the east coast of the United Kingdom was perhaps the most valuable contribution made by coastwise shipping to the country's peace-time economy. The industry had ships which were capable, if need be in war, of supplying military bases on the continent or continuing to function as an integral part of the inland transport system. Vulnerability to enemy attack was, however, likely seriously to reduce the capacity of this industry in time of war.

Finally the canals: in 1938, traffic originating on both railway owned and non-railway owned canals in Great Britain was 11 million tons, coal accounting for about one half.¹ Although canal carriers and undertakings could not be expected to play a principal part in any war-time transport organisation, they had craft and labour which might be assigned a useful minor role in war.

In conclusion, it needs to be stressed once again that the British inland transport system, in its layout and organisation, had been designed primarily for the needs of peace. Some of the developments towards public control and regulation in the inter-war years were conducive to central control by the Government in war, yet many completely new problems of organisation were to be faced. The efficiency of the British transport system in 1939 was high. While it is true that the special demands of war were to disclose defects in the transport system, it is equally true that the industries providing transport were not ordinarily organised for war. It was not their task to prepare to meet military and strategic demands—that was the responsibility of the Government. It is to the plans made by the Government, for the operation and control of inland transport in war, that we now turn.

¹ *Railway Returns*, 1938, p. 25.

APPENDIX I

The Net Revenues of the Four Main Line Railways, 1928 - 1939

<i>Year</i>	<i>Southern</i>	<i>G.W.R.</i>	<i>L.M.S.</i>	<i>L.N.E.R.</i>	<i>Total four main line companies</i>
1928	6,394,412	7,057,123	16,270,821	11,277,759	41,000,015
1929	6,547,966	8,198,644	17,175,839	13,061,250	44,983,699
1930	6,133,927	6,987,146	13,426,291	11,168,749	37,716,113
1931	5,607,873	5,682,396	12,655,656	9,424,610	33,370,535
1932	4,894,109	4,459,403	9,904,823	7,166,857	26,425,192
1933	5,539,797	4,828,561	10,712,684	7,723,120	28,804,162
1934	5,800,335	5,410,999	11,921,936	8,348,147	31,481,417
1935	6,072,297	5,450,559	13,027,575	8,371,373	32,921,804
1936	6,226,160	6,314,829	14,048,126	9,141,396	35,730,561
1937	6,552,124	6,886,505	14,356,276	10,107,442	37,902,347
1938	5,941,904	5,043,753	11,345,520	6,653,167	28,984,344

STANDARD REVENUE LAID DOWN IN RAILWAYS ACT (1921)

<i>Southern</i>	<i>G.W.R.</i>	<i>L.M.S.</i>	<i>L.N.E.R.</i>	<i>Total four main line companies</i>
7,100,000	8,500,000	20,600,000	15,200,000	51,400,000

Source: Railway Returns, 1928-1938, Table A2

APPENDIX II

Number of Vessels employed in the Coasting and Home Trades on 15th June, 1938¹

<i>Tonnage group</i>	<i>Coasting trade</i>	<i>'Home' trade</i>	<i>Total</i>
Under 100 tons . . .	266	12	278
100–500 gross tons . . .	332	295	627
500–1,000 gross tons . . .	109	275	384
1,000–2,000 gross tons . . .	121	123	244
2,000–3,000 gross tons . . .	26	39	65
3,000–4,000 gross tons . . .	11	1	12
4,000–6,000 gross tons . . .	—	3	3
Total	865	748	1,613
Total excluding ships under			
100 g.r.t.	599	736	1,335

¹ *Census of Seamen*, 15th June, 1938 (H.M.S.O.), p. 10. The various Censuses of Seamen refer to the activities of ships on one particular day each year and may be misleading about the actual numbers engaged in the coasting trade. Estimates of the number of ships actually engaged in the pre-war coasting trade range from 900 to 8,000. For example:

- 1929 Board of Trade memorandum for the Headlam Committee: 8,093 ships under 1,250 net tons 'in the main' employed in the coasting trade at the end of 1929. But only 2,341 of these were over 100 net tons.
- 1935 R. H. Thornton, *British Shipping* (Cambridge University Press 1939), gives 878 ships in the home and coasting trades in 1935. This figure is probably taken from the *Maritime Statistical Handbook* (I.L.O. 1936), Table II, p. 160, compiled from information supplied by Mercantile Marine Department of Board of Trade. It would appear to apply only to ships of over 400 g.r.t.
- 1936 L. Isserlis, 'Tramp Shipping Cargoes and Freights', *Journal of the Royal Statistical Society*, Vol. CI, Part 1, 1938. Table VI, p. 102, gives 1,260 ships over 100 g.r.t. engaged in home and coasting trades on 30th June, 1936 (1,101,461 g.r. tons: 1,159,102 d.w. tons). This includes all ships except sailing vessels. It is a figure very similar to the Census of Seamen for the same year—1,391 ships excluding sailing vessels—and is probably the most accurate figure for 1936.

APPENDIX III

The Volume of Traffic handled by Coastal Ships

It is difficult to measure the tonnage of cargo lifted by coastal shipping before the war because complete employment returns do not exist. The Trade and Navigation Returns, showing shipping arrivals and departures at ports with cargoes are not an accurate indication of cargoes carried, because they are expressed in net tons of shipping, not tons of freight carried. They are particularly misleading in the case of coasters which are in and out of port every few days, because of the amount of double counting involved. An incomplete return collected by the Fact Finding Committee Enquiry in 1936 indicates that in that year about 38 million tons of cargo were probably carried by coastal ships, 24 million tons of which was coal. (This does not differ very greatly from the 1935 estimate of 33 million tons which was made to the Committee of Imperial Defence and appears to be the one most frequently quoted in official documents. It is also quoted by the Fact Finding Committee Report as the estimate given to the Transport Advisory Council.) The figure of 38 million tons was reached in the following way:

An enquiry was circulated by the Chamber of Shipping to shipowners not engaged solely in the foreign trade, covering the years 1933 and 1936. According to the replies received 14,520,000 tons of coal and 8,767,000 tons of other commodities were carried coastwise in 1936. According to the Mines Department the total quantity of coal carried coastwise in 1936 was 23·74 million tons. On this basis and from other sources, the Fact Finding Committee estimated that the returns to their enquiry covered about 61 per cent. of the coastwise coal cargoes carried. It was assumed that the returns also covered the same percentage of other cargoes and therefore that the tonnage of all commodities carried in 1936 was approximately 38,000,000 of which about 24,000,000 tons consisted of coal. The figure for 1933 on the same basis was 31,000,000 total commodities and almost 20,000,000 tons of coal. (A rough check can be obtained for 1933 by taking the 1932 figures of coal shipped coastwise from British ports from the Customs monthly tables. This was 19,000,000 tons.) The figure of 38 million tons carried in 1936 is not therefore accurate, but it is probably the best estimate available of the pre-war tonnage of cargo carried in coastal ships.

How little relation they bear to the figures of coastal shipping departures with cargoes is shown by the fact that this was 19 million net tons in 1933 and 21 million net tons in 1936 (omitting trade with Ireland).

CHAPTER II

THE PREPARATIONS FOR WAR

(i)

The Assumptions made before Munich

THE BRITISH GOVERNMENT'S plans for the control of inland transport in the Second World War properly began in the early part of 1937.¹ In March of that year, the Committee of Imperial Defence considered a memorandum by the then Minister of Transport (Mr. Hore-Belisha) entitled 'Control of Rail and Road Services in Time of War'.

The matter had previously been under review in 1923, when the Ministry of Transport had been asked to prepare a comprehensive scheme for the organisation of inland transport in war-time, including the control of the railways. This project never came to fruition, since it was argued that the Ministry's functions in relation to the war-time problem had never been defined, and that no definite plan had ever been laid before it. Between 1923 and 1937 therefore, the matter had been allowed to lapse, and such plans as there were remained nebulous.

When active preparations for war began in the latter half of the nineteen thirties, the problem of inland transport had to be looked at afresh. As we have seen in the years between 1923 and 1937 there had been great changes both in the structure and organisation of inland transport; there had been the remarkable growth of the highly competitive road transport industry, the amalgamation of the railways, and the extension of Government control over transport.

When therefore the Committee of Imperial Defence decided on 23rd March, 1937

that in time of war or emergency the responsibility for the provision, allotment and co-ordination of transportation services should rest with the Minister of Transport

the responsibility which fell to him was a much wider one than had

¹ In the summer of 1935, the Cabinet had authorised the Service Ministries to work out their defensive preparations with a view to achieving a reasonable state of preparedness by 1939. See W. K. Hancock and M. M. Gowing, *British War Economy*, in this series (H.M.S.O. 1949), p. 64.

been assumed by his predecessor at the Board of Trade at the beginning of the First World War. The task of preparing inland transport for war was not only very different, but in many ways a much larger problem in 1937 than it had been before 1914. In addition to the railway system with its twenty thousand route miles, there were now, as we have seen, nearly half a million commercial goods vehicles and almost 50,000 motor omnibuses in the country. Against this, it was pointed out, 'the organisation of the railways had been strengthened and centralised in a way which would make it much easier to handle in a national emergency. A habit and spirit of co-operation had grown up which did not exist in 1914.' Furthermore, both sides of the road transport industry were now subject to a stringent form of public control in peace-time as a result of the licensing system imposed between 1930 and 1933.

For a proper understanding of the preparations made between 1937 and the outbreak of war in 1939 for the war-time control and operation of inland transport, it is necessary to go back and examine the knowledge and assumptions from which those preparations started. A Government, before it undertakes such preparations, must, if it is to perform its task realistically, do two things. In the first place it must know, or find out what already exists: it must know something of the nature and extent of transport resources and their capacity in terms of the services they provide. Secondly it must make what appear to be the most reasonable assumptions about the future: about the functions of the inland transport system in time of war, about the traffic that will have to be moved and about the likely differences of war-time transport requirements from those of peace, about the external conditions, such as attack from the air, that may be expected to affect the working of the inland transport system in war-time. If these two things can be done tolerably well, it may then be possible to estimate very roughly in advance how scarce inland transport is likely to become in war, and to determine what controls and other preparations are needed. The success or adequacy of the pre-war preparations will depend very largely on whether the requisite information is available in the preparatory period.

It is reasonable to suppose that the extent of existing resources can be known with some pretence to accuracy. Even here, however, there may be difficulties. It can, for example, be argued that it is not possible to measure the actual or potential capacity of the transport system in so general a way. Moreover, the necessary statistics may be difficult or impossible to collect. Nevertheless information about inland transport will not be entirely lacking. Most transport undertakings, large and small, find it necessary to keep some record of their own resources and operations. The difficulty is likely to arise in collecting and assembling the relevant information in a form which

can be used by busy administrators as a basis of Government planning.

The assumptions to be made about a future war are likely to raise problems of much greater difficulty. War is by its nature an uncertain business and this uncertainty inevitably brings about miscalculations. But if any preparations are to be made at all, it is obviously necessary to frame one, or perhaps several working hypotheses on the basis of what are considered to be the most reasonable assumptions. In the case of transport, such hypotheses can be built up on the basis first of the general strategic assumptions about the likely course of a future war, and second on the basis of past experience in war-time.

As we examine the preparation of inland transport for the Second World War, these considerations have constantly to be borne in mind. When we come to an appraisal of the inland transport preparations it will clearly be important to know whether they were adequate in the light of subsequent events. But for a balanced judgment of the adequacy of the preparations, the important question to be asked is whether, given the uncertainties of war, the difficulties of making accurate forecasts of the future, and the limits of existing knowledge, the measures put in hand were reasonable.

Between the wars, the general problem of inland transport in a future war was not made the subject of any systematic review by the Committee of Imperial Defence or any comparable body. There was no comprehensive study of such problems as the likely functions of inland transport as a whole in time of war, of the adequacy of transport resources to carry them out, of the extent to which transport resources would be scarce, and of the kind of controls needed to meet possible scarcity. In searching for the assumptions from which war-time inland transport preparations proceeded from 1937 onwards, it is first necessary to look at a larger problem of which inland transport formed only one part. This problem was the diversion of shipping from East coast to West coast ports, and the consequent redistribution of imports in war-time. Before 1937, this was the aspect of the general inland transport problem that received the most attention, and it is to discussions on this subject that we must look to find the assumptions from which the early inland transport preparations sprang.

The problem, as it was conceived in the early nineteen thirties, was that air attack in a future war would probably make necessary at least a partial closure of London and the East coast ports. In consequence, it was thought, the greater part of the merchant shipping approaching the British Isles would have to be diverted to ports in the West, which would make the reception and inland distribution of imports most difficult.

In the First World War, bombing from the air had been relatively

insignificant, and there had been no extensive diversion of shipping. Even so, in May and June 1917, when the German submarine campaign was at its height, difficulties had been experienced in receiving and transporting cargoes originally destined for the Port of London, but discharged instead at West coast ports. It was thought at the time that a policy of more extensive diversion would bring upon the railways a burden they were ill equipped to carry. Although the difficulties had eased by the end of 1917,¹ a Traffic Diversion Committee was appointed by the Board of Trade to study the measures needed should extensive diversion of shipping become necessary.

The Report the Committee produced in 1918 is an illuminating document; indeed the account of the stresses of railway working in war-time and the conditions of rail transport scarcity which accompany them, contains much that was as relevant over twenty years later during certain phases of the Second World War as when it was written. It is worth summarising part of the Report here. The Committee, writing in 1918, pointed out, that the railway position had become one 'of great difficulty'. The increase in goods train mileage more than counterbalanced any relief gained by the cutting down of passenger train mileage. The growth of services (both goods and workmen's) for the munition industries, the needs of the armies overseas, the cessation of coastwise coal and other traffic had, especially in the south, already taxed the capacity of the railways to a hitherto unknown degree. Thousands of special troop trains were being run. On many lines—especially those connected with the Severn Tunnel and those in the neighbourhood of London²—it was hardly possible to find space for additional trains without displacing existing services.

The heavy character of the trains worked, the Report continued, was causing rapid wear and tear of the permanent way. As a result of this, further deceleration of passenger and goods trains was expected with a consequent reduction of line capacity. Many locomotives had been sent overseas; many others were urgently in need of repair. Railway workshops and staff were engaged on the manufacture of munitions; large numbers of trained men had joined the colours. Wagon stocks were low, and the number of wagon sheets quite inadequate to meet current needs. Many sections of goods lines,

¹ Though apparently the adoption of the convoy system in July 1917 tended to concentrate arrivals of shipping at British ports, and created fresh problems of inward distribution.

² In a memorandum recording the final views of the Committee in 1919, it was stated that experience during the war had demonstrated that the capacity of the railways had been insufficient to handle traffic freely on many routes, particularly between:

- (a) Newport station and Severn Tunnel Junction on the Great Western Railway,
- (b) South and North of Carlisle station, and
- (c) In the immediate vicinity of Berwick.

terminals, and yards, particularly in the south, were reported to be more or less continuously blocked with traffic, largely due to difficulties in distribution. There were no signs of any reduction in the demands for railway services, the Report concluded, in fact quite the contrary. 'The obvious effect of [shipping] diversion [would] be to increase to a greater or less extent the present strain.'

It is not surprising in these circumstances that the Committee reached the conclusion that 'acute disorganisation of transport services, together with congestion at terminals would certainly arise if diversion to any large extent were prolonged'. In a memorandum it presented in 1919 recording its views of the experience gained during the war, the Committee took the view that sufficient defences to protect the passage of the bulk of seaborne cargoes to their accustomed ports of discharge must be provided if the transportation difficulties with which the country had been faced during the war were to be overcome.

By the early nineteen thirties, however, new developments suggested that this judgment might have to be modified. Since 1918 there had been great advances in bombing aircraft. The possibility of air attacks on the ports coupled with unrestricted submarine attacks on merchant shipping might, it was thought, make impossible the discharging of shipping at certain ports and the distribution of goods away from them. On the other hand, the rapid development of road motor transport since 1918, and the decline in the volume of traffic carried over the railway system suggested that the transport system might now be better able than in 1918 to deal with the burden of inland distribution which shipping diversion would present.

In 1933, on the advice of the Admiralty, a comprehensive investigation of the whole problem was begun by a sub-committee of the Committee of Imperial Defence, which was called the Sub-Committee on the Distribution of Imports in time of War. This body, generally known from the name of its chairman as the Headlam Committee was given the following terms of reference:

To review generally the question of the stocks, reception and distribution of food, raw material and other imports to the United Kingdom in time of war, including particularly the capacity of the ports and the means of transport serving them to handle goods . . . which may have to be diverted from their usual ports in a war exigency.

The Committee took as its point of departure, two assumptions: first that 75 per cent. of all shipping that normally entered ports lying between the Tyne and Southampton inclusive would be diverted to the West coast ports, and second that in a major war the imports needed by the United Kingdom would amount to between 55 and 60

million tons a year—in other words, much the same as in peace-time. On this basis it was calculated that altogether the West coast ports would be required to handle a tonnage 77·7 per cent. as large again as their normal volume of imports.¹

The Sub-Committee spent four years on its investigations, and produced its final report in March 1937. A detailed account of all the various enquiries it undertook will not be given here.² The present discussion must be primarily concerned with the inland transport aspects of the problem. It should however be pointed out that the Committee lacked the really essential information it needed for a fruitful enquiry. There was in the first place no means of measuring the capacity of the ports and the transport system serving them in a set of wholly undefined conditions. Secondly, at the time the enquiry was conducted, no Government department had worked out its import plans in the event of war.

As for the capacity of the ports, the Sub-Committee asked each of the port authorities outside the 'danger area' to estimate the maximum tonnage of imports it could handle. Most of them replied that they could deal with 80 to 100 per cent. more trade than normal, and pointed out that they had in fact dealt with traffic of this volume in the past. The Committee therefore concluded that the capacity of the West coast ports, in total, should be adequate to accommodate the increased traffic which they might have to handle in a large scale diversion. As an additional check on these replies, figures were collected of the amount of quays in use inside the 'danger area', and available outside the 'danger area', and these respective sets of figures were added up. The aggregates were taken as indicating that there was a general sufficiency of quays on the West coast to meet expected requirements, though at first class ports, the Committee pointed out, there would be a deficiency, which might be met by a quicker turn-round of ships. This possibility would depend very largely on the adequacy of the road and rail services serving the ports.

What then of the capacity of the transport system for clearing the ports outside the 'danger area'? Unlike its predecessor in 1919, the Headlam Committee foresaw none of the acute disorganisation of inland transport which had then been expected to follow if diversion were put in hand. On the contrary, it concluded that 'in view of the great flexibility of the existing road and rail transport systems, it is not considered that there would be any insuperable difficulty in conveying traffic away from the ports even in the contingency of spasmodic aerial bombardment'.

¹ i.e. They would be required to handle 48·25 million tons per annum.

² It will be found in C. B. A. Behrens, *Merchant Shipping and the Demands of War*, in this series (H.M.S.O 1955), pp. 24-34.

On what basis had previous opinion been so completely reversed? From the railways, the Committee had obtained estimates of the maximum tonnage of imports that could be cleared by rail from the West coast ports, each considered separately, compared with the average tonnage they actually cleared in the years 1927-1929. For each one of approximately 170 large and small ports served by rail outside the 'danger area' the railway companies, which for some years had been working below capacity, estimated that they could move a tonnage vastly in excess of normal. The answers for the various ports were then added together. On this basis, the Headlam Committee deduced that whereas the railways had, in the years 1927-1929, cleared an average of 16.8 million tons per annum from the West coast ports, they were in fact capable of moving as much as 75.5 million—no less than four and a half times more than they were accustomed to handling.

As for road transport, statistics went to show that the numbers of mechanically-propelled goods vehicles of more than two tons unladen weight had increased by 1935 to 470 per cent. of the 1919 figure. Since motor transport was mobile, the Committee envisaged that the vehicles not needed on the East coast could be either voluntarily transferred or commandeered for use at ports outside the 'danger area', though it made no specific proposals as to how this might be done. As with the railways, the Sub-Committee foresaw practically no difficulty about road transport. It decided, though without any relevant data to support its judgment, that in an emergency there would be 'a considerable margin of road motor transport available which could be used in connection with the clearing of imports from the ports'.

The Committee was therefore optimistic about the inland transport aspects of shipping diversion, though it found cause for some apprehension about difficulties expected to arise from what it called 'a probable dislocation of normal merchanting machinery'. Difficulties in the unloading, storage and distribution of particular commodities would arise and these would need further investigation. Nevertheless, the Committee remained generally satisfied that a 75 per cent. diversion of shipping from East to West was possible.

We need not dwell at length on the faulty reasoning from which these several conclusions about the adequacy of the ports and road and rail transport had been drawn. Clearly, however, it was unsafe to deduce that because the capacity of the railways at each port was sufficient to carry several times the normal tonnage of traffic, the capacity of the railway system as a whole would be adequate to clear four and a half times the normal volume of traffic from the West coast ports. Obviously if ports A, B and C were all working to capacity, and were served by lines branching from the same junction,

at a point not far distant inland the traffics would begin to affect each other. Again, railway capacity would depend in the last resort on the exact types of traffic and the distances they had to be moved inland. How would the volume of traffic expected to result from diversion work out in terms of ton-miles, or loaded and empty wagon-miles? Would there be a balanced movement of import and export traffic, or would there be a large movement of empty wagons back to the ports? Would the capacity of the marshalling yards inland be sufficient, and how much internal traffic, passenger and freight, would be on the move at the same time? Only with a great deal of information of this sort could the capacity of the railways to clear the ports have been usefully estimated. Similarly, the possibility of clearing the ports with the aid of road haulage could only have been assessed if something had first been known about the amount of other traffic capable of being curtailed in war to release the necessary vehicles. The evidence in the Committee's Report was too scanty to support the confident conclusion it had drawn about the capacity of the means of transport serving the ports.

In spite of this, the Report of the Sub-Committee was approved by the Committee of Imperial Defence on 29th April, 1937, and for two years the assumptions embodied in it went unquestioned. The belief that a large scale diversion of shipping was a practical possibility and that inland transport would be adequate to carry out its part of the task was, until 1939 at least, an accepted part of defence policy.

The Committee's conclusions about inland transport, although based on inadequate evidence and unsupported by previous experience, reflected a view held by many in the late nineteen thirties. This was to the effect that the British railway system had a large surplus capacity, which could readily be called into use in time of war. And closely linked with this was the opinion—inherent in the restrictive legislation of the nineteen thirties—that the road transport services in Britain were ample, if not more than sufficient to meet existing needs. If this were true, then it seemed likely that there would be a reserve of vehicles available for war-time use. If on the other hand it should become necessary to cut down road transport services in war-time, it followed that the traffic could be transferred without difficulty to the railways.

Such were the opinions current when the war transport preparations began in 1937. It is true they were rarely put down in so many words; nor indeed do we find them closely analysed. They appear nevertheless to have been widely held in the transport world and generally accepted by the Government. Perhaps they found their clearest exposition in the counsel provided by Sir Herbert Walker, who had been Chairman of the Railway Executive Committee in the

First World War. The advice he gave the Ministry of Transport in March 1937—that is at almost the same time as the Headlam Committee's final Report—ran as follows:

. . . . the resources and reserves of railway carrying capacity in times of emergency would be found to be 'immense' and certainly equal to any strain thrown upon them. The more severe and concentrated the crisis, the greater would be the automatic drying up of the stream of pleasure and other unnecessary travel and traffic which normally demanded such a high proportion of railway facilities. He could suggest no physical or operating question which in his opinion needed special attention, apart from the protection of vulnerable points, including generating stations.

This opinion was implicitly accepted by the Ministry of Transport, and passed unquestioned by the Committee of Imperial Defence.¹

Now opinions of this kind ran directly counter to the lessons of the First World War and were based on evidence that was insufficient and misleading. What was in fact really known about the capacity of the railways and road transport in the nineteen thirties, and what assumptions might reasonably have been made about their capabilities in a future war?

Let us look first at railway capacity. It was obvious that the situation in 1918, as outlined in the Reports and Memoranda of the Traffic Diversion Committee, was not one in which surplus capacity existed. The surplus railway capacity about which so much was heard in the nineteen thirties was clearly a development of the post-war years. The reasons underlying the belief that the railways were working below their capacity are, of course, not far to seek. Trade depression and the decline of the staple industries in the nineteen twenties and nineteen thirties had brought with them a corresponding decline in railborne traffic. At the same time the railways had been losing other traffic to their new competitor on the roads. The effects of these two influences are clearly apparent from the decline in the numbers of passengers travelling by rail, the tonnages of freight traffic moved, and the net receipts of the railway companies in the inter-war years. It is not easy to show statistically that the British railway system was working below capacity in the years before the war of 1939, or to measure how large the surplus railway capacity was. There is no reason to doubt, however, that the railways were moving less in the years immediately before the war than they were capable of moving.

But how much less? The capacity of a railway system is not an

¹ The Ministry of Transport made only one reservation. In its opinion the adequacy of railway mineral wagon stocks would need consideration.

easy thing to define, let alone measure. The British railway system as a whole might be carrying less traffic than it was capable of carrying, but it did not necessarily follow that each line, junction, and marshalling yard throughout the country could readily handle a large increase in traffic such as might—on the basis of past experience—be expected in war-time. Nor did it follow that because the railways were now carrying less traffic than in 1913 or 1920 they still had the rolling-stock, plant and equipment capable of carrying traffic at the former level without delay and congestion arising. Any realistic attempt to estimate the war-time potentialities of the railway system, could only be made if something were first known about the types of traffic that would have to be moved, the volume of traffic, and more important still, the routes over which war-time traffic would be most likely to travel. In 1937, however, little was known about matters of this sort. Few Government departments had their war plans sufficiently advanced to be able to forecast their likely demands for railway transport; as for the extent of private demands for rail transport in war-time, they could only be guessed at. There was, therefore, little or no indication how scarce rail transport might become in time of war.

There was in fact nothing to suggest that the railways could cope, in addition to their normal functions, with a burden as immense as that contemplated by the Headlam Committee, especially since much of the increased traffic from the West coast ports would *ex hypothesi* be moving over difficult cross-country routes. The East to West diversion of shipping would in any case be only one factor likely to bring a heavy increase in railway traffic in time of war. This much the Headlam Committee had pointed out in drawing attention to the large volume of coal carried coastwise which would probably have to be transferred to the railways in the event of war—a problem that was later to form the subject of a special investigation. The great coastwise movement of coal between Northumberland and Durham and London and the South of England would, it was thought, be seriously interfered with. The railways might be faced with this large additional burden at the same time as large scale East to West shipping diversion. If this were to happen, the demands on the railways would certainly be by no means light, either in terms of the tonnage of traffic to be handled or the distances it would have to be moved. As for the other demands which war might bring to the railways, very little was known. The First World War had brought a heavy volume of Service and munition traffic; the great disparity of rates had attracted coastwise traffic to the railways; demands for passenger travel had proved difficult to control. There was no reason for thinking that a similar situation might not arise in a future war. Even if the railways were working below capacity in the nineteen

thirties there was no conclusive evidence to suggest that the surplus might not be quickly absorbed by the huge demands war might bring.

Moreover in war-time it was likely that other factors would reduce the capacity of the railways. Perhaps the most serious was enemy air attack. It was indeed recognised that the railways had their nodal point in London, and that bombing might cause severe dislocation of traffic in this area. In the opinion of the Air Staff, the London shunting yards would probably become 'secondary' targets for enemy bombers, and their operation would be curtailed, particularly at night. It was estimated that the efficiency of these yards might be reduced to not more than 50 per cent. of normal. Attention was focussed mainly on the direct dislocation of railway working which bombing was likely to cause. In the War of 1914-1918, however, the problems of railway working in the blackout and during air raid warnings had been a cause of greater delay and congestion than the air attacks themselves.¹ It was quite possible if similar difficulties occurred in a future war, particularly over a long period, that congestion might spread over a large part of the railway system and seriously reduce its capacity to handle traffic. Again, the First World War had demonstrated the difficulty of maintaining the equipment and track of the railways in a period of general scarcity of raw materials and heavy traffic movement.

Although therefore it was perfectly true that the railways were working below capacity in the nineteen thirties, the experiences of the War of 1914-1918 might well have suggested a more cautious approach in forming conclusions about their capabilities in a future war. The confident assumptions, put forward early in 1937, that the capacity of the railways would be more than adequate, were hardly questioned until a few months before the outbreak of hostilities. The probability that war conditions might bring periods of severe congestion on the railways—as had happened between 1914 and 1918—does not appear to have been considered—at any rate until war was imminent.

When, therefore, war preparations began, no one concerned with the pre-war transport plans appears to have thought it necessary to explore at all deeply the problem of railway capacity in time of war. Very little was done, for example, to keep a continuous check on the capacity of the main and cross-country railway lines as the nature and extent of likely war-time traffic demands gradually became clearer. Such a review could hardly have been without useful results in indicating the points at which the railway system was most likely to become strained, what facilities were needed, and what existing

¹ E. A. Pratt, *op. cit.*, Chapter XXX, Railways and Air Raids.

ones should be retained, even though they were surplus to peace-time needs. For even if large parts of the railway system were working below capacity, there was always a danger that 'bottlenecks' at vital points might limit the movement of traffic over wide areas. To undertake such a review of railway line capacity was certainly no easy task. It could hardly be approached in terms of general traffic statistics; rather it was a problem for the railway expert.

An approach to the problem had been made as early as 1936 by the Ministry of Transport Railway Inspecting Officers. A Report was prepared to indicate the points on the railway system where congestion was most likely in war-time; this took account first, of the 'enormous' additional tonnage likely to be dealt with in the few days following an outbreak of war, and second, of the traffic towards London, the Midlands, and East coast towns likely to follow a diversion of shipping from the East to West coast and Scottish ports. The Inspecting Officers pointed out that without a great deal of preliminary information or a 'plan of some sort to work on (even though in the event it may prove to be wrong)' even the railway companies themselves would be unable to state specifically where congestion seemed likely to occur. It was therefore difficult for the Inspecting Officers themselves to attempt a detailed survey and to 'prepare a list of "bottlenecks"¹ having regard to their ignorance of the capacity of individual lines of communication'. They were however able to provide some useful observations on the nature of the problem. They drew attention to the kind of operating difficulties likely to be encountered in war-time, including the possibility of a failure of the Grid system and its effects on electric working and signalling as a cause of congestion, and the tendency to congestion around junctions, tunnels, bridges, etc. They prepared a list of sixteen principal points where congestion was likely to occur, but they pointed out that much more detailed knowledge would be needed before an adequate report could be furnished. The Report provided pointers which might usefully have been followed up. Unfortunately, however, it made little impression on Government defence policy, and did not reappear again until May 1939.

Let us now turn to road transport. Although it would not have been very easy to estimate the war-time capabilities of the railways in advance, it was almost impossible to make such an estimate for road transport. For the railways the peace-time statistics were comprehensive; they were collected regularly and the main traffic trends were

¹ A 'bottleneck' is, according to the Report, 'brought about over a short or long stretch of line, as the case may be, as the result of the number of trains tending to exceed the signalled capacity of the line. It must vary both as to time and place, and depend entirely on the extent of the movement concerned—military and/or civil—which is going on at the time, and the capacity of alternative routes by which the pressure can be relieved.'

known. There were no comparable data for road goods transport. While statistics of the numbers of vehicles and operators were collected and classified according to the broad types and sizes of vehicles,¹ nothing was known about the traffic these vehicles carried. It was not known, for example, how much traffic the road hauliers had taken away from the railways, or what fresh traffic had been created by the development of this cheap and convenient means of transport.

From general information and rough estimates, it appeared that road haulage had become a serious competitor of the railways in general merchandise traffics. Probably between 110,000 and 120,000 vehicles were actively engaged in long-distance haulage work and were competing with the railways. An independent estimate put the tonnage of traffic carried by road in competition with the railways at about 100 million tons per annum for 1935. This figure was estimated to be about twice the tonnage of traffic lost by the railways as a result of road competition.² It could be no more than a guess; detailed information on this matter did not exist. Nor was much known about the volume of traffic carried by over 300,000 vehicles principally engaged on short-distance and distributive work.

The Government therefore was almost completely in the dark about the actual and probable war-time capacity of the road haulage industry. There was no conclusive evidence one way or the other to show whether there would be a surplus of vehicles available to carry out such emergency tasks as helping to clear the Western ports. It is not clear on what basis the Headlam Committee concluded that there would be such a surplus. Certainly the large increase in the number of vehicles of all kinds between 1919 and 1935 provided no basis for this belief. It could not be assumed that traffic, now carried by road, which in previous years either had not existed or had gone by rail, would automatically fall off in time of war. Moreover there seems to have been no basis for the confident assertion to the Committee of Imperial Defence that there existed 'substantial reserves' of buses and coaches widely distributed throughout the country.

It is not easy to discern from the records precisely what assumptions were made around 1937 about the use and adequacy of road transport in a future war. Generally the capacity of the road haulage industry was taken as being ample for carrying out its normal functions as well as meeting 'emergency' demands, though the very

¹ See Ministry of Transport *Annual Census of Mechanically-Propelled Vehicles*, and the *Annual Reports of the Licensing Authorities*.

² These estimates appear in G. Walker, *op. cit.*, which contains the only serious attempts to estimate such figures. See particularly Chapters I and V.

large number of firms in the industry was recognised as an obstacle to control. When, however, it became clear that supplies of liquid fuel for road transport would have to be rationed in war-time, plans were made on the basis that the railways could and would carry most of the long-distance traffic which normally went by road. Road haulage would be confined to short-distance distribution, the needs of civil defence and the Fighting Services, and emergency work to relieve the railways in the event of a local breakdown. Since the Government accepted the railways' cheerful view that they could manage whatever traffic was offered them, and under whatever circumstances it had to be carried, the prospect of transferring a large, but unknown, quantity of long-distance road traffic to the railways on account of motor fuel rationing appears to have caused no special concern.

To sum up: when the Government began to prepare inland transport for war, it was optimistic about the capacity of the transport system in spite of the lessons of the previous war. No one really knew what the potential capacity of the railways was; no one knew how much traffic normally went by road. It was generally assumed that the railways could cope with a very large increase in traffic in time of war, while road transport and coasting shipping would make a more modest contribution than in peace. Since its early views were influenced by the idea of ample railway capacity, the Government in making its preparations for war, concentrated first and foremost on the railways.

(ii)

Plans for the Control and Preparation of the Railways and Road Transport up to Munich

Arrangements for taking the railways under Government control in an emergency had been in existence almost continuously since the First World War. As far back as 1923, a Communications Board had been established—or rather revived for a similar Board had existed before the War of 1914. Its terms of reference were:

To advise as to the railway arrangements for the mobilisation and to any subsequent concentration by rail of the Fighting Services, and also with regard to the co-ordination of Railway, Port and Shipping preparations for the dispatch overseas of an Expeditionary Force from Great Britain.

The Board met under the chairmanship of the Quartermaster-General. In 1926 it produced a set of 'Instructions to General

Managers of Railway Companies', but then became moribund.¹ Then came the Depression and the Disarmament Conference. Nothing more was done until the autumn of 1934, when the Committee of Imperial Defence approved the recommendation of the Chiefs of Staff that sub-committees should proceed with their work on the basis of a possible war with Germany in 1939. Defensive preparations went slowly ahead. It was not until March 1937 that the relations between the Government and the railways were set down by the Committee of Imperial Defence in the following conclusions:

- (a) In the event of a major emergency, the Government should assume full control and responsibility for the railways.
- (b) That with reference to the above, the Minister of Transport should be authorised to discuss with the companies the points on which the old agreements required amendment.
- (c) If it is necessary to take possession of the railways, action should be taken under regulations . . . to be made by virtue of the Emergency Powers (Defence) Act.

The significance of these conclusions was that the initiative for control of the railways was clearly and finally taken away from the War Office, where it had rested before the War of 1914, and given to the Ministry of Transport.

Discussions between the Ministry of Transport and the railway companies moved forward somewhat diffidently during 1937 and 1938. In April 1937, a Departmental Committee on the Control of Railways in Time of War was set on foot to work out the details of control in war. The Committee of Imperial Defence favoured control under the Defence Regulations, and not under the archaic Regulation of the Forces Act of 1871, under which possession had been taken in 1914. A good deal of time was spent in sorting out these legal tangles. On the one hand, officials were doubtful whether the draft Defence Regulation No. 60 applying to public utilities, under which it was proposed to take control of the railways, really gave the Government complete powers. For this regulation empowered the Government only to give 'directions' to the railways, and, even when supplemented by other Defence Regulations,² this power fell short of 'possession' which had been conferred by the 1871 Act. The railway companies, on the other hand, thought that the control agreement

¹ The Communications Board was formally wound up in 1939, and its functions transferred to the Railway Communications Committee, which had been set up in 1938. See below, p. 59.

² It was later pointed out, however, that Defence Regulations 54 and 57, and Regulation 60 were mutually incompatible, for whereas under the former, railway property could have been requisitioned, it would have been impossible to give 'directions' to an undertaking whose property had been requisitioned.

should be linked with the terms of financial compensation they were to be offered, and put forward the suggestion that they should be compensated in war-time on the basis of the 'standard revenue' of the 1921 Railways Act. The main line railway companies were also reluctant to see the London Passenger Transport Board—expected to be a liability in war-time—included in the system of control.

A Defence Plans Section of the Ministry of Transport was set up in December 1937. It was given the job of reporting progress on the following railway matters:

- (a) the form of instrument of Government control of the railways;
- (b) the constitution of the Railway Executive Committee;
- (c) the representation of the Ministry of Transport on the Committee;
- (d) the financial agreements for control.

Some headway was made with railway preparations during 1938, but the legal and financial complexities of railway control were still being thrashed out when the Munich crisis supervened in September of that year.

Before the crisis it had been suggested to the railway companies that a 'shadow' Railway Executive Committee should be set up in advance of a national emergency. The railways took the view that this was unnecessary as the four main line railway managers, who would form the Committee, met frequently in any case and could act temporarily as a channel of communication between the Government and the railways. On 24th September, 1938, however, the Railway Executive Committee, consisting of the General Managers of the four main line companies and the Vice-Chairman of the London Passenger Transport Board, was constituted as an advisory committee to the Minister of Transport. Four days later, an Order enabling the Government to take possession of the railways was hastily drafted and sent to the War Legislation Committee for approval. This Order simply empowered the Government to take possession of the railways but made no provision about the conditions of possession or financial compensation. It was subsequently found to have been *ultra vires* the draft Defence Regulations.

As for the physical preparation of the railways for war, little or nothing was done before the Munich crisis. A sub-committee of the Committee of Imperial Defence was appointed in 1937 to look into the problem of coal supplies in war to public utility undertakings and the adequacy of railway wagon stocks for the internal distribution of coal. A scheme was worked out for supplying the London gas and electricity works by rail, or by rail and barge, should coast-wise shipments be cut off. A survey of railway mineral wagon stocks showed that these were sufficient provided privately owned wagons

were pooled and demurrage charges imposed to quicken turn-round.¹

In 1938, as the international situation deteriorated, the railway companies were asked to put in hand special schemes for emergency lighting at a number of stations and goods yards, and to adapt certain Post Office trunk lines for emergency communications. Various A.R.P. measures for the railways were planned, but little progress was made because the railway companies were unable to agree about their share of the cost. Movement plans for the carrying of other Government departments' traffic were discussed between the departments concerned and the Ministry of Transport, but were still far from complete.

Unlike the railways, road motor transport had not been used before on a large scale in war-time. It was recognised from the beginning that road transport control in war-time presented the Government with an entirely new problem. This task had been entrusted to the Minister of Transport by the decision of the Committee of Imperial Defence in March 1937.² He was also empowered under the draft Defence Regulations to requisition property other than land, which included mechanically-propelled vehicles.

Generally, the provision and control of road passenger services by bus and coach was not expected to be very difficult. Considerable detailed information about the vehicles and operators already existed through the Traffic Area Organisation. A much more formidable problem had to be faced in controlling the goods side of the industry. For whereas the majority of public service vehicles belonged to large undertakings, the average fleet of goods vehicles was less than three, and there were no less than 200,000 separate firms owning goods vehicles to be dealt with. It was expected that some vehicles would be called on for civil and active defence in war-time, though it was recognised that requisitioning must not be indiscriminate. Some practical knowledge of goods vehicle operation would be needed, and it was thought better to keep the large units and organisations within the industry intact, and confine requisitioning to the small 'one-man' concerns. There was no precedent to be followed in working out a scheme for the war-time control of the industry as a whole. Since, however, the Ministry of Transport was responsible for the peace-time licensing of road goods transport under the Road and Rail Traffic Act, 1933, there were obvious administrative advantages in using the existing organisation as the basis of war-time control.

Certain statistical information about the numbers of goods vehicles in their various categories already existed, and during 1937 and 1938

¹ See Section (iii) of the present chapter.

² See above, p. 37.

steps were taken to make a rough check on the numbers available throughout the country to meet such war-time demands as could be known. From the returns of the Road Fund Licensing Authorities, it was known that approximately 465,000 ordinary goods vehicles and tractors were licensed in Great Britain. The expected demands on them in war-time were classified as follows:

- (a) demands from the Fighting Services for vehicles, without drivers. They estimated their needs at 20,000 vans altogether.
- (b) demands for 'stand-by' vehicles, with drivers, for various kinds of A.R.P. work, dealing with casualties, removing debris from the streets—estimated at 30,000 vehicles altogether, and/or the Fire Fighting services—20,000 vehicles.
- (c) demands for the services of vehicles with drivers for the removal of Government property from dangerous to less dangerous places.
- (d) demands for the services of vehicles with drivers for moving essential goods of all kinds if important lengths of railway were destroyed, and for abnormal traffic, if imports were diverted from Eastern to Western ports.
- (e) the continuance of trade in the country.

These estimates were necessarily very provisional. It was generally expected that war would bring about considerable changes in the functions of the road goods transport industry, as well as in the geographical distribution of vehicles. Since, however, the normal peace-time functions of the industry were very imperfectly known, it would have been pretty well impossible to make a useful estimate of the numbers of vehicles likely to be needed for say the continuance of normal trade in war-time, or for moving traffic away from the ports in the event of shipping diversion. Many of the vehicles needed for the civil and active defence services were already being earmarked in different localities, but the outlines of the picture of road transport as a whole in time of war were, as yet, ill defined.

By the summer of 1938, preparations were beginning to take a more concrete form. Preliminary discussions with the Area Traffic Commissioners were held at the Ministry of Transport in April. In July, Ministry officials met representatives of the road transport industry for an exchange of views about the proposed form of war-time control. The Emergency scheme, set up just before Munich, was based on the following organisation: (a) a Road Transport (Defence) Advisory Committee, advising at the headquarters of the Ministry of Transport; (b) Regional Transport Commissioners, each with a Regional Advisory Committee of transport representatives, in the 12 planned civil defence regions of the country; (c) District Transport Officers, with District Advisory Committees; and (d) Groups

of road transport operators, voluntarily formed, owning in the aggregate not less than 25 vehicles.

The Regional organisation was worked out so that the peace-time Area control could be adapted for war-time use. The existing Chairmen of the Area Traffic Commissioners were to become Regional Transport Commissioners in the war-time Regions (these were based on the peace-time Areas, with adjustments to make them coincide with the civil defence Regions). The Minister's powers to control road transport in war-time were to be delegated to the Regional Transport Commissioners, and the semi-judicial peace-time method of granting licences to goods and passenger operators was to be suspended in favour of a simpler permit system. The Regional Transport Commissioners were also to be empowered to represent the Minister of Transport in the control of all forms of transport, should any Region get cut off from the rest of the country in war-time.¹

Thus, in outline, stood the plans for the war-time control of inland transport at the time of the Munich crisis in September 1938. That crisis provided a good opportunity for the Government to take stock, and a stimulus to the speedier completion of defence plans. The administrative framework for the control of inland transport was tested and gaps disclosed. On the other hand there were some things the crisis could not test—for example the adequacy of the country's civil transport resources to meet the strain of war.

The general lesson drawn from the Munich crisis was that the existing transport plans were going ahead on the right lines, but needed rapid completion. Their completion depended, however, on the extent of planning in other fields of war preparation. 'The function of a transport service,' it was pointed out, 'is to provide for other services, and in many cases the needs of other services have not been defined.'

Among the many gaps disclosed by the crisis was the need to reach agreement with the railway companies about the precise form of war-time control and the conditions of the financial settlement. Although the Railway Executive Committee had been appointed, its exact functions and responsibilities had not been defined, since the 'Instructions to General Managers' issued by the Communications

¹ It was later objected that this arrangement would be unsatisfactory, because the Chairmen, who with three exceptions were not even experts in road transport matters, were not qualified to direct railway or canal operations. It was pointed out in answer to this that the basis of the Regional Transport Commissioner scheme was to provide for the maintenance of Government in the event of a breakdown of communications with the central Government. If such a breakdown were to occur, the Regional Transport Commissioner would become the Minister's representative for all forms of transport for which the Minister was responsible. Until this happened, the normal system of railway administration and responsibility of the local officers of the railways to their General Managers, and thence to the Railway Executive Committee would continue. There would also be railway and canal representatives on the Regional Transport Commissioners' Advisory Committees.

Board in 1926 were now more or less obsolete. The Government's intention was to leave the actual operation of the railways in the hands of the General Managers who formed the Railway Executive Committee, while the larger demands of the Departments for railway transport would be focussed through the Ministry of Transport. So far, however, no machinery had been constructed for co-ordinating these demands or for settling priorities. It was discovered during the crisis that it was not yet known, for example, how far the Service Departments' plans for mobilisation would conflict with the plans of the Home Office for the evacuation of children from London and the big cities. The Committee of Imperial Defence was told that 'numerous movement plans had been discussed between the Departments, military and civil, and the railways and the L.P.T.B.; but by the 1st October (1938) the Ministry of Transport had been unable to ascertain the total of these demands and relate them to the capacity of the railways'. Other railway matters still needing to be dealt with at the time of Munich were the pooling of privately owned railway wagons and the institution of penalty demurrage charges to speed up the turn-round of wagons.

On the road transport side too, the Munich crisis showed up deficiencies. It was difficult to say how well the emergency scheme for the control of road transport would have worked, since the full stress of war and the dislocation of transport expected to follow an outbreak of hostilities had not been experienced. The crisis was in fact over before the District Transport Officers could take up their posts. One troublesome problem was requisitioning. It was found that the Service Departments—which had powers to requisition vehicles in peace-time—had been able to make a start in front of the Ministry of Transport, whose requisitioning powers did not take effect until a state of emergency was proclaimed. As a result, in one large city a number of cold storage vans, indispensable for the distribution of food, had been requisitioned by the military authorities. This was plainly at variance with the intentions of the Committee of Imperial Defence that all requisitioning should be done through the Ministry of Transport, and vitiated the elaborate arrangements made for placing demands for transport with the Regional Transport Commissioners and their staff. To avoid a dangerous scramble if war did come, steps were at once taken to give the Ministry of Transport the powers it needed to take control in the period before an emergency.

Other aspects of the control scheme for road transport needed completion; more complete information about available vehicles and potential demand had to be focussed in the Regional and District Offices and the war-time road transport control had to be linked up with the Petroleum Department's fuel-rationing scheme. Since

the Regional Transport Commissioners would decide how road transport was to be allocated for various purposes, they had the information needed to assess what fuel rations should be issued. This problem had been discussed between the departments before Munich, but a combined scheme of fuel rationing and road transport control had not yet crystallised.

In the opinion of the Minister of Transport himself, one of the most serious gaps in the defence plans for transport was the lack of progress in Air Raid Precautions. This was due to a lack of agreement about responsibility for their cost. Various schemes had been formulated, but no progress made because the railway, dock and canal authorities could not agree to meet the cost of the expenditure on the basis of the Government's offer at that time.¹ Finally, the crisis impressed upon the Ministry the need for strengthening bridges on roads of military importance, and to complete repair work on roads leading out of London and other big cities. It had already been arranged that on the outbreak of war the Divisional Road Engineers of the Ministry would be available to arrange with the highway authorities for road maintenance. A survey of bridges was undertaken, and stocks of material for bridge and highway repairs were accumulated for possible war-time use. This work fell to the Roads Engineering Department of the Ministry, which had also undertaken large scale work on an agency basis for the Air Ministry for the construction of roads, aerodromes, ammunition parks, etc.

In the eleven months' breathing spell between the Munich crisis and the outbreak of war, plans to complete the framework of war-time inland transport control went ahead with renewed intensity. The Defence Plans Section, which had existed in the Ministry of Transport since December 1937, now had its duties more clearly defined. Even so, these duties were limited. The Section was in no way comparable with say the Food (Defence Plans) Department of the Board of Trade. It certainly did not plan in any wide sense of the word. It was not, for example, made responsible for studying how scarce various kinds of land transport might become under the full impact of war, taking account of motor fuel rationing, shipping diversion, the reduction of coasting shipping, the coal production plans of the Mines Department, etc. Nor did it attempt to investigate the problem of allocating transport in war-time through the application of priority schemes or by general rates policy. The Defence Plans Section was given a much more modest task. Its job was simply to edit the Departmental War Book in which the administrative procedure and organisation of the Ministry of Transport in

¹ Namely, 'good employer' precautions to be borne wholly by the undertakings, and other measures to receive a Government grant of 50 per cent. of the cost.

war-time were laid down; and to a limited extent to collate the 'progress reports' and defence preparations made by the different 'Emergency Divisions'. Even so, most of the initiative for the war-time preparations came from the Emergency Divisions themselves. Thus the so-called 'operating plans'—i.e. the schemes for the control and use of the railways, docks and road transport—remained very much outside the Defence Plans Section's control. This may explain one of the apparent weaknesses of the inland transport preparations: the tendency to plan each branch of inland transport separately and the absence of a firm policy for inland transport as a whole. For example, the 'operating plans' for the ports were worked out more or less independently of those for the railways; nor was there any general policy for supervising rates over the whole field of transport to check undesirable transfers of traffic from one form of transport to another. Coastal shipping, though very much a part of the inland transport system, was not in fact the responsibility of the Ministry of Transport at all.

In the field of long-term planning therefore, each Division was allowed a large measure of independence, and there was no well-defined policy for inland transport as a whole. Action on day-to-day matters was more closely co-ordinated. At the time of Munich, a Defence (Transport) Council, which consisted of the heads of each of the Emergency Divisions of the Ministry of Transport, under the chairmanship of the Permanent Secretary, was set up. The Council first met on 27th September, 1938, and between that time and the end of the war, had more than a thousand meetings. In periods of crisis it met as often as once a day. Undoubtedly this machinery was of value for the discussion of day-to-day problems, though it was not until 1941 that coastal shipping was represented, and the regular review of inland transport made complete.

(iii)

After Munich—The Railway Preparations

THE FRAMEWORK OF CONTROL

The real preparations for war-time railway control were completed between Munich and the outbreak of war in September 1939. At the time of the Munich crisis, much remained to be done. For the precise way in which control was to work was still undecided: the draft Order for the control of the railways had been found to be *ultra vires* the draft Defence Regulations; no agreement had yet been reached with the railways about the financial aspects of control; instructions to the Railway Executive Committee had not yet been

prepared. Moreover there was, as yet, no machinery for co-ordinating the larger demands of the various Government departments for railway transport. With the exception of the financial agreement, these railway matters had been settled before war broke out eleven months later.

The first step to be taken after Munich was the appointment of a Railway Communications Committee in November 1938. This was an interdepartmental committee, which included representatives of the three Service Departments, the Food (Defence Plans) Department, the Board of Trade, the Mines Department, the Ministry of Agriculture and Fisheries, the Air Raid Precautions Department, the Office of Works, the Ministry of Health and the Department of Health for Scotland, and the General Post Office. The chairman was a senior official of the Ministry of Transport, who had been designated Railway Control Officer when war came. Its aim was to bring the larger war-time demands of other Government departments for railway transport before the Ministry of Transport:

It would be for the various departments to inform the Minister what their transport needs were, and for the Minister to supply those needs to the best of his ability. In so doing he would obviously need the fullest information from and the closest touch with the Departments needing transport, and the Committee was intended to be the channel of communication as far as rail transport was concerned.

Thus the Committee was to provide a link between Government departments and the railways as its predecessor had done in the First World War. Moreover, where conflicting claims arose, it was to act as a machine for the settlement of priorities. Its functions were limited, however, to railway transport: the adequacy of railway facilities but not of other forms of transport was to come within its scope.

The Committee first met on 24th November, 1938, and began the task of drawing up fresh instructions to be carried out by the Railway Executive Committee in the event of war, to replace the old 'Instructions to General Managers' compiled in 1926 by the Communications Board.¹ The Railway Communications Committee itself met only three times before the outbreak of war. Detailed consideration of matters before the Committee was delegated to three sub-committees, representing the Service Departments, the Civil Defence Departments and the Supply Departments. While the Railway Communications Committee and its sub-committees did useful work in making movement plans to be carried out on the outbreak of war,

¹ Whereas the 1926 Instructions dealt only with Service Department needs, the new draft was intended to cover also the needs of the Civil Departments. The creation of the Railway Communications Committee coincided with the formal winding up of the Communications Board.

and in framing priorities for different categories of railway traffic, very little headway was made in other directions. As we shall presently describe, these committees failed to estimate the adequacy of railway resources to meet expected traffic demands. Nor was the Railway Communications Committee able to report progress in working out the charges for railway traffic on Government account in time of war.¹

Meanwhile, steps were taken to clarify the legal authority for railway control in war-time. Immediately after Munich, the matter was taken up by the War Legislation Committee, but progress was delayed once again because the Treasury had not decided on the financial basis for control. The matter was still unsettled in the spring of 1939, when the Treasury was told that in the absence of a new instrument of railway control, the Minister of Transport proposed to go ahead on the lines of the draft Order prepared in September 1938. Eventually, however, it was decided to substitute an entirely new Defence Regulation which would give the Government power, through the Minister of Transport, to take 'control'—but not as the earlier instrument provided, 'possession'—of the main line railway companies and the London Passenger Transport Board. This decision was taken without waiting for the outcome of the financial talks with the railway companies, and when war broke out, the Government took control of the railways even though the terms of the financial agreement had still not been decided.

While the legal and financial aspects of railway control were still being slowly worked out, the preparation of the new 'Instructions to General Managers'² was completed. The draft was discussed with the Railway Executive Committee and submitted to the Railway Communications Committee for approval. The final document was printed in April 1939. The 'Instructions' laid down the final administrative procedure for the control and operation of the railways in war-time:

In a major emergency, the Minister of Transport will be responsible for the provision, allotment, and co-ordination of internal transport services, and the railways will be brought under the Minister's control. The responsible officer at the Ministry of Transport will be the Railway Control Officer, who

¹ The members of the Railway Communications Committee were told in August 1939 that 'the terms of compensation under which the Government would control the railways had not yet been settled, but would most likely involve payment by Departments for carriage of traffic on Government account during war-time. It was intended that the terms of compensation should be such that they would be an incentive to the railway companies to carry as much traffic as possible with the maximum degree of efficiency and due regard to economy, and to Departments to make the most economical use of the railways.'

² The full title of this document was *Instructions to General Managers of Railways in Great Britain as to the control of the Railways and the working of essential traffic thereon during a major National Emergency.*

will be assisted by a Railway Communications Committee of representatives of other Government departments concerned with traffic by railway.

The Railway Executive Committee was to be responsible, under the Minister of Transport, for the operation of the railways as a unified whole.¹ At the highest level, relations between the Government and the railways were to be maintained through the Railway Control Officer. He would make known direct to the Railway Executive Committee the general needs of Naval, Military, and Air Force traffic, of other traffic declared by the Government to be essential, and the priority to be given to the various classes of such traffic. The Railway Control Officer would tell the Railway Executive Committee as far ahead as possible of any large movements of traffic likely to take place, and the Committee would then give the appropriate instructions to the railway companies concerned.

Besides these arrangements for dealing in advance with large movements of traffic, there was to be a network of local machinery. Local liaison between the Government departments needing transport and the railways was to be maintained by the appointment of Movement Officers. These officers would represent their Government department in the various localities. The railway companies themselves were to nominate liaison officers as their local representatives to keep in close touch with the Movement Officers. The duties of Movement Officers were:

- (a) to act as a channel of communication between their Departments and the railway liaison officers.
- (b) to authorise minor moves and make arrangements for them with local railway officials.
- (c) to implement decisions regarding major moves, and to make detailed arrangements with the local railway officials, when necessary.
- (d) to keep their Departments advised of the railway position.

Subject to the general traffic priorities, the railway companies were to carry out the instructions given them by Movement Officers unless they clashed with moves ordered by another authority, or caused such demands on railway resources that they could not be met. Where

¹ It will be recalled that the Railway Executive Committee had been appointed to act in an advisory capacity in September 1938 with the following terms of reference:

To advise the Government with a view to securing that in a national emergency, the powers and duties of the Railway Companies and the L.P.T.B. are exercised in the interests of the public safety or for maintaining supplies and services essential to the life of the community.

The Committee was to continue to act in its advisory capacity pending a decision to take control of the railways, when it would become the executive body acting on behalf of the Minister.

difficulties of this kind occurred, they were to be referred upwards to the Railway Executive Committee for a decision.¹ Local liaison between the railways and other forms of inland transport was to be maintained through the appointment of Railway Officers to the Regional Transport Advisory Committees.² Similarly, with the object of avoiding delays to shipping and congestion on the quays and in port areas, Railway Officers were appointed to the Port Emergency Committees, in whose hands the day-to-day war-time working of the ports was to rest.³

So much for the broad framework of war-time control. While this was being completed, the nature of the big railway movements for the mobilisation of the armed forces and the dispatch of field forces overseas was outlined. Pre-arranged movements were worked out between the Service departments and the railway companies, and were made known to the Railway Control Officer. A procedure was also set out for movement plans to be framed after mobilisation. Detailed plans were made for the provision of civilian casualty evacuation trains, thirty-four of which were to be made available by the Railway Executive Committee on the outbreak of war, together with a number of military ambulance trains. Preparations were also put in hand for providing the transport for the evacuation of children from London and the large cities. For London, the Minister of Transport entrusted the task to the Vice-Chairman of the L.P.T.B. Elsewhere, local Railway Officers were appointed to plan the detailed movement with the evacuation officers. The plans were based on the assumption that the evacuation movement would be completed rapidly before the actual outbreak of war, though there could, of course, be no guarantee that this would be possible.⁴ As the various plans were agreed locally, they were to be reported to the Railway Executive Committee and the Ministry of Transport for approval. The Minister of Transport was to give the signal to the railways when evacuation was to start. Among the other detailed instructions given

¹ Railway Traffic Officers (familiarily R.T.O.s) were also to be detailed, by one or more of the three Service departments, to those railway stations where the amount of Service traffic was large. These officers were to act as representatives of the Movement Officers in such districts. Their responsibilities included the dispatch and reception of members of the Services, both individually and in small bodies, and of Service stores.

² See above, p. 54. These Railway Officers were to act as advisers on railway matters to the Regional Transport Commissioner in the event of a Region being cut off from the rest of the country.

³ *Merchant Shipping and the Demands of War, op. cit.*, Chapter II.

⁴ The railways were told that 'while it is desired that the evacuation movement should be carried out as expeditiously as practicable it must not monopolise the railways to the exclusion of other essential services. It is not unlikely that the mobilisation of the armed forces will be proceeding at the same time as the evacuation movement and that other urgent movements of Service personnel and material will be taking place. The evacuation time-table should therefore be so planned that it does not prevent the uninterrupted operation of a service of long-distance passenger trains, though some reduction of normal services will no doubt be inevitable, or of essential goods services.'

to the railways at this time were the procedure to be followed if communications were interrupted, and in cases of congestion of traffic. The Minister of Transport was to be the sole authority for requisitioning plant and property of railway companies, and no Service or Government officer, except the Railway Control Officer, was to be given authority to detain or divert railway rolling stock.

Finally, the 'Instructions to General Managers' set out a list of priority traffics. In this respect the Instructions were novel, since they provided for the expediting of a number of vital civilian traffics besides military traffic. When the first priority list was drawn up, such traffics as A.R.P. stores and equipment, coal for public utility undertakings, farm livestock, feedingstuffs, foodstuffs for human consumption, hydrocarbon oils, medical stores, pit props and telegraph and telephone stores were all declared essential.¹

This completes our survey of the administrative measures for the war-time control of the railways. What then were the broad purposes of this control? It must be recognised that the problem of controlling the railways in war was in no sense comparable to that, say, of controlling deep sea shipping. For the railways, control on so comprehensive a scale was neither necessary nor possible. For even in time of war, demands for railway services come from many millions of private consumers. The types of services demanded are enormously varied, and do not lend themselves to any simple system of regulation or rationing. It needs to be emphasised that the intention to take control of the railways could not and did not mean that each separate demand for railway services in war-time should be sanctioned by the Ministry of Transport, who would then allocate the supply of transport to meet those demands it approved. The Ministry of Transport quite properly left the responsibility for the operation of the railways to the experts. So far as the records go, there appears to have been no questioning of the principle, hallowed by the experience of the previous war, that the General Managers, acting in committee, should direct the co-ordinated operation of the railways, subject to directives on policy framed by the Minister of Transport. No arrangements were made to introduce experienced railwaymen into the Ministry as temporary civil servants, or to appoint civil servants to the Railway Executive Committee. Liaison was, for the most part, left to the telephone or to periodic meetings.

What war-time control of the railways did imply was that railway services would continue to be provided for the public in much the same way as in peace, but that the Government should lay down the broad lines of policy. Thus the Ministry of Transport would instruct

¹ The railways were also instructed on the outbreak of war to do all in their power to secure an adequate supply of empty wagons and locomotives to collieries and remove loaded wagons promptly from colliery sidings.

the railways on such matters as the classes of traffic to be given priority, additional railway services needed, and the types of services to be cut down to make room for more essential traffics. Even on matters of this kind, the Government would have to rely on the Railway Executive Committee for advice. The Ministry of Transport would also have the task of supervising the movement of traffic controlled by other Government departments—traffic which was to increase enormously during nearly six years of war. In short, the purpose of the elaborate machinery of central and local control of the railways and the traffic on them was first to communicate the Government's policy to the railway companies, and second to provide an organisation to deal with the demands of Government departments for railway transport as they arose.

We shall see later, how, as the volume of Government traffic grew, gaps and weaknesses were found in the initial system of control.¹ On the one hand the problems of controlling the railways centrally proved difficult in practice. The Railway Control Officer did not, at the beginning, attend the meetings of the Railway Executive Committee, and liaison between the Ministry of Transport and the railways was not all that might have been desired. On the other hand, liaison between the Ministry of Transport and the Government departments using transport was found to be inadequate, not only locally, as in certain of the large ports, but at the centre, where the Railway Communications Committee machinery broke down and had to be replaced by a stronger organisation covering not only the railways but inland transport as a whole.

The close connection between railway and port problems has already been emphasised and, at this point, we must digress briefly to outline the preparations for the control of the home ports in war-time.² It will be recalled that the final report of the Headlam Committee was accepted by the Committee of Imperial Defence in April 1937. At this meeting, the C.I.D. also decided that henceforward the Ministry of Transport should provide the headquarters organisation necessary to operate the ports in war-time and that it should take over the task of formulating the pre-war plans. This was not, however, a task which one Ministry could profitably tackle in isolation, not merely because the war-time port problem was one of unusual

¹ It might have been argued that the decision to take 'control' and not 'possession' of the railways did not give the Ministry of Transport all the powers it needed. In practice the distinction between 'control' and 'possession' was not significant. For example it might have been open to question whether the Government was legally entitled to send railway locomotives overseas without the consent of their owners. In practice no dispute arose owing to the willing co-operation of the railway companies, and the Government did not find it necessary to extend its powers.

² The preparations are dealt with fully in *Merchant Shipping and the Demands of War*, *op. cit.*, pp. 24-34.

complexity, but because it was one which inevitably affected many Government departments and a variety of separate port and transport users and suppliers. Although tentative proposals were made in some quarters for the appointment of a minister, free from departmental duties, to consider port and transport problems as a whole, the initial machinery which was evolved for co-ordinating the various aspects of port and transit working was provided not at the Ministerial level but by the Port and Transit Standing Committee.¹ This body consisted of officials from Government departments which used and supplied port and transport facilities—there were some sixteen departments concerned by the end of 1940. Between April 1937 and the Munich crisis in September 1938 the Committee met on only three occasions. Between Munich and the outbreak of war, however, it met twelve times. The Port and Transit Standing Committee was faced with fundamentally the same problem as had confronted the Headlam Committee, namely to collect and co-ordinate departmental estimates of imports and to assess the capacity of the western ports to handle the estimated traffic. Like the Headlam Committee, the Port and Transit Committee found this task intractable. Indeed, by the end of 1938, Departments had scarcely moved any nearer to formulating estimates of their war-time imports.

In November 1938, however, the Port and Transit Standing Committee acquired a new chairman and from then on met more frequently. From the nature of the problem confronting it, the Committee could hardly have been expected to produce spectacular results. Between Munich and the outbreak of war, however, it did accomplish a good deal that was useful. As will be explained subsequently, fresh examination of the experiences of the First World War, together with a study of calculations made by the Food (Defence Plans) Department as to the nature of and extent of its war-time import programme, moved officials of the Ministry of Transport, Port and Transit Division, to explode the more dangerous fallacies in the reasoning of the Headlam Committee and thereby to rebuild that part of defence policy which concerned the ports on a firmer foundation.²

The Port and Transit Standing Committee was concerned with policy and planning. For efficient day-to-day port working in war-time some new form of machinery would be needed to supersede the ordinary peace-time machinery of storage and distribution. Shortly

¹ The terms of reference of the Port and Transit Standing Committee were: to prepare complete schemes for the reception in time of war at ports in the United Kingdom of all shipping (including shipping which may have to be diverted . . .), the distribution of all commodities passing through the ports, and the evacuation of essential commodities stored at ports within the danger area.

² See below, Chapter V.

after Munich the basic component of this machinery was devised. This was known as the Diversion Room, which, after the outbreak of war, met daily at 10 a.m. to control the distribution of incoming ships between ports. This was to become the pivot of the port and transit control, in which the main users and suppliers of port and transport facilities, as well as the authorities responsible for the control and protection of shipping were represented. The Diversion Room was not only the focal point for the information needed for the effective day-to-day distribution of shipping between ports, but an executive body with authority to decide where each ship should be berthed.¹

Such was the machinery for securing the most efficient allocation of port capacity available at any given time. As for the efficient day-to-day working of the individual ports themselves, this had to be left largely to local planning. The machinery set up for this purpose took the form of Port Emergency Committees, which were subject to instructions from headquarters. These bodies, which represented a variety of local interests, were intended primarily to expedite the turn-round of shipping and ensure the most rapid clearance of the ports and were set up in all the principal ports of the United Kingdom. In practice, as will be seen later, these committees, during the critical period of the war after the fall of France, proved unable to exercise sufficient authority on the spot to prevent congestion from arising.

RAILWAY CAPACITY AND RESOURCES

So far we have concentrated on the administrative side of the railway preparations: the creation of the machinery of control, and the working out of movement plans to be carried out on the outbreak of war. We must now look at the other side of the picture. What of the adequacy of the railway system to meet the heavy demands of war-time traffic?

As was explained earlier, when the preparations for war were begun, the railways took an optimistic view of their war-time abilities, and this view was broadly accepted by the Government. The experience of the Munich crisis disclosed nothing about this side of the defence preparations, and little discussion on the matter seems to have ensued in the months immediately afterwards. The assumptions made in 1937 still went unquestioned.

With the appointment after Munich of the Railway Communications Committee, it seemed that this problem of measuring the likely volume of war-time traffic in relation to the capacity of the railways

¹ From 1941, it was also empowered to decide on the means of transport to be employed in clearing a ship's cargo from the port.

might be tackled more persistently. Although the Committee's terms of reference¹ conceivably brought the task of determining the 'adequacy of railway facilities' within its scope, the records of the Committee show that the progress made in this direction was disappointing. The sub-committee of the Railway Communications Committee made responsible for investigating the problem was that representing the Supply departments, which included the Food (Defence Plans) Department, later to become the Ministry of Food, the Ministry of Supply, and the Mines Department, which would be by far the largest users of railway transport in war-time. The sub-committee met only twice, however, before the war and in the first nine months of 1939 it did not meet at all. Its work was badly hampered because most Government departments had at this time no more than a hazy idea of their likely war-time transport needs. On the other hand, the Ministry of Transport appears to have been slow, not only to press other departments to work out their transport requirements, but to draw the obvious conclusion from the few estimates it did get from them: that railway transport would be scarce in war, and that railway capacity might not be sufficient. The most useful pre-war estimates of war-time transport needs came from the Mines Department and the Food (Defence Plans) Department, and are worthy of examination.

The Mines Department was able to work out roughly in advance how much coal would have to move by rail in time of war. Between 1928 and 1938, the tonnage of coal conveyed each year by the main line railways (including the companies' free-hauled traffic) had varied between 177 million and 221 million tons. In 1937, this traffic had been approximately 201 million tons, which worked out at 8,900 million ton-miles.² The average length of haul for railborne coal traffic in peace-time was about 44 miles.

According to the Mines Department, war-time demands for coal (for inland and export) would amount to 267 million tons per annum.³ In 1937, 84 per cent. of the total output of saleable coal had been railborne, and on this basis it was reckoned that the railways would have to move roughly 224 million tons annually in war-time. On the face of it this was not an insuperable or abnormally difficult task. The real difficulty would begin if, as was expected, some or all of the large movement of coal by sea off the East coast were cut off by enemy action. In that event the railways, which were the only alternative means of transport for a commodity as bulky as coal, might have to move altogether between 240 and 250 million tons per annum.

¹ See above, p. 59.

² *Railway Returns*, 1938, p. 24.

³ See W. H. B. Court, *Coal*, in this series (H.M.S.O. 1951), Chapter II.

Furthermore, the greater part of this additional tonnage—that shipped normally from the North-East coast of England to London and the South—might have to be carried for much longer distances than was normal.

The most important aspect of this problem was supplying the public utility undertakings in those areas likely to be bombed. In 1937, a sub-committee of the Committee of Imperial Defence had been appointed to look into this question together with the more general one of the adequacy of railway wagon stocks for the internal distribution of coal. Attention was directed to those public utilities situated east of a line from Hull to Bournemouth; the crux of the problem was supplies to the London area. Every year, the London public utility undertakings consumed some $10\frac{1}{4}$ million tons of coal, of which some $9\frac{1}{4}$ million tons were supplied coastwise, mainly from the North-East coast ports.

To divert this traffic to the railways would not be easy. For one thing, even if coal for London could be supplied from pits nearer at hand than the normal source of supply in Northumberland and Durham, the length of the rail haul would be none the less considerable. Moreover, many of the London public utilities were laid out to receive their coal from the river, and insufficiently equipped to receive more than a small part of their total requirements by rail. At the same time, the railway bridges serving those south of the Thames were thought to be vulnerable to air attack.

On investigation, however, the problems of transporting coal seemed to be less difficult than had been thought. For it seemed, in the first place, that there would be enough wagons. A census of railway wagons taken at the end of 1937 showed that there were some 638,000 privately owned wagons, of which 592,000 were coal and coke wagons. Altogether, stocks of privately owned and railway owned mineral wagons amounted to 737,000. The privately owned wagons had in peace to be sorted by the railway companies and returned to their owners empty, and there were obvious wastes in continuing such a system in war-time. Moreover, the collieries often used their wagons for storage and other purposes, and to that extent reduced the total wagon stock available for railway working. With this in mind the sub-committee recommended the pooling of privately owned wagons with railway owned wagons and the imposition of reasonable demurrage charges to quicken turn-round. On these conditions, it was thought that wagon stocks would be adequate to move the 240–250 million tons of coal per annum contemplated by the Mines Department. These pooling measures were put in hand.

Some discussion took place about the need for requisitioning these wagons. While the railways wanted to take control of the wagons on simple hire terms by agreement with the owners, the Treasury and the

Ministry of Transport thought that as a short-term policy, requisitioning would be necessary, since it would take too long to reach agreement with some 5,000 owners. Although the Mines Department was not happy about this, it acquiesced, and when war came the Ministry of Transport issued an Order under the Defence Regulations requisitioning all privately owned railway wagons—with the exception of certain wagons not suited to general use—and directing the Railway Executive Committee to pool the wagons thus requisitioned with the wagons owned by railway companies.¹ This measure brought the stock of wagons over which the Railway Executive Committee had direct control from 660,000 to 1,252,000. Although an increase in the scale of demurrage charges was discussed before the war, the final decisions to put this into effect were not taken until after war began.

So much for the problem of wagon supply. There were other complicated technical questions to be settled in supplying coal to the London public utilities. A scheme was worked out in detail by the railway managements and the Port of London Authority for supplying these undertakings with coal by rail and barge, on the assumption that the sea route to the Port of London would be completely closed. Under the scheme, coal would be dispatched direct by railway wagons to the gas and electricity works to the limits of their capacity to receive and unload them, while that proportion of coal supplies that could not be received direct in this way would be unloaded into barges at waterside depots and supplied from the river. Thus of the 10·5 million tons to be supplied annually to the London public utilities, 4·4 million tons would be railed direct, and 6·1 million tons supplied by barge.

Thus the plans for the war-time distribution of coal were made, and accepted by the Committee of Imperial Defence; the railways, it was assumed, would be capable of keeping the London public utilities supplied even if coastwise deliveries were completely cut off, provided privately owned wagons were pooled and coal was drawn from the nearest coalfield. In short, the view that the railways would be able to move the 240–250 million tons of coal for which the Mines Department was planning was accepted. This assumption proved in the event to have been optimistic. Even before the summer of 1940 when the French collapse and the beginning of air attacks brought complications in the whole problem of coal distribution, the difficulty of supplying coal to the South of England had produced a serious transport crisis.

¹ The Board of Trade had been given power in the First World War to take possession of privately owned wagons, but no pooling scheme was ever put into effect. In spite of the measures taken on the outbreak of war in 1939, the complete pooling of company owned wagons did not come until the beginning of 1941. See below, Chapter VI.

The Ministry of Transport for its part seems to have accepted these pre-war plans too readily. Although the Mines Department furnished its estimates to the Railway Communications Committee, that body made no serious attempt to investigate them in relation to other expected war-time demands on the railways. Too little account appears to have been taken of such things as the likely interruptions to railway traffic from enemy air attack, or the capacity of the main line and cross-country routes for carrying coal traffic. At worst, the plans that were accepted would mean that some 17 million tons¹ of coal normally carried by sea from Northumberland and Durham to London and the South—a distance of 250 miles or more—would have to go by rail.² It was clear that the average length of the rail haul for coal traffic would amount at least to two or three times the normal average of 44 miles, but the Ministry of Transport did not attempt to work out these coal transport demands in terms of estimated ton-miles or wagon-miles.

As events turned out, the war-time coal transport problem, burdensome as it was, never became as difficult as the pre-war estimates might, on careful examination, have suggested. There were several reasons for this. First, the coal export trade to the Continent ceased after the summer of 1940. Second, coastal shipping, far from ceasing entirely, was able to move a sizeable proportion of its normal tonnage of coal throughout the war. Third, the output of saleable coal in Great Britain declined appreciably—the war-time weekly average never approached the level estimated by the Mines Department before the war.³ These questions will be taken up in later chapters.

The only other advance estimates of war-time transport needs—not counting military movement and evacuation plans—came from the Food (Defence Plans) Department. As early as 1937, that department had worked out detailed estimates of the additional transport likely to be needed if wholesale East to West shipping diversion

¹ That is to say, some 11 million tons of coal normally conveyed coastwise to public utilities east of a line from Hull to Bournemouth (including London) and in addition some 6 million tons conveyed by sea for domestic and industrial purposes in the London area. The problem of supplies for essential industries in the Thames and Medway areas and for the public utilities outside the London area, including those in the South West of England was also investigated by the Mines Department. See *Coal, op. cit.*

² The original idea was to supply London from the nearest coalfield producing suitable coal. Thus supplies for London and the South would largely be met from the Midlands. It was later pointed out that if this were done, Midland coal would have to be withdrawn from other districts such as Lancashire, for which the only source of replacement was Durham. In these circumstances it was thought that the demands on transport would probably be less if some part of the London coal could be supplied direct by rail from Durham. It was not thought possible to supply southern and south-western England from South Wales by rail on account of the limited capacity of the Severn Tunnel. To relieve the railways, the possibility of handling Welsh coal at North Somerset ports was under consideration.

³ That estimate provided for an output of 267 million tons per annum or 5.1 million tons per week. The war-time weekly output rarely rose much above 4 million tons.

were begun. These estimates were based on three assumptions: first, that the East coast ports would be completely unusable for importing food; second, that the quantity of the more important foods and feedingstuffs arriving from overseas would be the same as during recent years; third, that no movement of population would occur. It was calculated that the estimated additional transport requirements to supply the 'danger area' from the West coast ports would be 982 million ton-miles, of which the bulk would have to be carried by rail. The gross ton-mileage of railway freight traffic (excluding coal and minerals) being approximately five and a half thousand millions per annum, it was estimated that if all this additional food traffic were to be moved by rail, it would 'represent an increase of about one-sixth of the normal capacity of the railways'.

The nature and extent of the other big demands likely to be put on the railways were not nearly as well known as those for coal and food. The Railway Communications Committee therefore found itself without the information it needed to fulfil its appointed task of finding whether or not railway facilities would be sufficient and it came to no conclusion on the subject.

Meanwhile, however, officials in the Ministry of Transport who were responsible for Port and Transit matters and had been working on plans for the diversion of shipping to the West coast ports, were taking a more sombre view of the capabilities of the transport system. When the question of diversion of shipping came before the Committee of Imperial Defence in the spring of 1939, the Minister of Transport (Mr. Leslie Burgin) drew the Committee's attention to the records of the experience of the First World War and the reports of 1918, all of which cast grave doubts on the practicability of large scale shipping diversion. 'In spite of the great development of road transport since 1918', he pointed out, 'the Ministry of Transport has no reason for doubting the general validity of these conclusions under present circumstances.' Reviewing the conclusions about the adequacy of inland transport reached by the Headlam Committee two years previously, the Minister thought them 'optimistic', particularly since the prospective fuel shortage would reduce the use of road transport for long hauls, and since the capacity of the railways would be limited on account of the needs of civil evacuation and the demands of the Services. He went on to warn the Committee that:

there are difficulties in placing a sudden demand on the railways for increased traffic in unfamiliar channels . . . the trading habits of the community pass goods from the ports to their destinations through complex but relatively well defined and regulated channels which have been built up to meet the normal demand, and in general the length of haul has been reduced to a minimum. Any alteration of those channels is likely to cause

congestion by making a port handle more than it can reasonably manage, or by upsetting normal trading habits in controlling the progress and movement of goods, or by throwing a sudden and heavy burden upon inland transport. Congestion at any one point has widespread effects and when once it starts it increases in geometric rather than arithmetic progression, and is increasingly difficult to overcome. The prevention of congestion is one of the first duties of any regulated transport organisation.

The Food (Defence Plans) Department's estimates were taken to illustrate the extent of the likely burden, since this additional traffic alone might amount to one-sixth of normal railway merchandise traffic. The Minister of Transport thought that 'exact quantification of the additional traffic which the railways would be called upon to handle at any given time (was) impracticable, but whatever the proportion, expressed in terms of total capacity, it would in fact be concentrated in overwhelming volume on the connections radiating from Plymouth, Bristol, the South Wales ports, Liverpool, Manchester and Glasgow. Doubts must be entertained of the practicability of adding a heavy burden of this character to the railways' capacity until they have had the opportunity to adapt its use to the new conditions.'

Thus for the first time, the general confidence about the war-time capabilities of the railway system was called into question. At any rate this belated discovery moved the Committee of Imperial Defence to doubt the wisdom of a policy of prolonged large-scale shipping diversion, and it was now decided that 'the general principle for dealing with . . . imports in time of war should be to make use to the greatest possible extent of normal facilities until prevented from doing so by enemy naval or air action, by congestion at the ports or inland, or by supply conditions'.¹ After six years of discussion it was thus discovered that the lessons of the experience of the First World War, which had been preserved in the Report of 1918, were, after all, still generally sound.

Although the Ministry of Transport was beginning to have its doubts about the abilities of the railway system to meet the expected heavy demands of war, it moved no further in the few months that remained before war broke out towards working out the nature and extent of the likely war-time burden or consequently towards finding out how well the railways were equipped to sustain it. The apprehension which some Ministry of Transport officials were now beginning to show was not shared by the railway companies. In the last

¹ Broadly speaking, wrote a senior official of the Ministry of Transport in August 1939, our intentions as to the diversion of shipping are that:

- (a) we shall secure a precautionary diversion in the precautionary period—if there is one—and during the early days of a war—if there is one—and
- (b) when we know more about the enemy's intentions we shall divert particular ships only as and when the need arises.

few months of peace, approaches were made by the Ministry to the companies suggesting that additional railway facilities should be provided in anticipation of war. The railways, however, turned down these suggestions; they thought such facilities unnecessary.

In March 1939 the Ministry of Transport, acting on the advice of the Committee of Imperial Defence, approached the Railway Executive Committee on the question of providing alternative termini and goods yards as an insurance should existing points be knocked out. The railways replied that they had no such plans. They argued that such facilities would be of no use to them in peace-time, and they were unable to meet the cost of providing them. They thought that the best procedure in the event of damage would be to arrange for quick repairs so that facilities could be restored at once.¹

Meanwhile, Ministry of Transport Railway Inspecting Officers were displaying renewed anxiety about the 'bottlenecks' on the railway system, which might become seats of serious congestion in war-time and they urged that the matter be taken up at once.

The Ministry of Transport therefore approached the railways proposing that immediate attention should be given to the re-laying of certain temporary junctions laid in the First World War to facilitate traffic crossing the River Thames. They also suggested an examination into the need for physical measures at 'bottlenecks' on the railway system; the section of line between Newport and the Severn Tunnel was a case in point. The Chairman of the Railway Executive Committee considered this unnecessary. He thought that, if pressed, the railway companies would probably answer the Ministry by pointing out that this was a question well within the competence of railway officers who were taking all steps possible. In his view, 'it was impossible to envisage all the contingencies that might arise in the event of war, and it would be a mistake, at a time when our energies were already fully occupied, to plan for contingencies that might never arise . . . the wiser course was to await the event. The network of railways in this country was such that if one route was seriously damaged, it would always be possible to divert traffic and send it by another route or routes which, although not so convenient as the old, would be reasonably satisfactory.' Ministry of Transport officials were more cautious. They pointed out that they were unaware of any works recently carried out to improve the more obvious places where congestion was likely to arise, and that these places must be well known to the companies. The Railway Inspecting Officers wanted

¹ After the experiences of the bombing of 1940-1941, the railway companies altered their views and sought and obtained permission from the Government for considerable decentralisation of their goods shed traffic in the London area. The L.M.S. was the first company to take action in this way by improving the facilities at Hendon after their Somers Town goods station had been damaged by the enemy.

the matter looked into, and suggested a review of 'bottlenecks', junctions, and yards, etc., assuming say 100 per cent. increase in traffic, and as illustrations mentioned Bristol, Yate, the L.M.S. line serving Gloucester, Cheltenham, and Birmingham, and between Weaver Junction and Crewe. The railways, however, showed no enthusiasm. It was not until shortly after war had begun that, under pressure from the Ministry of Transport, they came forward with proposals for new works to facilitate the flow of war-time traffic, to be paid for by the Government.

Before the war, therefore, the railways remained confident of their abilities. No new lines or railway works were put in hand to prepare them for the strains of war-time traffic—improvidence which was to have unfortunate results when the effects of total war made themselves felt. On the other hand, although a late start was made, foresight was shown in equipping the railway system to meet attack from the air. Official discussions on Air Raid Precautions for the railways had been going on throughout the nineteen thirties, and at the end of 1937, a Technical Committee of railway experts was set to work to make concrete plans. Early in 1938, the Committee put forward a comprehensive scheme for precautions to cost £5·2 million altogether, of which £1·2 million would be for the protection of railway staff—a charge to be met by the railway companies as 'good employers'. During 1938, however, nothing was done to put these proposals into effect, since it was not yet agreed who should pay for them. The Railway Technical Committee had indeed seen fit to point out that unless the financial questions could be quickly settled, 'the railways of this country may be caught totally unprotected against an emergency'.

It was nevertheless some time before the Treasury could be induced to agree to pay the whole cost of Air Raid Precautions for the railways. Both the Treasury and the Home Office wanted to treat the railways as public utilities, which would pay one half of the cost of A.R.P. themselves, while the Government paid the other half. The Ministry of Transport, on the other hand, accepted the view that the railways ought to be treated as a special case,¹ and given more generous help. The railways, it was argued, would be the Government's responsibility in time of war, and their worsening financial position made it impossible for them to pay for all the A.R.P. measures that were needed. After prolonged discussion, the Treasury agreed to the Ministry of Transport's proposals, and by the end of 1938, the

¹ Early in 1938 the Home Office was finding cause for concern that the railways were 'spending time on proposals which had not the ghost of a chance of being put into execution. We should have to make do on the railways as in other spheres with "matches and string" expedients.' Less than a year later, however, the railway proposals had been accepted by the Government.

Government had undertaken to bear the whole of the cost of railway A.R.P. measures, excluding the 'good employer' precautions.¹

In all, the Government spent about £4 million before the war on Air Raid Precautions for the railways, £ $\frac{3}{4}$ million of this being set aside for the London Passenger Transport Board. The whole of this expenditure was supervised by the Ministry of Transport, and covered a wide variety of work. On the main line railways it included the strengthening of signal boxes and power stations, the accumulation of emergency stores, emergency lighting arrangements, the provision of breakdown trains, and the strengthening of important viaducts and bridges. By the time war broke out, this work was well under way. London Transport faced some particularly difficult problems. The 'tube' system was highly vulnerable to bombing on account of the danger of flooding from the Thames, or from sewers and water mains. An elaborate system of protection was devised, including the provision of flood-gates on the under-river sections of the Bakerloo and Northern lines and also on the District line. Practically all of this work was completed by the end of 1939.

Apart therefore from this expenditure of public money to keep the railway system working in the event of aerial attack, nothing was done to improve the facilities of the railways in anticipation of war. It was still widely believed that the railways could perform virtually whatever tasks were demanded of them in time of war.² The railways themselves rated their war-time capabilities highly—too highly as it turned out. The Government, which had started out by sharing the confidence of the railways, only began seriously to question it in the few months immediately before the war.

(iv)

The Emergency Road Transport Organisation

The Munich crisis was not a complete test of the limited preparations made for controlling road transport in time of war. It did, nevertheless, show up a number of weaknesses. Among the matters reported to be in hand immediately after the September crisis were arrangements for:

- (i) bringing control into effective operation before an emergency;
- (ii) making more information available in the regional and

¹ The railways undertook to repay one half of the cost of precautionary measures to the Government out of any excess by which their war-time revenues exceeded the base figure to be fixed in the railway financial agreement.

² See Memorandum prepared by the Chairman of the Railway Executive Committee, indicating the nature of transport conditions during the first three months of war. May 1939. Appendix IV.

- district offices about numbers of vehicles and the likely demand for them;
- (iii) limiting requisitioning powers to the Ministry of Transport;
 - (iv) linking the Ministry of Transport scheme for road transport control with the Petroleum Department's plans for motor fuel rationing.

The crisis had plainly demonstrated the need to bring together the plans for fuel rationing and for road transport control under one organisation. During 1938, while the Ministry of Transport was slowly working out its emergency plans for road transport, the Petroleum Department was making separate plans for the rationing of motor fuel. The Government now recognised that the most pressing limitation on the use of road transport in war would be scarcity of imported fuel; the Oil Control Board had fixed the allocation for goods and public service vehicles¹ at no more than 75 per cent. of normal peace-time consumption. Both the Ministry of Transport and the Petroleum Department, therefore, had a direct concern in the uses to which road transport was to be put in war-time; the former in seeing that essential transport needs were met, the latter in seeing that fuel was not wasted in providing unnecessary transport services. After Munich, the Government took the logical step of combining fuel rationing for road transport and its control under one organisation under the Ministry of Transport.² At the same time, the Government's war-time road transport policy became more sharply defined. Stress was now laid on curtailing the use of road transport in war in order to economise in imported fuel. It was now proposed that the function of road goods transport in war would be principally short-distance distribution rather than long-distance haulage; its flexibility would enable it to be adapted to changing conditions, and in particular it would be used to clear goods from railheads rather than to carry long-distance traffic in competition with the railways. In short, the Government's road transport policy for war-time was to transfer long-distance traffic to the railways, on the assumption that road transport resources would be scarce while the railways would have capacity to spare.

Between Munich and the outbreak of war, the administrative

¹ Roughly goods vehicles are lorries and public service vehicles are 'buses. The former range from traders' local delivery vans to heavy long-distance lorries on contract or hire work. The latter cover all vehicles seating eight or more persons, whether they are used for local 'bus services, long-distance express coach services or a day's trip to the seaside.

² The Ministry of Transport was concerned only with fuel rationing for goods vehicles and public service vehicles (and some vehicles operating under goods licences but not carrying goods, e.g. hearses, showmen's vans, contractors' mobile plant, etc.). Petrol rationing for private cars, motor cycles, taxi cabs, etc., remained the responsibility of the Petroleum Department. The Oil History should be consulted therefore for a full account of the whole scheme for Motor Spirit Rationing.

machinery for war-time road transport control was completed, though the Emergency Road Transport Organisation, as it was called, was based on the scheme worked out just before Munich.¹ Detailed operational control of 228,186 separate firms and 513,147 vehicles² being out of the question, the aim of this scheme was to reduce the large number of units with which the Ministry of Transport had to deal. The Regional Transport Commissioners were instructed to revise the list of districts provisionally selected by them in September 1938, and to subdivide them into sub-districts based, as far as possible, on convenient railheads. The group system was to be modified by grouping vehicles according to function and type—groups were to be localised, and were to consist, as far as possible, of vehicles used in peace-time for the same sort of work³—and by imposing a maximum size of 100 vehicles as well as the previous minimum of 24. (These limits could be varied at the discretion of the Commissioners where the functions and economic characteristics of the industry made larger or smaller groups necessary.) Thus the number of units to be dealt with by the Ministry of Transport was reduced from over 200,000 firms to 9,500 groups. Each group was under the control of a Group Organiser, appointed by the members of the group—i.e. the operators themselves.⁴ He was to be responsible for seeing that his group ran efficiently and economically: he would apply for fuel on his group's behalf, and distribute the petrol coupons received from the Sub-district Office. The Group Organisers, in turn, nominated the Sub-district Managers, whose job it would be to allocate the fuel ration for the vehicles in their sub-districts. Each Sub-district Manager was to receive his allocation of coupons from the District Transport Officers who were civil servants directly responsible to the Regional Transport Commissioners.

It was planned that total goods vehicle consumption would be reduced to 75 per cent. of normal peace-time fuel requirements. Two-thirds of the supplies to be issued would be distributed to goods vehicle operators in the form of a basic ration. The remaining third of the fuel allocation would be issued by the Sub-district Managers as a discretionary supplementary ration when the need could be justified. The Sub-district Managers were the linch pin of the scheme since the District Transport Officers would necessarily have to be guided by their advice. They were not salaried officials, although

¹ See above, Section (ii) of this Chapter.

² See *Fourth Annual Reports of the Licensing Authorities, 1937-1938*. The figures are for June 1938.

³ In practice, the attempt to 'group' vehicles on a functional basis was not a success, except in the larger towns. All other 'grouping' was on a geographical basis.

⁴ Group Organisers were unpaid, but could claim postal expenses up to 10s. to 15s. a month from the Ministry. The practice arose during the war for some Group Organisers to be paid by the operators in his group at the rate of 1s. per week per vehicle.

eventually they were given an allowance varying with the number of vehicles in their sub-districts.¹ They were assisted by Traffic Officers, who were paid officials employed by the Ministry of Transport. Traffic Officers were responsible for actually issuing petrol coupons, for calculating and issuing the basic ration, and for the safe custody of the sub-districts' stocks. Just as the District Transport Officer could adjust the use of road transport between the sub-districts, so also could the Regional Transport Commissioner make adjustments between the districts by the manipulation of supplementary rations. In this way the Ministry of Transport proposed to exercise control over the use to which road goods transport was put in time of war through the fuel rationing system. While supplementary issues were to be carefully allocated, and their extent was to depend at all times on the general fuel supply position, the fuel rationing machinery was designed to be flexible and simple to operate. Necessary issues of fuel for immediate emergencies would not be held up by any complex procedure.

The Regional Transport Commissioner for each Region was also made responsible for the issue of fuel rations to operators of public service vehicles. The bus and coach industry had in service some 49,574 vehicles owned by 4,798 operators at the end of 1937.² Since a high proportion of the vehicles engaged in the bus and coach business were owned by a relatively small number of operators, and the total number of operators in the country was very much smaller than on the goods side of the industry, the problem of war-time control was much simpler. As grouping was not considered necessary for road passenger transport, it was planned that the Regional Transport Commissioners would issue fuel rations direct to operators themselves. As with road goods transport, there were to be basic and supplementary issues, the aim being to restrict total supplies to 75 per cent. of normal peace-time consumption. Thus it was planned that both goods and public service vehicles should be initially controlled for war purposes through the manipulation of their fuel rations. It was a flexible method of control in that adjustments could be made quickly in either basic or supplementary rations to match any changes in the fuel position. The scheme for goods vehicles was agreed with the Petroleum Department in March 1939, and that for passenger vehicles in July 1939.

This control machinery was worked out in consultation with the industry through a body known as the Road Haulage (Defence) Advisory Committee.³ It was thought that since, in the case of the

¹ The average annual allowance in 1944-1945 was £160.

² *Seventh Annual Reports of the Traffic Commissioners, 1937-1938.*

³ This consisted of leading operators in the road transport industry together with representatives of the railways and the Transport and General Workers Union.

highly individualistic road haulage industry, petrol coupons would be distributed through the members of the industry itself—the Sub-district Managers and Group Organisers—the machinery would run more smoothly than if left entirely in the hands of officials unfamiliar with the technicalities of road transport operation. Moreover, in controlling an industry with so little central organisation, the Ministry of Transport had no alternative but to refrain from interfering too deeply in the day-to-day working of individual firms. As experience was to prove, the form of control decided on was negative rather than positive, in the sense that the Government could withhold supplementary rations for purposes it did not approve, but had no power to compel operators to carry out particular tasks. This weakness did not detract from the general soundness of the 'grouping' scheme. It must be recognised that the administrative problem of organising road transport was formidable: the Government had no experience of operating vehicles on its own account, and, whatever its merits might have been, direct operational control over so diverse an industry was hardly a practical possibility at this time, for among other things positive control would have meant assuming financial responsibility. It was claimed in favour of the Emergency Road Transport Organisation that it would enable the Government to know the whereabouts of almost every goods vehicle in the country and ensure that none was put to a wasteful use. If, later, it were to become necessary to impose positive control, then the existing organisation, armed with this knowledge, would be a sound basis for the extension of control.

The Regional Transport Commissioners were to have sole responsibility for requisitioning vehicles needed by the Armed Forces and Civil Defence services. In the first place, the Commissioners were notified by the Services and Civil Defence Departments of the arrangements made in advance for the impressment and earmarking of vehicles. Secondly, it was arranged that after war had broken out, requisitioning powers—as distinct from impressment—should be exercised only by them or other officers of the Ministry of Transport; other Departments were to exercise such powers only if they could not call on an officer of the Ministry of Transport to do so, and then they were to report the event at once to the District Transport Officer. Finally, certain classes of vehicles owned by the Government, local authorities or other transport undertakings (such as the Railways) were exempted from requisitioning.¹ Private cars were also entirely excluded from the control of the Regional Transport Commissioner. Instructions about requisitioning were sent out by the Treasury in a circular to Departments in the summer of 1939.

¹ In specific cases, vehicles were, for example, exempted on representation by Ministry of Food.

By the time war broke out, the voluntary 'shadow' grouping arrangements were practically complete. They covered over 90 per cent. of the goods vehicles in the country, with an average number of 43 vehicles in each group. The Regional Transport Commissioners' organisation was also ready to go into action, although a few difficulties were to be encountered on both sides of the industry, particularly in the detailed work of administering the fuel rationing scheme. The measures we have described were taken as being sufficient to control an industry which was to assume a secondary role in war-time. The decision to reduce the quantity of fuel to be consumed by the road transport industry to three-quarters of the normal peace-time consumption¹ does not appear to have been questioned. This more or less arbitrary figure was decided on the basis not of the estimated demands which war might place on the road transport industry, but of the expected general fuel supply position. The Government took the view that the road transport industry must contract in war-time, and that the extent of this contraction would be determined by the scarcity of fuel. The transfer of a large, but unknown, quantity of long-distance road traffic to the railways on this account was considered quite possible, and, indeed, inevitable. The Minister of Transport told the Committee of Imperial Defence on 20th April, 1939 that:

whilst there might not be an actual shortage (of fuel), he understood that the need to conserve our stocks would be very great and would operate to reduce to a minimum any long hauls by road. Whilst there must be an element of elasticity, he was convinced that it would be extremely wasteful to use long-distance road transport for the conveyance of goods in bulk over a long distance and that we should be bound to rely from the start on the railways for such work.

The pre-war plans for road transport were thus based on the assumption that by transferring long-distance traffic to the railways, by eliminating non-essential traffic, and by the pooling of competitive transport services such as retail delivery, road transport would manage to function on its reduced fuel allocation.

(v)

Highway Precautions

We have touched on the responsibilities of the Ministry of Transport Roads Engineering Department above.² While plans were being completed to control and curtail road transport, special arrangements

¹ The Oil Control Board's aim was to secure an overall reduction of 33½ per cent. in the consumption of motor spirit for civilian purposes, so that road transport was receiving more generous treatment than private cars, etc.

² See above, p. 57.

were also being made during 1939 to keep vital communications open and under repair, especially those routes likely to be needed by military traffic. The War Office supplied the Ministry of Transport with a list of routes to be used for the dispatch of the expeditionary force to embarkation ports, the Air Ministry announced that on routes on which its traffic would travel a minimum of 15 feet 4 inches would be needed and Scotland Yard provided a map of civilian evacuation routes. These requirements were scrutinised by the Divisional Engineers of the Ministry of Transport—England and Wales were then split up into seven Divisions—and various emergency measures were decided upon. The guiding principle followed in the year before the war was to give preference to the improvement of trunk and main road facilities out of London and other large cities working outwards. At the same time it was recognised that roads must be kept clear in case of war, and from the spring of 1939, no new road works were undertaken which could not be cleared up at short notice. As soon as war became certain, road works in London were suspended and all peacetime road works throughout the country, save those considered essential to war needs, were closed.

During the early part of 1939, considerable attention was given to the establishment of depots to hold stocks of materials for the repair of bridges and roads in case important routes should be damaged by air attack. Pools of bridge repair materials were to be provided, and a depot, under the control of the Divisional Engineer's staff, was set up in each Division. Three or four firms of contractors were nominated in each Division to provide men at short notice to erect temporary bridges on trunk roads should existing bridges be wrecked through a successful enemy air attack. A meeting was held with the contractors in June 1939 who then agreed to arrange for the training of their men in the erection of Callender-Hamilton unit construction bridges with spans of 50 to 100 feet, which had been selected for the purpose. Local authorities were encouraged to make similar emergency preparations and the railways were also approached and asked to hold emergency stocks of bridge repair materials for the same purpose. Both haggled over the question of responsibility for the cost, but this was ultimately settled by the provision of grants to local authorities out of the Air Raid Precautions vote, and by the railways holding repair materials on behalf of the Ministry. Discussions were also opened between the Ministry of Transport and the London County Council and other interested local authorities on the provision of materials for the construction of three emergency bridges across the Thames, in case other important bridges were damaged beyond repair. It was pointed out that the new bridges already under construction, the Waterloo and Wandsworth bridges, would not be available for traffic until well into 1940, while the Tower, Chelsea, Albert and

Hammersmith bridges were all of a type vulnerable both to aerial attack and sabotage—a sabotage attempt on Hammersmith bridge had closed it to vehicular traffic for a month in mid-1939. Sites for three temporary bridges were selected; it was also proposed to prepare a similar one at Staines. In spite of financial questions, all these plans were put into operation, though, in the event, very little use was made either of the bridges or the bridging material for the purposes for which they had been prepared.

Apart from these special measures, the Ministry of Transport was made responsible for seeing that the work of improving and maintaining highways in time of war was properly performed. While it was not proposed that the highway authorities should be deprived of their normal responsibilities, the Committee of Imperial Defence agreed that in exceptional cases—such as extensive damage from air attack or military use, or the need for new construction for military purposes—the central government should be made responsible for repair and reconstruction. It was also agreed that an interdepartmental committee should be set up to advise the Minister of Transport on the construction, improvement and maintenance of roads for war purposes. However, the Roads Advisory Committee, as it was called, which was appointed on 25th May, 1939, met only once during the whole of the war, as it was found that the questions with which it had to deal could be managed more conveniently by normal departmental methods.

(vi)

Canal Control

Canal problems in war-time were first considered in October 1936, before the Committee of Imperial Defence assigned responsibility for inland transport as a whole to the Ministry of Transport. At this time it was assumed that there would be no need for the Government to take possession of canals—at least at the beginning of an emergency. Indeed, there was much reluctance in official circles to assume responsibility for canals in war. In the First World War, although control had not become effective until March 1917 it cost the Treasury three million pounds paid in compensation to controlled canal companies and carriers between that date and August 1920, while attempts to relieve the railways by putting more traffic on the canals came too late to succeed. The value of canals in the war of 1914–1918 had therefore been comparatively small, and the view now prevailed that instead of being a second means of inland transport

they had now become a bad third. Since canals were expected to carry only a small volume of traffic compared with rail and road in a future war, no special measures for war-time control were favoured.

However, the railway owned canals would automatically come under Government control in war-time as part of the general railway system. Moreover there had already been preliminary discussions with the canal interests about A.R.P., and there was uncertainty about the use of canals in the proposed East to West coast shipping diversion. It was therefore decided in the spring of 1938 to re-examine the canal problem. The Minister of Transport sought the authority of the Committee of Imperial Defence to make a tentative approach to the non-railway owned canal interests on the question of possible war-time control. This was agreed to on the understanding that no financial commitments could be entered into.

In discussions between representatives of the Ministry and of the canal owners and carriers, both the undertakings and the carriers argued that control should be applied to railway owned and non-railway owned canals from the beginning of an emergency. They thought that canal labour might thus be protected and the canals allocated a 'fair share' of war-time transport; this would avoid a repetition of what had happened in the 1914-1918 war, when high costs and labour difficulties caused by the call up of men for military service resulted in a serious decline in canal traffic—a process not satisfactorily reversed by Government control in 1917. They went on to argue—somewhat confidently—that canals would be well-suited to deal with large movements of traffic diverted from the roads as a result of restrictions on supplies of imported fuel. The canal interests favoured some system of war-time co-ordination between the different forms of transport, fearing that otherwise those forms of transport whose rates were controlled or pegged would gain traffic at the expense of the non-railway owned canals, whose charges would inevitably increase as a result of increased war-time operating costs. They also advocated that existing canals and barges should be better equipped to meet an emergency—presumably this was to be done with Government financial help.

The Ministry of Transport was not fully convinced by these arguments. It was thought that canal labour could be protected and sufficient traffic allocated to the canals in war-time without government control. It is true that officials were not all of the same mind about the question of canal control. One body of opinion wanted all canals to be controlled so as to secure the effective and unified operation of all forms of transport in war-time and broadly shared the view of the canal interests that the non-railway owned canals would suffer loss of traffic if they were left out and other forms of transport taken

under control. The other view was that with the expected restriction of traffic by road and a possible overburdening of railway resources,¹ more, rather than less traffic would be carried by the canals; this view held that the case for control over canals as 'necessary in the interests of the most effective operation of an instrument essential to the successful waging of the war' had not been made out. It was therefore decided in December 1938 to postpone any decision on the canals until arrangements for the railways had been completed. Three months later, however, the canal question came up for consideration again and a compromise plan was agreed to. There was to be no immediate scheme of control, though the question of Government possession and possible compensation at some future date was not ruled out. The plan was to draw up a 'skeleton' scheme for control: a headquarters committee, the Canal (Defence) Advisory Committee, to consist of representatives of the Ministry and the canal undertakings and carriers, would be set up to 'advise the Minister of Transport upon measures to secure the best use of canals in the national interest in time of war . . .' Regional committees were to be established in the six main canal regions to deal with such questions as the allocation of barges, labour, supply, distribution of fuel under the rationing scheme and to maintain contact with the Government regional organisations. The canal interests would have naturally preferred complete control to the compromise plan, but accepted the proposed arrangements.

The decision of the Government against full control of the non-railway owned canals on the outbreak of war was one of the few cases where the system of inland transport control in the Second World War did not begin where the system existing at the end of the First World War left off. The Ministry of Transport's main reason for deciding against control was that it had not got a strong enough case to take to the Treasury to induce it to accept a financial liability—more especially since experience of canal control in the 1914–1918 War had not been a happy one financially. Yet if the experience of the First World War showed anything, it was that canal control had been ineffective precisely because it had come too late. On this basis it might well have been argued in 1938 and 1939 that if control of canals was to be taken at any time, that time was at the beginning of the expected war and not at some undefined future date. It is easy to look back from the later war years and say that the compromise scheme adopted fell between two stools and was inadequate. Yet it is difficult to avoid the conclusion, viewing the question from 1939, that the scheme reflected the elements of uncertainty and inconsistency

¹ This view, recorded in 1938, must be one of the earliest occasions on which this was officially accepted as a possibility.

which underlay the Government's war-time canal policy.¹ It is possible that control from the outset of the war would have prevented the drift of skilled labour and traffic away from the non-railway owned canals as in fact happened after 1939 as in the earlier war. Since, however, the pre-war inland transport plans were not drawn up in the expectation of a shortage of transport capacity in war, the Government was at any rate consistent in assigning a minor war-time role to the canals. In the end, of course, control was found to be necessary owing to the growing burden of traffic on all forms of inland transport. But this did not come until 1942 and the canals cost the Government £2,600,000 between that time and the end of the war in 1945.

(vii)

Coastal Shipping Preparations

Since coastal shipping is an integral part of the inland transport system, plans for its operation in war-time influenced and were much influenced by the plans for other forms of transport particularly those for the railways. But although coasters are part of the inland transport system they belong to the sea as much as any other ship and before the war coastal shipping was handled by the Mercantile Marine Department of the Board of Trade and not by the Ministry of Transport. For the problems of managing a ship are roughly the same whether she trades to Berwick or Buenos Aires; coasters can be diverted to perform tasks that cannot be performed by other forms of inland transport, such as carrying coal to France or troops to Norway. Moreover a coaster is exposed to the same hazards of weather as a deep sea ship and in war to similar forms of enemy attack.

In the nineteen thirties it seemed likely that in at least two important ways the war would have the same effects on coasters as upon other merchant ships. First, as in the 1914-1918 war, coasters would be called upon for naval service under the Admiralty; the number required by the Admiralty would certainly be considerable but it was not finally decided upon before the war. Secondly, coastal shipping would most probably be subjected to enemy attack.

The possibility of enemy attacks on merchant shipping in home

¹ While the view that the Government might lose money by taking control of canals was advanced as a reason for not taking control, that argument plainly applied more forcibly in the case of *eventual* rather than *immediate* control; yet it was *eventual* control of non-railway owned canals that the Government's compromise scheme envisaged. It is also difficult to reconcile this view with the opinion that the canals would have so much traffic in war-time that they would need no assistance. While sufficient traffic may have existed to keep the non-railway owned canals fully occupied, it would have found its way to the canals only through a co-ordinated system of rates and charges for all transport, and this pre-supposed at least a limited form of control.

waters was taken very seriously. Early in the nineteen thirties, the naval and air experts agreed that it was improbable that shipping would suffer serious losses from surface, submarine or air attack as it approached or left the ports. But heavy air attacks on the ports of the East and South-East coasts were expected. This forecast was the starting point for the deliberations of the Headlam Committee¹ which assumed that facilities for the reception and distribution of goods from ports between the Tyne and Southampton inclusive would be reduced by 75 per cent. The Committee, as we have already seen, studied the consequences of the diversion to the West coast ports of 75 per cent. of the traffic that normally used the ports from the Tyne to Southampton.

The Committee was mainly concerned with deep sea shipping but clearly if the ports on the South and East coasts were only working at 25 per cent. of their normal level, coastal ships would also be very seriously affected. The Committee did in fact ask for and receive a paper from the Board of Trade about the extent of the coastal trade and its methods of operation. And although the facts and figures in the main body of the Committee's report were confined to deep sea ships, there was a reference to the very large tonnage of coal carried from the North-East coast to London by sea and to the transport difficulties that might arise if this traffic had to be transferred to the railways. In an appendix to the report the Admiralty worked out the extra traffic that the 'safe' ports would have to handle if 75 per cent. of the coasting tonnage that normally entered the 'danger' area were to be diverted thither. However, the interesting point of the Admiralty appendix is the statement that in practice the number of coasting vessels to be diverted would not be so great as the figures suggested owing to the impracticability of diversion in such cases as the coal trade between the North and South and the estuarial services.

In the same month that the Headlam Committee reported—March 1937—another Committee was set up to investigate whether it was or was not practicable to transfer to the railways the coal that was normally carried by sea. In the 1914–1918 war it had been possible to allow the coasters' East coast coal traffic to diminish considerably—possibly to as little as one-third of the 1913 figure—without undue hardship. But since then there had been a great increase in the demand for coal for power stations and gas works and these were placed so as to receive the bulk of their coal from the waterfront. The new Committee,² as we have seen earlier in this chapter, studied in detail the mechanics of supplying coal by rail to these public utilities and the adequacy of mineral wagons and eventually it concluded

¹ See above, pp. 41 *et seq.*

² i.e. Sub-Committee on Supplies of Coal in War for Public Utility Undertakings and the Adequacy of Railway Wagon Stocks for Internal Distribution of Coal. See p. 68.

that the diversion of this coal traffic to the railways was practicable. Behind these deliberations there was an assumption that railway capacity as a whole would be adequate to carry the coal from North to South.

The fallacy of this assumption has been explained earlier in this chapter; our concern now is rather its implication for coastal shipping. If the coastwise traffic of coal from North to South were to fall to 25 per cent. or so of the normal traffic there would undoubtedly be a surplus of coastal ships in war-time. For of the 33 to 38 million tons of cargo that coastal ships carried round Britain shortly before the war, some 17 million tons consisted of coal carried long distances from the North-East coast to the South. If this traffic were to dwindle to four or five million tons, this alone would mean that a third of the coasters' pre-war cargo would disappear. If other East coast traffic dwindled to a quarter then well over half the coasters' pre-war cargo would disappear.¹

It seems that some Government circles did assume that much of this East coast traffic would disappear but others did not. At the beginning of 1939 a senior official of the Mercantile Marine Department emphasised that his department had always felt that coal would in war-time 'be more likely to continue to move coastwise than to be diverted to rail' and that they always had in mind that colliers should remain on their normal service. And, as we shall see, the Coastal Shipping War Control Committees were told in their instructions in 1938 that they would be expected to maintain essential coasting services such as the carriage of coal coastwise to the London public utilities. Finally in 1939 the Committee of Imperial Defence overthrew the assumption that 75 per cent. of the shipping normally entering the East and South coast ports could be diverted to the West coast throughout the whole period of a war. It was not that the danger of air attack on shipping had lessened. Air attacks on shipping—at sea as well as in port—on the East and South coasts were expected to be serious; there might well be attacks on the West coast ports too but these it could be assumed would be less dangerous. But it was realised that wholesale and permanent diversion of ships, with all the dislocation of trade and transport that it would involve, was quite impracticable.² One particular point that concerns this narrative is the Minister of Transport's belief, firmly expressed in April 1939, that a

¹ As Appendix II suggests, information about the quantity of cargo carried before the war is scanty. A figure provided for the Committee of Imperial Defence by the Minister of Transport gives the total coastwise imports into London, in 1937-1938, as nearly 17 million tons of which 11 million tons was coal and coke.

² It was agreed that the normal facilities should be used to the greatest possible extent until enemy action or port congestion prevented this. At, or just before the outbreak of war, deep sea ships proceeding to East coast ports might be temporarily diverted to the West coast in order to see how enemy attacks developed.

considerable amount of coastwise traffic must be allowed to proceed to and from the ports in the danger area of the East and South coast, including London.

There is evidence that the assumption that much of the East coast traffic would disappear¹ and cause a surplus of coastal ships lingered on in some quarters. But even where it was banished there was apparently no inkling that war would bring a scarcity of coasters. Indeed it was believed that big additional war-time demands for coasters could be easily handled. There were two such demands that were of exceptional importance; one concerned the carriage of coal to France and the other concerned the overside discharge of deep sea ships into coasters.

In 1938 discussions began about the French war-time coal requirements. France's coal requirements would be higher than in peace-time but her railborne imports of German and Polish coal would cease, some of the French mines would be in the battle zone and many miners would be called up for the Army. The French therefore calculated that they would need 20 million tons of coal a year from Britain compared with the 9 million tons or so that they imported from Britain in peace-time;² of this 20 million tons only 8 million tons or so could be carried in French ships. Before the war only about 7 million tons of French annual coal imports had been carried in British ships and clearly another 5 million tons would be a very heavy additional burden; the carriage of 12 million tons to France would require the continuous employment of 600,000 d.w.t. of shipping. The Mercantile Marine Department was at first doubtful whether there would be enough shipping to carry the coal for the number of British and neutral colliers was demonstrably inadequate for the task. Some deep sea tramps could however be used to carry coal and such ships were expected to be available in plenty. By the outbreak of war, therefore, the Mercantile Marine Department was satisfied that there would be enough shipping to meet the needs of the French coal trade.

Even though larger neutral ships might be used for carrying coal to France, presumably the coastal tramps—the ships most suited to the trade—would be used to the full first. It seemed therefore as if the coastal tramps would be fully employed in war-time unless the normal East coast traffic were to be really drastically reduced which on balance the Mercantile Marine Department thought was unlikely. However, apart from the demands of the French coal trade another big new war-time demand for coasters was foreseen—they were to help in the overside discharge of deep sea ships in the West coast

¹ For the prevalence of this opinion see, for example, Appendix IV, para. 5, p. 96.

² It was thought that coal production would be sufficient to allow this quantity for export to France. See *Coal, op. cit.*, Chapter IV.

ports. The Port and Transit Organisation that was studying in the years 1937-1939 the problems connected with the diversion of shipping concluded that coastal ships could be of great help in relieving any port congestion that might arise. If ocean vessels were waiting outside the docks for berths that might not become vacant for some time, if warehouses and quays were so congested that the unloading of ships was being delayed or if inland transport facilities were unable to cope with the goods already unloaded into the port—then cargo should be trans-shipped from ocean vessels into coasters. The coasters would then redistribute the cargoes—presumably to smaller West coast and North-East Scottish ports that the ocean vessels could not enter or to the East coast, since it was now apparently assumed that coasters could be risked in the danger areas more lightly than ocean ships. A general scheme was prepared showing the action to be taken by Port Emergency Committees, by ocean ships and by coasters and discussing some of the problems of the consignee.

It was assumed that sufficient coasters would be available for the purposes of this scheme. But when, during the war, ocean shipping was diverted and schemes for overside discharge were needed they broke down on this very point; there were not nearly enough coasters to do the work. Indeed, as we shall see, even without any diversion of shipping and without any overside discharge there was a serious shortage of coasters soon after the outbreak of war—a shortage that had been completely unforeseen. It was not surprising that the shortage was unforeseen for the problems of coastal shipping had never been looked at as a whole nor in their relationship to the problems of other forms of transport, such as the railways and road haulage. Different hypotheses about the East coast traffic had been thrown about, the problem of the French coal trade had been confined in one compartment and the problem of coastwise shipping for France in another. There was apparently no attempt to estimate the total demands according to the different hypotheses and the probable resources for meeting them. For example, it was not until after war broke out that it was calculated that 200 small or 100 large coasters would be needed for a month to discharge 20 ocean ships each carrying 8,000 tons of cargo. And although the Admiralty intended to convoy ships on the East coast from the outbreak of war¹ no estimate was made for the loss of carrying capacity that coastal ships would suffer. Much less was the effect of port blackouts and air raid precautions on shipping turn-around considered. The assumption that there would be plenty of coastal ships in war-time seems to have been based on a conglomeration of considerations—the pre-war surplus of coastal shipping, the

¹ S. W. Roskill, *The War at Sea*, Vol. I (History of the Second World War, United Kingdom Military Series, H.M.S.O.).

pre-war competition from foreign, especially Dutch, coastal ships, the possible disappearance of some of the short sea trade, the probable surplus of some types of neutral ships, the belief that some peace-time services could be discontinued and the resurrection from time to time of the belief that it would be necessary to reduce considerably the amount of coastwise shipping trading between ports that were regularly and heavily attacked. Behind these considerations was the faith that in case of need most kinds of traffic normally carried by coasters could be transferred without difficulty to the railways. The tangled threads of many possibilities were never straightened out.

Fortunately, although it foresaw no general shortage of coastal shipping the Mercantile Marine Department realised the need for some organisation to control coastal shipping so that the sudden disturbances of war could be smoothly surmounted and the sudden demands of war be met.¹ The expressed object of the control was 'to reduce to a minimum the amount of shipping employed in areas . . . regularly and heavily attacked and to ensure that in other areas coastwise shipping will be used to the full to assist the distribution of import cargoes and cargoes of internally produced commodities'. It was agreed that the form of control would have to be one which was sufficiently flexible to act in emergencies at short notice but which would leave the complicated day-to-day operation of the ships in the hands of their owners.

The administrative framework of the control was to be a headquarters organisation and nine Coastal Shipping War Control Committees, each of which was to be responsible for coasting activities in a specified area, centred on the principal port in the area.² The headquarters organisation was the responsibility of Mercantile Marine Department officials whose activities would in war-time be expanded into a branch of the Ministry of Shipping. The nuclei of the Coastal Shipping War Control Committees were set up at the principal ports during 1938, and their future members named; they were mostly local shipowners or others with experience of the coasting trade. They were told that in time of war they would be expected to maintain essential coasting services—for example the carriage of coal coastwise to the London public utility undertakings; to ensure that important cargoes received preference and that there was no uneconomical use of tonnage; to regulate voyages by eliminating unnecessary

¹ In peace-time the only control over the movement of coastal shipping was that of H.M. Customs. They maintained a record of arrivals and departures by the issue of a transire which is a form describing the ship and stating what goods it is about to carry or discharge. This form, dated and signed by the Customs, constitutes the pass for the goods and the clearance of the ship for the voyage. A general transire can be issued for ships trading regularly between specified ports. No transire is required for fresh fish, meat or straw, or a ship sailing in ballast.

² See below, Chapter IV.

calls; and to use coasting vessels in the distribution of imports to relieve port congestion and the burden on inland communications. These tasks would have to be performed, they were told, against a background of sudden demands from ports normally unused by coastal ships, and the closure of other ports by enemy action.

The Headquarters Organisation was to decide which coastwise services ought to be maintained, whether particular vessels should be earmarked, which cargoes in general terms were essential or inessential and which should receive priorities, while the Committees would exercise their local knowledge to ensure that services were run economically. The Headquarters Organisation was also responsible for informing the Committees of the general trends of costs and rates in coastal shipping. The experience of the First World War, when the rise of coastwise shipping rates had resulted in the diversion of traffic from the coasters to the railways had not been forgotten, although no co-ordinated rates policy appears to have been envisaged.

At first, it was contemplated that full control of coastal shipping in war-time should only be exercised after the failure of voluntary efforts. A licensing scheme was worked out, however, to be applied if it were later thought necessary, and by May 1939 it was decided that the Coastal Shipping War Control Committees should be empowered to license voyages of all ships¹ engaged in coasting and short sea trades. Licensing was considered a more satisfactory method of control than the outright requisitioning of ships, although the Committees were empowered to requisition space on voyages already arranged. Full requisitioning, it was considered, would have created more problems than it solved where voyages were short and frequent and where ownership was divided into numerous small units.

(viii)

Conclusions—Government dependence on the Railways

We have now considered the Government's plans for the war-time control of all the different forms of inland transport. These plans were eclectic. The railways were to be directly and positively controlled; road transport was to be supervised through the manipulation of fuel rations; coastal shipping was to be subject to voyage licences; the non-railway owned canals were to be left uncontrolled. The provision of transport services in war-time was to be left to those experienced

¹ At first all ships of over 100 tons gross in coasting trade, and all United Kingdom registered ships in the short sea trade. When the instructions were actually issued however in November 1939 only United Kingdom ships were controlled. Dominion and foreign ships were not at first subject to licence.

in transport working—at any rate as far as day-to-day operation was concerned. Generally, the Government's function was to lay down broad lines of policy as to which general types of transport services should be provided, and which should be restricted. In the case of the railways, the Government would possess well-defined powers to do this, since it was to assume complete financial and operational responsibility. In operating matters this responsibility was delegated to the General Managers of the main line companies acting in committee. Technically, however, these railway officials remained outside the Government organisation; that is to say, they were not brought into the Ministry of Transport as temporary civil servants. Their task was as much to provide advice to the Government in framing its railway policy as to carry out that policy. Over coastal shipping, the Government was to exercise control more indirectly, although it was planned to bring into the Ministry of Shipping organisation experienced shipping men to administer the control from the start. Over road transport, the Ministry of Transport proposed no positive control. Hauliers were permitted to provide services at what rates they chose, but the Government was able, through the fuel rationing mechanism, to decide broadly which types of operations should be pruned and which should continue to be provided.

Turning now to the demand side, no complex system of regulating or rationing the demands of private consumers for transport was envisaged; motor fuel rationing and the licensing of coastwise voyages would automatically either choke off some demands for transport or transfer them to other forms of transport. Nor, apart from such normal regulation as existed, was there to be any special war-time policy of rates and charges for transport as a whole aimed at preserving an even balance of traffic between the different branches; even if this policy had been accepted as desirable, the lack of organisation in some parts of the transport industry would have made it very difficult to work out. To ensure that Government traffics got the first claim to the services of the railways, the plans relied partly on a priority system, and partly on direct contact between the Departments concerned on the one hand, and the Ministry of Transport and the railways on the other. Guidance on the degree of priority to be given to different claims for transport by coastal shipping and road transport was outlined in the general policy directives sent out either from the Ministry of Shipping or from the Ministry of Transport to the various local controlling authorities.

It will be explained later in this narrative how, in the light of war-time experience, these controls were found to be deficient. No impartial account ought to judge the pre-war administrative preparations solely by how far they fell short of the standards of the later years of the war. Yet it is fair to emphasise that the Government's whole

defence policy, as far as inland transport was concerned, had been built up round the acceptance of a belief which had no firm basis in reality and which previous war-time experience had flatly contradicted, namely that there would be no serious scarcity of transport in a future war. True, it was recognised that road transport services might have to be restricted, and that air attack and the hazards of the war at sea might not only cause certain ports, particularly on the East coast, to be closed, but also drastically reduce coastwise voyages. Even so, it was argued the railway system had a large surplus capacity, which would provide an adequate reserve of transport even if other forms of transport were to contract. Such, at any rate, was the atmosphere of optimism that suffused the counsels of the Committee of Imperial Defence until the spring of 1939. Although, by then, the Ministry of Transport was slowly coming round to the view that war might bring more traffic to the railways than they could comfortably carry, the railways themselves, on whom the Ministry necessarily relied to some extent for advice, remained confident of their ability to meet almost any eventuality. In short, therefore, war-time control over inland transport was not planned on the assumption of acute transport scarcity. It was partly for this reason that it was to prove insufficient to meet the full strain of total war.

Up to the outbreak of war, there was no serious study of how scarce transport resources and therefore transport services as a whole might become in war-time. It would have been difficult to have constructed a balance sheet of supply and demand for transport as a whole with any claim to accuracy. It might have been possible to have worked out the peace-time figures of ton-miles or passenger-miles for the main types of traffic and compared these with the likely war-time demands. But in equating the prospective demand for transport with the supply, there were many complicating factors such as the adequacy of specialised facilities, the routing of traffic, besides the difficulties attaching to rates and charges and their effects on demand. Even a rough estimate of the capacity of the inland transport system in relation to the likely war-time demands on it would however have provided a more reliable guide to action than the optimistic guesswork from which the inland transport preparations started. Indeed, as the war drew closer, it gradually became plain that the existence of surplus capacity on the railways was not a sufficient ground for regarding lightly the expected demands of war on the inland transport system. For supposing that:

- (a) there really had been a 77·7 per cent. increase in the tonnage of imports arriving at West coast ports as the Headlam Committee had envisaged;¹

¹ This is discussed fully in *Merchant Shipping and the Demands of War*, *op. cit.*, pp. 24-34.

- (b) the railways had been called upon to carry additional traffic in foodstuffs to the extent of 982 million ton-miles per annum—one-sixth of their normal traffic in merchandise;
- (c) coal production had increased as the Mines Department envisaged by 10 per cent., and that the coal carried by the railways on this account alone had increased from approximately 201 million tons—the figure for 1937—to roughly 224 million tons per annum;
- (d) in addition, the shipment of coal coastwise from the Northumberland and Durham ports to London and the south of England had ceased entirely, and the traffic had been put on the railways—perhaps as much as 17 million tons per annum with a length of haul much greater than the average for coal traffic;
- (e) some part of the 100 million tons of goods carried annually by the road hauliers in competition with the railways¹ had been transferred to rail;
- (f) the capacity of the London marshalling yards had been reduced to 50 per cent. of normal, not counting the general interference from air raid and blackout conditions;

then clearly the railways would have been faced with an impossible task.

The only attempt to draw up an estimate of railway conditions after the outbreak of war was made in May 1939 by the Chairman of the Railway Executive Committee,² though this estimate can hardly be regarded as a balance sheet of supply and demand. It was estimated that, during the first three months of war, goods traffic on the railways—measured in ton-miles—would increase by as much as 100 per cent., but the railways confidently believed that they would be able to discharge the burden thrown upon them provided measures were taken to speed up the turn-round of wagons and passenger traffic was reduced.³

It was fortunate, for the railway system at any rate, that the war-time volume of inland transport never reached the heights envisaged by some of these pre-war estimates and guesses. Goods traffic by rail did not assume the immense proportions outlined by the Chairman of the Railway Executive Committee; the East coast ports were never completely closed; coastal shipping did not cease to ply up the East

¹ This is the tonnage estimated in G. Walker, *op. cit.* There are no other estimates in existence.

² Memorandum indicating the nature of the Transport Conditions during the First Three Months of War. Copy reproduced in Appendix IV. The memorandum was not, apparently, submitted to the Government.

³ Even during 1944, when the railways were called on to make their maximum effort, the ton-mileage of all classes of traffic increased by only 50 per cent. of the pre-war figure. See *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944.*

coast; the tonnage of imports did not increase, but decreased; coal output did not rise, but fell. Nor did air attack—always an uncertain factor in the pre-war preparations—dislocate transport to the extent that might have been expected. Broadly speaking, the railways set their war-time capabilities far too high both in the light of what might reasonably have been known at the time and what they proved capable of in the event. The Government, though it may have questioned the railways' sanguine views, did not seriously challenge them before the war. Perhaps it was not surprising that the railway companies, who were then in the middle of their 'Square Deal' campaign, refrained from emphasising the difficulties of moving additional traffic in war-time. It must be remembered too that in the days of the pre-war planning, the Government had no direct control over the privately owned railway companies, save for the normal peace-time measures concerned in the main with safety and rates and charges. The Government was not free to dictate policy to the privately owned companies before the war; it could only rely on their willingness to provide advice on railway policy and their readiness to accept guidance in defence planning.

Thus no physical improvements or additions were made to the railway system to enable it to take the strains of war. When preparations for war were accelerated after the Munich crisis, the small group of officials in the Ministry of Transport concerned with defence planning—in addition to their normal duties—were occupied mainly in completing a framework of transport control ready to apply if and when war came. The central policy was clear; the Government relied principally on the railways, when taken under control, to adjust themselves to every twist and turn of war, and trusted to a more modest degree of control—free from financial commitments—over road transport and coastal shipping to do the rest.

APPENDIX IV

Memorandum prepared by the Chairman of the Railway Executive Committee indicating the nature of Transport Conditions during First Three Months of War

12th May, 1939

SUGGESTED OUTLINE

1. The period may be taken as one of more or less continuous air raid, aimed principally at key centres of population, densely populated areas generally, aerodromes and other military objectives, docks, railways and other means of communication.

2. The aim of the attack will be to dislocate the life of the country, bring vital services to a standstill, and force the acceptance of peace terms as the only escape from confusion, disorder and starvation.

3. Transport is a vital service, and must be kept going regardless of air attack. This applies to railways, roads, and canals, also (and as far as possible) to shipping and docks. It should be accepted as a general principle that all forms of transport must be utilised to the full extent that their war-time circumstances permit.

4. **SHIPPING.** Tonnage will be scarce and valuable. It will have to be dealt with where it can be handled with least risk of damage or loss. This will mean the transfer of a large volume of shipping to West coast ports, and may involve closing the East coast ports (from Aberdeen to Southampton inclusive) and putting the West coast ports on double-shift or even continuous working.

5. **COASTWISE SHIPPING.** Coastwise traffic originating at or destined for East coast ports (as defined in 4) will have to be handled by inland transport agencies. In particular coal now carried coastwise from and/or to East coast ports will be carried by rail, though arrangements will be made to supply consuming points from the nearest suitable coal-producing area.

On the other hand there may be increased use for coastwise shipping on the West coast for the purpose of distribution between deep-water ports and local docks and wharves, in relief of rail transport.

6. INLAND TRANSPORT

(a) *Roads.* Petrol will be scarce and valuable. It is probable that the supply of road vehicles will be so limited that road transport will be confined to services not exceeding 15 miles in radius, and will become in effect ancillary to rail transport. Traffic at present carried longer distances than 15 miles by road will either cease to pass or be transferred to rail.

Omnibus traffic will probably be limited to short distance services, and points not served by rail.

(b) *Canals.* These depend now largely on fuel-oil for propulsion. Subject to such limitations as may be involved by this use, it will be essential to make the maximum use of canal and river transport where available.

(c) *Rail.* There will be a large increase in rail traffic due :

- (i) to diversion from coastwise transport,
- (ii) to diversion from road transport,
- (iii) to special war-time demands—evacuation, military traffic, etc.,
- (iv) to importation of supplies through West coast ports for areas now served over shorter distances from East coast ports.

It should be assumed that, apart from a first period of industrial dislocation, the goods traffic of the railways (as measured by ton-mileage) will increase by 100 per cent.

There are certain considerations to be taken into account on the other side.

- (i) Passenger train mileage will be cut down to the bare necessities of essential business.
- (ii) The majority of express trains will be taken off and the remainder decelerated. Competitive services will be allocated between the interested companies.
- (iii) Suburban travel will be materially reduced.
- (iv) Taken as a whole, the ordinary passenger service will be reduced by 70 per cent. or thereabouts.
- (v) Railway owned and privately owned wagons will be pooled.
- (vi) Drastic demurrage regulations will be introduced, and enforced.
- (vii) Wasteful competition will be eliminated; wagons will be better loaded, and unnecessary empty-wagon-mileage abolished.

7. It may be taken that the railways will be able to discharge the burden thrown upon them, though the position of West coast ports will call for particular and individual examination, both in regard to dock ancillary services (shunting, storage, etc.) and the more general question of main line access and clearance.

8. The incalculable feature of the situation is the extent of the interruption of services by enemy air attack, whether direct or in its effect on destruction of plant, bridges, permanent way, rolling stock, etc.

It will be essential for transport to proceed without regard to air raid interruption.

- (a) This will mean that certain grades of employees must be encouraged to carry on, however imminent the peril. These grades will be—train-men of all kinds, signalmen, shunters, a skeleton station staff, controllers, etc.
- (b) Other grades can be allowed to take shelter for the minimum period of duration of the warning—goods station staff, the bulk of the passenger station staff, clerical grades.
- (c) Permanent way staff will have to patrol the track and to carry out repairs to damaged track immediately it occurs—regardless of the occurrence or continuance of air attack.
- (d) All grades will have to resume work immediately the all-clear signal is sounded.

It is evident that these conditions will raise a number of difficult questions in regard to discipline, pay, etc. These will be less acute in

proportion as the question of shelter (at or near work) is more effectively handled in preparation for the emergency.

9. The channels of rail transport will in any event be very different from the peace-time channels, and will be subject to sudden and substantial variation. Railway staff generally will have to be moved at short notice, to lodge away much more freely than at present, or to accept transfer for long periods. Hours will be irregular, staff must be prepared to undertake long spells of work. This will arise particularly in the working of West coast ports, which will have to handle (as a whole) 100 per cent. more traffic than in peace-time.

10. Night-work will present particular difficulties. There will be restricted lighting in yards and stations. Generally the maximum use will have to be made of the hours of daylight.

11. Branch lines, now unimportant, may assume special importance in war-time and have to be worked intensively. The same is true of particular junctions, stations or signal-boxes.

PART II

Autumn 1939 to Summer 1940

CHAPTER III

THE OUTBREAK OF WAR, 1939-1940 (I)

(i)

Outline

FROM MIDNIGHT on 31st August, 1939, a few hours before the first German attacks on Poland, the principal British railways were brought under Government control and the mechanism of war-time inland transport control began to function. The Railway Executive Committee, consisting of the General Managers of the four main-line companies and the Vice-Chairman of the London Passenger Transport Board became the 'agents' of the Minister of Transport 'for the purpose of giving directions' under the control Order and the Railway Control Officer took up his duties as the link between the Minister and the R.E.C.¹ The prepared schemes for controlling road goods and road passenger transport were also brought into operation on the outbreak of war, though several months were to elapse before the planned restriction of road transport took full effect. Although the Area Committees which were to control coastal shipping were similarly constituted at the start of hostilities, the plans of the new-born Ministry of Shipping for the licensing of coastwise voyages were not put into practice until December 1939.

Pre-war thinking had always assumed that heavy air attacks would immediately follow the outbreak of a major war. But in fact there were no continuous enemy air attacks on the ports and key centres of population in the autumn of 1939 and, in consequence, none of the transport dislocation which might have been expected. Moreover, except for two short periods in September and October 1939, the autumn and winter brought no large-scale diversion of deep sea shipping to the West coast ports so that the 'difficulties of placing sudden demands on the railways in unfamiliar channels' turned out

¹ Railway Control Order, 1st September, 1939, S.R. & O. 1939, No. 1197. The Railway Executive Committee as at 1st September, 1939, consisted of the following persons: Sir Ralph Wedgwood (Chairman); Sir James Milne; Mr. C. H. Newton; Mr. Frank Pick (succeeded by Lord Ashfield in May 1940); Mr. G. S. Szlumper (succeeded on 16th September, 1939 by Mr. E. J. Missenden); and Sir William Wood. Mr. R. H. Hill of the Ministry of Transport was Railway Control Officer.

much less acute than had been feared. These facts go far to explain the smoothness of the transition of inland transport in September 1939 from a peace to a war footing. This, in turn, enabled the railways to carry out, without interference, their first planned emergency movements, namely to assist in the mobilisation of the armed forces, to carry out the evacuation of mothers and children from the larger towns and to begin the movement of the expeditionary force to the ships in which it was to be embarked for France. Within little more than one month of the beginning of the war, these movements had all been carried out as planned.

There were two dominant facts about the general inland transport situation in the autumn and winter of 1939-1940. First, both sections of the road transport industry were deliberately restricted in order to economise imported fuel, and secondly, the capacity of coastal shipping to move coal down the East coast of Britain was reduced below normal. The consequence was that the railways were expected to carry additional traffic.

At first fuel supplies were not drastically restricted to road haulage. Sudden dislocation was to be avoided. Moreover there was a hope, which was not in fact fulfilled, that the hauliers and the railways would agree to a detailed scheme for transferring long road hauls to rail, leaving road transport the task of delivering and collecting from specified rail-heads.¹ By February 1940, however, road haulage was being drastically restricted; fuel supplies had been reduced to about 75 per cent. of pre-war in accordance with official policy that long-distance transport should be transferred to rail. As for coastal shipping, its role up to June 1940 proved rather different from what had been expected, because there was no enemy bombing of the ports and because the diversion of ocean-going shipping occurred only on a small scale. The main problems of coastal shipping were to provide sufficient tramps for both the supply of coal to France and the East coast coal trade. Since, however, the capacity of coastal shipping was reduced, partly because of inevitable war-time delays arising from the convoy system and the blackout and partly because of the requisitioning of coasters by the Service Departments, there were not enough ships to do both jobs. This shortage of coasters reacted on inland transport as a whole. By the beginning of 1940, the weekly coastwise deliveries of coal to London and southern England had fallen to about two-thirds of their normal peace-time level. The transfer of coal traffic, with its long hauls, to the railways caused difficulties which were aggravated by severe weather in January and February 1940. Railway working was extensively dislocated and coal supplies in London and southern England fell to a precariously low

¹ The 'rail-head' scheme is more fully discussed in Section (v) of the present chapter.

level. Only by dint of hastily improvised transport arrangements, at the expense of delays to other railway traffics, was a widespread coal shortage averted in the early months of 1940. Such, in outline, were the principal inland transport developments in the first nine months of the war; the detail will be filled in later in this and the succeeding chapter.

With the capacity of coastal shipping and road transport reduced, the main tasks of inland transport clearly fell to the railways. The relations of the Government with the railways were therefore the crux of the problem of war-time inland transport organisation. Although, however, the Government had decided as far back as 1937 on the framework of railway control in war-time, when the war started it had not yet reached agreement with the railway companies about the financial implications of control. This question extended beyond the narrower issue of railway control into the field of domestic economic policy. The aim of the Government's financial policy in the period of the Anglo-French alliance was the maintenance of a level economy. The threat of inflation was taken seriously and efforts were made to stabilise the cost of living by the introduction of food subsidies, which, it was hoped, would damp down claims for increased wage rates. Furthermore, in order to allay public suspicion about profiteering, a 60 per cent. excess profits tax had been imposed on the outbreak of war.¹ The agreement reached between the Government and the railway companies in February 1940 was rather out of harmony with this general economic policy. Under the agreement, which will be described more fully later in this chapter, the railways were guaranteed a minimum net revenue of £40 million a year. They were allowed to keep any further revenue up to £43½ million and one-half of any further excess up to £56 million. Government traffic on the railways was to be paid for by Departments and the Government was committed to raising fares and charges during the war, where the railways could prove increased costs.² The agreement was criticised at the time because of its inflationary possibilities, which did not harmonise with the Government's wider domestic economic policy. The Government, however, believed that the agreement gave the railways an 'incentive to efficiency' through the prospect of higher earnings. Thus, the railways were being openly encouraged, in the national interest, to carry as much traffic as possible. Such an arrangement was defensible on the assumption that the railways had sufficient capacity to perform all the war-time tasks likely to be asked of them, but the policy plainly held real dangers if this was not the case. Even as the

¹ *British War Economy, op. cit.*, Chapter VI, Section (ii).

² *Government Control of Railways*, Cmd. 6168, (February 1940).

agreement was reached, the rapidly deteriorating coal transport situation was already undermining the assumption of sufficient war-time railway capacity.

A brief summary of departmental organisation at the outbreak of the war concludes this preliminary sketch. As has been described, control over the railways, road transport and the home ports rested with the Ministry of Transport, while coastal shipping was the responsibility of the Ministry of Shipping.¹ Within the Ministry of Transport, responsibility for railway matters was assigned to two Divisions. Railways (Traffic) Division, headed by the Assistant Railway Control Officer (Traffic), was concerned with all questions, other than finance and maintenance, arising from war-time control of railways. Railways (Maintenance) Division, under the Assistant Railway Control Officer (Maintenance), who was a technical expert, was responsible, apart from the inspection and safety of railways, for all matters concerned with their maintenance, technical operation and efficiency in war. The heads of these Divisions were directly responsible to the Railway Control Officer, who was in charge of all railway matters at the Ministry and at the same time provided the link between the Ministry and the Railway Executive Committee. The R.E.C. was composed of persons experienced in the management and operation of railways. It had its own independent organisation and staff, and was regularly advised on a wide variety of questions relating to railway working by a number of specialist consultative committees composed of experts drawn from the principal railways.

Headquarters responsibility for road transport, both goods and passenger, was shared by two Divisions of the Ministry of Transport, working in double harness. The division of function was less clearly defined here than in the case of the two railway Divisions, but very broadly, Road Transport Division 'A' looked after road goods transport policy and control, while Road Transport Division 'B' was concerned with road passenger transport. Both Divisions shared in administering the fuel rationing scheme for commercial vehicles. Ministry of Transport war-time control of commercial road transport, exercised through the two Road Transport Divisions, devolved on the Regional Transport Commissioners and, in the case of road goods transport, was effected locally through the District Transport Officers, Sub-district Managers and Group Organisers. A further Division of the Ministry of Transport, Port and Transit Division, was closely concerned with inland transport matters inasmuch as its main duties were to secure the quick turn-round of ships and smooth port working through the machinery of the Diversion Room and the

¹ Until November 1939 the Mercantile Marine Department of the Board of Trade.

local Port Emergency Committees. These five Divisions of the Ministry of Transport were those most directly concerned with the war-time control of the main inland transport services, although a number of other Divisions, such as those responsible for finance and rates and charges, clearly had much more than an indirect concern in transport control. From November 1939 coastal shipping was the responsibility of a newly formed and independent Government department, the Ministry of Shipping, control was exercised at headquarters by Coasting and Short Sea Division and decentralised into nine Coasting Area Control Committees.

The elaborate system of liaison officers and movement controls, which had been devised to deal at a local level with war-time service and civil demands for rail transport, went into operation from the outbreak of war. At headquarters, the Railway Communications Committee in theory provided the link between the main Government departments using transport and the Ministry of Transport officials responsible for railway control, but, for a variety of reasons, this machinery failed in practice. In the first place, many of the transport problems of the user Departments extended beyond rail transport and were, therefore, beyond the scope of the Railway Communications Committee. Inland coal transport was a case in point, for it directly affected three separate Government departments: the Mines Department on the one hand and the Ministries of Shipping and Transport, as well as the Railway Executive Committee, on the other. Thus, when coal transport difficulties were experienced early in 1940, co-ordination of policy could only be achieved by arranging a series of meetings at Ministerial level.¹ Secondly, few of the important civil Departments using transport in 1939 and 1940 knew at all accurately what their future inland transport requirements would be. The main exception was the Ministry of Food, which had created a Transport Division on the outbreak of war and had made an early start in attempting to estimate its transport needs in advance.² Elsewhere, however, nothing comparable had been achieved: for example, the Ministry of Supply, whose transport demands were to increase greatly during 1940, possessed at this time no transport organisation of its own. In short, in 1939 and 1940, there was, as yet, no effective machinery at the centre for co-ordinating the larger departmental demands on all forms of inland transport and for matching demand against supply. It is probably a fair generalisation to say that headquarters liaison

¹ *Coal, op. cit.*, Chapter III. In October 1940 the Lord President's Coal Committee and its Executive Sub-Committee were specifically created to deal with the coal distribution problem as a whole. See below, Chapters V and VI.

² R. J. Hammond, *Food*, Vol. I—*The Growth of Policy* in this series (H.M.S.O. 1951), Chapter IV and *passim*.

between the user Departments and the inland transport controls was, at this time, mainly left to normal official contacts and *ad hoc* arrangements. This lack of adequate machinery at the centre for linking up the demands for transport with its supply was not a conspicuous weakness in the first year of the war, when demands for inland transport remained broadly within the capacity of the system. During 1940 and 1941, however, this was recognised to be a critical weakness of the existing war-time inland transport organisation.

(ii)

Railway Capacity in the First Year of War

In Chapter II, the reasons were examined for the widespread pre-war belief that the British railway system possessed considerable surplus capacity. It was concluded that this belief was apt to be misleading without careful interpretation and qualification. Certainly it provided no logical basis for the view, which emanated from the railways themselves, that war would bring no great scarcity of railway resources. From the spring of 1939, the Ministry of Transport began to perceive the fallacy underlying this view, though it was slow to grasp the full implications of this important modification in its thinking for war-time transport policy.

When, in May 1939, the Railway Executive Committee had been urged to consider new works that might be used as insurances against the effects of bombing—particularly in the London area—the railways had been apathetic about the proposal. It was not until after war broke out that the R.E.C. submitted to the Ministry of Transport a programme of works required for diverting north-south freight traffic away from the London area,¹ or to pass through it if Blackfriars railway bridge were damaged. Even then the R.E.C. deprecated expenditure on a detour round London because it would take two years to complete. However, work was begun at the Ministry of Transport's expense. In the London area, improvements were started on junctions at King's Cross, Ludgate Hill, Haringay and Gospel Oak. At the same time, under pressure from the Ministry of Transport, a scheme was instituted to improve a route for avoiding London altogether, linking the L.N.E.R. and the L.M.S. railway with the Southern railway through Cambridge, Sandy, Bedford, Bletchley, Calvert, High Wycombe and Staines. This particular 'avoiding' route was chosen to save additional pressure on the

¹ These works were primarily intended for the heavy coal traffic expected to be diverted from the coasters to the railways.

Didcot-Oxford-Reading route, which was heavily burdened even in peace-time, though improvements were also made at various points between Oxford, Didcot and Reading to increase the capacity of this line. Most of these works were approved by the end of 1939. Early in 1940, further works were authorised for increasing the capacity of a route between Sheffield and South Wales and, by May the Government had approved expenditure of about one million pounds on various new railway works; some of an 'insurance' character against the possibility of bombing, others to ease the movement of traffic on heavily burdened routes. Schemes of this nature were slow to complete; by July 1940, for example, out of over a million pounds authorised for new railway works, those actually finished accounted for only £178,000. During the summer of 1940, as the outlook darkened, further schemes were authorised and existing ones speeded up, so that, by the end of the year, approximately one and a half million pounds had been provided by the Treasury for new railway works.¹

Locomotives were not a cause of difficulty for the railways in the first twelve months of the war and a full discussion of locomotive problems belongs to later chapters of this narrative.² It was generally expected in 1939 that war would increase demands on locomotive stocks, firstly because traffic was expected to increase, secondly because the War Office would require British railway engines for use overseas,³ and thirdly because steam traction might be needed to replace electric traction if power supplies should be cut off.⁴ Since, in war, labour, materials and workshop capacity would be scarce, and therefore inadequate to maintain peace-time rates of new locomotive construction, the policy followed from 1939 was to balance the loss of new locomotives by cutting down the rate of scrapping and concentrating available resources on repair work. The annual statistics show that the railways maintained their operating stock of locomotives at about the September 1939 level for the first sixteen months of the war.⁵ This stock was sufficient to meet the increased traffic demands of the period.

The construction of new rolling stock, like that of locomotives,

¹ The Treasury gave ready approval to Ministry of Transport expenditure on all 'insurance' schemes recommended by the Ministry. In the case of schemes to facilitate normal traffic, the Treasury approved the expenditure but the railway companies concerned paid a rent for the capital expended on it (3 per cent.), plus a charge for depreciation.

² See below, Chapter XI, Section (ii).

³ At the beginning of the war, the War Office said that it would need 400 locomotives for use overseas. Loans from the railways were, in fact, probably much smaller than this during 1939 and 1940.

⁴ This never in fact happened during the war.

⁵ *Statistical Digest of the War*, *op. cit.*, Table 164.

was considerably reduced after the outbreak of war. The construction of new passenger coaches practically ceased and the limited amount of new wagon construction was primarily concentrated on the types in greatest demand. The general policy was to economise labour, resources and workshop capacity by keeping existing stock in good repair and allowing new building to fall below pre-war level. There exist few detailed statistics relating to railway wagons for the earlier part of the war. It is known, however, that the numbers of railway owned wagons under and awaiting repair at the end of 1939 and 1940 respectively were 18·7 and 22·5 thousand, showing only a slight increase over the peace-time 1937 and 1938 figures of 20·1 and 18·8 thousand. The operating stock of railway owned wagons rose from 663·6 thousand at the end of 1938 to 664·1 in 1939 and 670·3 in 1940; the policy of reduced new building and fewer withdrawals maintained the stock slightly higher than the pre-war level during the first sixteen months of war.¹

Most of the railway owned wagon stock was, in peace-time, subject to 'common user' arrangements. Very broadly, these arrangements, which entitled each railway to use ordinary wagons and sheets belonging to any company as if they were its own, were based on the principle that a company had a right to a number of wagons equal to the number it owned. Adjustments were made regularly through the Railway Clearing House, which employed a staff of number takers at the inter-company exchange junctions to record the stock passing from one railway system to another. This system was continued by the R.E.C. without substantial change after the outbreak of war, when, in addition to the 660,000 railway owned wagons, 592,000 privately owned wagons were requisitioned by the Minister of Transport and passed into the control of the R.E.C.² The privately owned wagons were to be used interchangeably with railway owned stock under the 'common user' arrangements; this would eliminate the peace-time work of sorting privately owned wagons in the marshalling yards and would save empty wagon haulage through back loading. In practice, however, the 'common user' arrangements lacked the flexibility needed for the conditions of war-time working and failed to provide an effective wagon pooling scheme. Not only did changes in the volume and flow of war-time traffic alter the wagon requirements of the different companies, but there was no straightforward principle by which the requisitioned stock could be apportioned between the companies on a

¹ *Statistical Digest of the War, op. cit.*, Table 164.

² The wagon owners were paid a rent and a committee representing the owners and the wagon building industry was appointed to advise the Minister of Transport on all matters affecting the requisition, including the terms of compensation. Certain types of specialised stock, such as tank wagons, were excluded from the scope of the requisitioning Order.

'common user' basis. As will be subsequently described, the 'common user' arrangements were abandoned early in 1941 in favour of a comprehensive scheme for the pooling of railway owned and requisitioned wagons.

The railways were made responsible for maintaining the privately owned wagons requisitioned in 1939 and an elaborate organisation was set up to co-ordinate activities at some 280 private repair shops and 900 siding depots. The railways also undertook the repair of a number of requisitioned wagons in their own shops.¹ Although facilities were given, during the war, to private owners of requisitioned stock to build new wagons, the response was small and only a few thousand new privately owned wagons were built during the whole war. Towards the end of the war, the Ministry of War Transport undertook the construction of new wagons to augment the requisitioned stock.²

Although the requisitioning of privately owned wagons and the extension of 'common user' arrangements were later shown to have been inadequate, these measures did enable the wagon stock to be used more economically than in peace-time and practically doubled the stock of wagons over which the railways had control. But although the railways agreed that they had sufficient wagons to carry the traffic coming to them, they complained that the capacity of their stock was unnecessarily and seriously reduced by the delays of traders in loading and unloading. On these grounds the R.E.C. pressed for the imposition of stricter demurrage regulations as a solution to the problem of getting a quicker turn-round of wagons.³

On 21st September, 1939, the Minister of Transport, on behalf of the R.E.C., proposed that the 'free time' allowed to traders for loading and unloading their goods should be twenty-four hours and that the existing demurrage charges for wagons not released within the 'free time' should be doubled. If, as was hoped, the proposed regulations were to improve the average round trip time of railway wagons by twenty-four hours, it was estimated that the saving would be equivalent to the addition of 200,000 wagons to an existing stock of nearly 1,300,000. However, the matter went deeper than this. The proposal would be certain to bear heavily on collieries and coal

¹ A detailed account is given in R. Bell, *History of British Railways during the War, 1939-1945*, Chapter 14.

² See below, Chapter XI.

³ One of the principal arguments advanced by the R.E.C. in favour of the imposition of higher demurrage charges was that the restriction of road haulage and the proposed 'rail-head' scheme, under which long-distance road traffic was to be transferred to rail, would put a heavy burden on the railway wagon supply. In the hope of getting an early agreement between road and rail interests the Minister of Transport treated the demurrage question as a matter of urgency.

merchants since the existing regulations allowed generous free time for loading and unloading coal; outside Scotland and the North-East of England there was no limit at all to the free time for loading. Moreover the bulk of the now requisitioned privately owned wagons belonged to the collieries and had hitherto been exempt from demurrage regulations, which normally applied only to railway owned wagons. These privately owned wagons had, in peace-time, been extensively used for the storing of coal, as an alternative to stacking. At the colliery, a scarcity of wagons might bring operations to a standstill, while, at the receiving end, limitations on the use of wagons would call for reorganisation in unloading arrangements and might add to merchants' costs. The Mines Department was therefore perturbed about the proposals, while the Ministry of Supply doubted the wisdom of a policy of tightening up demurrage regulations at a time—October 1939—when a temporary diversion of shipping from East to West coast ports was already causing dislocation to traders' organisations. The Service Departments too displayed no enthusiasm for the proposals and the Board of Trade, which was uncertain of their effects, urged prior consultation with traders. The National Farmers' Union vigorously protested that it would be impossible for the farmers to work the free time of twenty-four hours and both coal merchants and farmers asked that, at the very least, the new regulations should not be applied to them without the granting of a period of grace. This question was brought before the Home Policy Committee of the Cabinet which decided to postpone a decision until an appeal had been made to transport users voluntarily to co-operate in speeding up the turn-round of wagons. On 30th October, a meeting was held at the Board of Trade for this purpose; a warning was given that if voluntary means failed, higher demurrage charges would be imposed.

In November, there was a slight worsening of the railway situation: a number of restrictions were placed on the acceptance of traffic and there was a steady but gradual increase in the number of wagons standing under load. The Minister of Transport therefore brought the matter before the Home Policy Committee once again and was authorised to prepare a draft Order with the object of reducing to twenty-four hours the free time allowed for loading or unloading wagons and for doubling the demurrage charges for wagons not released within the free time. This was to be done on the understanding that wagons for coal merchants would continue to be allowed a free period of forty-eight hours until 31st March, 1940, and that the Minister should give an undertaking, to meet the apprehensions of farmers and others, that the regulations would be administered with due regard to any genuine difficulties which traders might have in complying strictly with them. The new

regulations were published on 14th December and took effect from 18th December, 1939.¹

After what had happened in the First World War, it is surprising that the railways should have been so hopeful about the contribution of stricter demurrage regulations to the quicker turn-round of wagons. It had been found in the previous war that traders often preferred to pay the penalties rather than unload wagons quickly, especially when those traders were short of both labour and storage accommodation.² The experience of the earlier war had also shown that a large proportion of the charges remained unpaid, and indeed after less than a year of the working of the 1939 regulations, the railways were complaining of exactly the same difficulty. It is possible that the several concessions allowed by the Government may have weakened the power of the regulations to some extent. At all events, by the end of 1940, both the R.E.C. and the Ministry of Transport were complaining of a 'conspiracy to avoid paying these charges' and of the difficulties encountered in obtaining payments. Legal action was being taken to enforce payment in a number of cases and Government departments were apparently not guiltless in the matter. It is questionable whether the new regulations did contribute greatly to the war effort. For example, while the railways were continuing to press for the strict enforcement of the regulations in the hope of quickening the rate of wagon turn-round, the Mines Department was complaining, in the summer of 1940, that the reduction in the period of free time was hampering its plans for getting the co-operation of merchants in building up coal stocks. Whatever the truth of the matter, although the Government decided in March 1940 to remit the charges between 18th December, 1939, and 29th February, 1940, and to extend the period of grace for coal merchants until the end of June, the total sum of unpaid demurrage charges amounted to over £4,500,000 by September 1941, and a year later it had risen to £5,200,000. Even Government departments raised objections to paying the charges, and finally a commuted settlement had to be arranged.

Even from the narrower viewpoint of their effects on railway working, it is difficult to reach a firm conclusion about the 1939 demurrage regulations. The R.E.C. argued from statistics that their immediate effects were satisfactory. But statistics of railway operation tend to show results of which the many causes cannot easily be separated and which are not, therefore, always conclusive. If the statistics for a longer period are considered, there is a strong suggestion that the revised demurrage regulations, as framed in December

¹ The Railways (Demurrage Charges) Order, 1939, S.R. & O. 1939, No. 1822.

² E. A. Pratt, *op. cit.*, pp. 298-300.

1939, failed in their purpose in the first year of their operation.¹ Indeed, as will be shown subsequently in this narrative, circumstances often arose in which traders were overwhelmed with more traffic than they could readily handle through no fault of their own. When this happened, penalties for wagon detention were useless. The remedy needed to be sought in better organisation to prevent the unregulated forwarding of wagons to consignees.²

Besides track capacity and the availability and use of locomotives and rolling stock, the other main influences on railway capacity in the first year of war were the deceleration of passenger and freight trains and the lighting restrictions made necessary by Air Raid Precautions. Since heavy air attacks were expected at the beginning of the war, the R.E.C. had arranged for the preparation of emergency time-tables, which were designed for the difficult operating conditions that appeared likely. These emergency time-tables were introduced on the railways on 12th September, 1939, with the exception of the Great Western Railway where they took effect one week later. A drastic reduction in passenger services was made to provide what was called 'a minimum service with proper connections'. All passenger trains were to be decelerated and limited to a maximum speed of 45 miles per hour including stops, or 60 miles per hour without stops. In addition, excursion and reduced fare

¹ The following figures were provided by the R.E.C. in February 1940 in support of their view that the results of the new demurrage regulations had been satisfactory:

Date	Daily shortage of goods wagons reported at principal stations	Wagons standing under load more than 48 hours at stations, works and private sidings	
		Mineral	Goods
17th November, 1939	5,047	116,228	24,744
24th November, 1939	5,072	116,050	27,542
1st December, 1939	6,614	110,697	27,581
8th December, 1939	9,836	106,874	27,190
15th December, 1939	10,414	91,867	25,668
22nd December, 1939	7,707	75,972	21,458
29th December, 1939	1,372	72,554	26,103
5th January, 1940	1,163	58,053	23,027
12th January, 1940	2,209	48,712	19,630
19th January, 1940	2,992	45,393	22,727

After the beginning of January, the bad weather distorted the figures and it was admitted that the improved situation which the above figures appear to show was partly a seasonal fluctuation. During 1940, the number of wagons standing under load for more than 48 hours rose from 52,519 on 5th April (the lowest figure recorded during the year) to 92,656 on 27th December.

² Such reorganisation was largely a matter for the railways and the user Departments. For example, the railways considered that it was necessary to impose the demurrage regulations to release for railway use coal wagons normally used for storage purposes. This, however, raised new problems for the coal merchants and collieries, who did not, in many cases, have facilities for stacking coal.

facilities, seat reservations and restaurant cars were to be discontinued, while sleeping car accommodation was to be restricted. Express freight services were similarly reduced; their schedules were revised, and to make the best use of locomotive capacity, the train loads were advanced to the capacity of engines.¹ It was the intention that the new scheduled services would run to time, and that delays, which had become unavoidable while normal time-tables remained unadjusted, would be eliminated. But the expected air raids did not happen, the railways managed their main tasks in the autumn of 1939 without difficulty, and it was thought that the new time-tables were causing unnecessary inconvenience and discomfort to the public. It was therefore agreed before the New Year to adjust passenger time-tables so as to permit a marked improvement in the services as compared with those shown in the first emergency time-tables.² It was even decided, it seems unwisely, to re-introduce cheap day fares and to restore certain refreshment car facilities that had been cancelled when war began. Scarcely had the improvements come into force, however, when the impact of abnormally heavy coal traffic and severe weather on railway working compelled the R.E.C. to agree to fresh reductions in passenger services, especially on the L.N.E.R. system.

Lighting restrictions were one of the main hindrances to efficient railway operation in the first months of the war. This matter had been investigated from 1937 onwards by a special committee and a number of tests had been carried out. As a result, it had been decided that, if railway movements were to continue in war with reasonable speed and safety, a complete blackout was not practicable. Instead, standards of lighting were laid down to meet separate classes of railway requirements. The standard for stations and yards was known as 'Category B (Fully restricted)' and permitted low-powered lights to be kept on even during air raid warnings. A higher standard, 'Category C (Exempted)' was required for large passenger stations, marshalling yards, motive power depots and goods warehouses. Although these lights were screened, it was necessary to put them out immediately an air raid warning was received. Among other matters settled by the Lighting Committee were a degree of lighting slightly above Category B for signal boxes and a specification for train lighting. In spite of this preparatory work, the first experiences of railway working under the restricted lighting conditions disclosed a variety of unsuspected difficulties.

¹ The average wagon load at starting point for merchandise traffic rose from 2.99 tons in 1938 to 3.88 tons in 1942, 4.12 tons in 1943 and 4.27 tons in 1944. See *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944*.

² Though broadly the services brought into force at the beginning of 1940 represented a worsening of at least 25 per cent. compared with those run in the winter of 1938.

Indeed, one R.E.C. estimate in September 1939 put the loss of efficiency on the railways due to lighting restrictions as high as four working hours a day. To help mitigate the difficulties of railway staffs and passengers, a fresh committee was appointed in December 1939 to explore the possibility of improved standards of lighting in the various branches of railway operation.¹ Although many improved methods of lighting during blackout hours were devised as a result of experience, lighting restrictions remained one of the more serious hindrances to railway efficiency throughout the war, more especially in the autumn and winter of 1940-1941, when enemy air raids were most frequent.²

It is difficult to sum up accurately what happened to the capacity of the railways in the first year of the war because the quantitative measurement of railway capacity is well-nigh impossible. All that can be done is to enumerate the principal elements in the situation. Firstly, although limited new railway works were under construction, the net increase in track capacity between September 1939 and the summer of 1940 was almost negligible. Secondly, the locomotive stock was maintained at the September 1939 level, which was adequate for the traffic demands of 1939-1940, though the curtailment of new locomotive construction and the use of railway shops for munition work were to have serious consequences for railway working in the later years of the war. Thirdly, the stock of railway wagons probably increased slightly in the first year of the war, while the requisitioning of privately owned wagons and their inclusion in the common user system enabled the total wagon stock to be used more economically. It is uncertain whether the 1939 demurrage regulations contributed significantly towards economy in the use of wagons. If they did, they almost certainly created as many problems of inconvenience to traders as they solved for the railways. Fourthly, the deceleration of passenger and freight trains inevitably caused some reduction in the capacity of the system in terms of services that could be provided with given resources—though reductions in passenger services did free capacity for freight trains. Fifthly, probably the most severe reduction in railway efficiency and capacity to handle traffic resulted from A.R.P. and lighting restrictions, which inevitably impeded railway working, especially at night.

Thus, while track and locomotive capacity remained at about pre-war level and the capacity of the wagon stock increased, there is good reason for thinking that loss of capacity resulting from deceleration

¹ This committee represented the Ministry of Transport, the Railway Executive Committee, the London Passenger Transport Board, the Air Ministry and the Ministry of Home Security. See R. Bell, *op. cit.*, Chapter 8.

² Although the railways continued to press for improved lighting, the Air Ministry was unable to agree.

and lighting restrictions more than counterbalanced the gains elsewhere. But although, as far as can be judged, railway capacity in 1939-1940 was less than before the war, it could still broadly handle the increased traffic demands of that period;¹ the one important exception was southbound coal traffic. Since, however, there were no heavy enemy air attacks nor large-scale diversion of shipping before the late summer of 1940, there was, as yet, insufficient experience to confirm or refute pre-war conclusions about the capacity of the railway system in conditions of total war. The real test of the adequacy of railway resources was still to come.

(iii)

The Railway Priority Machinery

At the beginning of the war, no effective machinery existed for matching the larger Government demands for transport against supply. The Railway Communications Committee, which seems to have been intended to fulfil this function, did not, as we have seen, succeed in doing so. In the first twelve months of the war, the committee met only four times and nothing further was done to build up a new or stronger organisation to replace it. Thus there was no machinery in existence capable of allocating inland transport facilities if a prolonged transport scarcity were to occur. Machinery did, however, exist for meeting temporary shortages of railway capacity. Essential traffics might be given priority if and when certain routes became congested and restrictions had to be placed on the movement of traffic over them. Primarily, the scheme was intended to expedite vital military movements, though it also covered a number of essential civilian traffics.

The broad principles of the scheme for giving priority to essential traffics on the railways were embodied in the document 'Instructions to General Managers', which had been issued in April 1939. The document contained a list of essential passenger and merchandise traffics, which were to be accorded priority over other traffics. The Railway Control Officer was to keep the R.E.C. informed of traffics declared by the Government to be essential, and in the case of local problems, excepting those of a serious nature, the railways were to comply with the instructions of Movement Officers. Priority regulated the acceptance of traffic and not its movement. Thus, if traffic on any given route was congested and the railway company had to impose restrictions on the acceptance of traffic on that route, the

¹ See Appendix V.

railway was required, if possible, to exempt priority traffic from these restrictions. If, in practice, the railway had insufficient capacity to deal with all the priority traffics, it was to give first preference to urgent military consignments and second preference to specific goods declared by the Government to be essential. Generally, however, perishable foodstuffs were always moved if possible. Where, in practice, there was a consignment demanding extremely urgent movement, the Ministry of Transport Railways Division could always intervene on its behalf.¹

To advise the Government on railway priority questions, a Transport Priority Sub-Committee was appointed under the Chairmanship of the Parliamentary Secretary to the Ministry of Transport. It consisted of representatives of all the Government departments using the railways and other forms of inland transport and held its first meeting on 5th October, 1939. Where the sub-committee failed to reach agreement on a particular priority question, the matter was referred to the Cabinet Sub-Committee on Priorities for a decision. One of the first arrangements agreed to by the Transport Priority Sub-Committee was the use of what were known as 'red priority slips'. This allowed consignments of immediate urgency such as those needing to reach their destinations by a particular time—as for example ship's gear to enable a ship to sail in convoy—to be expedited by attaching to the consignment note a special priority slip known as a 'red label'. This was the highest form of priority and was very sparingly used. It was the only form of priority which affected the *movement* of traffic on the railways rather than its *acceptance*. These labels were originally fixed to the consignment note on the direct authority of the Railway Control Officer, but, to avoid delays, a supply was later held by the railway District Goods Officers. The Movement Officer of a Department wishing to make use of the procedure could then apply by telephone to the Railways Division of the Ministry of Transport, who could authorise the railway concerned, through the R.E.C., to issue the label. This scheme, a relatively minor form of priority, was only used for special and limited purposes.

It needs to be stressed that the railway priority machinery was essentially a device for dealing with short-term transport difficulties and that its purpose was to give essential traffics the first claim to railway facilities when temporary congestion occurred. Though it was to prove effective on occasions, the railway priority system—in common with most war-time priority machinery—had certain inherent weaknesses and limitations. Firstly from a traffic point of

¹ See above, Chapter II, p. 63, for the principal traffics declared by the Government to be essential.

view, priority of one class of traffic over another is 'inherently vicious', since it necessarily interferes with the air of maintaining a regular flow with the minimum of interruption. Secondly, priority for a few selected traffics, if maintained for very long, may exclude the remaining traffics completely: thus, it is generally better to move a proportion of all traffics, rather than all of some and none of others. Thirdly, a priority system can only work if the number of essential traffics is kept small. If priority had been granted to all those traffics moving by rail in war-time, which claimed to be urgent for war production, the whole system would have become meaningless. The importance of observing these rules—or rather the consequence of not observing them—was amply demonstrated in the early months of 1940, when an attempt was made to apply the railway priority system to resolve the critical situation which had arisen with the movement of coal.

It is worth anticipating the story of the 1940 coal distribution problem at this point in the narrative in order to illustrate more clearly the uses and abuses to which the railway priority machinery was subject. The roots of the coal distribution problem lay in the need to transfer about one-third of the normal seaborne coal movement down the East coast to the railways but the immediate cause of the early 1940 difficulties was the severity of the weather in January and February of that year. This not only caused a complete stoppage of rail movement in some districts, but seriously reduced stocks of coal throughout the country. It was against this critical background that the Mines Department, on 15th February, 1940, requested the Transport Priority Sub-Committee to grant 'absolute priority' for all coal traffic on the railways. The request brought protests from other Government departments represented on the committee, in particular from the Ministry of Supply, who considered that the proposal might result in the closing down of munition factories for a month, and from the War Office, who feared that the movement of men and stores to the ports might be held up. The Mines Department subsequently modified its request and it was agreed that all coal¹ should be added to the list of 'essential traffics'—thus being granted priority in the ordinary way—for a period of seven days from 16th February, 1940, which was subsequently extended for a further fortnight.

The continued applications of the Mines Department for the extension of the priority given to coal traffic raised a fundamental question of transport policy, namely whether the legitimate short-term uses of the railway priority system could safely continue to be

¹ The original list of essential traffics included only certain types of coal traffic, viz. 'coal to power stations, gas works, sewage works and waterworks, munition works . . . and for bunkering'.

exceeded in this way. Plainly they could not unless the whole system was to be undermined, for it was fundamental to the priority scheme that the number of 'essential' traffics be kept low. Coal is a bulky commodity, which accounts for roughly two-thirds of all freight tonnage originating on the British railway system. Consequently, the extended priority for all coal traffic made the system meaningless and threatened to defeat the whole object of the scheme. Moreover, because coal trains are heavy and not fitted with continuous brakes, coal is necessarily a slow-moving traffic. Under these conditions, priority for coal was especially damaging to other traffics on the railways. To quote a few examples, mail and newspaper trains were delayed; internal military moves were interrupted; the transport of special cables for use against magnetic mines took four days instead of two. Thus, if coal was to continue to enjoy priority, the cost must be met in delay and inconvenience to other traffics, many of them equally essential to the war effort. It is, therefore, doubtful if the result achieved justified the cost, especially since no one could be certain that the granting of priority had, in fact, done anything to expedite deliveries of coal. Consequently, when on 8th March, the Mines Department came back to the Transport Priority Sub-Committee to ask for a further extension of the general priority for coal traffic, there was almost unanimous opposition from other Departments on the ground that a further extension would have deleterious effects on their contributions to the war effort. The matter had to be referred to the Ministerial Priority Committee, where it was decided to extend priority for seven days more, and ultimately until the end of March. It is not altogether clear why the Government persisted in this course when the weight of evidence was against a further extension of priority. Indeed, the Mines Department representative admitted to the Transport Priority Sub-Committee on 4th March that the application for priority was based 'more on psychological grounds than on any definite need for priority to ensure conveyance'. The decision to extend priority seems to have been based on the highly dubious argument that this would avert further Parliamentary criticism of the Government's handling of the coal situation, and hence prevent the enemy from discovering the true cause of the coal shortage.¹

This early experience of the working of the railway priority system demonstrated its essentially limited usefulness. In dealing with acute local congestion, the granting of priority might help to avert a breakdown of 'essential' supplies. In a situation of chronic and widespread inland transport scarcity—as the coal transport situation was on the verge of becoming—priority for one large class

¹ The Government had already encountered sharp Opposition criticism in the weeks of the coal crisis.

of traffic only endangered the movement of all traffics. Two important lessons about transport priority thus emerged from the coal transport difficulties of early 1940. Firstly, that priority, if it was to work, must be used sparingly and not indiscriminately. Secondly, the priority system alone would be largely useless if widespread and prolonged transport congestion were to arise; it would need to be supplemented by more comprehensive machinery for regulating war-time demands on transport to match the capacity of the system.¹ The first lesson of experience was taken to heart by the Government, and subsequently throughout the war, unreasonable demands for transport priority were firmly resisted. The second lesson made little impression on Government policy at this time, perhaps because in the atmosphere of early 1940, the possibility of chronic inland transport congestion still seemed remote. Within less than six months, however, it had become a reality.

(iv)

Government Control of the Railways

When, in 1939, the Railway Executive Committee was given executive responsibility under the Minister of Transport for the war-time operation of the British railway system, the Government was closely following the precedent set in the 1914-1918 War. In 1914, however, the R.E.C. had consisted of an Acting Chairman and the General Managers of the ten leading railway companies, and was responsible for well over a hundred independent railway undertakings. Now, in 1939, the number of separate undertakings to be controlled was considerably smaller: the four main line systems and the L.P.T.B., whose General Managers and Deputy Chairman composed the R.E.C., under the chairmanship of Sir Ralph Wedgwood. Thus, the R.E.C. of 1939 was not only smaller than its predecessor, but directly representative of each of the organisations forming the British railway system. In theory, this should have made for simpler and more effective control than had existed in the earlier war. In practice, as will subsequently be described, the arrangement disclosed certain organisational weaknesses during the first two years of war-time railway control.

The members of the R.E.C. were, without exception, men of considerable ability and experience in the operation and management of transport undertakings.² Sir Ralph Wedgwood, its chairman, had

¹ This was achieved later in the war by the creation of the Central Transport Committee. See below, Chapters VII and X for a discussion of its functions.

² See above, p. 101, for the membership of the R.E.C.

been General Manager of the L.N.E.R. from 1923 until 1939 and was widely recognised in the railway world for his expert knowledge of railway operating matters. Of the technical competence of the members of the R.E.C. there was no doubt. The real test of the effectiveness of the R.E.C. as the key piece in the machinery of war-time control turned on how far its members, representing different railway companies each with its own peculiar characteristics and organisation, could organise the British railway system as one unit and carry out the policy of the Government.

When war came, there was some uncertainty about the exact nature of the R.E.C.'s functions, since these had been set down in the 'Instructions to General Managers' only in general terms. The *Railway Control Order*¹ of 1st September, 1939, did, however, make it plain that the R.E.C. was to be a channel of communication between the Minister of Transport—or rather the official appointed by him as Railway Control Officer—and the railway companies. Thus, Government policy was conveyed to the companies by the Minister of Transport through the Railway Control Officer and the R.E.C. Similarly, information, about say the current traffic situation, was passed up the hierarchy from the separate companies to the R.E.C., where it was generally summarised, and thence to the Railway Control Officer and, where necessary, to the Minister. Frequently, the R.E.C. itself took the initiative in bringing important questions of policy to the notice of the Ministry of Transport. The position of the individual companies under this system of control was that they could not take independent action in matters that affected other railway systems or involved special expenditure. Such questions had to be referred to the R.E.C., and in matters of major importance the R.E.C.'s conclusions were put up to the Ministry of Transport for approval. The internal business of the R.E.C. was organised as a system of 'consultative' or advisory committees dealing with each specialised aspect of railway working, such as railway operation, passenger traffic, mineral traffic and so forth, and reporting to the main R.E.C. These committees varied in number at different periods of the war, but there were usually about twenty. Each was composed of the appropriate departmental managers or superintendents of the four companies and handled those matters referred to it by the R.E.C. or raised by individual members. While the minutes of the departmental committees were subject to R.E.C. approval, the departmental managers and superintendents who composed the committees remained individually responsible to the General Managers of their companies.

The instruction issued by the R.E.C. to the main line companies

¹ Railway Control Order, 1st September, 1939, S.R. & O. 1939, No. 1197.

on the outbreak of war was to 'carry on as usual' subject to broad directives as to policy.¹ In effect, this meant that the R.E.C. did not attempt to run the railways from its headquarters, but left the internal organisation of each company undisturbed. The function of the R.E.C. and its elaborate system of advisory committees was rather to ensure that those companies worked as a unified system so that individual company considerations did not obstruct the fulfilment of war transport needs, that the companies followed, as far as possible, common war-time policies and that, in other respects, they carried out the policy of the Government. Even in the vital matter of railway operation, the R.E.C. Operating Committee did not treat the British railway system as a single operating unit. To have done so would have called for revolutionary changes in normal practice and created many difficulties. Instead, each company retained its own operating organisation, the operating superintendents meeting as an advisory committee of the R.E.C. In practice, however, this procedure did not go far enough in the direction of unity. The volume of traffic passing between the different companies' systems grew increasingly heavy and it later proved necessary to strengthen liaison between the four groups over operating problems.²

Since this machinery of war-time railway control survived for less than two years in its original form and had subsequently to be overhauled, it is necessary to consider how far its weaknesses were inherent and obvious at the time of its introduction and also how far there was any practicable alternative open to the Government in 1939. The one inherent weakness which seems to have been insufficiently recognised from the start was the length of the 'chain' of responsibility downwards from the Minister through the Railway Control Officer and the R.E.C. to the railway companies themselves. This arrangement was not well-conceived either for the speedy decisions necessary in war-time or for close Government supervision of railway working. It kept the Ministry of Transport unnecessarily

¹ In correspondence from the R.E.C. to the Ministry of Transport, the Ministry was told 'that the direction to "carry on as usual" is one of administrative convenience, which may be adjusted between the Committee and the undertakers by way of some general formula, so long as it is understood that the Committee's powers remain unimpaired, and the Committee can assure the Minister that it will be able to exercise its responsibility to the full extent'.

² The operating arrangements of the four main line groups were not identical. The L.N.E.R. was the only British railway organised on a divisional rather than a departmental system. It had Area Managers at London, York and Edinburgh to whom executive powers were delegated. This organisation was well-suited to the peace-time needs of a geographically widespread system. In war, however, this arrangement had the disadvantage of not providing an operating section with power to operate in an 'all-line' capacity. This weakness was remedied in 1942 by setting up a Central Traffic Office for the L.N.E.R. at Marylebone under the charge of Mr. V. M. Barrington-Ward, who became Assistant General Manager (Operating) for the duration of the war. Mr. Barrington-Ward remained chairman of the R.E.C. Operating Committee, which position he held throughout the war.

remote from railway problems and hardly simplified the already difficult problem of controlling five large-scale undertakings with combined staffs of 589,000 in 1939.¹ The remoteness from the Ministry of Transport of the separate railway managements, which were in effect the operating authorities, stemmed, partly at any rate, from the fact that the Ministry's Railways Division under the Railway Control Officer on the one hand, and the R.E.C. on the other, were separate organisations. The R.E.C. was not a part of the Ministry of Transport, nor did the Railway Control Officer attend its meetings or come into frequent contact with the individual railway managers.² Policy instructions from the Railway Control Officer to the R.E.C. and information from the R.E.C. to the Railway Control Officer usually passed through the telephone or by correspondence. Even the precedent of the earlier war, when the whole problem had been complicated because of the larger number of companies to be controlled, provides no obvious reasons why a closer relationship was not thought necessary in 1939, either by making the R.E.C. a part of the Ministry organisation or by appointing the Railway Control Officer as its official chairman.

From the point of view of the Ministry of Transport, this procedure meant that there was no responsible Government official actually present to obtain information at first hand when either day-to-day or longer-term railway problems were discussed by the R.E.C. It is true that the relatively small number of officials who formed the Ministry's Railways Division were largely unfamiliar with the technicalities of railway working; only in the Railways (Maintenance) Division did the Ministry possess a staff of technical officers expert in railway problems, and the nature of their normal duties hardly fitted them to exercise a constant supervision of day-to-day railway working. Nevertheless one can scarcely avoid the conclusion that the original form of control over the railways was inherently unsuited to close participation by the Ministry of Transport in their war-time working.

The system of control proved unsatisfactory too from the viewpoint of the railway managers, though this was due rather to the method of working adopted within the R.E.C. than to inherent weaknesses of organisation. In the early part of the war the work of the R.E.C. was largely centralised in the hands of the chairman, who became, in effect, the sole channel of communication with the Government. This procedure, appropriate enough, no doubt, for the conditions of 1914, proved unsuited to the problems of 1939 and

¹ *Railways Staff Return, 1939-1945.*

² At this time, the Ministry of Transport occupied Metropole Buildings, Northumberland Avenue, while the R.E.C. had taken over specially prepared premises in the disused tube station in Down Street, Piccadilly.

1940. The four British railway groups had different traditions, served different areas and to some extent handled different types of traffic. It was with some justification, therefore, that certain of the railway managers considered that the 'funneling' of all communications with the Government through the Chairman of the R.E.C. and the Railway Control Officer gave them too little opportunity to bring the special problems of their individual systems to the attention of the Government; there were, however, strong personal differences of opinion among the members of the R.E.C. on matters of policy. This did not make for unity within the ranks of the R.E.C. and, in addition, the railway managements owed their loyalty to their individual companies. It would serve no useful purpose for the historian to re-open those issues which at different times hampered the smooth working of the R.E.C. The fact needs to be recorded, however, that despite the great technical ability which its members brought to bear on war-time railway problems, the R.E.C. did not succeed in the first two years of the war in bringing about the unified outlook which war demanded. There were thus weaknesses on both sides: in the Ministry's organisation for controlling the railways and within the R.E.C. itself. Some of these defects were inherent in the form of organisation adopted; others could scarcely have been foreseen on the outbreak of war.¹

Although the Government's war-time railway policy had been under discussion as far back as 1937, when war came in 1939, no agreement had been reached between the Government and the railways about the financial aspects of war-time control. In the First World War, the Government had guaranteed the net revenues of the railway companies at the level of 1913. The agreement permitted Government traffic to be carried free of charge and enabled the rates for non-government traffic to be stabilised. Under this agreement, however, the railway companies had no direct interest in the level of their costs in war and these financial arrangements were said to give no incentive to the companies to operate their lines with economy and efficiency. Similarly, Government departments were under no obligation to use the services of the railways economically.

Although, however, there appeared to be objections to this form of agreement, the financial negotiations before the Second World War were begun on the assumption that there would again be a guarantee of net receipts.² Negotiations started in 1937; the Government proposed that the net revenue should be based, as before, on the

¹ This matter is further pursued in Chapter VII.

² This account of the financial negotiations is a simplified one and it has not been thought necessary to deal with every aspect in detail. One reason why the Government was prepared to compromise with the railways was the hope that the latter would be prepared to agree to the Government's special terms for A.R.P.

results of a single pre-war year or on the average of perhaps three or more years. It was also proposed to include the London Passenger Transport Board in the pool since it had been agreed that the Board's railways would have to be controlled and it was not possible to ascertain separately the net receipts of any particular section of the Board's undertaking. The railway companies, who were not enthusiastic about the inclusion of the L.P.T.B. in the pool, advanced the proposal for compensation in war-time on the basis of the 'standard net revenue', to which they claimed they were entitled under the Railways Act, 1921. They argued that railway traffic would be likely to increase in war and that they would be able to earn their 'standard revenue', which was recognised by law as a fair return to capital invested. If their costs increased in war-time, so the argument ran, they would be fully justified by the 1921 Act to raise their charges accordingly. The Ministry of Transport rejected this argument. It pointed out that the 'standard revenue' of the 1921 Act had never, in fact, been earned and to accept the railway companies' claim to it in war-time would be to allow them to 'profiteer' as a result of abnormal conditions. The Ministry took the view that the companies must be prepared to accept as a basis of agreement the actual net revenue of some defined period.

Negotiations between the Government and the railways were prolonged and it was not until July 1939 that the Treasury approved in outline the Ministry's proposal for taking the net revenues of a defined period as the basis for compensation. The railways, however, now came forward with the proposal that net revenues should be increased in proportion to gross receipts—that is, in relation to traffic carried. This was not acceptable to the Government, who said that this would not ensure that the companies had a financial interest in the management of their undertakings. Finally a compromise was agreed to and the financial agreement between the four amalgamated companies and the L.P.T.B. was set out in the form of a White Paper published on 7th February, 1940.¹

The basis of the agreement was that the revenues of the controlled undertakings were to be pooled as from 1st September, 1939, and that a minimum net revenue of £40 million was to be guaranteed by the state. This sum was equivalent to the average net revenues of the four amalgamated companies for the three relatively prosperous years 1935, 1936 and 1937 plus the revenue of the L.P.T.B. for the year ended 30th June, 1939. If the railways earned more than this guaranteed minimum net revenue, they were to keep all of the excess up to £43½ million and share with the Exchequer one

¹ Cmd. 6168, February 1940. Statement by the Minister of Transport in the House of Commons, 7th February, 1940. H. of C. Deb., Vol. 357, Cols. 222-225.

half of any further excess up to £56 million, a figure equal to the 'standard revenues' of the four railway companies plus the net revenue necessary to enable the L.P.T.B. to pay the standard rate of interest on its 'C' stock.

It followed from this agreement that, unlike the arrangement in the previous war, Government traffic had to be paid for, and that rates, fares, and charges might be adjusted, with the approval of the Minister of Transport, to meet variations in working costs due to the war without reference to the volume of traffic. It was also agreed that the railways might charge to expenditure a standard sum for maintenance (including renewals) on the basis of the average of the charges made in the basic period, but subject to adjustment for altered conditions; amounts not expended currently would be transferred to separate trust funds for employment after the war. Provision was also made that the cost of restoring war damage up to a maximum of £10 million in any full year might also be charged to revenue when damage occurred. Either side might propose a revision of the agreement after the end of 1940 'for any cause of a major character'.

The main implications of this agreement were firstly, that the Government was committed to raising fares and charges in wartime if the railways could show that their costs had risen, and secondly, that Government departments, which in war were bound to consign increased traffic by rail, were obliged to pay for all movements of passengers and goods and often enter into elaborate negotiations about charges with the companies.¹ Thus, there was to be no question of 'compensation' to the railways for Government traffic carried, the agreement being, in effect, a guarantee by the Government of a minimum net revenue. Thirdly, the railways which, as a result of deliberate Government policy and handicaps imposed on their competitors, particularly road transport, were being given traffic they might never have obtained in peace, were allowed to earn higher revenues and pay larger dividends than in peace largely at the expense of the transport consumer, upon whom the burden of increased charges fell.²

It is not altogether surprising, therefore, that objections were advanced against the agreement on economic, administrative and political grounds and that it was subjected to severe criticism by

¹ The Treasury wanted the railways to fix rates for Government traffic as part of the financial agreement, but it was argued that this could not be done until the nature and extent of the traffic were known.

² See *The Economist*, 10th February, 1940, p. 243. 'The present and prospective earnings of the railway companies are due very largely to the handicaps imposed by war conditions on their competitors. These are not in any sense the railways' merit, but their good fortune. And is it not a sound principle that nobody should be allowed to make windfall profits out of war?'

the Opposition in the House of Commons.¹ The Government maintained that the agreement prevented profiteering without destroying the incentive to economy and efficiency.² The critics argued that the railways were being allowed to earn higher revenues than in peace because of the disadvantages of their competitors and that, in the event of their earning more than £43½ million a year, the effect of the agreement would be to impose a tax on transport.³ The Government was also criticised for facilitating a rise in the cost of transport in war-time merely to assist the railway companies to earn higher revenues, a policy which, it was said, treated the companies too generously and was a potential instrument of inflation.⁴

The problem of raising charges had not occurred in the First World War because the railways were paid a fixed sum each year by the Government and the Treasury took the profits or sustained the losses. It was only because the Government decided to allow the railway companies to earn more, if they could, than the guaranteed minimum net revenue that it was necessary to sanction their right to ask to impose higher rates and fares. There was, nevertheless, substance in the criticisms advanced against the agreement. The Government, in striving to retain an incentive to economy and efficiency in railway working had come seriously into conflict with its own precept in the broader field of domestic economic policy, namely the stabilisation of the cost of living. Sooner or later, increased railway charges were inevitable under the agreement and, since transport cost enters into the cost of most commodities, it would be difficult to hold the cost of living down. What of the argument that the prospect of higher net revenues for the railway companies would promote 'economy and efficiency' and maintain them 'in a healthy economic state'? Was this reasoning sound? It was true that the companies might have an interest in the level of their costs under the agreement, but the incentive to keep them low was partly removed by the virtual guarantee of increased fares and charges, which transport consumers, principally Government departments in war, had to meet. Certainly, nobody who supported the 'economy and efficiency' argument seems to have taken the trouble to explain it

¹ H. of C. Deb., Vol. 357, Cols. 621-728.

² Of course, had the railways earned enough to pay 6 per cent. on their ordinary shares they would have become liable to pay Excess Profits Tax, but this position never arose. Cf. statement by Parliamentary Secretary to Ministry of Transport in House of Commons, H. of C. Deb., Vol. 365, Cols. 1780-1786, 13th November, 1940.

³ See *The Economist*, February 1940, pp. 243 and 286. 'The Government are spending money on keeping down the cost of food. When it comes to the cost of transport—a hardly less vital element in the whole price structure—they not only make arrangements to facilitate an increase, but they impose a tax which might result, in the extreme case, in the railway user paying £12½ millions more than would be necessary to satisfy the railways' claim for standard revenue.'

⁴ *Ibid.*

precisely or to analyse its implications carefully. In practice, what it amounted to was an encouragement to the railway companies, through the prospect of higher profits, to carry as much traffic as they could. While the railways had capacity in reserve, this, on the whole, was possibly justified in the national interest. But what if the railways became overburdened and it became necessary to relieve them of traffic? The 'incentive' principle might then work against the national interest and place the railway managers in an embarrassingly difficult situation. They would be torn between their duty of earning profits for their companies and their duty, as members of the R.E.C., of following the policy which contributed most to the general war effort.

The railway companies lost no time in making use of their right to apply for increased fares and charges. For one thing, their labour costs rose. In November and December 1939, the railwaymen's unions asked for an increase in wages amounting to ten shillings a week in the 'Conciliation grades' on the ground that the cost of living had risen. In February 1940 they were granted a rise of four shillings a week and in May a further three shillings a week—a total of seven shillings a week in all. In each case the Government was consulted and the Ministry of Labour approved the second increase because it was no higher than corresponding increases in industries such as coalmining. The R.E.C., in March 1940, therefore sought approval for a general increase of 10 per cent. in the charges of the main line companies, together with a corresponding but separate adjustment of L.P.T.B. fares. The Minister was satisfied that there was a case for increased charges. The matter was not referred to the War Cabinet, but the Minister obtained the approval of the Chancellor of the Exchequer and the Prime Minister to order increased charges on the main line railways as from 1st May, 1940.¹ The procedure applied in ordering this increase, which was made without the consideration or approval of the Railway Rates Tribunal either in its normal pre-war judicial capacity or its war-time consultative capacity,² was sharply criticised in the House of Commons.³ On 1st July, 1940, there followed corresponding increases in the road

¹ The Railways (Additional Charges) Order, 17th April, 1940, S. R. & O. 1940, No. 586.

² It should be pointed out that the Defence Regulations had given the Minister control over the general charges and had suspended the Tribunal's jurisdiction in that connection. The Tribunal's jurisdiction over charges in detail had not, however, been suspended. The members of the Tribunal had not been given any statutory consultative functions and were, in fact, consulted only if time permitted. The limitation of the Minister's powers to the control of the general level, and the retention of the Tribunal's powers over detail, coupled with the magnitude and complexity of railway charges, made exceedingly difficult any manipulation for specific purposes.

³ H. of C. Deb., Vol. 360, Cols. 120-178. See also criticisms in *The Economist*, April 1940, pp. 724 and 768.

fares of the L.P.T.B. calculated to yield £2 million a year.¹ The exact nature of these latter increases was decided after referring the matter to the permanent members of the pre-war Railway Rates Tribunal, acting as a consultative committee to the Minister of Transport.

A further application for a general increase in charges of $7\frac{1}{2}$ per cent. was made by the R.E.C. in July 1940 and this time the Minister referred the matter to the Consultative Committee for advice. On 18th September the Consultative Committee reported that the additional revenue necessary could be secured by making no increase in the prices of season tickets or workmen's fares or the ordinary fares of the L.P.T.B., but by increasing other charges and fares from the existing level of 10 per cent. above the pre-war basis to $16\frac{2}{3}$ per cent. It was maintained by the Chancellor of the Exchequer and the Minister of Transport that this report went a long way towards meeting public criticisms directed against any further increase in the cost of essential travel, while the railways would continue to be run on an economic basis during the period of control, thus preserving the 'no subsidy' principle. The War Cabinet agreed to the increase in the fares and charges as recommended, which were brought into force on 1st December, 1940, but agreed that a new Railway Agreement should be negotiated since the terms of the original agreement had perhaps been rather generous.

One further difficulty which was to persist while the first financial agreement remained in force was the question of rates for Government traffic. To revert to the First World War practice of dispensing with payments altogether was thought to be undesirable as it would encourage the wasteful use of transport. On the other hand, the continuous and heavy traffic now being forwarded by Government departments usually justified the quotation of 'exceptional' rates—i.e. percentage reductions below 'standard'—with the result that the railways became inundated with applications for such reductions in the early part of the war. To resolve the complicated problem of special charges for Government traffic and to relieve the railways of the heavy burden being placed on their clerical staffs, in May 1940, the Ministry of Transport set up a Government Traffic (Railway Charges) Committee.² This Committee made a start with the difficult task of working out agreed percentage reductions on standard charges for the main classes of traffic moving on Government account and towards the ultimate aim of saving railway clerical labour and book-keeping by a system of flat rates for Government traffic. This

¹ The Railways (Additional Charges) No. 2 Order, 26th June, 1940, S. R. & O. 1940, No. 1151.

² This met under a Ministry of Transport chairman and represented the various Government departments using transport.

was to be a slow process, however, for so long as the railways were entitled, under the first financial agreement, to participate in proceeds in excess of the guaranteed minimum net revenue, it proved very difficult to carry out any drastic simplification of railway charges for Government traffic because of the possible effects on the earnings of the pool.¹

To sum up, the financial agreement with the railways, agreed in February 1940, aimed at encouraging the railways to carry as much traffic as possible through the incentive of participation in higher profits. In 1939 and 1940, the Government's policy was broadly to encourage the railways to carry more traffic, so that, as long as the 'incentive' principle worked, the railways would be fulfilling the Government's policy with the minimum of direct control. Thus, even if the method of control over the railways in 1939 did not amount to close Government participation in their working, the financial agreement was supposed to provide a buttress to strengthen control. The Churchill Government apparently thought the terms of the original agreement too favourable to the railways, and, as will be described later, the revised agreement with the railways reverted to the original plan of a fixed guarantee payable by the Government to the railways. Although railway workers continued to be granted wage increases to meet the cost of living, the Government approved no further increases in rates of fares during the war.

(v)

Conclusions: Railways in the First Year of War

We turn now to describe the tasks and to examine the performance of the controlled railways from the outbreak of war until the summer of 1940. During September 1939, the railways were busy carrying out the large pre-planned emergency movements in connection with the Government's programme for civilian evacuation, the mobilisation of the armed forces and the dispatch of the British Expeditionary Force to France. Each of these movements had been carefully studied beforehand and precise time-tables drawn up. Their execution raised no unforeseen or insuperable difficulties for the railways, especially since enemy air attacks, though expected at the time, failed to take place. The chief significance of these early emergency movements is that they tested for the first time the local liaison arrangements between the railways and Government departments but disclosed no fundamental weakness.

¹ See *Food*, Volume I, *op. cit.*, pp. 212-213, for an account of the question of special rates for Ministry of Food traffics. The work of the Committee is further discussed below, Chapter VII, Section (iv).

Railway time-tables for the evacuation of mothers and children from the larger towns had been worked out in the early months of 1939 as a vital part of the larger arrangements for civilian evacuation. In the hope of avoiding dislocation, it was planned that, as far as possible, the whole evacuation movement should be completed before war broke out. In fact, the main programme of official civilian evacuation was carried out in the first three days of September 1939. In that short period, the railways ran over 3,800 special trains and carried over 1,300,000 passengers.¹ Since, however, fewer than half the number of persons who had registered for evacuation actually went, the railways' task proved smaller than had been expected. Indeed, on the second day of the evacuation, some planned train movements were found to be unnecessary and, in consequence, cancellations and changes in schedules and destinations were made. These alterations accorded strictly with the principles on which the Government had drawn up the transport arrangements for evacuation, namely that evacuees should be removed from the danger areas with the minimum of delay, but that evacuation should not monopolise the railways to the exclusion of other essential services. Since the railways were already busy with other urgent movements, last minute re-arrangements to meet the smaller numbers of evacuees helped to speed up the evacuation movement as a whole. It was unfortunate that the changes, undertaken with the object of getting the evacuees away from the danger areas as rapidly as possible, caused confusion in the reception areas which was not easy to disentangle.²

Apart from the exodus of official evacuees, the railways were extensively used at the beginning of the war for unofficial evacuation and general dispersal purposes. Besides the independent travel of individuals and family groups who left the large cities for safer areas in the country, a number of Government offices and public institutions, together with many private firms and offices, moved away from London and other cities to country districts. It is impossible to assess the total volume of railway travel associated with private evacuation and general dispersal, but it was certainly substantial—that is, in relation to official movements.³

Mobilisation of the Army and the Royal Air Force started on

¹ The railways' figure of official evacuees in September 1939 is 1,334,358, who were moved in 3,823 special trains. (See R. Bell, *op. cit.*, p. 71). The total number of official evacuees is given in R. M. Titmuss, *Problems of Social Policy*, in this series (H.M.S.O. 1950), Chapter VII, as 1,473,000. The discrepancy would appear to be accounted for by the fact that some evacuees were moved direct to the reception areas by road and a few by sea.

² *Problems of Social Policy, op. cit.*, Chapter VII and *passim*.

³ Professor Titmuss has estimated that approximately two million persons privately evacuated themselves between the end of June and the first week of September 1939. *Problems of Social Policy, op. cit.*, p. 102.

2nd September, and, in accordance with prearranged movement plans, was spread over 24 days.¹ The planned movements were carried out smoothly, though the railways encountered some difficulties with the unregulated travel of men being called up for the armed forces under Ministry of Labour instructions.² The carefully planned movement of the British Expeditionary Force to Southampton, requiring 261 special trains, began on 9th September and was spread over a period of 27 days until 5th October. Altogether, 102,000 troops, together with baggage and equipment, were moved in this period. Thereafter, as the build-up of the British forces in France went ahead, the railways were required to transport a steady and continuous flow of reinforcements, stores and munitions through southern English ports.

The railways carried out these and other prearranged movements efficiently, though it would be misleading to over-emphasise the size or the difficulty of these tasks. Compared with the big railway movements of Government traffic in the later war years, the number of special trains run on Government account in the autumn of 1939 was small.³ These early emergency movements were merely the first instalment of a vast and increasing quantity of military, munition and other Government traffics which the railways were to carry in six years of war. It must be remembered too that the whole aim of railway organisation in peace and in war is to plan to meet foreseeable movements of traffic, and in the autumn of 1939 railway operating conditions were not especially unfavourable. The really exacting tasks were to come later in the war, when much larger quantities of Government traffic had to be moved to precise time-tables and often against a background of widespread railway congestion. If the war had opened with air raids and prolonged shipping diversion, the task of carrying out the pre-planned movements of September 1939 would have been much more difficult.

The two periods in 1939 when shipping was diverted to western ports were both of short duration and on a scale very much smaller than had been contemplated by the Headlam Committee before the war. Neither lasted long enough to interfere seriously with railway traffic. These diversions, instituted as precautionary measures in the expectation of air attack, happened during the first fortnight of September and the last fortnight of October. The first was on a minor scale; the second probably affected about a quarter of the

¹ The Admiralty had brought the crews of the fleet up to full strength before the outbreak of war.

² R. Bell, *op. cit.*, Chapter 12.

³ In the four months, September to December 1939, the number of special trains on Government account was 8,282. In three months, October–December 1943, the number was 30,107; for October–December 1944, 44,882. R. Bell, *op. cit.*, Appendix 12.

shipping tonnage destined for the East coast, though it needs to be pointed out that entrances with cargo of shipping in the foreign trade were abnormally low during September and October 1939.¹ To estimate from statistics the effects of the October diversion on the volume of railway traffic is exceedingly difficult. It is known, for instance, that the tonnage of merchandise traffic originating on the main line railways for the three months, September to November 1939, compared with the tonnage for the previous three months, showed twice the normal pre-war seasonal increase. It seems unlikely, however, in view of the low level of imports at the time, that this abnormal increase in merchandise traffic was a direct result of shipping diversion.²

Before the war, the concern of Port and Transit Division had been not so much with the mere size of the expected increase in the volume of imports entering western ports as with the serious consequences likely to follow a shipping diversion in the form of a breakdown of normal merchanting machinery. If commodities requiring specialised handling or transport facilities were normally imported through one area, and were sent to another, disorganisation might quickly result. Despite the small scale and brief duration of the diversion of October 1939, difficulties of this sort seemed on the point of occurring. Some types of imports now required longer rail hauls and more wagons, while there were reports of temporary and local shortages of specialised rolling stock. Iron ore shipments, in particular, seemed likely to cause great difficulties; the Minister of Supply thought that if diversion to West coast ports of shipments destined for Middlesbrough was continued for long, the railways would be quite unable to cope with the additional traffic. Dislocation seemed possible also with other shipments requiring specialised facilities, such as refrigerated meat, oil-seeds and grain. The experience in October 1939 thus provided a foretaste of the difficulties likely to occur if shipping diversion were to last for any length of time. In consequence, the Government decided that diversion had better be called off until air raids really started and no more ships were diverted until after the French surrender in the summer of 1940.

As events turned out, therefore, the diversion of shipping did not put a heavy burden on the railways in the first year of the war. It will be recalled, however, that pre-war plans had been made to

¹ Compared with a 1938 monthly average of entrances with cargo at United Kingdom ports of ships in the foreign trade of 5.7 million net tons, the October 1939 figure was 2.9 million net tons. This matter is further discussed in *Merchant Shipping and the Demands of War*, *op. cit.*

² These calculations were made during the war by economists of the War Cabinet Secretariat. Statistics of merchandise ton-miles for the L.M.S. railway, which might be expected to show more strikingly the effects of a diversion to western ports, seem to reflect closely the changes indicated by total merchandise tonnage originating and are, therefore, equally inconclusive.

divert traffic to the railways from other branches of inland transport. Long-distance traffic was to be transferred from road haulage on account of motor fuel restrictions and at least some part of the coal normally moved by coasting tramps was to be diverted to rail. This transfer of traffic to the railways in the autumn and winter of 1939-1940 broadly conformed to the pattern of the pre-war expectations, though its extent was somewhat different from what had been expected. Moreover, because of disparities in rates, reflecting changes in war-time operating costs, some additional traffic found its way to the railways from coasting liners and canals. It is worth looking more closely at the transfer of traffic to the railways from other forms of transport in the first year of the war.

Let us consider road transport first. It had been understood from an early stage in the pre-war planning that road transport would have to be curtailed to save fuel and that long-distance goods traffic should be taken over in war by the railways. Early in September 1939, the railways were approached by the Government to make definite arrangements for taking over traffic from the long-distance road hauliers. It was proposed that both road and rail should retain their existing customers and be responsible for the collection and delivery of consignments, but that the road hauliers should confine their activities to delivery and collection from specified rail-heads with adequate road facilities, but away from the busier stations. The long-distance part of the journey would thus be left to the railways. Discussions were opened between road and rail representatives at the Road and Rail Central Conference and, in the meantime, supplies of fuel for the long-distance road hauliers were temporarily maintained. The proposed scheme was a cumbersome arrangement and, not unnaturally, discussions made slow progress. The railways agreed in principle, but showed little enthusiasm for the proposals, arguing that the scheme would impose an additional burden on their wagon stock. Although some progress was made by the road and rail representatives towards a workable agreement, complete deadlock was reached over the problem of rates. The lowest rate which the railway companies were able to offer the road hauliers for the long-distance part of the journey, without fear of their ordinary customers demanding lower rates, was so high that the inclusive rate which the hauliers would have had to charge their customers worked out higher than the corresponding railway 'exceptional' rate. Traders would thus have found it cheaper to consign by rail throughout and the result would have been precisely what the whole scheme was intended to avoid: an unregulated diversion of road traffic to the railways and congestion at the railway terminals. Short of drastic Government action in the form of a re-organisation of the railway rate structure, which would have been

very difficult, there was no way out of the impasse. The Government was slow to realise this and made no constructive proposals for overcoming the rate problem. It did not intervene in the discussions but continued hopefully to press the road and rail interests to work out a scheme of co-operation. This was not forthcoming and the 'rail-head' scheme failed to take shape. The diversion from road to rail was left to be carried out on a more or less unregulated basis through the fuel rationing system operated by the Regional Transport Commissioners' organisation. This method of restricting long-distance road hauls in the first months of the war was admittedly somewhat rough and ready and imposed greater hardship on some hauliers than on others. It was, however, effective. By February 1940, long-distance road haulage considered in the aggregate had almost certainly been reduced to something less than 75 per cent. of its pre-war mileage. Although the proposed 'rail-head' scheme did not come to fruition, it must be assumed that the railways took over the bulk of the long-distance traffic which would normally have moved by road. The quantity of traffic concerned is, of course, unknown.

Meanwhile, war-time economic circumstances were causing a transfer of traffic normally carried in coastal liners to the railways. Although in the First World War, disparities in rates had caused an extensive transfer of traffic from coasters to the railways and had severely crippled the coastal shipping industry, there existed in 1939 no policy to prevent such a transfer happening again. War conditions in 1939 almost doubled coastwise voyage times and war risk insurance further added to costs. Coasting liner freight rates therefore rose rapidly in the early part of the war—a 25 per cent. surcharge on pre-war rates was allowed in September 1939 and was raised to 33½ per cent. in May 1940. Since railway rates remained unchanged until May 1940, when they were raised by 10 per cent., traders were encouraged to transfer their freight from sea to rail. The hazards of the sea voyage also provided an inducement to consign goods by the safer rail route. As early as November 1939, therefore, the Government was concerned that full use was not being made of coasting liner tonnage. It was suggested that, as in the First World War, means must be found to direct traffic back to the coastwise routes and relieve the burden on land transport. But the Government was not prepared, in 1939, to take the drastic measures needed to check the drift from the liners to the railways.¹ It will be explained subsequently how the canal carriers too lost traffic to the railways in the first year of the war because of the increased charges made necessary by a big rise in their working costs.² Indeed the coasting liners and the

¹ See below, Chapter IV, Section (ii).

² See below, Chapter IV, Section (iii).

canal carriers faced similar problems—how to prevent the drift of their traffic to the railways.

For the railways, however, these were minor matters by comparison with the strain put on their resources in the first winter of war by a big increase in tonnage and length of haul of coal traffic. This arose primarily because there were not enough coasting tramps available to handle the normal volume of East coast coal traffic. The whole problem of the internal distribution of coal in war, and more particularly that of supplying London and the South with coal, was examined before the war by a sub-committee of the Committee of Imperial Defence. Its deliberations and conclusions were discussed earlier in this narrative.¹ The sub-committee concluded then that the railways were capable of handling expected war-time coal traffic provided that privately owned wagons were pooled and that reasonable demurrage charges were imposed to speed up the turn-round of wagons. Indeed, it was partly in expectation of a large increase in coal traffic that the railways pressed for the Government's approval, in the autumn of 1939, for stricter demurrage regulations. The Railway Executive Committee believed that if the new regulations were firmly enforced, railway wagon capacity would be adequate for the task of maintaining coal supplies. Meanwhile, the estimates of expected coal traffic made by the Mines Department before the war had in no way been modified. In October 1939 the Mines Department was still thinking in terms of war-time coal production at a rate of 260 or 270 million tons per annum, of which 40 million tons were to be exported—that is including exports to France at a rate of 15 to 20 million tons per annum. The annual rate of coal output immediately before the war was about 230 million tons,² so that the proposed war-time level of output would be certain to put a heavy strain on inland transport capacity.

It had, however, been realised before the war that the most difficult part of the coal distribution problem would be the supply of London and Southern England if and when coastwise shipments were reduced. While, in fact, this task caused no serious practical difficulties in the autumn of 1939, the future prospect was hardly encouraging. As early as November, the Ministry of Transport began to be concerned about the steadily increasing diversion of coal traffic to the railways and the likely consequences of this diversion on the stocks of the London public utility undertakings. Complaints were being received from some areas of a shortage of wagons at collieries. Nevertheless, the R.E.C. remained optimistic about the

¹ See above, pp. 67–69.

² The average coal output for the three years 1936–1938 is 232 million tons per annum. (*Ministry of Fuel and Power, Statistical Digest 1944*, Table 1, Cmd. 6639, 1945.)

future; it asserted that the railways could carry an additional 600,000 tons of coal monthly during the winter to the London area to meet the demand normally satisfied by seaborne deliveries, provided that wagons were promptly discharged at the receiving end. The events of the early months of 1940 proved this forecast to have been decidedly too high.

In January 1940 the railway traffic situation deteriorated sharply, resulting in a coal distribution crisis, which persisted until the spring. The fundamental causes of these coal distribution difficulties were: the reduction in coastal shipping capacity and the need to transfer coastwise coal to the railways; an over-estimate of railway capacity followed by an attempt to divert too much coal traffic to them; and a severe winter, which brought the situation to a head.¹

In normal times, it will be remembered, two-thirds of the coal used by the public utility undertakings in London and the South is delivered by sea. Even in peace, the combined capacity of rail and sea transport is inadequate to meet the full winter demand for coal in these areas, and it is customary to accumulate stocks in the spring and summer months against the prospective winter demand. In the spring of 1939, industries and merchants were advised by the Mines Department to build up their stocks against the possibility of war in the autumn, so that the winter of 1939-1940 was, in fact, begun with exceptionally good stocks at public utility undertakings and at large industrial concerns. Even as late as Christmas 1939 stocks of coal were still satisfactory in London and the South.

During the first five months of war, however, the total reduction in the amount of seaborne coal supplied to London and South of England destinations amounted to about two and a half million tons. Many colliers had to be diverted from the East coast trade in the attempt to satisfy the demands of the French for coal; so that despite efforts to maintain shipping movements off the East coast in the face of enemy interference such as mine laying, weekly seaborne deliveries of coal were reckoned to have fallen to an average of two-thirds of their peace-time level.² The rate of diversion of coal traffic from coastal shipping to the railways up to January 1940 was estimated to be about five million tons per annum. This was not much more than 400,000 tons a month and considerably less than the railways had previously undertaken to carry. The Mines Department, moreover, admitted that its plans to press public utility and industrial undertakings to get their coal from the Midlands had been disappointing. By the New Year, the stock and supply situation in

¹ Coastal shipping problems are examined more fully in Chapter IV of this volume. The history of this period from the viewpoint of coal supply and distribution is to be found in *Coal, op. cit.*

² See below, Chapter IV, Section (ii).

London and the South began to look serious, and just at the time when much needed relief had been expected from the railways, transport by rail was immobilised by a prolonged spell of unusually severe weather.

It was not easy, in any event, to supply coal to the public utility undertakings in London and the South by rail. The reasons for this, which were touched on earlier, were firstly that exceptionally long rail hauls of coal were inevitable as the nearest coalfields with substantial supplies were in the Midlands and the North; and secondly that, as most of the London public utilities were laid out to receive coal from the river, coal had to be tipped from railway wagons into barges at a number of tipping stations along the Thames.¹ These tipping stations had not sufficient facilities to handle much additional traffic, while the railway layout in the vicinity was frequently inadequate to carry it. These obstacles might have been largely surmounted had not exceptionally bad weather disorganised the whole coal distribution programme.

January 1940 brought no improvement in the rate of deliveries of coastwise coal and, early in the month, a shortage of coal was reported in the South. The laying of magnetic mines in the Tyne had caused the river to be closed to shipping, while the Admiralty was making fresh demands for coastal ships for use against this new menace. To meet the situation, a programme of special train loads of coal was organised by the Mines Department early in January, but it was seriously interfered with by persistent foggy weather, which at one time caused the delay of nearly five thousand loaded wagons of coal and coke in transit to the South. Fog, frost and snow in the middle of January so confused the situation that it became impossible for the railways to supply even the normal quantities of railborne coal—deliveries not only to London but to places in the neighbourhood of collieries could no longer be maintained. Although extra petrol was made available to lorries to enable coal to be carried over short distances, the plan was handicapped by the bad state of the roads in many parts.

A critical situation developed at the end of January. The heavy snowfall of the week-end of 27th, 28th and 29th of that month caused a complete stoppage of both passenger and goods traffic on the railways in many parts of the country, work in the railway yards was brought to a standstill, and troops had to be called in to clear the lines. Coal shortage was no longer localised but widespread, for not only were deliveries below normal, but cold weather had caused consumption to rise. On 29th January, therefore, a meeting of representatives of the Treasury, the Ministry of Shipping, the Ministry of

¹ See above, p. 69.

Transport and the Mines Department decided on specific measures to relieve the situation. These included the moving of trains of coal, irrespective of ownership or quality, from the junctions to the districts most in need, and the requisitioning of coal and its distribution to the best advantage. The decisions were at once put into effect: thirty trains standing in sidings were requisitioned and arrangements made for the direct dispatch from the collieries of about seventy more. After two days of requisitioning trains and ships already loaded with coal, the coal situation and the congestion in the railway yards and goods sidings were eased and it was possible to resume more normal arrangements.

In spite of these measures, the crisis persisted throughout the greater part of February. A further period of bad weather in the middle of that month and sickness among railwaymen had detrimental effects on railway operations. The serious depletion of coal stocks and continuing difficulties in replenishing the heavy inroads that had been made into them prompted the Mines Department's appeal for 'absolute priority' for the coal traffic on the railways, the consequences of which have already been considered. Although the decision to add coal to the list of 'essential traffics' until the end of March probably did little to assist the movement of coal traffic, more effective measures to relieve the coal stock position had been taken in the middle of February. It was proposed to convey by rail an additional 71,500 tons of coal per week, though the Ministry of Transport and the R.E.C. realised that this would necessitate a sharp reduction in the already curtailed passenger services, and that the scheme could not be put into operation until the sidings had been relieved of existing accumulations of traffic. During the week-end of 24th-26th February, the railways were, in fact, successful in clearing the accumulation of traffic at the Midland collieries and it became possible to put into practice the programme of special trains. In order to avoid delays in the making up of these trains, the principle of 'block loading' was adopted: that is, complete trains were dispatched from the collieries to single destinations. With the coming of better weather and the operation of the special coal trains, deliveries of coal began to improve. By the beginning of March, although it was admitted that the situation was still precarious, supplies of coal were reported to be sufficient to keep pace with current consumption. The special trains continued to run week by week, and were still being operated at the beginning of May, when the coal shortage finally came to an end.

To sum up: the coal distribution crisis of the early months of 1940 arose because the demands made on the railways for the movement of coal were heavier than they could sustain, and it was unquestionably aggravated by a winter of unusual severity. The big reduction in

coastwise coal shipments and the longer war-time rail hauls—even when coal came from the Midlands instead of Northumberland—all bore heavily on the railway system. Statistics of coal production and of the tonnage of coal traffic originating on the railways show that the railways carried a greater tonnage of coal traffic in the year 1939–1940 than in any subsequent war-time year.¹ While the abnormally hard winter may be blamed for transforming a difficult coal transport problem into an acute coal distribution crisis, inadequate planning of coal transport also contributed to the difficulties. In the autumn of 1939, an effective organisation for the joint planning of coal movements by the several interested authorities (the Mines Department, the Ministry of Transport, the Ministry of Shipping and the railways) had not yet been built up; nor had much thought been given as yet to the question of rationalising coal distribution as a whole. The railways, moreover, had given an exaggerated estimate of the coal traffic they could handle, which made the whole task appear easier than it turned out to be. The coal transport difficulties, in fact, disclosed the full implications of a policy of deliberately transferring large amounts of traffic from the coasting tramps and from long-distance road transport, and of allowing coasting liners to lose traffic and canal traffic to decline, without taking sufficient account of whether the railways possessed the capacity to deal with the transferred traffic. The coal crisis was overcome by able improvisation, though not without interference to other important railway traffics. It was surely clear from this experience that the railways could not be expected to cope with unlimited burdens. It was clear too that economy in the use of all forms of inland transport was needed if essential traffic was to be kept moving without congestion and delay. For if severe weather could disorganise the railways and threaten the war effort, what would happen when air raids started?

Two suggestions for making better use of the railways did emerge at a meeting of the Civil Defence Committee on 13th March, 1940. One was that special officials should be appointed to supervise the movement of goods traffic at selected points on the railways, similar to the 'wagon shepherds', who were employed by the large coal companies to deal with coal traffic. The other suggestion was that railway rates for goods traffic might be adjusted to discourage unnecessarily long hauls and so relieve the railways. These suggestions were rather wide of the mark. As the Minister of Transport pointed

¹ *Ministry of Fuel and Power, Statistical Digest 1944* (Cmd. 6639) and *Summary Table of Statistical Returns of Railways of Great Britain, 1938–1944*. It is difficult to make accurate comparisons of the burden of railway coal traffic between the first twelve months of war on the one hand and pre-war and other war-time years on the other because the significant *ton-mileage* statistics do not exist for the early war years.

out, the whole railway organisation had been built up to keep traffic moving and a duplicate set of officials working outside the railway district control organisation, which already had its outdoor inspectors, would only lead to friction and confusion. Similarly, to discourage long hauls by manipulating the rate structure would raise serious practical difficulties and might penalise necessary movements. The Civil Defence Committee accepted the Minister's arguments and agreed that, while Government Departments should aim at avoiding long hauls, this policy could not be achieved by manipulating the railway rate structure.

To encourage Departments to avoid long hauls was only a small beginning to what was needed. For one thing, the coal problem had suggested that railway capacity, especially at marshalling yards and exchange junctions, needed to be increased in order to deal effectively with flows of traffic that differed from those normally handled in peace. The programme of new works already under way was a start in the right direction, but as yet it had not gone far enough and the work completed by mid-1940 was very small. Apart from this, however, in order to avoid overloading the railways and to achieve economy in the use of all forms of transport in war, it was necessary not only to maintain a better balance of traffic between the different means of transport, but also to evolve some means of regulating aggregate war-time traffic offerings in relation to the capacity of the means of transport. This was a difficult problem, which the Government had not yet tackled in earnest.

To complete this account of the tasks of the railways in the first year of war, mention must be made of the part they played during the evacuation from Dunkirk. In contrast with the planned movements of military traffic, which have already been described, the movement of a third of a million battle-weary troops by rail from southern and south-eastern ports during 'Operation Dynamo'¹ was essentially a matter of improvisation for the railways. The decision to evacuate Dunkirk was taken on the evening of Sunday, 26th May, 1940, and the withdrawal operations lasted until 4th June. The railways had no accurate knowledge either of the number of troops to be entrained in England or of the rate of their landing at particular ports and piers. Their arrangements had, therefore, to be kept flexible. A pool of 186 trains was formed from all four main line companies. After it had been loaded at a port, each train went to a regulating point, such as Banbury or Reading, whence it was directed, after consultation with the military authorities, to one of the various reception camps. Thus there was no prepared movement programme and railway working was arranged by telephone. Altogether the

¹ The code name for the Dunkirk evacuation.

railways worked 620 trains and conveyed over 319,000 troops.¹ For this masterly handling of train movements the railways fully deserved the credit they received. It was an example of the ability to improvise which had shown itself during the coal crisis.

Unforeseen emergencies like Dunkirk were, however, uncommon occurrences, even in war-time. The main tasks of the railways were, and continued to be, the unspectacular ones: the movement of coal, other types of freight traffic and passenger traffic to meet both civil and military needs. In the long run, the railways' contribution to the war effort turned on their ability to perform these ordinary tasks and to adjust themselves to changes in the volume and flow of different types of traffic as the course of the war changed. For Dunkirk was not only a deliverance but a defeat. The collapse of France which followed left the French channel coast in enemy hands and Britain alone in the field against the combined power of Germany and Italy. The ordinary tasks of the railways were now to become much more difficult: enemy air attacks and the need to divert shipping to West coast ports were about to turn many of the worst pre-war expectations into stern realities.

¹ The number of British and allied troops embarked in France has been put at 338,226. See L. F. Ellis, *The War in France and Flanders* (History of the Second World War, United Kingdom Military Series, H.M.S.O. 1953), p. 247. For further discussion of these figures, see below, Chapter IV, Section (ii).

APPENDIX V

A Note on Railway Performance, 1939-1940

It is not possible to make a thorough statistical survey of inland transport during this period of the war because sufficient data do not exist. Enough information is, however, available to enable an assessment to be made of the principal changes in the volume of rail traffic resulting from the initial impact of war. The following figures are taken from estimates made by economists of the War Cabinet Secretariat during the war. Some of the estimates are inevitably subject to the fairly wide margin of error, but they are the best available and are adequate for our present purpose. The following table shows the *tonnage originating* in the three classes of railway freight traffic in the 12 weeks ended 15th June, 1939, and 13th June, 1940.

FREIGHT TONNAGE ORIGINATING ON THE MAIN LINE RAILWAYS

Thousand tons

<i>Weekly average of 12 weeks ending</i>	<i>15th June, 1939</i>	<i>13th June, 1940</i>	<i>Percentage increase</i>
Merchandise	922	1,111	20·5
Mineral	984	1,203	22
Coal	3,466	3,751	8
TOTAL	5,372	6,065	11

By the early summer of 1940, the total tonnage originating for all classes of freight traffic was 11 per cent. greater than that for the corresponding period of 1939. Mineral tonnage rose by 22 per cent., keeping pace with steel production, while merchandise tonnage, which was 20·5 per cent. more than in 1939, had probably risen because of an improvement in imports, the movement of munitions and stores and the diversion of traffic from road to rail. The increase in coal tonnage, 8 per cent., was due mainly to the diversion from coasters to rail.

Measurement of railway freight traffic in ton-miles¹ shows more strikingly the increase in traffic carried. Detailed figures are only available for the L.M.S. and L.N.E. railways, but are probably typical of the railway system generally. They show an increase in ton-mileage in the first war months' traffic in the winter months at a level little higher than normal, followed by a rapid increase in the spring and early summer of 1940. By midsummer 1940, the ton-mileage of freight traffic on the L.M.S. and L.N.E.R. systems was about half as much again as in the same

¹ *Ton-mileage* is the product of the tonnage of freight traffic carried and the average length of haul.

period in 1939. Figures for the four weeks ended 13th July, 1940, show very clearly the consequences of the diversion of coal from coasters to rail and the heavy stocking campaign of the early summer. For the L.M.S. system, the ton-mileage of coal traffic in this period was 172 per cent. of the average of the corresponding periods in the years 1936–1938; for the L.N.E.R., it was 162 per cent. of the ton-mileage for the corresponding period of 1939. An even closer examination of this data reveals that in the same four-weekly period, the ton-mileage of coal traffic carried over the North-Eastern region of the L.N.E.R. was just about twice as great (202 per cent.) as that handled in the same period of 1939, a clear indication of the longer hauls imposed by the transfer of coal traffic from coastal shipping. The relevant statistics of ton-mileage are summarised in the following table.

ESTIMATED TON-MILEAGE—L.M.S. AND L.N.E.R.
(JANUARY AND JULY 1940)

Cols. (1), (3), (5), (7): ton-miles, million
Cols. (2), (4), (6), (8): 1936–1938 = 100
L.M.S.

Average of 4 weeks ending	Merchandise		Minerals		Coal class		TOTAL	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1940:								
27th January .	55·2	134	26·2	93	77·7	111	150·1	108
13th July .	71·8	164	43·4	145	95·8	172	211·0	163

1939 = 100

L.N.E.R.

Average of 4 weeks ending	Merchandise	Minerals	Coal class	TOTAL
1940:				
27th January .	123	127	107	114
13th July .	135	142	162	150

NORTH-EASTERN REGION ONLY

Average of 4 weeks ending	Merchandise	Minerals	Coal class	TOTAL
1940:				
27th January .	126	137	115	123
13th July .	133	154	202	164

Estimates of the average length of haul for railway freight traffic in the first year of the war show that it was longer hauls rather than increased

L

tonnage carried that influenced the rise in railway ton-mileage. By January 1940, the average length of haul for coal traffic on the railways was 11 per cent. greater than in the previous January. In July it was 53 per cent. higher than a year before, compared with a 17 per cent. increase for freight traffics other than coal. If these figures are compared with the tonnage of coal traffic originating, it is evident that although by mid-summer 1940, the actual tonnage of coal traffic had not greatly increased, it was being hauled, on average, a distance half as great again as before the war, while the figures for other traffics are less spectacular, they also indicate the general trend towards longer hauls. The following table summarises all the available data concerning railway freight traffic in the first twelve months of war.

FREIGHT TRAFFIC ON THE FOUR MAIN LINE RAILWAYS

Tonnage originating, estimated ton-miles, and estimated average length of haul

Average of 4 weeks ending	Tonnage originating— all classes (thousands per week)	Tonnage originating— all classes (corresp. period 1936–1938 = 100)	Estimated ton-mileage all classes (millions per week)	Estimated average length of haul	
				(a) miles	(b) 1937 = 100
<i>1939:</i>					
9th September	5,343	108	355	66·1	105·6
7th October	5,837	114	416	70·6	112·6
4th November	5,959	109	428	71·3	113·9
2nd December	5,934	109	421	70·4	112·5
30th December	5,458	100	387	70·5	112·6
<i>1940:</i>					
27th January	5,361	99	391	72·4	115·7
24th February	5,020	90	377	74·5	119·0
23rd March	5,750	103	465	80·0	127·8
20th April	5,955	117	463	76·9	122·8
18th May	5,975	115	478	79·3	126·7
15th June	6,266	129	499	79·0	126·2
13th July	5,941	120	508	84·8	135·5
10th August	5,514	123	485	87·1	139·1
7th September	5,578	113	471	83·7	133·1

Other significant trends in this period may be briefly noted. Heavier train loads than in peace-time are indicated by an increase in the average wagon load at starting point. The speeds of both passenger and freight trains were substantially reduced, and passenger traffic was fairly drastically cut. The number of passengers originating fell heavily in the first months of war, and though it showed a tendency to rise in the early summer of 1940, remained below its peace-time level during the first year of war.

CHAPTER IV

THE OUTBREAK OF WAR, 1939-1940 (II)

(i)

Road Transport

THE ARRANGEMENTS made before the war for bringing road transport under control¹ were made effective shortly after war had broken out. Through the Emergency Road Transport Organisation, the highly diversified road goods transport industry (including both the road haulage business proper and a host of 'C' licence vehicles, which were ancillary to other industries) together with road passenger transport were to be controlled by manipulating fuel rations. Both sections of the industry were allocated fuel supplies equivalent to 75 per cent. of their estimated peace-time consumption.² As one official of the Ministry of Transport wrote, 'fuel rationing is not merely a process of issuing coupons; it is a control of the use of fuel to see that essential traffic which can only be carried by road vehicles is not held up, and that carrying capacity is not wasted on light running or non-essential work'.

The framework of the Emergency Road Transport Organisation has already been described:³ Regional Transport Commissioners in the twelve Civil Defence Regions,⁴ District Transport Officers,⁵ Sub-district Managers⁶ and Group Organisers.⁷ As had been planned, a basic ration was issued to all goods vehicle operators up to a total of 50 per cent. of peace-time consumption, or two-thirds of the total allowance. The basic ration was 3 units⁸ of fuel per week for every

¹ See above, Chapter II, Section (iv) of this volume.

² Private cars were to be cut to 33 per cent. of their normal consumption, and taxis to 50 per cent.

³ See above, pp. 76-77.

⁴ There were also two Deputy Regional Transport Commissioners acting in the two Sub-Regions of North Wales and Northern Scotland.

⁵ There were 74 Districts in 1944.

⁶ There were 475 Sub-districts in 1941. They tended to decrease as the war progressed. (There were about 400 in 1944 and about 300 in 1946.)

⁷ 10,000 men were taken from the road transport industry to act as war-time Sub-district Managers and Group Organisers.

⁸ A unit was worth 1 gallon of motor spirit or two-thirds of a gallon of DERV oil (Diesel-Engined Road Vehicle Oil). This gave roughly the same mileage per unit whichever fuel was used, but was aimed to give a very slight advantage to diesel oil users. The

half ton unladen weight of a goods vehicle.¹ This gave a mileage of about 180 a week and enabled all operators to keep their road haulage businesses alive. Actually the basic ration could be used without restriction and an operator could even use it for private purposes if he wished and if the vehicle was licensed for it; but it was in his interest to use it only for essential work, especially if he needed a supplementary ration.

The remaining third of the fuel allocation comprised the supplementary ration, issued at the discretion of the Sub-district Manager, who was responsible for seeing that petrol was not used wastefully, but that essential work got the fuel it needed.² An aggrieved operator whose application for a supplementary ration was refused by the Sub-district Manager could appeal to the District Transport Officer or, if necessary, to the Regional Transport Commissioner. Similarly, consignors of goods could make representations if they considered the application of fuel rationing injurious to their interests.

The Sub-district Manager was limited in the total amount of fuel he could issue as supplementary rations to one-sixth of the basic ration for his Sub-district. If an individual Sub-district Manager needed more coupons for supplementary rations than his allotment he could apply to the District Transport Officer for some of the District's reserve of fuel coupons. In turn a District Transport Officer who needed to issue more than his reserve could apply to the Regional Transport Commissioner for extra fuel issues. In this way Regions, Districts and Sub-districts could be reasonably sure they were granting supplementary rations on broadly the same basis. If any Region exceeded its allocation for the supplementary issues, its deficiency was made good, so far as possible, by borrowing from other Regions within the Ministry of Transport's fuel allocation. Thus the discretionary issue was divided equally between the Sub-district Managers, the District Transport Officers and the Regional

tendency was for vehicles—especially public service vehicles—to turn over to diesel oil consumption which is more economical than motor spirit. This tendency continued during war-time. The consumption of DERV oil by public service vehicles rose from 313·9 thousand tons in 1940 to 382·1 thousand tons in 1945. See Statistical Appendix, Table 11.

¹ Goods vehicle coupons were marked X, and issued in 500, 100, 5, 3 and 1 units. Later a 50-unit coupon was added. Petrol could not be supplied against X coupons except to goods vehicles.

² The tests which were applied to the granting of supplementary rations were as follows:

- (1) Is the work essential from the national point of view?
- (2) Is the work urgent?
- (3) Can another form of transport reasonably be used to do the work?
- (4) Could a supplementary issue be avoided or reduced by (a) rationalisation of operators, (b) any modification of operation to avoid light running?
- (5) Is the basic ration used for work which passes the above tests?

The definition of 'reasonable' in the use of other forms of transport caused some difficulty in interpretation as it raised the question of comparative road and rail charges.

Transport Commissioners who each controlled one-ninth of the total allocation of fuel.

There were a few types of vehicles which fell outside the normal vehicle rationing scheme, and for which special arrangements had to be made. For example, ungrouped vehicles¹ received only the basic ration; those operators whose vehicles were working for the Services drew the necessary fuel on presentation of Service authorised indents;² vehicles employed by public utility undertakings were grouped and fuelled by the Sub-district Office in which the Headquarters were situated;³ some vehicles, such as showmen's lorries⁴ and self-propelled engineering plant, were issued with fuel for their road journeys only by the Sub-district Office where they happened to be situated, and so on.

There was some criticism of the rationing scheme, especially from the Petroleum Department on the grounds that 'the weakness . . . lies in the fact that there is far too little control by Ministry of Transport officials. Two-thirds of the total issue is automatic and a further ninth is at the discretion of an unpaid Sub-district Manager, making some 78 per cent. in all.'

The issue of an automatic allocation possibly left the way open for the wasteful use of fuel, and there could be no real check on the actual journeys made on the basic ration apart from the sample checks made on the operators' statements of the use being made of the fuel. Operators also had to make a return two weeks later of their mileage run loaded and unloaded, the points between which goods were actually carried, and the actual fuel consumed whether it was the basic or the supplementary ration. Some operators were in fact prosecuted for false statements. There was some evidence of the existence of a black market in 'basic' coupons. The Ministry of

¹ Only a small number of ordinary goods carrying vehicles remained ungrouped, but some vehicles taxed as goods vehicles, e.g. hearses, utility vans and so on did not hold carriers' licences. For purposes of fuel rationing they were treated as ungrouped vehicles.

² This did not apply to vehicles carrying manufactured goods from factories to the Services, but only to civilian vehicles and their drivers actually employed by units of the Army, Air Force or Navy. These indents were scrutinised at Headquarters until November 1940 when the burden of work made transfer to the relevant local offices necessary. The system of presenting Service indents for fuel led to a certain amount of dissatisfaction, as it was very difficult for Sub-district Offices to have any check on the purposes for which fuel was being issued—sometimes they suspected on a generous scale. Some efforts were made from June 1940 to make a more thorough check possible, but this was abandoned in 1942 as the Service departments found these checks often interfered with urgent or secret tasks, e.g. military exercises. This problem became quite serious in 1944 when many civilian vehicles were taken into temporary Service employment. Service indents were also used to supply fuel for vehicles for Ministry of Home Security smoke screens against hostile aircraft.

³ Vehicles employed by Local Authorities were rationed direct by the Petroleum Department and some public utility vehicles owned by Local Authorities were therefore rationed by the Petroleum Department.

⁴ By a scheme devised in November 1939 with the Showmen's Guild of Great Britain, showmen had to present a fuel ration card and an application form to the nearest Sub-district Office every time they needed petrol coupons.

Transport's scheme however provided important checks on the issue of supplementary coupons. In the first place, the supplementary ration was not, as the Petroleum Department implied, at the sole discretion of the Sub-district Manager. The guiding principles for issuing these rations were laid down by Headquarters and were binding on Sub-district Managers, and the presence of the Traffic Officer, a paid civil servant who actually issued the coupons, was a useful deterrent to possible abuse.

There were also some complaints about the scheme from the operators themselves. Long-distance operators said the system of issuing a basic ration to cover about 180 miles put them at a disadvantage compared to short-distance operators. In addition the basic ration was probably less advantageous for small 10 cwt. vehicles than for larger lorries.

As was pointed out above,¹ the problem of controlling and rationing bus and coach services was nothing like so complicated as that of controlling goods operators. Fuel rations were therefore issued direct by the Regional Transport Commissioners, the basic ration for public service vehicle operators representing 50 per cent. of their normal annual consumption of petrol or diesel oil, 1938 being the basic year.² It was not related to the unladen weight of vehicles. Public service vehicle operators never had the right to a basic fuel ration—as goods vehicles and private cars had—regardless of the work they were carrying out. The basic ration was issued automatically every fortnight without any form of application or vehicle statement, but the routes operated and the services provided had to be those approved by the R.T.C. Thus public service vehicle operators unlike goods vehicle operators could not use their basic ration frivolously. At the outbreak of war, R.T.C.s had reviewed passenger-carrying services and routes in order to eliminate unnecessary journeys. Some long-distance express bus services and some pleasure coach excursions were for instance considerably pruned. All the remaining services, including contract and excursion operators as well as ordinary stage and long-distance express services, were known as approved services. They were subject to review at fairly frequent intervals, and further economies in them were made as the war progressed. The supplementary ration was issued by the R.T.C. to enable operators to provide those remaining approved services which the basic did not cover. Each R.T.C. was notified at the beginning of each rationing period³ of the reserve at his disposal for

¹ See above, Chapter II, p. 78.

² Adjusted to any subsequent changes, e.g. increase of diesel oil vehicles, change from trams to buses or decrease of fleet, etc.

³ i.e. each fortnight, after the initial 4 weeks of rationing. Later the period was extended to a month, see below, p. 434.

the issue of supplementary rations. An operator who needed a supplementary ration applied stating the total approved mileage he had to operate and the amount of fuel he required.¹

The curtailment of bus services through rationing inevitably provoked some complaints from the general public.² Gradually, however, it became possible by manipulating fuel rations to maintain adequate and regular bus services where they were most needed, and the curtailment made necessary by fuel rationing was confined in the main to the least essential services such as excursions and tours.

How far did the Emergency Road Transport Organisation achieve its aims in the first year of war: first in saving imported fuel, and second in giving the Ministry of Transport, through its Regional organisation, effective control over road transport? It will be convenient to discuss the two parts of this question separately.

When fuel rationing started, rations were issued on a fairly lavish scale. Although the pre-war plans were fairly comprehensive, fuel rationing started only three weeks after the day war broke out. The Emergency Road Transport Organisation, although organised on paper before the war, had to become a reality—it had to recruit staff, take over premises and deal with applications covering over half a million vehicles and issue the necessary coupons within this period. The sheer physical task of working out the basic ration and assessing claims for supplementary rations, of collecting claim forms, stamping coupons³ and issuing them to Group Organisers for something like $7\frac{1}{2}$ million gallons of fuel⁴—in conditions where office accommodation was scanty, and improvised, and telephones and clerical assistance often non-existent, placed a very considerable burden on the staff of the Sub-district Offices. At this early stage little time could be spared for scrutinising applications very carefully. For the first four weeks of the scheme, when the issues were made weekly, the task indeed was well-nigh impossible; the pressure of work was so great that neither Sub-district Managers nor Traffic Officers could keep a satisfactory check. Fortnightly issues started on

¹ Rationing coupons for public service vehicles were marked Y and to save administrative work those operators whose basic ration was more than 1,000 gallons were issued with Y cheques.

² The later withdrawal of the London Transport 'Green Line' coaches in 1942, which gave rise to most complaints, was, however, due partly to their temporary allotment to ambulance work as well as to fuel economies.

³ In order to reduce the risks of forgery each coupon had to be authenticated by a stamp showing the Sub-district Office and validity date, and by another stamp showing the number of the group to which it was issued. The physical operation of stamping took a great deal of time—not more than 400 coupons an hour could be stamped. Some offices (by the exercise of considerable ingenuity) managed to halve the work by clamping the two stamps together. Nevertheless in each Sub-district Office on an average 30 hours per fortnight of one person's time was occupied by stamping throughout the period of fuel rationing.

⁴ i.e. the amount of the first issue.

21st October, 1939, and this reduced the task to more reasonable proportions. During the early months of rationing, moreover, it was more essential to get the machine in working order than to effect large immediate economies. 'It is more important', wrote one senior official in the Ministry of Transport, 'that road transport should be kept moving than that any pre-determined economy in fuel consumption should be secured. . . . The rationing scheme can be more strictly applied when it is a going concern.'

It had been hoped that there would be a 25 per cent. reduction in the fuel consumption of goods and public service vehicles. On the goods side of the industry, this target was not reached except briefly and temporarily during February and March 1940.¹ This was partly because the war led to new demands for the road haulage industry, for example, the carriage of materials for airfield and factory construction, and partly because pre-war plans had assumed that long-distance road hauliers would be limited to short hauls to and from rail-heads.² This did not happen, and Regional Transport Commissioners were told in the first weeks of the war that 'the railways were not able to accept sufficient traffic to enable the expected economies to be made'. So, for the time being, a substantial amount of long-distance traffic remained with the road hauliers.

Thus, there was at first no drastic reduction in fuel supplies to long-distance road haulage. But as it became increasingly apparent that no agreement was likely between the railways and road transport over the 'rail-head' scheme³ and it was thought that road transport generally had had sufficient time to adjust itself to war conditions, a progressive restriction of long-distance road haulage was enforced through the stricter application of the tests for supplementary rations. For the administrative device of granting two sorts of ration was a useful means by which the degree of control exercised over road transport could be varied from time to time.

These restrictions on long-distance road haulage met with criticism in some quarters. The opinion was widely held by those engaged in the business that the Government was using the war to force traffic on to the railways as a matter of policy but without evidence of real need. These views were also reflected by some of the Regional Transport Commissioners, and Mr. Ernest Bevin, who was then Secretary of the Transport and General Workers Union, said that the men employed in the industry shared the hauliers' view; he urged the Minister of Transport to give some public indication of the important services the industry was performing and to make a clear

¹ See Appendix VI.

² Sub-district Offices had been based on rail-heads, wherever possible, to facilitate this transfer of function.

³ See above, pp. 133-134.

statement of war-time policy towards road transport. It is true that the progressively more rigid restriction of supplementary fuel rations was causing some hardship among hauliers whose vehicles had to be laid up or drivers discharged. Not unnaturally, they found cause to criticise 'what appeared to them lavish issues of fuel to farmers and private motorists by local authorities and the War Department'. In January 1940, therefore, the Regional Transport Commissioners 'urged that the Minister should make a further statement emphasising that fuel rationing for commercial road transport is dictated by national necessity, and not, as is still suspected in some quarters, by ulterior motives'. There is no evidence to suggest that Government policy was influenced by 'ulterior motives' as was alleged. While the precise extent to which long-distance road haulage ought to have been restricted—taking account of the need to use all forms of transport efficiently in time of war—may be a matter for debate, allegations that Government policy favoured the railways at the expense of road transport were wide of the mark. Policy was necessarily influenced in the last resort by the limitation in total supplies of liquid fuel for all war-time requirements. The restriction of long-distance road transport was one of the methods by which the Government's aim of conserving fuel was achieved.

Fuel economy on the goods side of the road transport industry was not pushed as far as the pre-war plans had envisaged. During the first winter of rationing the saving in fuel consumption by goods vehicles averaged only about 19 per cent. and the Oil Control Board had in fact to authorise the Ministry of Transport in March 1940 to exceed its original allocation and to stabilise the ration at 81 per cent. of pre-war consumption.¹ This only represented a very small proportion of total United Kingdom fuel consumption.

Economy was more easily achieved on the passenger side of the industry. Throughout the first year of the war, the total issues of fuel for public service vehicles varied between 55 per cent. and 62 per cent. of estimated 1938 consumption. This may have been due to a statistical reason—the pre-war consumption of public service vehicles may have been over-estimated. Nevertheless, substantial economies were made without causing great hardship to the travelling public. It was a relatively simple matter to curtail the less essential types of passenger services such as long-distance services and excursions and tours, and to maintain the necessary regular services. The normal seasonal decline in road passenger transport operation during the winter months may also have simplified the introduction of rationing and the subsequent adjustment of bus and coach operation to war conditions.

¹ This was not an automatic increase for all Transport Regions. Each Region had to prove its need to over-step the 75 per cent. allotment.

The economies gained on the road passenger side of the industry offset those not achieved on the goods side. Taking the two industries together, the requisite 25 per cent. economy was made by the end of 1939 and continued down to November 1940. The statistics of issues of motor fuel rations to goods and public service vehicles during this period are found in an Appendix to this chapter.¹

How great was the reduction caused by fuel rationing in road goods and passenger services in the first year of the war? The Ministry of Transport did not keep statistics of traffic carried by road, so that a precise answer to this question is impossible. It is known, however, that the number of goods vehicles for which licences were current (excluding agricultural, showmen's and local authorities' cleansing vehicles) was 418,000 in August 1940 compared with 466,000 for the corresponding period of 1939. The number of 'hackneys (other than tramcars)' also fell from 90,000 in August 1939 to 81,000 in August 1940, which suggests that the number of buses and coaches in use also declined.² These reductions must have been due principally to fuel rationing, though some part of the decline may be attributed to the absorption of vehicles into A.R.P. and other Government work. Since statistics of traffic carried are non-existent, it is, of course, impossible to say how much more or how much less the vehicles with current licences were actually used.

The Emergency Road Transport Organisation appears, therefore, to have achieved its first aim—economy in imported fuel—during the first year of its existence. Moreover, as far as one can judge, it

¹ Appendix VI.

² The relevant statistics are as follows:

MOTOR VEHICLES FOR WHICH LICENCES WERE CURRENT UNDER THE
ROADS ACT, 1920 (GREAT BRITAIN)

<i>Period</i>	<i>Thousands</i>	
	<i>Hackneys (other than tramcars) seating more than 8, i.e. vehicles plying for hire</i>	<i>Goods vehicles*</i>
1939: February . . .	75	455
May	84	459
August	90	466
November	67	441
1940: February . . .	77	427
May	84	425
August	81	418
November	81	420

* Excludes agricultural vans and lorries, showmen's and local authorities' cleansing vehicles.

realised this aim without imposing any serious limitation on the war effort. When the fuel position temporarily eased in mid-1940, the Regional Transport Commissioners reported in all but two Regions that, under conditions similar to those of the first year of war, more liberal issues of fuel were not necessary in the interests of the war effort. It needs to be pointed out, however, that after mid-1940, the conditions in which road transport had to work were, in many ways, different from those of the first months of the war.

How far did the Emergency Road Transport Organisation realise its second aim—that of effectively controlling the road transport industry for the purposes of war? From the earliest stage of the war preparations it had been realised that great obstacles stood in the way of the Government's assuming what later came to be called 'operational control' of road goods transport. Since no statistics were kept, nobody knew how much or precisely what types of traffic were moved by road. Since this highly diverse industry was composed of a vast number of firms engaged in many kinds of business, ranging from small-scale shopkeepers to long-distance road haulage concerns, and at the same time lacked any central organisation, it was clearly difficult to build up a central operating organisation for war purposes. Since, moreover, the Government itself possessed no technical knowledge of road transport operation and was unwilling to assume financial responsibility for it, to exercise positive control over so highly individualistic an industry would have been very difficult. These were the reasons why the Ministry of Transport did not take positive operational control of road goods transport from the beginning of the war. Thus, while the Emergency Road Transport Organisation represented a definite achievement in that an organisation existed where there had previously been none, it was still widely thought that this organisation did not go far enough. In particular it did not empower the Ministry of Transport positively to direct either the operation of vehicles or their transfer from one task to another.

It was rightly claimed that the advantage of the Emergency Road Transport Organisation, apart from its being a means of rationing fuel and eliminating non-essential journeys, was that it put the Government in full possession of the numbers and whereabouts of road vehicles throughout the country. Its chief weakness was that it was a form of control which enabled fuel rations to be withheld if the Commissioners did not approve the purposes for which they were being used, but gave them too few positive powers. The question which was therefore being deliberated by Ministry of Transport officials was whether the existing form of control would be adequate in the event of a serious emergency in a particular region. Would the Regional Transport Commissioners be able to obtain vehicles and

men in large numbers at short notice to work away from their home bases in the event say of a large-scale diversion of shipping? It seemed that they would not. For although the R.T.C.s had powers to requisition vehicles, they could not requisition drivers. Nor was there any organisation in being to enlist them or to manage the requisitioned vehicles. Indeed, it was frankly admitted in March 1940, that 'the Ministry's organisation was not designed to operate vehicles and had not the experience to do so efficiently'.

The Ministry of Food, on the other hand, had such an organisation at its disposal in the Wholesale Meat Transport Association, which managed on that Ministry's behalf the transport by road of both imported and home-produced meat. The Association was composed of all the important meat road transport firms in the country, with which the Ministry of Food had concluded financial arrangements. Many Ministry of Transport officials considered that a similar organisation should be built up for goods transport as a whole, by which a pool of vehicles would be available in a major transport crisis such as might result from a large-scale diversion of shipping or a widespread breakdown on the railways. But it was easy to press too far the analogy between the Ministry of Food's meat transport organisation and the kind of road haulage organisation which the Ministry of Transport needed. The Food organisation dealt with a specialised commodity and the number of vehicles it controlled was very small by comparison with those the Ministry of Transport hoped to control. But if no new form of road transport organisation readily suggested itself, it was realised by the summer of 1940 that negative control by itself was not enough. Restriction of road transport, however desirable on grounds of fuel economy, naturally reduced the numbers of vehicles and drivers available at short notice in an emergency. Indeed, fuel economy and the efficient use of road transport for sudden emergencies were largely incompatible aims. As a step towards working out an improved form of control over road haulage and in order to bring those engaged in the industry more closely into the Government's confidence, a Road Haulage Consultative Committee was appointed in September 1940, and as the second year of war opened, schemes for the pooling of vehicles and Government operation were being explored.

(ii)

Coastal Shipping up to the Fall of France

In an earlier chapter it was explained how pre-war official thinking about the war-time functions of coastal shipping had centred round three main problems: first, the coasting coal trade from the North

East coast to London and southern England, and the practicability of transferring some or all of this traffic to the railways if (as was, on balance, thought unlikely) the seaborne trade were to be cut off; second, the supply of coal to France, whose war-time requirements would probably be as high as 20 million tons a year, 12 million tons of which would have to be carried in British ships; third, the use of coasters for overside discharge from ocean vessels at West coast ports in the event of large-scale shipping diversion. Each of these inter-related problems had, however, been considered largely in isolation. It had not been sufficiently realised before the war that if the East coast coal trade were to continue, if all the French coal requirements were to be met and if coasters were to be used on a considerable scale for overside discharge, then these demands taken together would add up to much more than the coasting fleet could possibly handle. As it turned out, only the first two of these three possible demands for coastal tonnage were made between September 1939 and June 1940, but together they were sufficiently heavy to result in a severe shortage of coasting tramps, which persisted throughout the first war-time winter and indeed until the collapse of France radically changed the whole coastal shipping situation in the summer of 1940. This shortage of tramps was the biggest coastal shipping problem in the first nine months of the war. The only other important problem was the under-employment of the coasting liners, which was caused by the rapid rise in their freight rates as compared with the railways. The nature of these problems can, however, best be understood if we view the history of coastal shipping from the outbreak of war until the fall of France from three main aspects in turn. Firstly, the machinery of Government control over coastal shipping will be examined. Secondly, the supply and carrying capacity of coasting tonnage will, as far as is possible, be estimated. Thirdly, the nature and extent of the principal demands for coasting services will be considered.

CONTROL OVER COASTAL SHIPPING

In accordance with the pre-war plans, Area Committees,¹ mainly composed of local shipowners, came into existence, as soon as war broke out, at Leith, Newcastle, Hull, London, Southampton, Cardiff, Liverpool, Glasgow and Belfast. Each Committee was responsible for all the coast and ports and the movement of coastal ships within its own area.² There were also about 90 coastal shipping representatives, one stationed at almost every port in the United Kingdom

¹ Their full title was Coasting and Short Sea Shipping Control Committees.

² For example, Hull Area Committee controlled the coast from Whitby to Wells (Norfolk), London Area Committee from Wells to Bognor Regis, Southampton Area Committee from Bognor Regis to Land's End including the Scilly Isles, and Cardiff Area Committee from Land's End to Cardigan and so on round the whole coast. Belfast Committee controlled all the coast of Northern Ireland.

and working to the Area Committee at the main port. The Area Committees' tasks were originally defined as 'to administer Headquarters policy, which was concerned to see that essential cargoes got preference, that coasters were available for such tasks as the relief of port congestion when necessary,¹ and that freight rates² did not rise to an unreasonable level'. Headquarters only laid down policy in broad terms, and necessarily left much initiative to the Area Committees. Headquarters could say, for example, that the coal trade was to receive priority. The Area Committees were responsible for knowing where ships in their area were, what they were doing, whether they could be spared to lift the priority cargo, and when, and how best they could be worked into position to do so. Cargoes normally had to be fixed through ordinary commercial channels, and Area Committees also had to see that the priority cargo was being offered at rates likely to attract shipowners.³ In general, Area Committees were responsible for seeing that ships in their area were moving the more important cargoes, that ballast runs were cut to a minimum, and so on. For the first three months of the war, Area Committees worked through the voluntary co-operation of shipowners. More effective control was taken over the movement of coastal ships on 4th December, 1939,⁴ when voyage licensing was introduced as the pre-war plans had envisaged. All British ships⁵ registered in the United Kingdom of a gross tonnage of over 100 tons (fishing boats were excluded) were now required to obtain a voyage licence before proceeding on any coasting or short sea voyage.⁶ Ships were permitted in the Order to continue to proceed on overseas voyages under licences granted under the original Control of Trade by Sea Order,⁷ but as soon as deep sea ships were requisitioned in the following month an amending Order was introduced⁸ specifically

¹ The Coasting Area Committees were represented on the Port Emergency Committees and worked in close consultation with them.

² For discussion of the control of freight rates, see below.

³ e.g. in the second winter of the war the freight rates fixed for the London coal trade had to be withdrawn 'since it was impossible to find ships able to fix at these rates' and the freight rates permitted had to be substantially increased, especially for the smaller tonnage.

⁴ Control of Trade by Sea (No. 2) Order, 1939, S.R. & O. 1939, No. 1671.

⁵ Dominion and foreign ships were not subject to licensing control in either the coasting or short sea trades.

⁶ 'Coasting voyage' meant a voyage made wholly between ports within the United Kingdom, the Channel Islands and the Isle of Man. 'Short sea voyage' meant any voyage, other than a coasting voyage, from a port within the limits sixty-nine degrees North and forty-three degrees North latitude and eleven degrees West and thirty-one degrees East longitude, not being a port in the Mediterranean, Adriatic or Black Seas or a port in Spain, to any other port within such limits not being a port in the Mediterranean, Adriatic or Black Seas or a port in Spain, i.e. ports between Narvik and St. Jean de Luz.

⁷ S.R. & O. 1939, No. 1090, September 1939.

⁸ Control of Trade by Sea (Amendment) Order, 1940, S.R. & O. 1940, No. 90.

excluding 'Government ships', i.e. requisitioned ships, from any liability to obtain a licence for any voyage.

The introduction of voyage licensing did not mean that every coasting ship had to obtain a licence for each and every voyage in the coasting and short sea trades. The delays would have been intolerable. As soon as voyage licensing started, General licences were issued automatically to all coastal ships, either for general tramp or regular liner employment. The issue of these General licences was a formality. The Government's control over the coasting trade derived from the fact that these General licences could be revoked by any Area Committee¹ and superseded by a Specific Voyage licence when necessary. The Specific Voyage licence, as its name implies, was an authority to make one voyage between ports named on the licence, on specified dates and to carry the cargo also named therein. It superseded any General licence held by the ship. Specific Voyage licences were particularly useful for tramps. Nevertheless, Area Committees were expected to interfere as little as possible with liners and tramps in regular trades by the issue of Specific Voyage licences, but were asked to refer to Headquarters their suggestions for eliminating unnecessary calls or using the ships' capacity to better advantage. They were asked not to interfere with tankers, vessels chartered to public utility undertakings, and to interfere as little as possible with the coasting coal trade. Both General and Specific Voyage licences could only be granted by an Area Committee, but coastal shipping representatives either at 'outports' or on Port Emergency Committees could, for convenience, sign licences approved by the appropriate Area Committee. Ships were required to produce a valid licence to the Customs before they could be cleared from a port,² and Masters were required to report their arrival in any port immediately to the nearest Area Committee. The Area Committees thus had a clear picture at any moment of the movements of coasting tonnage within their area.

Area Committees were notified by Headquarters of cargoes that were to be given special priority, and for which tonnage was to be made available; the two most important examples were tonnage for the French coal trade, and as the winter progressed, for the coal trade to London and the South coast. In order to make tonnage

¹ Strictly speaking, no powers were invested in an Area Committee to direct a particular ship to undertake a particular voyage or to load a particular cargo. Their powers were limited to revoking or refusing to grant a licence and offering the owner a licence for the voyage which they considered more urgent. They did have powers in the Order to impose conditions on the grant of a licence concerning the trades in which a ship could be engaged, the class of cargo and passengers she could carry and the rates at which she could carry them, but these were only to be exercised in accordance with specific Headquarters instructions.

² H.M. Customs was not legally responsible for enforcing the licensing system. They were merely expected to report any irregularity to the local Area Committee.

available for such priority cargoes it was not always necessary for the Area Committees to revoke General licences and issue Specific Voyage licences. Sometimes General licences could merely be re-issued subject to conditions for trading within prescribed limits, e.g. in the French coal trade. From December 1939, however, in order to reduce the issue of licences and the consequent delays to a minimum, owners of ships with General tramp licences were asked to submit to the Area Committee a weekly report of the intended movements of their vessels and a description of the cargoes to be carried. These they could be asked to alter if the Committee thought necessary. A month later owners were asked to agree programmes with the Area Committees for as far ahead as possible, and to keep in such close touch that they did not arrange voyages before making sure that there were not more urgent requirements which were being overlooked. These weekly reports and consultations made possible a very effective control over coastal tonnage, and gave the Ministry of Shipping power to establish priorities for the movement of cargoes in general terms, without impairing the flexibility of movement of the coasters and their ability to respond to urgent needs. This did not mean that no coasting tramps were ever requisitioned. In an emergency such as for salvage work, the Admiralty could and did requisition ships. During the invasion of France also, Area Committees were reminded that the Sea Transport Officers acting for the Minister of Shipping had power to requisition any ship including coastal tonnage, and after the fall of France those tramps employed on the Hell's Corner route¹ were requisitioned because the extreme danger of the voyage made it almost a military operation.

The normal control over coasting tonnage was, however, the formal control of voyage licensing together with the informal control of regular consultation with the shipowners. This mixture appears to have worked well in the coasting trades. It was a method that required no substantial modification during the war. Why did the formal control over coastal shipping take the form of voyage licensing when all other shipping was requisitioned? Briefly because the frequency of coastal voyages, the multiplicity of owners² and the great diversity of cargoes made requisition inappropriate, especially in the coasting tramp trades.³ Requisitioning can only be justified when the Government can use the ships to better advantage than the individual shipowner. This justification existed in the case of deep

¹ That is, through the Straits of Dover, where shipping came within range of the German guns on the French coast as well as shore based aircraft and E-boats.

² There were about 25-30 liner companies in February 1940. So far as tramps were concerned there were about 50 public utility undertakings and coal merchants who owned ships and about 150 other shipowners, many of them owning only one coasting ship.

³ It was not however inappropriate in the case of coasting liners plying on regular routes, and they were in fact requisitioned in May 1940. See below, p. 169.

sea ships which were required to carry out a definite programme and whose movements had to be dovetailed to fit, however roughly, into a world wide shipping policy. It did not exist in the case of coastal tramps which, with the exception of coal and pitwood, did not carry out a pre-arranged export and import programme but which had to adjust themselves quickly to local transport needs as and when they arose. The units of the fleet had to be continually re-arranged according to the position of the cargo, whether the cargo was home-produced or imported. Coasters had to be able to go at short notice, for instance, to help to speed up the turn-round of deep sea ships should ports become congested,¹ or to offer themselves, for example, for cement cargoes from the Thames to other ports in the spring of 1940 when the transport of cement suddenly became urgent. Since flexibility was the essence of the coasting trade, the exact programming of their movements by a central authority was neither possible nor desirable. To achieve this flexibility the day-to-day management of the ships was better left in the hands of their owners. The nature of the coasting trade—namely, shortness of the voyages and the very large number of small ports of call—gave another advantage in leaving the management of vessels in the hands of the owners. It provided the owner with an incentive to turn his ships round quickly. This can be one of the disadvantages of requisitioning, and, in a trade where ships are in and out of port every few days and ownership is split into a large number of small units, it might have been a considerable one.² Coasting shipowners arranged the movement of their fleet in consultation with the Area Committees who were responsible for the issue of voyage licences. Headquarters could and did lay down the broad considerations which were to govern the movements of the coastal fleet, but decisions about the movements of individual ships had to be decentralised on to the Area Committees. Voyage licensing enabled tonnage to be diverted quickly from one part of the coast to another as necessary and at the same time ensure that cargoes were dealt with in a rough order of priority.

THE SUPPLY OF COASTING SERVICES

It is very difficult to estimate how much coasting tonnage was available between the outbreak of war and the fall of France, because no statistics were kept at that time. The best pre-war estimate of the size of the coasting fleet is that in 1936 there were 1,260 coastal ships

¹ Although there was no major diversion of deep sea shipping before September 1940, Port Emergency Committees could arrange for coasters to help to clear a port.

² This may have been another reason why coasting liners were requisitioned and tramps were not. Liners trade to scheduled ports at all of which the liner company has a shore organisation. Tramps trade to any port, in the coasting trade often to very small ones, and the tramp owner must rely on brokers or agents to discharge and load his ships. It was desirable to leave the owner with an incentive to urge speed on these agents.

with a total deadweight tonnage of 1,159,102. If account is taken only of dry cargo vessels, there were in the same year 1,145 ships with a total deadweight tonnage of 1,088,309.¹ After the war began, coasters were requisitioned in considerable numbers by the Services. Coasting passenger liners were taken for use as hospital ships. Colliers and tramps were extensively used as rescue ships, examination vessels and minesweepers in home waters. They were also used as coaling ships and supply ships: for fuel, ammunition, oil and water to the Royal Navy, aviation spirit to the R.A.F., for stores of all kinds to the Army overseas and as feeder services for the deep sea liners in all theatres of war.² It is not known how many ships were requisitioned by the Services in the early months of the war, but some indication of the size of the coasting fleet and the extent of requisitioning is given by the fact that there were 1,342,000 deadweight tons of British dry cargo vessels between 750 and 5,000 d.w.t. (most of them coasters) trading on 31st January, 1940, and a further 245,000 deadweight tons in the same category requisitioned, Government owned, or chartered and employed in Defence services.³ By July 1940, it is known that 105 out of 320 British coasting cargo liners had been taken over by the Services. In emergencies, coasters were also taken temporarily by the Admiralty for direct military operations like the Norway landings and the Dunkirk evacuation.

Besides the reduction in the number of coasters and in the tonnage of shipping employed, the effective capacity of the coasting fleet was also much reduced by the difficulties and hazards of war-time voyages. Coastal ships on the East coast were subject to serious voyage delays, partly owing to convoy delays—awaiting convoys, moving at the rate of the slowest ship, and so on—and partly owing to increased turn-round time in port. Almost as soon as war broke out, for example, the round trip from the Tyne to London, which in peace-time took 6 to 7 days, increased to 13 to 14 days. There were comparable increases on all other routes, including the short sea trades.⁴ Attempts were made to shorten voyage times. At first all

¹ L. Isserlis, *Tramp Shipping Cargoes and Freights*, *Journal of the Royal Statistical Society*, Vol. CI, 1938. See also Chapter I, Appendix II.

² In addition, all ocean tugs (over 1,200 indicated horsepower, used for heavy towage at sea) were requisitioned as rescue ships by the Admiralty on the outbreak of war, while demands for ship tugs (c. 500–1,000 indicated horsepower, used for docking and unloading ships in port) were enormous for naval control and contraband examination vessels, and for handling the increasing naval fleet at home and in Empire ports.

³ See Appendix VII, p. 182. This, however, excludes the numerous small coasters below 750 d.w.t. (for which Service demands were also considerable) and includes some ships large enough to be classed as ocean-going tonnage. The figure of 1,342,000 d.w.t. is not, therefore, to be regarded as a true indication of the size of the United Kingdom coasting fleet in January 1940.

⁴ This does not, of course, take any account of northabout routeing, though there was not a great deal of this until after the fall of France. It did not, in any case, affect the main coal trades.

ships over 500 g.r.t. had to be convoyed, but the serious voyage delays, partly owing to a shortage of naval escort vessels, led to permission being given for ships under 2,000 g.r.t. to sail for a time without convoy by night; they were simply given routing instructions to avoid minefields.¹ A good deal of attention was given to speeding the convoys by arranging more frequent convoy sailings, increasing the number of escort vessels, allowing slower ships to sail in special slow convoys, and so on. Difficulties were gradually overcome as men and ships became more used to convoy problems.² By March 1940, four Southend-Tyne convoys were running every five days. Nevertheless, voyage times were still on average nearly twice the pre-war voyage times, particularly in the East coast coal trade. The coastal ships, in and out of port every few days, were also particularly hampered by the slower turn-round caused by the blackout. Loading and discharging took much longer. In some ports, such as in the River Humber up to December 1939, lighting was not permitted and, during the winter, ships could not approach Goole for five days every fortnight, when both tides occurred in the hours of darkness. There is, unfortunately, no means of calculating the cost of such delays, but it was obviously considerable.

To sum up: not only was there a smaller tonnage available to the coasting fleet after the outbreak of war, but the carrying capacity of the tonnage available was greatly reduced because of the comparative slowness of war-time coastwise voyages.

DEMANDS ON COASTING TONNAGE

The most important task of coastal shipping in peace or war is the transport of coal.³ In the early months of the war, coal had to be exported in considerable quantities to France, the bulk of whose normal continental supplies had been cut off by the outbreak of war.

¹ There was some talk of permitting East coast coal ships to sail without convoy by day as well as by night if the coal stock position became very serious, but apparently nothing came of it.

² At first there were numerous complaints of ships having to wait in estuaries for days for convoys, e.g. the 'Southend Block', and missing tides while waiting permission to 'button off' a convoy, etc. The early teething troubles were gradually overcome. For instance, at first ships in Downs-Firth of Forth convoys sailed in order of arrival at the convoy station. This could be serious, e.g. one ship bound for the North was left floundering alone in the dark when the middle of the convoy 'buttoned off' to the Tyne. She could find neither the front of the convoy nor escort and had to put in to the Tyne to await the next convoy. This sort of thing was overcome by assembling convoys according to destination port. See below, Chapter IX, for description of sailing in a coastal convoy.

³ As was pointed out in Chapter I, in 1936, coasters probably carried around the coasts of the United Kingdom 38 million tons of cargo, 24 million tons of which were coal. In war-time, on the average, they carried 30 million tons of cargo, 21 million tons of which were coal. Coal exports to France were probably in the region of 13 million tons in an average peace-time year, although immediately before the war there had been a decline. In 1936 they had fallen to 7 million tons.

Coal had also to be carried in United Kingdom coastal waters, the maintenance of the East coast trade in particular being vital to the British economy. These two important war-time tasks competed with each other for coastal shipping. They both needed the same kind of ship, the coasting tramp; and they were both substantial traffics. A very rough estimate shows that out of 1,342,000 deadweight tons of British dry cargo vessels between 750 and 5,000 tons trading on 31st January, 1940, approximately 866,000 deadweight tons were probably engaged in the French and East coast coal trades¹—i.e. very roughly about one-third of this dry cargo tonnage was engaged in the French coal trade, one-third in the East coast trade, and one-third in the rest of coastal and short sea employment. While, however, it is convenient for some purposes to distinguish sharply between the French and domestic coal trades, it needs to be emphasised that, in practice, the line of demarcation between the two trades was much more blurred. Both coasting and short sea voyages are short compared with those undertaken by deep sea ships. Coasting colliers, being readily interchangeable, were not permanently allocated to one trade or the other, but were switched frequently and at short notice from the East coast coal trade to the French trade and vice versa as the need arose. For as we have seen, the war-time control over coastal shipping was designed to facilitate the rapid transfer of ships from one trade to another in the belief that this resulted in the most efficient use of available tonnage.

It had been planned before the war that, out of an expected war-time export total of 40 million tons, coal would be delivered from the United Kingdom to France from the outbreak of war at an annual rate of 15 to 20 million tons—that is nearly as much coal as was moved round the coast of the United Kingdom in peace-time, which then amounted to about two-thirds of the total tonnage of cargo moved coastwise. The French were expected to be able to carry only 8 million tons a year in their own ships and British coasters were not expected to be available in sufficient numbers to carry all of the remainder. It was thought, however, before the war that deep sea tramps, which could be used to carry coal, would be readily available from neutral countries and that these would enable Britain to meet the French requirements in full. Moreover, colliers could, if necessary, be withdrawn from the East coast coal trade and diverted to meet the French demands, for the pre-war planners had been given to

¹ This is a very rough approximation only, adding items i, vii and viii from Appendix VII. Not all the 'liner and other vessels' trading to the Channel Islands, N. France, French Bay, Spain and Portugal would be carrying coal. On the other hand, some of the ships in item vi trading to Belgium would be carrying coal for the French Mission account. Again the small coasters are excluded from this table and their numbers are likely to be considerable—probably between 500 and 600 vessels.

understand that the British railways had sufficient capacity to carry all the coal normally moved down the East coast by sea.¹

When war came, the shipment of coal to France was therefore given the highest priority.² For example, in December 1939, instructions were given to Area Committees that 'all possible tonnage should be offered to the French Mission³ for employment in the coal trade to France'. Voyages of ships carrying coal to Holland and Belgium were only to be approved if vessels were fixed with important homeward cargoes and no vessels of over 650 deadweight tons were to be permitted to go to Ireland save in exceptional circumstances.⁴ Although, however, the British Government was anxious to meet its undertaking to the French in full, it found itself with much less shipping available than had originally been hoped for. There were no surplus British ships except the under-used coasting liners, which were unsuited to carrying bulk cargoes. A few deep sea ships were spared to help the coasting trade generally and therefore the French trade indirectly;⁵ some coal for France was carried in French ships⁶ and efforts were made to obtain neutral tonnage for the trade. But the bulk of the coal exported to France had to be carried in British coasting tramps and the only way exports could be substantially increased was by withdrawing ships from the East coast trade. For the railways could be used to carry more coal to London and the South, but only ships could carry coal to France and bring back valuable imports such as pitwood, iron ore, tungsten, cork and grain from France and Northern Spain. The Government's policy was therefore to encourage the use of coasters between Great Britain and the Continent rather than for moving cargoes between United Kingdom ports. 'Broadly speaking, the aim has been to ensure that coasting tramps should do the work that must be done by "ships" and cannot be done by other forms of transport.' Even so, the coasters did not succeed in delivering to the French all the coal they needed. Whereas it had been hoped to ship 2.7 million tons⁷ in the three months October, November and December 1939, actual shipments

¹ See above, p. 69. The French demands for shipping in the first year of the war are discussed in *Merchant Shipping and the Demands of War*, *op. cit.*, Chapter IV. Coal problems are treated in *Coal*, *op. cit.*

² Partly also because the ships could bring back valuable imports from the Continent.

³ Not all coal for French ports was fixed through the French Mission, but Area Committees were told that no voyages were to be approved for other charterers so long as the needs of the French Mission were unsatisfied.

⁴ Coal deliveries to Northern Ireland and Eire during 1939 had exceeded those of 1938.

⁵ In November 1939, four large ships (6,000–10,000 d.w.t.) were to be allocated to the London coal trade, at first 'until the end of the year', then 'for the period of the crisis'. Space in other large ships was also used to carry coal to London en route abroad.

⁶ It has not been possible to find out how much. Before the war on an average about 3 million tons of coal a year was imported in French ships and 7 million tons in British ships. (*Coal*, *op. cit.*, p. 71).

⁷ *Coal*, *op. cit.*, p. 73.

were 2.1 million tons.¹ By the end of 1939, therefore, there was already a considerable deficit.

Meanwhile, what were the effects on inland transport of the diversion of coastal tramps to the French trade? Everything depended here on whether the railways could, in fact, move a high proportion of the East coast coal traffic which in peace had been carried by sea.² Unfortunately, just as coastal shipping turned out to be scarce, so the pre-war assumptions about railway capacity proved, as we have seen, to have been too optimistic. By December, the Mines Department was showing serious concern because the railways and the coasters between them were not moving sufficient coal from North to South to meet the needs of industrial consumers in London and the South.³ The difficulty was that, in trying to meet French needs as well as maintain coal supplies at home, the Government was trying to force more coal on to the coastal tramps and the railways than they could carry between them. In the event, neither the French nor the domestic demands were being adequately met. This situation, which was gradually becoming apparent at the end of 1939, was partly due to the fact that coal transport was not yet being looked at as one problem. Liaison between the several authorities concerned (the Mines Department, the Ministry of Transport, the Ministry of Shipping and the Railway Executive Committee) had been established, but it was inadequate. There was apparently no agreed set of proposals as to just how much coal should move by rail and how much by sea. It only needed a spell of unusually severe weather in the early months of 1940 to turn this unsatisfactory situation into a crisis. The difficulties experienced on the railways early in 1940 have already been described.⁴ For coastal shipping,

¹ The following are statistics of coal and anthracite *imported* into France (statute tons):

1939	September	500,493
	October	441,252
	November	673,215
	December	601,076
1940	January	621,391
	February	614,729
	Total	<u>3,452,156</u> tons
		2,951,663 tons excluding September.

These figures are slightly lower than the deliveries given in *Coal, op. cit.*, p. 73, since Professor Court's figures include coal, coke and manufactured fuel delivered to France, North Africa and the French colonies.

² During the first five months of the war, weekly seaborne deliveries fell to an average of two-thirds of their pre-war level. This, however, was only an estimate given at the time. Some of the reduction was, of course, due to increased voyage times, quite apart from the withdrawal of tonnage to meet the French demands.

³ See *Coal, op. cit.*, p. 62.

⁴ See above, Chapter III.

the dislocation of rail movements caused by prolonged bad weather meant that additional tonnage had to be allocated to the East coast trade, not only from the West coast and elsewhere, but even at the expense of the French coal trade.¹ These transfers were facilitated by the system of voyage licensing introduced in December 1939. Early in February 1940, the Coastal Shipping Division of the Ministry of Shipping was saying that the new system of control had gone 'a long way towards ensuring . . . the availability of more tonnage for the French Mission account and the prompt shipment of priority cargoes for London and South coast ports'. In spite of this, persistent coal shortages and the low level of coal stocks at places served by sea transport made it necessary by the end of February to send telegrams to all Area Committees instructing them to give the shipment of coal to London and the South priority over other tramp cargoes. Efforts were also being made at this time to alleviate the shortage of tramp tonnage by chartering additional ships. Some Dutch tonnage was taken on and by the spring the coasting fleet was augmented by 33 Danish and 26 Norwegian vessels. It was not, however, until the middle of May that the Mines Department could report that 37 Scandinavian ships had been made available for use in the coal trade.

By the spring of 1940, improved weather and better arrangements for moving coal on the railways helped to ease the strain on the coasting tramps which meant that supplies of coal to France could be stepped up once again. The French had been alarmed during the winter by the insufficiency of their coal imports and the decline of their coal stocks. In January 1940, the allocation of coal exports to France and the French colonial empire had been fixed at 1,250,000 tons a month; in May the allocation was increased to 1,500,000 tons a month.² Whether coastal shipping would have been available to carry this amount of coal became an academic question with the collapse of France. By 16th June, 1940, all loading of coal for France had been stopped. In the nine months, October–June inclusive, 6½ million tons of coal had been exported from the United Kingdom to France,³ or roughly an amount equivalent to 9 million tons a year.

Complete statistics of the amount of coal moved coastwise and by rail to London and southern England and of the amount of coal

¹ During the coal distribution crisis of January and February 1940, some coasters loaded with coal export cargoes were requisitioned and diverted to the Thames. (See *Coal, op. cit.*, pp. 63–64.) It is difficult to determine from the records precisely what degree of priority was accorded to the East coast trade at that time. The periodic instructions issued by coasting shipping headquarters to the Area Committees emphasised that it was essential to build up collier tonnage on the East coast for the London coal trade and also for the French coal trade, but were usually non-committal about the relative priorities as between the two trades.

² *Coal, op. cit.*, Table II, p. 80.

[Continued on following page]

carried to France in British ships are, unfortunately, not available. It is, however, fairly clear that neither the domestic nor the French coal requirements were fully met because the combined capacity of the railways and coastal shipping proved insufficient. Looking backwards, one may be tempted to argue that, during the 1939-1940 autumn and winter, the export of coal to France was over-emphasised to the detriment of the distribution and supply of British needs. This is not the place to question the wisdom of the Government's policy of supplying considerable quantities of coal to France. What may be said is that, when this policy was agreed, the limits to the combined capacity of coastal shipping and the railways to meet both home and French coal requirements were not sufficiently taken into account. Thus, the allocation of inland transport resources between these two tasks, instead of being a matter of conscious and agreed policy, tended in the earliest months of the war to be a process of trial and error, in which one coal problem was apt to be eased by creating another.

Because there was no extensive diversion of deep sea shipping from its normal home ports in the first year of the war, coastal shipping was not in demand for discharging ocean ships overseas—the function that had engaged so much attention in the pre-war plans. Preparations had to be made, however, in case shipping diversion to the West coast became necessary, and in November 1939 a Committee on Overseide Discharge was appointed to examine the question. Its findings expressed grave doubts about the possibility of overseide discharge on any large scale; there would not be enough coasters.

The Committee found that it would take 200 small coasters (each making two trips and carrying 400 tons of cargo per trip) or 100 large size coasters one month to discharge 20 deep sea ships with normal sized cargoes of 8,000 tons. This would have meant, in fact,

Continued from previous page]

³ The total coal and anthracite *exported* from the United Kingdom to France (statute tons) was as follows:

October	.	.	474,104
November	.	.	646,680
December	.	.	549,872
January	.	.	696,616
February	.	.	627,273
March	.	.	668,234
April	.	.	878,237
May	.	.	1,287,592
June	.	.	724,993
			<u>6,553,601</u>

The monthly totals of French *imports* of United Kingdom coal, which would give the most reliable total, are unfortunately not available after April 1940. This figure for the 8 months September 1939 to April 1940 inclusive is about 5 million tons.

that 15 per cent. of the probable number¹ of coasting vessels would be occupied for a month in order to discharge no more than 20 ships overside.² Since the demands of war were already causing a serious shortage of coasters, the Committee concluded that not more than 'a very small proportion (of the vessels normally engaged in the coasting trade) could be made available for the purpose of overside discharge', and it therefore recommended that if overside discharge into coasters was to become feasible on any considerable scale, immediate steps would have to be taken to secure additional coasting vessels. The most suitable for the purpose, the Committee thought, would be 200 or so shallow draught Dutch motor vessels, but if it was impossible to obtain these it recommended that 100 larger coasters of about 800 tons carrying capacity should be built,³ and that 'all available coastal ships should be sent to the West coast in the event of a major diversion'.

In December the acquisition of this tonnage was authorised. It was known that there were about 150 suitable Dutch vessels laid up in Holland, but owners and crews were reluctant to risk chartering their ships to sail in belligerent waters, or to sell them outright to the British.⁴ It had been hoped that the extra tonnage would be available by 1st April, 1940, at the latest, but by February, only 20 ships had been obtained⁵ from the Dutch, and although the possibilities of buying tonnage from other countries were being explored, it was not considered likely that more than about half-a-dozen more ships from Norway could be obtained. If a total diversion of deep sea tonnage from the East to the West coast was expected, the Ministry of Shipping said that it should be made clear to the Ministry of Transport and the War Cabinet that there was no hope of obtaining by either chartering or buying, anything like the numbers of coasters contemplated. Some orders were placed for additional coasters to be built (4 were being built at available berths in December 1939 and 12 in February 1940), but the general policy was to reserve limited shipbuilding capacity for constructing deep sea ships.

In fact, when the Germans conquered Western Europe, the Dutch and other coasters which Britain had been trying to acquire came

¹ Statistics of the total number of coasting vessels are not obtainable for the early months of the war. There were probably about 1,300 to 1,500.

² About 70 deep sea ships arrived at United Kingdom ports every day.

³ The Committee also pointed out that this would only have been a small contribution to the problem, as loss by enemy action of merchant vessels of under 2,500 tons was at the time at the rate of 150 per annum and therefore the 100 larger coasters would not have replaced wastage.

⁴ The Dutch did not wish to sell their ships for fear of devaluation and did not wish to charter them to the British for fear of losing them. About 14 Dutch ships had been taken on by December 1939.

⁵ 4 were purchased and 16 chartered; 2 on Government account and 14 by British coasting shipowners.

to augment her coasting fleet.¹ The catastrophe, which made large-scale shipping diversion necessary, brought with it some of the additional tonnage needed to make overside discharge practicable—though only on a very small scale. Indeed, overside discharge could not be and was not in fact anything like a complete answer to the problem of distributing imports from diverted deep sea ships. In principle and in practice its great weakness lay in the extravagant use it inevitably made of a scarce and therefore valuable asset—coastal shipping.

While the demands of war caused an acute shortage of coasting tramps, the coasting liners lost traffic during 1939–1940² as they had during 1914–1918. They continued to operate (after 1st December, 1939, under General Licences) on their peace-time routes and services, but were seldom fully loaded in both directions. Rail transport offered traders comparatively safe transit for their goods at more or less pre-war rates³ and journey time. Coasting liners were open to enemy attack and their voyage times almost doubled because of convoy delays and danger from mines. Freight rates mounted rapidly to cover war risk insurance, higher wages and, of course, the increased length of time taken on voyage. Liner freight rates were permitted a 25 per cent. surcharge on pre-war rates in September 1939,⁴ which increased to 33½ per cent. in May 1940. The only exception was in the Irish cross-channel trade, where there was no alternative railway route and freight rates were allowed to rise by 65 per cent. of the pre-war figure. Economic circumstances therefore forced general merchandise from coastal liners on to the railways, and even to some extent on to road transport, in spite of the need to economise petrol.⁵ This undesirable transfer of traffic came at a time when as a deliberate policy the railways were being asked to relieve the coastal tramps of their coal traffic. It added unnecessarily to the railway burden and left coastal liners under-employed. Although as early as November 1939 the Government was saying that means must be found to divert traffic back to the coasting liners, it proved easier to state what was desirable than to decide what ought to be done. The only possibilities were either to increase railway rates, or to subsidise merchants when

¹ For the full story of how the ships of the conquered nations came under British and Allied control, see *Merchant Shipping and the Demands of War*, *op. cit.*, Chapter V.

² Small tramps of under 500 deadweight tons lost traffic to the railways as did the liners and were under-employed.

³ Until 1st May, 1940, when they were raised by 10 per cent.

⁴ The surcharge permitted did not cover the increased cost of operating liner tonnage in war-time conditions, which was 60–100 per cent. over the pre-war figure, depending on the particular trade.

⁵ For example, cattle feedingstuffs from London to the East coast were being carried by road.

shipping coastwise, or to take arbitrary powers to prevent traffics suitable for coastwise conveyance from going by rail or road. All of these methods raised considerable practical difficulties and in the autumn of 1939 the Government was not prepared to adopt any of them. The actual amount of general cargo that was transferred from the coastal liners to the railways in the first year of the war is not known, but its loss did cause hardship to the liner companies.

The position of the coastal liners continued to get worse after the fall of France. Traders continued to divert their goods from sea to rail and the liner companies claimed that the rates they were allowed to charge no longer covered their operating costs. They therefore asked for Government help so that their vessels would not have to be laid up and their crews dispersed. The Minister of Shipping therefore proposed to the War Cabinet that coasting and short sea liners should be brought under full requisition to prevent the laying up of ships expected to be needed when shipping diversion was instituted. The War Cabinet agreed to this on 19th August, 1940.¹

Of all the demands met by coastal shipping in the first year of the war, none so fired popular imagination as the coasters' great achievements at Dunkirk. The complete account of the Dunkirk evacuation finds its proper place in the military histories,² but a history of coasters can scarcely neglect to mention their part in the operation. It started for them on 19th May, 1940,³ when the Admiralty asked urgently for six degaussed vessels to proceed to the Downs and await orders from the Vice-Admiral, Dover. From then on more and more calls were made and colliers, tramps, liners, small motor ships, tugs, cross-channel packets and pleasure steamers, even Thames sprit-sail barges left their ordinary jobs to go to Dunkirk harbour and the beaches. There, with the ships of the Royal Navy, they shared the task of 'evacuating the mass of hard-pressed troops from a continually shrinking perimeter, under uncertain conditions of wind and sea, often in the dark, and under heavy attack from the air'. 'Nearly 240,000 troops in all were embarked from the shattered quays of Dunkirk harbour and some 99,000 more were lifted from the 10-mile stretch of beaches to the North-East.' The beach evacuation was performed by hundreds of shallow draught motor vessels, fishing craft, lighters, barges, sailing and pulling boats, which ferried the troops to the destroyers, coasters and other ships waiting in deeper water. Or the smaller coasters were run ashore so that waiting troops could wade out to them. Many coasters were sunk or damaged by

¹ Area Committees thenceforward issued 'permits' instead of licences. The full implications of requisition are examined in Chapter IX below.

² *The War in France and Flanders, 1939-1940, op. cit.*, Chapters XI to XVI.

³ Officially 'Operation Dynamo' lasted from 26th May to 4th June, 1940 although some troops were taken off before then.

enemy bombing, mines or torpedoes. Out of the 53 coasters¹ engaged in the operation, 9 were sunk and 13 damaged, most of them seriously.² The size of the coasters' contribution to the success of the Dunkirk evacuation is shown by the figures: out of about 308,500 troops³ landed in England by British ships, nearly 91,000 or 30 per cent. were carried by the 50 or so coasters engaged in the operation.

To sum up: between the outbreak of war and June 1940 the picture presented by coastal shipping was one of acute scarcity of coasting tramps but of under-employment for the coasting liners. The export of coal to France put the tramps under considerable strain; and the scarcity of tonnage on the one hand, and rising freight rates on the other forced extra traffic on to the railways. The German successes in Europe altered the whole situation. The coal export trade to France stopped and additional tonnage from Norway, Denmark and Holland became available. The acute shortage of coastal tramps was over.

(iii)

Canals: War Conditions and Government Policy

It has already been explained above that the Ministry of Transport decided, early in 1939, not to take control of the non-railway owned canals in war because they were expected to become a financial liability and that this decision was reached in full knowledge of what had happened to canals in the First World War. How far did the experience of the first year of the Second World War confirm the apprehensions expressed in some quarters before the war about the danger of leaving canals uncontrolled?

Experience showed that these fears had been generally well-

1	<i>British ships employed evacuating troops</i>	<i>Troops landed in England</i>
Destroyers	39	96,197
Minesweepers	36	46,434
Drifters	51	12,370
Skoots	39	22,698
Personnel vessels } i.e. coasters {	45	87,810
Hospital carriers }	8	3,006
All other ships	471	40,373
	689	308,888

¹ W. S. Churchill, *Second World War, Vol. II, Their Finest Hour*, Table on pp. 89-90.

² There is a negligible discrepancy between the Admiralty and War Office official totals of troops landed. The Admiralty total is 308,888. The most nearly correct figure is now considered to be the War Office figure of 308,491 men landed in England between 26th May and 4th June. The higher figure of 338,226 quoted in W. S. Churchill, *op. cit.*, Vol. II, p. 102, is the number of men who *embarked* in France, not those landed in England. The War Office figure quoted at the bottom of the same page is high because it includes men landed between 20th and 26th May.

founded. The canal carriers, or 'bye traders', soon complained that they were losing traffic. Some peace-time traffics were reduced or even disappeared in war conditions. During the periods when deep sea ships were diverted from their normal ports of call, canal carriers serving those ports lost much of their traffic. War-time circumstances generally caused difficulties for both the independent canal carriers and the canal undertakings themselves, and the equilibrium of relative costs and rates as between canal and rail transport was quickly disturbed. The canal carriers' working expenses increased: restrictions on night working delayed the movement of craft and raised wage costs and, because the costs of fuel, stores, maintenance and other items also rose, carriers found it difficult or impossible to continue to carry at existing rates. The canal undertakings (some of which were canal carriers as well) also suffered in much the same way, for though their costs rose they were not free to raise their tolls. Many found, in consequence, that they could only use their resources at a loss and had to lay up their equipment and allow their labour to drift into better-paid industries.¹ It was contended by the canal carriers that increased costs, which had forced them to raise their charges, had diverted traffic to the railways whose rates, as we have seen, were not raised until May 1940. The situation varied on different waterways: there was, for example, much more traffic on canals in the West than on those in the East. There can, however, be little doubt that war-time working conditions and the absence of a clear Government policy not only brought difficulties but even caused hardship for many canal carriers and undertakings. More important, these factors prevented the full use of canal facilities in the first year of war.²

¹ A good survey of canal problems in war-time may be found in the leading article in *Modern Transport*, 6th January, 1940, entitled 'The Canals must be used'. See also *The Economist*, 20th April, 1940, for an article entitled 'English Canals'.

² The extent of the decline in canal traffic in the first year of the war is difficult to assess statistically. The following figures give some idea of the decline in canal traffic during 1940 as compared with pre-war traffic. No data are available for the last half of 1939.

CANAL TRAFFIC ORIGINATING—GREAT BRITAIN

thousand tons

<i>Monthly averages</i>	<i>Total</i>	<i>Coal, Coke and Patent Fuel</i>	<i>Liquids in bulk</i>	<i>Other merchandise</i>
1937	1,197	567	105	525
1938	1,079	513	111	455
1939 (Jan.-June) . . .	1,051	533	96	422
1940	945	436	105	404

Note: Figures include both railway owned and non-railway owned undertakings and include Lee and Stort Navigations.

In February 1940 these problems were brought to the notice of the Government by the Canal Joint Committee, a body representative of both the canal carriers and the statutory undertakings. The canal interests prepared a memorandum outlining their problems and asked the Government for financial assistance. Their basic contentions were that means should be found to assure the same proportionate allocation of traffic between railway and waterway as existed before the war, whether by raising railway rates or by other methods, and that broadly the Government should guarantee their net revenues on the lines of the railway agreement. Without such Government help, so it was argued, the canal industry would decline and labour would drift into better-paid occupations as had happened in the previous war, while the public would be deprived of the contribution which inland waterways might otherwise make to the war effort.

It was perhaps natural for the canal industry, whose financial position even before the war had been far from secure, to lament its war-time misfortune and to deplore the Government's apparent inability to help. The real question of Government control of canals in war-time had, however, to be decided on wider issues—how far could use be made of the canals for purposes of war? Could the canals, for example, offer relief to the railways in the event of congestion, or could they give material help in solving the war-time coal transport problem? If the canals could make a useful contribution to the war effort, then the case for control was firmly established. It was clear, however, that the Government needed to decide either for or against control without delay. The experience of 1914–1918 had shown the dangers of postponing a decision to take control until the last possible moment.

The Ministry of Transport, while still unwilling to take control of the canals or to guarantee their net revenues, was convinced that there was a case for helping them so as to enable them to carry more traffic and to relieve other forms of transport, should the need arise. It was however made clear in the course of discussions between the Ministry and the Canal Association that the Government had no intention of paying a subsidy merely to keep alive a business that was suffering on account of the war, for on those slender grounds many other industries could advance an equal claim. In short, the criterion for a subsidy was to be the contribution which canals, considered together, could make to the war effort. The Government decided that, given the right conditions, canals could help the war effort and, while rejecting control, proposed to subsidise canal carriers to the extent of 50 per cent. of the cost of canal tolls. It was further proposed to permit the canal undertakings in turn to raise the level of these tolls to meet their higher costs. By this means it was

hoped that tolls could be increased to meet the reasonable needs of the canal undertakings without causing such an increase in carriers' charges as would drive away traffic to other forms of inland transport. At least it was thought that the scheme would keep traffic on the canals and enable the canal system to be maintained in a reasonable state of efficiency. At the same time, the Ministry undertook to ask the Treasury for financial assistance for undertakings where the provision of new facilities would be of definite use in war-time.

The canal subsidy came into operation on 1st June, 1940. It was paid to those carriers who conveyed goods for hire and reward (but not originally to firms providing their own canal haulage), and who were prepared to register with the Ministry of Transport and supply details of the traffic they carried. Registered carriers also undertook not to increase their rates without notifying the Minister. It was considered an advantage of the subsidy policy that it would benefit those canals where traffic was most active, but would not bolster up derelict concerns which were of no value for war purposes. In fact, while the scheme brought immediate satisfaction to the carriers, it failed to satisfy the canal undertakings. When the subsidy for carriers was introduced, an Order was made under the Defence Regulations forbidding canal undertakings from raising their tolls without the consent of the Minister¹ and in most cases tolls were pegged at 33½ per cent. above their pre-war level. The canal undertakings continued to complain that without Government control accompanied by a guarantee of their pre-war net revenues they could not maintain their facilities, provide for dredging, or protect their works. An impartial investigation did in fact conclude later that the undertakings were 'exhausting their resources or, what was worse, discontinuing or restricting their exertions'.²

Within the Ministry of Transport, differences of opinion prevailed about war-time canal policy. One school of thought considered that canal facilities and labour conditions were completely out of date, that railway and road transport had obvious advantages over canals, and that in 1939 there had existed a substantial excess of transport facilities for actual and prospective demands. On these grounds, so it was argued, Government policy towards canals should be confined to encouraging Government departments, such as the Ministry of Food, to put on to the canals 'a fair amount of traffic appropriate to that form of transport', and also to 'bribing' towards the cost of tolls. The other school of thought favoured the complete control of canal undertakings through a Central Canal authority with the post-war object of a nationally owned canal system. This view was

¹ Canals (Limitation of Tolls) Order, 1940, S.R. & O. 1940, No. 999, 10th June, 1940.

² See below, Chapter XI.

strengthened because every enquiry that had considered the inland waterway problem in recent years had recommended such a course. It was also rightly asked whether something more comprehensive than a policy of 'bribing' ought not to be undertaken.

When Sir John Reith became Minister of Transport, he epitomised the problem by asking firstly whether the canals were worth keeping in existence as a means of transport, and secondly whether particular measures should or should not be put in hand. If the canals were worth keeping, there was a case for control rather than a subsidy; on the other hand, he argued, if canals were, in fact, an out-of-date form of transport, then the effort to keep them alive with a subsidy was open to question. Ultimately, it was decided to invite Mr. Frank Pick, the Vice-Chairman of the London Passenger Transport Board, to investigate the whole question of canals on behalf of the Government. His report, which was completed in May 1941 and finally induced the Government to take control of the canals, will be discussed later in this narrative.¹

The Government's canal policy in the first year of the war failed to profit by the lessons of 1914-1918, when it had been clearly demonstrated that, if canals were to contribute to the war effort, Government control was needed from the beginning of a war while the labour force and the resources of the canals remained intact. The choice of policy was therefore straightforward: either the canals could be left to their fate for the duration, or they could be fully controlled and effectively used. Unfortunately, the Ministry of Transport tried to find a middle way and, by a policy of half-measures and compromises, allowed its opportunity of getting real advantages from war-time canal control to pass by. When, later in the war, control was decided upon, it came too late to provide substantial help to the inland transport system as a whole.

(iv)

Summer 1940: Retrospect and Outlook

Before the war, official thinking about inland transport had focussed attention on three main problems which seemed likely to cause difficulties if war came: the burden on inland transport which would arise following a large-scale diversion of shipping to West coast ports; the distribution of coal in war-time, especially if the coastwise movement to the South of England were cut off; and inland transport working—particularly railway operation—during enemy air raids. Between September 1939 and September 1940, inland transport had

¹ See below, Chapter XI.

to contend with only the second of these problems on a significant scale. Inland coal distribution in fact turned out, during the first year of the war, to be a more difficult inland transport problem than had previously been thought. It confounded those prophets who, before the war, had sought comfort—or so it seemed—in the belief that railway capacity was virtually without limit. It imposed demands, which, together with the French coal requirements, were greater than the coasting tramp fleet could possibly manage. Even before the summer of 1940, therefore, there were indications that the surplus capacity which the inland transport system—especially the railways—had been said to possess before the war, was either smaller than many had supposed or was being rapidly absorbed by the growth of war-time traffic.¹ What then if shipping diversion were to become a necessity and air raids were to dislocate transport working? Would the inland transport system still possess sufficient capacity to meet this situation and still carry out its ordinary tasks? The experience of almost a year of war suggested that what still remained of the pre-war surplus of inland transport resources might, in such circumstances, be transformed into a serious scarcity.

In some quarters, such a situation was foreseen. Port and Transit Division, for example, having found its earlier scepticism confirmed by its limited war-time experience, continued to show uneasiness about the ability of inland transport to cope with shipping diversion on a large scale.² Elsewhere, apparently, the shape of things to come was either imperfectly perceived, or the belief was still unquestioningly held that the inland transport system had a surplus of resources.³ Moreover, existing transport arrangements were now thought to provide the 'maximum degree of flexibility' of railway and road transport resources to meet future problems once these had been defined.⁴ In fact, despite the powerful warning which had been

¹ During the three 4-weekly periods ended 18th May, 15th June and 13th July, 1940, the *tonnage originating* on the railways was between 15 and 29 per cent. greater than the pre-war level (1936–1938), while the *average length of haul* for all traffics was between 26 and 35 per cent. greater than pre-war (1937). Even in the corresponding period of 1944, which included D-day, the railways do not appear to have moved so great a tonnage as this, though the average length of haul was by that time somewhat greater. It should be pointed out, however, that operating conditions on the railways in 1944 were much less favourable than in the early part of 1940. In 1944, labour and rolling stock, together with other scarcities, set the limit to railway performance. Moreover, merchandise traffic formed a much bigger proportion of total traffic in 1944 than in 1940 and this class of traffic is normally the most difficult for the railways to handle. The detailed statistics may be found in Appendix V, p. 142, and in Table 1 of the Statistical Appendix to this volume.

² A Transport Planning Sub-Committee of the Ministry's Port and Transit Organisation was set up in March 1940 to examine this whole question afresh. See below, Chapter V.

³ For example, in June 1940, the argument was being used by a senior Ministry of Transport official against war-time canal control that 'in 1939 there had existed a substantial excess of transport facilities for actual and prospective demands'.

⁴ A note on the term 'capacity' applied to the inland transport system will not be out of place here. 'Capacity', applied to inland transport, is difficult to define and exceedingly difficult to measure. No single formula expresses completely the 'output' of the wide

sounded by the Minister of Transport before the Committee of Imperial Defence as far back as the spring of 1939 and despite war-time experience which tended to confirm those apprehensions it was still, in the spring and early summer of 1940, neither a commonly expressed nor universally held belief in the Ministry of Transport that a serious scarcity of inland transport was probable in war-time.

This had implications for inland transport policy and particularly for the machinery of war-time inland transport control. The form of control over the main inland transport agencies during the first year of war reflected the pre-war belief that a surplus of inland transport resources existed. Indeed, the railways had been offered a definite financial incentive to carry additional traffic as part of the first war-time control agreement, while the restrictions imposed on road goods transport through the Emergency Road Transport Organisation implied that it was quite possible to transfer long-distance goods traffic from road to rail. Although, therefore, the Government could fairly claim to have established, during the first year of the war, comprehensive control over three of the four branches of the inland transport system, control was comprehensive only in the sense that the Government had acquired the power and the organisation to direct inland transport resources in conditions where no great scarcity of those resources existed.¹

The important question was whether these controls would be adequate if inland transport were to pass from a state of surplus capacity to one of chronic scarcity of resources. There was reason to think that they would not. The 'incentive' principle which buttressed the Ministry of Transport's railway control would plainly become inappropriate if the need arose generally to restrict traffic offerings to avoid congestion. Moreover, as has been pointed out, the relationship between the Ministry of Transport and the Railway Executive Committee was not well devised for close Government intervention in matters of railway policy. It is apparent too, from instances already

variety of services provided by an inland transport system. Statistics like *ton-miles* or *wagon-miles* provide a basis for measurement, but need extremely careful interpretation. It is impossible to measure in advance the potential capacity of the inland transport system down to the last *ton-mile*, since types of traffic, operating conditions, distribution of traffic on different routes are subject to wide and continuous variation. Precise measurement in these circumstances is, to borrow an analogy from the shipping historian, 'like measuring a piece of elastic' (*Merchant Shipping and the Demands of War, op. cit.*, Chapter V, p. 24). Probably the only safe guide to transport capacity is experience, for when an attempt is made to overload the system, congestion arises. It does not in the least follow from what is said here that attempts to find out in advance roughly how far the railways could cope with say shipping diversion or coal traffic in time of war were, or would have been, useless. To decide whether inland transport is likely to have a surplus of resources or whether it is going to be scarce does not call for precise measurement down to the last *ton-mile*.

¹ This applied mainly to the railway and road transport controls. In the case of coastal shipping, the system of control was better devised to meet a situation of prolonged scarcity.

mentioned in this narrative, that the railways, both before and after the outbreak of war, showed a persistent tendency to exaggerate their capabilities. It was always difficult for the Ministry of Transport to check these extravagant claims, for the size and technical complexity of the railway system made close investigation impossible.¹ Thus there were several aspects of war-time railway control likely to show weaknesses if and when railway resources became heavily strained.

While control over road transport worked efficiently, it was control of a negative and restrictive kind. With motor fuel scarce and the railways able to carry additional traffic, the policy of cutting down long-distance hauls by road had seemed wise. But if the railways were to become congested, economy of railway resources might have to take precedence over economy in the use of motor fuel. In the event of shipping diversion or heavy air attack, all the resources of long-distance road transport, with its advantage over the railways of greater flexibility, might need to be mobilised for port clearance or other emergency tasks. Road Transport Division recognised that the Emergency Road Transport Organisation might prove inadequate for this kind of task and that the resources of long-distance road transport might have to be welded into one Government-operated organisation. So far, however, administrative difficulties had stood in the way of such developments.

Control over coastal shipping was firmly established and had already proved effective in allocating scarce tramp tonnage between the competing claims of the French and domestic coal trades. Voyage licensing had not, in the case of the coasting liners, prevented them from becoming under-employed, but the matter was taken in hand by the decision to requisition them in August 1940. Canals, apart from those owned by the railways, were not brought under control, though a subsidy scheme had been agreed in the summer of 1940. This compromise to some extent reflected the indecision within the Ministry of Transport as to whether or not canals would be needed to provide a fourth line of defence if other forms of inland transport were hard pressed.

Thus, up to the summer of 1940, no radical departures were made

¹ The technicalities of railway working were, indeed, of a kind which could confuse all but the most enquiring lay mind. It is hardly surprising that officials sometimes found difficulty in framing the right questions to put to the railways and, when the right questions were asked, had to contend with answers they could not readily understand. For example, a prolonged correspondence between the Ministry of Transport and the R.E.C. took place early in 1940 about whether the railways kept full records of coal movement. The R.E.C. persistently contrived to evade answering the question until pressed very firmly by the Ministry of Transport to do so. The author also recalls one official's complaint to the effect that whenever one made specific and constructive proposals concerning railway working, one was always apt to be confronted by some expert who just said 'You do not understand'.

from the controls decided on for inland transport before the war. It is difficult to establish from the conflicting opinions to be found in official records exactly how far the Ministry of Transport had changed its views about prospective inland transport capacity by the summer of 1940. Only a few officials—principally those concerned with shipping diversion problems—seem to have foreseen the possibility of a serious shortage of railway capacity and its serious consequences for the rest of inland transport and the war economy as a whole. Yet the question whether to plan for a surplus or scarcity of inland transport was fundamental to deciding on a correct war-time transport policy. If there was every reason to expect inland transport to be plentiful, then existing controls could be left well alone. If, however, there was good reason for expecting inland transport to be scarce, then existing arrangements would clearly need overhauling: firstly, the existing controls over the inland transport agencies would need tightening up; secondly, improvements would need to be put in hand at once to increase the capacity of the inland transport system; thirdly, machinery would be required at the centre to assess in broad terms and as a whole the likely future demands on the inland transport system—this would be necessary to provide a basis for a policy of restricting the use of inland transport by the least essential traffics; fourthly, rates policy would need to be made consistent with a policy of using all branches of the inland transport system to the fullest extent. None of these things was in fact seriously attempted between the outbreak of war and September 1940.

How did the outlook for inland transport appear in the summer of 1940? The evacuation from Dunkirk ended on the night of 3rd June and France capitulated three weeks later. As the summer wore on, enemy attacks on British ships at sea were already increasing and, almost any day, it seemed, the Germans would begin to bomb British ports and cities in earnest. Air attacks, with the probability of widespread interruption, congestion and scarcity of inland transport were imminent. The diversion of deep sea shipping on a considerable scale from its accustomed ports of discharge looked like becoming an inescapable necessity. This was the sombre prospect ahead. Yet the nature of the impact which prolonged large-scale diversion of shipping would have on inland transport remained as elusive and ill-defined as ever. In the uncertain summer of 1940, with past assumptions undermined and the future more than usually obscure, Port and Transit Division was finding it well-nigh impossible to formulate precise plans for inland transport once diversion started. Inland transport itself was, as we have seen, virtually no better organised or equipped to meet such a situation than it had been in the autumn of 1939. The relation between inland transport and shipping diversion policy from the outbreak of the war onwards

is discussed more fully later.¹ As matters stood in the summer of 1940, however, the Ministry of Transport, having found it impossible to work out exact plans to enable inland transport to cope with shipping diversion, relied principally on the 'flexibility' of inland transport resources to meet the situation as and when it arose. While a period of temporary congestion was now thought to be unavoidable, the hope was entertained that experience would gradually facilitate a return to normal working.² Since no determined measures had yet been put in hand to organise inland transport to operate in conditions of scarcity, this hope was largely built on a quicksand.

If the prospect of shipping diversion seemed—at any rate to officials of Port and Transit Division—anything but encouraging, what of the prospects for coal transport? At first sight the collapse of France seemed to have made the coal distribution problem a good deal easier. Coasting tramps would no longer be needed to carry coal to France and would, therefore, be available in greater numbers for the East coast coal trade and would relieve the railways of these long hauls. On closer examination, however, the problem went deeper than this. For the German occupation of France had much increased the hazards of coastwise voyages not only in the North Sea, but in the English Channel. This delayed coastwise voyages generally and also made it extremely dangerous to try to supply coal to towns on the South coast of England by sea through the Straits of Dover.³ There were other big complications resulting from the loss of export markets for British coal. The two great coalfields of Northumberland and Durham and South Wales, which had become highly organised over a long period to supply the French trade, now lost their traditional export markets.⁴ New markets could only be found in Great Britain to a limited extent, and even where it was possible to dispose of the surplus coal on the home market, inland

¹ The detailed account of shipping diversion policy in the first year of war has been left over to Chapter V in order to preserve the continuity in the story necessary to an understanding of port and railway problems during 1940–1941. See also *Merchant Shipping and the Demands of War*, *op. cit.*, *passim*.

² The Minister of Transport reported in March 1940 that 'exact plans . . . could no doubt be drawn up if it were known with certainty which ports would be closed for what periods, and the nature and distribution of the commodities to be handled during those periods'. These factors were, however, unknown variables. It was impossible to lay down precise plans for transport in a series of assumed circumstances. The essence of the existing transport arrangements was, therefore, 'to secure the maximum degree of flexibility of operation, with the power to strengthen immediately any points where weakness threatens'. He went on to emphasise that 'a policy of major diversion will inevitably involve serious dislocation of shipping, supply and inland transport'. No plans could avoid this, though existing arrangements were designed to reduce, as far as possible, its effects on the life of the country. In the Minister's opinion, 'the deterioration that was bound to result from a major diversion' could be checked at a certain point—though he could not pretend to say where that point was—from which experience would gradually enable improvements to be made.

³ See below, Chapter IX.

⁴ *Coal*, *op. cit.*, Chapter IV, Section (iii).

transport had not always the capacity to move it. London, for example, might have provided a market for much Durham coal that was normally exported, but railway and coastal shipping capacity set a definite limit to this possibility. Similar difficulties arose in South Wales, whose geographical situation made the transport of large quantities of surplus coal to inland destinations extremely awkward. Thus the collapse of France and the cutting off of the coal export trade both solved old inland transport problems by liberating colliers for the domestic trade and at the same time threw up new ones by making it necessary to dispose of Northumberland and Durham and South Wales coal in abnormal quantities over unusual routes on to the home market. Even before September 1940, when the German bombers intervened to complicate matters, the railways were already encountering difficulty in accommodating themselves to this new situation.

Here, in the summer of 1940, were to be seen the lengthening shadows of coming events. In July and August, small patches of congestion were already developing on the railways and the tempo of enemy bombing was increasing. Shipping diversion on a large scale seemed imminent. Coal distribution had become, in some ways, less burdensome for inland transport, but, in others, more complicated. There were also other difficulties ahead, the shape of which was by no means clear. The demands of war production were rising; the character of British import requirements was undergoing marked changes because of the drying up of European sources of supply.¹ These and many other changes, which were to affect inland transport in the months ahead, were occurring rapidly—much too rapidly to enable any detailed estimates of demand for inland transport to be set down in advance. But it does not seem to have been doubted that the inland transport system would have sufficient capacity both to continue to perform its normal tasks and to meet these several large additional demands as well. When, for example, the Prime Minister sent a minute to the Minister of Transport on 25th August, 1940, asking whether the widespread dislocation caused by the cold spell of the previous winter did not raise some doubts as to the ready adaptability of the railway system in the case of sudden emergency, he was confidently told that the cold spell had dislocated the railways more than the enemy was likely to do. Events, however, were soon to take a hand to prove otherwise. For the unpleasant fact was that inland transport was still only half-prepared to meet the ordeal that lay ahead.

¹ J. Hurstfield, *The Control of Raw Materials*, in this series (H.M.S.O. 1953), Chapter XI.

APPENDIX VI

Issues of Motor Fuel Rations Weekly Averages—4-weekly period

Thousand gallons

<i>Period</i>	<i>Goods vehicles</i>		<i>Public service vehicles</i>			
	<i>Estimated gallonnage of units issued</i>	<i>Per cent. of 1938</i>	<i>Petrol</i>	<i>Diesel oil</i>	<i>Total p.s.v. issues</i>	<i>Per cent. of 1938</i>
1938	10,104				4,327	
<i>Four weeks ended:</i>						
<i>1939</i>						
20th October . . .	9,203	91·1	1,117	1,288	2,405	55·6
17th November . . .	8,522	84·3	966	1,469	2,435	56·3
15th December . . .	8,312	82·3	1,005	1,480	2,485	57·4
<i>1940</i>						
12th January . . .	8,111	80·3	918	1,547	2,465	57·0
9th February . . .	7,661	75·8	970	1,496	2,466	57·0
8th March . . .	7,467	73·9	876	1,510	2,386	55·1
5th April . . .	7,767	76·9	968	1,527	2,495	57·7
3rd May . . .	7,908	78·3	992	1,573	2,565	59·3
31st May . . .	8,038	79·6	1,056	1,611	2,667	61·6
28th June . . .	8,025	79·4	1,030	1,641	2,671	61·7
26th July . . .	8,063	79·8	1,021	1,644	2,665	61·6
23rd August . . .	7,998	79·2	1,042	1,645	2,687	62·1

APPENDIX VII

British Cargo Vessels—750/5,000 d.w.t. (excluding tankers) Employment as at 31st January, 1940¹

(N.B. This includes ships of a size big enough to be classed as deep sea ships. It excludes the many small coasters—perhaps 500–600—below 750 d.w.t.)

<i>Area of employment</i>	<i>No.</i>	<i>d.w.t.</i>	<i>No.</i>	<i>d.w.t.</i>
COASTAL TRADE OF UNITED KINGDOM AND EIRE				
(i) Principally on East Coast	203	444,000	} 345	612,000
(ii) " " West and South Coasts	30	33,000		
(iii) " " general coasting	57	75,000		
(iv) " " between United Kingdom and Northern Ireland	27	27,000		
(v) " " between United Kingdom and Eire	28	33,000		
LINERS AND OTHER VESSELS TRADING BETWEEN:				
(vi) United Kingdom and Scandinavia, Holland, Denmark and Belgium	68	112,000	} 264	534,000
(vii) Channel Islands and Northern France	95	137,000		
(viii) French Bay, Spain and part of Mediterranean	101	285,000		
Bulk cargoes from French Bay, Spain and Mediterranean			34	102,000
Repairing, damaged or unfixd			46	94,000
TOTAL:			689	1,342,000

¹ In addition there were on this date 118 ships (283,000 d.w.tons) requisitioned, government owned or chartered. Of these, 107 were employed in Defence Services (245,000 d.w.tons) and only 11 in commercial services (38,000 d.w.tons), and not all of the eleven were in the coasting and short sea trades. They have therefore been excluded from this table.

APPENDIX VIII

A Note on Coasting Freight Rates

This outline of coastal freight rates will cover a period beyond the strict limits of the summer of 1940. It has been explained how mounting freight rates and the risks of coastwise shipment in war-time caused traders to divert their goods away from the coasting liners. The objections to moving goods by coast also applied to the tramps, but as there was work for them which could not be done by other forms of transport they were used to capacity in spite of the high cost. Coasting tramp freight rates in fact immediately rose much higher than liner rates.¹ By the middle of September 1939 they had increased by 50 per cent. over the pre-war figure and by November they had increased by 100 to 200 per cent. depending on the trade. The heaviest increase in ships' daily operating costs was war risk insurance which accounted for about one-third of the war-time freight rate and was in itself frequently more than the total pre-war freight rate. The premiums amounted to the total value of the ship over a period of four years. The second main cause of high costs was increased time, but there were also higher wages and increased bunker and pilotage charges.

The Ministry of Shipping did not control tramp freight rates, but during the autumn and winter of 1939 and the spring of 1940, agreements about the rates to be charged were frequently reached at its instigation.² The agreements were made between the shipowners and the merchants operating in a particular trade, negotiating through the Coasting and Home Trade Section of the Chamber of Shipping.³ Freight rate agreements were fixed in the three most important trades, namely the London coal trade,⁴ the South coast coal trade, and the coal export trade to France, but they were also reached for a host of other coasting trades such as cement, stone, basic slag and fertilisers, and also for imported commodities carried by coasters like Jersey potatoes, pitwood from France and Portugal, wheat from France, iron ore and coal from Spain. Freight schedules were reviewed frequently, usually every three months. The basic idea was that freight rates were to be related to operating costs and voyage time and were not to reflect the shipping shortage. They were permitted, however, to vary with the size of the ship and cargo; for example, in the French coal export trade, rates were fixed in agreement with the French Transport Mission as early as October 1939.⁵ The rates were based on a maximum rate of 10s. per ton for coal to Rouen for cargoes of over 3,800 tons, with proportionate increases and decreases for other ports, for example, Tyne to Bay of Biscay ports were to be charged at 15s. 6d. a ton; Bristol Channel

¹ If a coasting liner went tramping, tramp freight rates applied for the voyage.

² e.g. the Ministry notified Chamber of Shipping when it was desirable to fix the maximum rates of freight in the basic slag trade.

³ Who also mediated between disputing parties if any rates disputes arose.

⁴ If London coal ships were sent northabout on Admiralty instructions, the freight rates were increased to cover the extra voyage time and bunkers.

⁵ They were revised on 1st February, 1940, when they also included Dutch and Belgian ports.

to the Bay ports 11s. a ton; Bristol Channel to Cherbourg at 9s. 6d. a ton and so on. Demurrage, despatch and other charges were also agreed,¹ and differentials were fixed according to size of cargo varying from 5 per cent. increase over the standard rates for cargoes below 3,800 tons to 30 per cent. increase for cargoes below 500 tons. It was hoped that fixing of these rates would help to persuade owners to offer a reasonable proportion of their tonnage to the French Mission. Similarly in the London coal trade at the same date, the maximum freight rates agreed for cargoes of 1,450 tons to 4,500 tons varied from 8s. 6d. to 10s. 9d. per ton² and for cargoes of less than 1,450 tons, the rates varied from 10s. 9d. to 17s. per ton.

When licensing control was introduced in December 1939,³ in those trades where freight schedules had been fixed the Area Committee could refuse to approve the voyage licence unless the proposed rate of freight was in accordance with the schedule. Rates for less frequent trades where no schedules had been agreed were expected to be fixed on similar principles and Area Committees were asked to report excessive rates to Headquarters for investigation.⁴

When freight rates were calculated, either for a freight schedule of rates or for individual voyages, there were three main items in their make up:

1. The daily operating costs of the ship.
2. The time taken on voyage.
3. Port charges and bunkers.⁵

From May 1940 a surcharge of 2s. 6d. per ton of freight carried was added to the scheduled freight rates for British owned vessels, in the case of ex-

¹ *The Economist*, 28th October, 1939, p. 144.

² MAXIMUM RATES OF FREIGHT FOR SHIPMENTS OF COAL TO LONDON,
17TH OCTOBER, 1939

Cargo tons	N.E. Coast	Humber	Wales	Firth of Forth
1,450/1,999	10s.	10s.	10s.	10s. 9d.
2,000/2,999	9s. 6d.	9s. 6d.	9s. 6d.	10s. 3d.
3,000/3,749	9s.	9s.	9s.	9s. 9d.
3,800/4,500	8s. 6d.	8s. 6d.	8s. 6d.	9s. 3d.

³ From the outbreak of war Area Committees had been expected to watch the general level of freights and to send to Headquarters weekly reports of the level of freights in their areas. These do not appear to have been continued beyond March 1940.

⁴ e.g. in May 1940 the Ministry of Shipping, after receiving reports from the Area Committee concerned wrote to the Chamber of Shipping drawing their attention to the fact that fixtures of coal cargo rates from Lerwick appeared to be much too high and suggesting that owners of tonnage likely to be trading there should be told that the rates must be calculated in relation to the operating costs of the steamer and the time taken on voyage.

⁵ DAILY OPERATING COSTS

This included such items as war risk insurance, marine risk insurance, wages, stores management charges (office rent and rates and overheads based on actual figures supplied by the Chamber of Shipping), the cost of repairs and time off service for repairs plus an allowance of 5 per cent. for depreciation and 5 per cent. for interest on capital based on agreed average values (based on the cost of tonnage delivered, or under construction at outbreak of war) less approximately 20 per cent.

Schedules of daily operating costs were agreed for ships of various sizes and revised from time to time. For example, in June 1940, they varied from £21 14s. 1d. a day for ships up to 200 deadweight tons, to £86 4s. 6d. a day for ships between 4,500 and 5,000 deadweight tons. They were raised again in September and again in November of that year. These daily operating costs were also the Government rates of hire for ships on requisition.

[continued on opposite page]

Swedish, Danish, Norwegian, French and some other foreign tonnage.¹ The Government had chartered this tonnage at high rates and its operation was more costly than British tonnage. The 2s. 6d. surcharge helped to reduce the Exchequer's losses, although it did not cover them entirely. In the deep sea trades, differences in the cost of operating foreign and British shipping could be evened out over the whole cargo fleet, as all the deep sea ships were requisitioned by the Government. In the case of coasters, the unrequisitioned tramps were chartered by the shipper of the goods. The differences between rail and sea rates were also a complication. It was not therefore possible to average freights over the whole field. If they had been so averaged, the individual shipowner would probably have had a higher rate of freight, and the Government a lower one. This 2s. 6d. surcharge continued until June 1941.

By early 1941 tramp freight rates—leaving the 2s. 6d. surcharge out of account—were about 300–400 per cent. higher than the pre-war rates, varying according to the different trades and the size of ship. The increase was relatively higher for smaller tonnage.

As the war progressed, however, freight rates fell. This was partly owing to improved voyage times but mainly to direct Government action. In December 1940, for instance, the differences between the costs of sea and land transport for coal²—which were normally passed on to the consumer—were

continued from opposite page]

TIME TAKEN ON VOYAGE

Averages were taken based on actual voyage times of ships of various classes in the particular trade during the previous quarter. (Returns were made by owners through the Chamber of Shipping.)

PORT CHARGES AND BUNKERS

These differed according to the actual charges at ports used and the duration of the voyage.

A typical freight rate—varying in daily operating costs according to the size of ship—would be worked out as follows:

TYNE-LONDON 2,000 TONS OF COAL (1941)			
Voyage time	16 days at daily operating costs of £81 13s. 4d.		£1,306 13 4
Port Charges	. . . . .		122 0 0
Bunkers	. . . . .		120 0 0
Commissions to charterers' and owners' brokers (two-thirds of 2½ per cent.)	. . . . .		26 0 0
			£1,574 13 4

This gives a rate of 15s. 9d. a ton.

¹ Also Polish, Yugoslav, Lithuanian and Latvian. The surcharge apparently did not apply to Dutch tonnage on time charter or to Canadian lake steamers. In the case of the ex-Dutch tonnage which mainly consisted of small shallow draft motor vessels, the ships were 'earmarked for a special purpose' (i.e. overside discharge) which had not started when this surcharge was introduced, consequently they were being employed on the coast only temporarily.

² e.g. Yorkshire House Coal (retail) delivered by rail to Croydon. Northumberland House Coal (retail) delivered by sea to Southampton.

	<i>Pre-war</i>	<i>Dec. 1940</i>	F.o.b. price	<i>Pre-war</i>	<i>Dec. 1940</i>
Pithead price	22s. od.	26s. 6d.	Freight	19s. od.	23s. 10d.
Rail charges	15s. 9d.	18s. 5d.	Insurance and discharge	4s. od.	14s. od.
Cost to merchant	37s. 9d.	44s. 11d.	Cost to merchant	25s. 3½d.	40s. 7d.

partially evened out by the coal freight refund scheme,¹ which was a subsidy paid by the Mines Department to the shipper, not the shipowner. The purpose of the scheme was to even out rail and sea costs so that coal would not be forced on to the already heavily burdened railways. It was hoped it would stabilise the cost of transporting seaborne coal at the levels of autumn 1940.

The subsidy was paid for all coal delivered to ports South of the Wash and the Bristol Channel, varying according to the schedule of coal freight rates in force at the time of the application. The cost of the scheme during the 1940–1941 winter was £103,048. Ports were grouped and a rebate fixed for each area, but allowances were made, at least in the London area, within each group for difficult or poor ports or wharves (varying from 3d. to 1s. per ton).² In July 1941 the coal freight rebate scheme was extended to the other ports of the United Kingdom where necessary and the subsidy was increased and related to the rail freight costs in order to equalise the cost of coal to the consumer whether it had been brought by sea or land. A ‘basic freight rate’ per ton of coal was now fixed for each area—e.g. the London basic for domestic coal was 7s. 6d. per ton and 13s. for industrial coal (where the disparity between rail and sea rates was not so marked). For ports between Dover and Poole it was 10s. per ton for domestic coal shipped from the North-East coast, 9s. from the Bristol Channel, and so on. The shipper then received a rebate of the difference between the ‘basic rate’ and the actual scheduled freight rate. At the same time similar schemes were extended to all other commodities which were covered by freight schedule.³

Then from 30th June, 1941, the Government took over the whole of the cost of war risk insurance on cargoes.⁴ Coastal freight rates were immediately reduced by 17½ per cent. in the London coal trade and in other trades new freight increases ranging from 15 per cent. to 25 per cent. were cancelled. Non-scheduled freight rates were also reduced by about 15 per cent. and the daily operating costs of vessels were also proportionately lowered. The 2s. 6d. per ton surcharge on coal cargoes carried in certain foreign ships was also cancelled. Shipowners still had to bear war risk insurance on hulls, but with the heavy cargo war risk insurance borne by the Exchequer, rates for sea and land transport were more or less equalised.

One other scheme—the Tramp Owners Compensation Pool—should be mentioned here. One of the disadvantages of operating non-requisitioned tonnage during a war is that shipowners, especially those owning only a few ships, face particular hardship if they have a run of bad luck, for example if their ships are sunk or have to undergo prolonged repairs or are detained in port by enemy activity. Owners of non-requisitioned tramp tonnage therefore put forward a scheme in June 1941 by which they

¹ Including coke and manufactured fuel.

² e.g. lower rates of subsidy were paid on coal discharged at the smaller Thames wharves as the costs of owners of the larger wharves were considerably higher.

³ Much freight was of course carried on Government account by this date and the subsidy in these cases meant merely an adjustment in interdepartmental accounting.

⁴ For unrequisioned ships only. The requisitioned coastal liners war risk insurance had been borne by the Exchequer from the date of their requisition, August 1940.

contributed a percentage of their freight earnings to form a fund for compensating owners suffering special hardship. Although difficulties arose in getting all tramp shipowners to join this Tramp Owners Compensation Pool scheme,¹ a company was eventually formed to administer the fund and the scheme started to operate in the middle of 1943.²

¹ Coasting tramp owners were perhaps unaccustomed to co-operating before this scheme.

² *The Economist*, 8th May, 1943.

PART III

The Critical Year

CHAPTER V
THE RAILWAYS
AND THE TRANSPORT CRISIS,
1940—1941

(i)

The Nature of the Railway Problem

FOR INLAND TRANSPORT, the autumn and winter of 1940—1941 proved to be the most critical period of the war. 'By October, it was apparent that the railways were not doing their job; they were carrying badly and not enough.' This declaration, made by the Chairman of the Railway Executive Committee in December 1940, epitomised the serious railway situation that developed in the months that followed the collapse of France. In September, the enemy had begun his heavy air raids. In the same month, the long-awaited shipping diversion had become a reality, and revolutionary changes had occurred in the types and quantities of goods moved by rail from the West coast ports. Meanwhile other freight traffics on the railways had undergone marked changes; coal was the outstanding example. This transformation in the pattern of traffic coupled with unprecedented operating difficulties caused by prolonged air raid conditions, placed a heavy strain on the railway system. The resulting state of congestion on the railways was the most grave aspect of the generally disturbing transport situation that lasted from September 1940 until the following spring. For in those months, transport shortage came to be a limiting factor in the nation's war effort. Shipping was held up, and the United Kingdom's capacity to import was thereby reduced, for want of wagons to clear the ports.¹ Coal supplies for public utilities, factories, and domestic consumers were precarious, not because coal production was flagging, but because transport was scarce.² On the basis of these facts, it is reasonable to describe this deterioration in the transport position as a 'crisis'. Moreover, this judgment reflects the disquiet displayed by the War Cabinet at this time over inland transport matters.

The transport crisis was primarily a railway crisis. How did the

¹ *Merchant Shipping and the Demands of War, op. cit.*, Chapter VI.

² *Coal, op. cit.*, Chapter V.

railways become congested? Why was there a shortage of rail transport? The causes of the railway difficulties were many and complex. Nevertheless, an attempt must be made to answer these questions, for the limitations that a transport shortage can impose on a nation's war economy are too obvious to need elaboration. To understand the nature of the railway crisis, let us look for a moment at the normal aims of railway operation and traffic organisation, and the conditions under which they are most likely to be fulfilled. Then we can enquire how the conditions under which the railways had to work, and the traffic they had to carry in the period we are considering, complicated the task of realising these aims. This is the theme of the present chapter. The remedies put in hand to relieve the railway crisis will be examined in the next.

What then are the general conditions of efficient railway operation, and what happens when, for various reasons, these conditions cease to exist?¹ Railway operating techniques are seldom understood by the layman, and the skill of British railway operating staffs is frequently taken for granted by the ordinary user. The railway system is a highly complicated and delicate mechanism, whose smooth and efficient operation is only attained through meticulous planning. Planning is necessary to ensure the punctual running of trains, and to give both passenger and freight trains clear timed 'paths' to avoid delays and congestion. Train planning begins with the preparation of a working time-table in which each train is timed in a proper 'path', headways—or time intervals—between trains are arranged to make the best use of line capacity and to minimise delays. Duty schedules must then be worked out for train crews and railway staff, and elaborate arrangements have to be made to achieve a balanced movement of traffic in both directions, to get crews and engines back to their home stations. Good planning of railway operations is most readily achieved where traffic conditions are well-known. That is to say, planning the movement of trains requires a knowledge of the approximate quantities and types of traffic which move periodically between different places, and the routes the various traffics must follow. The basis of railway working is the organisation of routine, or time-table, operations to meet regular and well-defined flows of traffic. For this reason, the amount of 'special' or unusual traffic has to be kept as small as possible and carefully regulated through a control system. Before the Second World War, the railway companies had succeeded in realising these conditions.

¹ It must be emphasised that the writer makes no pretence to enter into the multitude of technical problems relating to railway operation. Such matters are outside the scope of this history. The present discussion is concerned only to give a bare outline of the general principles of good railway operation. The interested reader will find a detailed discussion in one of the recognised text books on the subject. See for example, T. B. Hare, *British Railway Operation*, and *Practical Railway Operating*.

The main flows of traffic were clearly apparent, the railway system was, on the whole, well laid out to meet peace-time traffic needs, and planning made for smooth and regular operation.

An important aspect of the problem of train planning is the problem of calculating 'line capacity'. To the railwayman, 'line capacity' is an attempt to express the amount of traffic, as measured by the number of trains, that can be passed over a line without breach of the regulations imposed by the block system, and existing signalling arrangements.¹ 'Line occupation' is a term employed to denote the degree to which the line is actually used. Both are somewhat elastic terms. It is difficult to calculate the theoretical capacity of a main line carrying mixed traffic, and virtually impossible to say in advance what its practical capacity in everyday working amounts to. Many variable factors, such as the size of the train unit, the speed of the trains, the incidence of gradients, the signalling arrangements, the length of the block sections, all affect line capacity. Even if the theoretical capacity of a given line can be worked out taking all of these factors into account, there are usually unforeseeable circumstances which make the achievement of theoretical capacity impossible in practice.

Line capacity can only be worked out and train planning properly undertaken in terms of the type of traffic handled. A section of line with a capacity of say, six passenger trains an hour, may only be able to take three heavy mineral trains in an hour, because mineral trains move slowly and are not fitted with continuous brakes. If the nature, volume, and route from the point of origin to the destination of traffic over a particular line are known in advance, line capacity in relation to those traffic conditions can usually be estimated with reasonable accuracy. In practice, experience usually indicates when maximum line capacity is approached, for if an attempt is made to exceed it, congestion arises. If the nature and volume of traffic on a given line undergo a radical change, or if external conditions interfere with normal operation, line capacity will not only alter, but will become more difficult to determine until practical experience indicates the extent of the changed conditions. When traffic becomes irregular or unpredictable for any length of time, train planning may become impossible or break down. Under these conditions, the probability of congestion increases.

The aim of good railway operation is to avoid congestion. It is clear that over a long period of time total line occupation cannot exceed line capacity. Nor indeed can it do so for a short period.

¹ The block telegraph system, in common use on British railways, necessitates the division of lines into sections. No train is allowed into a section until the previous train has passed clear. The principle underlying this system is that a section is normally assumed to be blocked until the reverse is established by definite enquiry.

What can happen is that a series of trains may be directed to a line in excess of the capacity of that line. The rules of block signalling have the effect of holding up such of the trains as represent the excess and, by spreading them over a longer period of time, reduce the flow to the rate the capacity of the line allows. Congestion is said to exist when this state of affairs becomes more or less chronic. Railway congestion is cumulative; once it has arisen it tends to spread. It may build up over a substantial length of line for a considerable time, and may persist for a long time after its original cause has been rectified. It is not only on heavily burdened main or branch lines that congestion arises; it may be caused, and frequently was in the war years, at overburdened terminals, sidings, and marshalling yards. The function of a marshalling yard is to sort goods wagons. Trainloads of wagons enter a yard in a 'rough', unsorted state from their original loading points. They are then broken up, the wagons are sorted, and made up into fresh trains according to their destinations. A marshalling yard will have a capacity to handle so many wagons a day. If more 'rough' trainloads are forwarded than can be handled, traffic has to be held up outside the yard—or stopped back, which will tend to cause congestion. Similarly, if more traffic is forwarded to a goods depot or private siding than can be accommodated and unloaded quickly, goods traffic may be held up on the running lines at its approaches. If this situation is allowed to persist, it will have adverse reactions on railway working generally. Congestion will develop, traffic will be slowed down; this in turn further reduces the ability of the railway system to handle traffic. Congestion must therefore be avoided if a railway system is to continue to run efficiently; hence the importance which attaches to the careful planning and regulation of all traffic movements.

To plan the expeditious movement of freight traffic on the railways, it is obvious that the railways must be given proper information about where consignments are going to and coming from. The speedy movement of wagons over the railway system, their prompt turn-round at unloading points and the avoidance of congestion depend not only on the efficiency of railway staffs, but also on the co-operation of merchants and firms who use the railways. In time of war, when much traffic moves on Government account, close co-operation between the trading departments of the Government and the railways becomes no less essential. Indeed it becomes more essential because war adds an element of uncertainty to traffic movements. War-time co-operation between Government trading departments and the railways is therefore necessary at two levels; locally, in the form of efficient movement controls to supervise day-to-day loading, movement and unloading of freight traffic on behalf of the departments concerned; centrally, in the form of an organisation

through which the size and nature of all the larger Government demands for railway transport can, wherever possible, be assessed in advance and matched against the capacity of the railway system to meet them. Even with such machinery, supposing that it can be made to work effectively, the uncertainties of war cannot all be planned against; without such an organisation in war-time, congestion and waste of railway resources are almost certain.

To sum up, the greatest 'output' from the railway system, in terms of traffic handled, is obtained when traffic flows freely and the lines are not congested. That is the aim of good railway operation. Its achievement calls for a high degree of skill in planning train movements to meet traffic demands. But planning may cease to be effective, and the delicate mechanism of railway working cease to function with efficiency if certain conditions are not satisfied. These are:

- (a) that traffic comes forward with regularity; that the principal traffic movements are well-known, are capable of being translated into routine operations, and do not change suddenly.
- (b) that external factors—outside the control of railway staffs—do not disturb the carefully prepared routine of railway working.

Such ideal conditions are not always achieved in peace-time; they are less likely to be achieved in the uncertain conditions of war. That they were far from being satisfied in the autumn and winter of 1940-1941 was the fundamental reason for the serious railway congestion experienced in those months. This will be demonstrated by examining more closely the nature of the principal problems that faced the railways after France fell.

It is a commonplace that the collapse of France upset many earlier strategic and economic calculations, and produced drastic changes in the war economy of this country. It is not, perhaps, so generally realised how severe was the impact of these changes on the working of inland transport in the months that followed. The re-equipment and expansion of the Armed Forces at home, and the mobilisation of industrial and manpower resources for war production brought new and altered demands for transport. The loss of European sources of supply, and a shortage of shipping capacity dictated the need for changes in the nature and volume of imported commodities, and the expansion of home production. The cessation of the short sea trades, particularly the elimination of the export coal trade with France, raised new problems of internal distribution. In the sphere of war strategy, the fall of France heralded the beginning of enemy air raids and the intensification of attacks on British shipping. Air raid conditions seriously interfered with railway working. The increased risks

that shipping now ran made it necessary to divert shipping to West coast ports.

Such changes greatly disorganised the normal working of the railways. The factors that complicated the task of maintaining efficient railway operation in the autumn and winter of 1940-1941 were three:

- (a) The prolonged air raid conditions.
- (b) The much altered traffic conditions that resulted from the diversion of shipping to West coast ports and the drastically changed import programme.
- (c) The changed pattern of internal traffic on the railways.

Each factor will be considered in turn.

(ii)

Air Raid Conditions and Railway Working

Probably no single factor caused so much disturbance to railway working in the autumn of 1940 as air raid conditions. There is no simple statistical formula by which we can calculate the extent to which such conditions reduced the ability of the railways to handle traffic at this time, but the effects of the raids were certainly both significant and serious, coming as they did at a time when the railways were faced with particularly heavy tasks. Air raid conditions can interfere with railway working in several ways:

- (a) through physical damage to or the destruction of railway facilities by bombing.
- (b) through interruptions caused by the presence of delayed action bombs on or near railway lines.
- (c) through the stopping and slowing down of trains during air raid warnings.
- (d) through delay and inconvenience caused by blackout precautions, particularly during air raid warnings when external lighting at stations, marshalling yards, etc., has to be put out.
- (e) by their effect on the morale of the staff.¹

Moreover, the effects of such conditions in causing railway congestion are cumulative, and frequently spread beyond the areas where the actual raids occur. The effects of enemy air activity on railway operation are by no means confined to physical destruction or

¹ The term 'air raid conditions' is used in this chapter to mean a combination of several or all of these things.

damage to facilities. The nuisance and inconvenience that accompany air raid conditions, quite apart from actual attacks, may be more damaging to efficient railway working than the direct effects of bombing.

Railway facilities are, for obvious practical reasons, both extensive and geographically widespread. If indiscriminate enemy bombing occurs, there is always a fair chance that some railway facilities will be included in the damage. On the other hand, the possibility of anything like complete destruction of railway facilities by bombing is remote. Railways are nevertheless vulnerable to air attack because their facilities are interdependent and the railway system is highly sensitive. Facilities at key-points and 'bottlenecks' on the railways, such as important junctions, marshalling yards, tunnels, and bridges are particularly vulnerable, especially if they cannot be replaced quickly if they are destroyed. The simultaneous and accurate bombing of such facilities could quickly paralyse railway working over a wide area by blocking vital routes. But when the raids came in 1940, the German Air Force apparently lacked the will or the ability to carry out such attacks.¹ Even if enemy air activity is not directed towards the railways, however, it can cause serious disturbance to railway working. When air raid conditions are prolonged, and precautions such as lighting restrictions and air raid warnings have to be taken, railway working is slowed down, and congestion is likely to arise. While these conditions do not cause complete immobilisation of the railway system, such as might arise from the systematic destruction of vital points by bombing, they seriously reduce the capacity of the system to handle traffic. In short, the efficiency of a railway system can be reduced not only by bombing attacks on vital facilities, but by the inconvenience caused in taking precautions against such attacks.²

The problems of railway operation during air raids and the danger of enemy air attacks on vital facilities had been considered before the war. The Railway Executive Committee had admitted in May 1939 that the extent of interruption of services by air attack in war-time was incalculable, though it does not appear to have modified its rather optimistic assumptions about the railways' ability to carry war-time traffic on that account. 'It was essential for the railways to proceed without regard to air raid interruption,' so the Chairman of the Railway Executive Committee had declared.³ This did not

¹ The explanation of this falls within the province of the military historians. The present writer understands that the Luftwaffe had not, at this time, developed the technique of precision bombing by night sufficiently to make effective attacks on vital targets of this nature.

² Cf. E. A. Pratt, *op. cit.*, Chapter XXX.

³ Memorandum by Sir Ralph Wedgwood, May 1939, '*Transport Conditions during First Three Months of War*', Appendix IV, p. 96.

imply that the prospect of air raids could be or had been ignored. On the contrary, it presupposed the existence of adequate preparations.

Although, before the war, the railways had been unenthusiastic about 'insurance' works to provide alternative routes in case vital bridges or other facilities were destroyed, a limited number of 'insurance schemes' were, as was described above,¹ put in hand immediately after the outbreak of war. Such schemes could, however, cover only a limited number of cases where dislocation through enemy bombing was likely to be most serious. They were necessarily complementary to a more general programme of air raid precautions. The £4 million scheme of A.R.P. for the railways, which had been agreed by the Treasury before the war, was practically complete by the end of 1939.² The precautions carried out were various; they included the construction of air raid shelters, the protection of railway staff, the reinforcement of important bridges and viaducts and the protection of the London Passenger Transport Board's railway system against flooding. Vulnerable points on the railways were notified to the War Office, which arranged for their special protection. Railway engineers provided reserve stocks of repair materials at various places on the railway system in anticipation of bomb damage, which, when the raids came, enabled lines that suffered damage to be quickly cleared. The expenditure of public money on railway air raid precautions proved, in the difficult months of 1940 and 1941, to have been a worthwhile investment.

The first bomb to damage railway facilities fell at Melton Ross siding on the London and North Eastern Railway between Lincoln and Grimsby on 19th June, 1940. Between that date and the end of the war, there were 9,239 reported incidents of damage and delay to railways through enemy action. 4,218 of these incidents, just under one half, occurred in the months June-December 1940, and of them, 316 delayed the movement of railway traffic for between 24 hours and one week, while 125 delayed working for more than one week. The Luftwaffe began heavy night attacks on London early in September, and extended them in November to industrial centres in the Midlands and the North. The months of September and October brought the worst damage to railway facilities; the number of incidents of damage to railways averaged over forty a day in that period.³ But there is no evidence that railway targets were singled

¹ See above, pp. 106-107.

² Further A.R.P. expenditure was undertaken as the war progressed, but under the Railway Control Agreement of 1942 A.R.P. arrangements were modified and extended. The Ministry of Transport did not authorise fresh A.R.P. expenditure in the aggregate but required the controlled undertakings to obtain prior approval for any measure estimated to cost £1,000 or more.

³ See Appendix IX, facing p. 226.

out for special attention by the enemy at this or at any other period during the 1940-1941 bombing. Nor apparently were the large number of incidents of damage to railway facilities part of any general enemy plan aimed at immobilising the British railway system.¹ The aims of enemy bombing strategy included what the Germans called 'the beginning of the economic war in the air', but in practice the bombing was largely indiscriminate. The railway system covers large areas, particularly in places like London. It was for this reason, rather than because of any preconceived enemy plan to dislocate the British railway system, that railway facilities suffered fairly considerable damage from bombing. They escaped the complete dislocation which might have resulted from the planned and accurate bombing of vital facilities. The effects of bombing were certainly much reduced by the skill and improvisation displayed by railway engineers in clearing the lines. Damage to track was often made good in a matter of hours, and damaged girders of many of the smaller bridges were also quickly replaced. This was an achievement for which the railways rightly deserved and received credit. Even so, it would be wrong to underestimate the serious consequences of the bombing of the railways on that account.

Bomb damage, and precautions made necessary by the presence of unexploded bombs on or near the lines, had cumulative effects in slowing down the movement of railway traffic and reducing railway capacity. London is, in effect, the centre of the British railway system, and when London terminals were put out of action or London goods depots destroyed, the movement of traffic throughout the country suffered. For example, on 7th September, 1940, four out of the six principal London goods depots belonging to the Great Western Railway had to be closed for over three weeks. On 29th September, 1940, owing to damage to the approaches to the Thames crossings, the number of wagons exchanged between the London Midland and Scottish and the Southern Railways in the London area was less than a quarter of what it had been six months earlier. Air raids in the Midlands had similar consequences: Bordesley Junction (G.W.R.) and Washwood Heath (L.M.S.) were bombed on no less than twelve occasions in October and November 1940. During this period, the average number of wagons exchanged daily between those yards fell from 950 to 680. Lawley Street Goods Depot in Birmingham was bombed six times in this period, and had to be completely rebuilt before the end of the war.

It is not surprising that bomb damage of this nature seriously interrupted and retarded railway working over wide areas. Nevertheless, actual instances of bombing appear to have caused less

¹ This information has been confirmed from Air Ministry sources.

dislocation on the railways than the air raid warnings themselves. The original instructions about railway working in air raids stated that as soon as a warning had been given, passenger trains were to be stopped at the first station and passengers allowed to get out and take cover if they chose. The trains were then to continue their journey at a speed of not more than fifteen miles per hour. Freight trains were to be stopped at the first signal box and the driver warned not to exceed a speed of ten miles an hour. These instructions were modified in November 1940 so as to permit passenger and braked freight trains to run at twenty-five miles per hour in daylight, and unbraked freight trains to move at fifteen miles an hour both by day and night. Further modifications were permitted in February 1941, but it is clear that during the period when the air raids on London were most heavy and prolonged, these precautions slowed down railway movement generally, and considerably reduced the capacity of the railway system to handle traffic.

The combined effects of bomb damage, delays caused by unexploded bombs, air raid warnings, and lighting restrictions so dislocated railway operation that time-tables became disorganised, and planned movement on the railways broke down over wide areas. Difficulties arose in re-organising railwaymen's working hours to meet the new conditions. Normally, time-tables are worked out and trainmen's working hours arranged so that they travel out and home in one turn of duty. This is known as 'single trip working'. Where this is not possible, 'double trip working' has to be arranged, and the men have to work 'lodging turns', which means that they have to book off, spend time away from home, and be provided with lodgings while waiting to work a train back on their next turn of duty. When war came, the trade unions pressed the railway companies to reduce lodging turns to a minimum because of lodging and rationing difficulties, and men's anxiety about their families. But when the air raids began, working became so disorganised that engines failed to get through for their next turn of duty, while engine crews and guards were forced to book off before completing runs or were unable to get sufficient rest to take up their next booked turns. Thus the breakdown of planned movement on the railways not only produced congestion in the yards and exchange junctions through the general slowing down of traffic, but through the lack of engines or crews or both. The railways eventually overcame these difficulties by re-distributing engines, re-arranging trainmen's workings, and providing additional trainmen at strategic points for relief purposes; speeding up the movement of trains during alerts also helped. But these improvisations did not come all at once. Until they became effective, and the railways were able to adjust their working to the new conditions, there was inevitably much confusion on the lines.

The most serious effects of the air raids of 1940, and on this all who investigated the railway position at the time appear to have agreed, were felt in the marshalling yards and exchange junctions. Exchange junctions are the points where freight traffic is handed over from one railway system to another. These yards and junctions are normally worked for twenty-four hours a day, and depend, particularly in the winter, on some form of artificial lighting. The modern yards, where wagons are sorted over a 'hump', rely largely on good lighting for their speed and efficiency. The blackout itself reduced the lighting in these yards far below that required for the high standard of working achieved in peace-time, and when the air raids started, these difficulties became worse. When a 'purple' or 'red' warning was received, all external lights had to be put out, and work had to be carried on in complete darkness except for the shunters' hand lamps. During October 1940, marshalling yards in the London area experienced an 'alert' almost every night, with the result that out of 382 hours of darkness, shunting had to be carried on in complete darkness for 299 hours. The following figures, recorded at Willesden yard in November 1940, provide a useful illustration of the effect of air raid conditions on working:

<i>Night of</i>	<i>Conditions</i>	<i>Wagons shunted between 10 p.m. and 6 a.m.</i>
1940		
13th November	No 'alert'—rain and sleet.	502 = 100 per cent.
12th ,,	'Alert' throughout—bright moonlight—moderate A.A. gunfire.	344 = 69 per cent.
6th ,,	'Alert' throughout—weather good—intense A.A. gunfire.	146 = 30 per cent.

Such conditions had widespread consequences, not only, of course, on the exchanges of wagons between companies, but also on the domestic working of each company. Willesden yard was the most heavily congested in the country in the autumn of 1940, partly because of the effects of air raid conditions there, but also because similar conditions existed on the lines connecting with the Southern Railway. Congestion at such places as this had direct reactions throughout the whole of Great Britain.

To sum up the effects of air raid conditions on railway working in the autumn of 1940: bombing and the precautions it made necessary slowed down working over wide areas and caused considerable congestion of traffic. It is certain that the capacity of the railways was much reduced by the general slowing down of the movement of traffic, but it is impossible to measure the extent of this reduction. The concept of 'railway capacity' is elusive in any case, and no

simple analysis of railway traffic statistics can show what the effects of the German air raids and the precautions they made necessary really amounted to in terms of the ability of the railways to handle traffic. Certainly although bombing did not cause widespread destruction of railway resources, the confusion and disorganisation it caused in slowing down the movement of traffic very significantly reduced the practical capacity of the railway system. Although the effects of the air raids were serious, and although the railways were not able to do all that was asked of them, they were able to make use of what reserves of carrying capacity they had. While some traffics fell off badly during the worst months of the bombing—railborne coal for London, for example¹—the railways as a whole were probably carrying a load, in terms of ton-miles, rather heavier than what they had moved in the corresponding months of the previous year. What they might have carried in the absence of air raids must remain a matter of conjecture.²

(iii)

The Railways and Port Clearance, 1940-1941

Of the tasks that fell to the railways in the second winter of the war, the clearance of the West coast ports was, in many respects, the most vital one. It was also a task which presented problems of the greatest complexity. The history of the United Kingdom ports in war-time is fully treated in the shipping history of this series.³ The present discussion considers the problem of port clearance in 1940-1941 simply in relation to the congestion on the railways at that time. First, the function of inland transport in the distribution of imports is briefly examined. This leads to the second and main part of our subject: the consequences of the diversion of shipping and import policy on railway working in the autumn of 1940.

Broadly it is the function of the port to receive seaborne imports, and the function of inland transport to distribute them. But there is no rigid distinction in practice between reception and distribution, for together they consist of a chain of inter-connected processes: the discharge of the ship; the handling of imported commodities on the quay; the removal of commodities from the quay into store or to

¹ See below, Section (iv) of this chapter.

² Complete statistics of *ton-miles* are not available for this period of the war. This estimate, based on L.M.S. and L.N.E.R. statistics, was made by economists of the War Cabinet Secretariat. It would serve no useful purpose to attempt to estimate the effects of air raids on railway capacity by reference to railway traffic statistics alone. It would be impossible, when using statistics, to avoid attributing to one cause a result which, in fact, derived from many.

³ *Merchant Shipping and the Demands of War*, *op. cit.*

destinations inland. If imports have to be moved to inland destinations, they must be loaded on to railway wagons or motor trucks, transported, and then unloaded at the consignee's premises. Each process is a link in the chain connecting the producer with the consumer, and each process is closely related to the others.

The capacity to receive and to distribute imports depends on the rate at which imports can be passed from one process in the chain to the next. In peace-time, the capacities of each of the various processes—in terms of the rate of imports they can handle—will tend to be equal. There can be no point in equipping one process to handle imported commodities faster than any other, because the rate of import must ultimately be determined by the process with the smallest capacity. If an attempt is made to import, receive, and distribute commodities in excess of the rate determined by the process with the smallest capacity, congestion will sooner or later arise, and dislocation of the import mechanism may result. If, for example, consignees are unable to receive traffic from the railways, and traffic is being passed from the ports to the railways faster than they can dispose of it, congestion on the railways will result. From what has already been said of railway congestion, the cumulative effects of this condition can well be imagined. Railway congestion may spread back to the ports, and ultimately slow down the turn-round of shipping, thus wasting both railway and shipping capacity.

In normal conditions, such as prevail in peace, the mechanism for the reception and distribution of imports functions smoothly. Shipping, port facilities, facilities for reception at inland destinations are equipped and geared to handle particular types of imports in well-defined flows. Established commercial practices and existing facilities have adapted themselves over many years to handle the types and volume of traffic normally expected. Changes are gradual, and the process of adaptation to meet changed traffic conditions is usually smooth. In war, however, conditions are not normal. Changes do not occur gradually, but rapidly; established commercial practices disappear; ships have to be diverted from their normal ports of call; the types and volume of commodities handled at particular ports may be vastly different from those handled in peace; imports arrive at irregular intervals, and have to move over difficult routes to different inland destinations from those normally served by particular ports, often requiring longer inland hauls than in peace-time. This was the situation that confronted the Ministry of Transport in the autumn of 1940. Clearly unless adequate plans have been made to meet such conditions, there is a danger that the import mechanism may be thrown into a state of confusion. The capacities of the various processes, which in peace are finely adjusted, may be completely changed and become maladjusted under war conditions. The

probability of congestion in some process of the import mechanism is consequently much greater in war-time, and if it is to be avoided, must be planned against.

Reduced to its simplest terms, the problem of planning for the reception and distribution of imports in war resolves itself into ascertaining which process in the import mechanism is likely to impose the greatest limitations, and basing a realistic import policy on that information. In short, an attempt must be made to assess the capacity of the ports, storage facilities, inland transport and reception facilities at inland destinations to handle imports in war conditions. In theory, this might appear to be a simple matter; in practice, it proved to be a problem of extraordinary complexity. This was the problem with which first the Headlam Committee and later the Port and Transit Standing Committee had wrestled from 1933 to 1940.

From the spring of 1939 onwards, when the fallacious conclusions of the Headlam Committee were abandoned, the Ministry's Port and Transit Organisation became increasingly sceptical about the practicability of drawing up such a statistical estimate of the country's capacity to import and of using this as the basis of precise plans for inland transport to fulfil once shipping diversion started. This scepticism was not diminished by the short experience of precautionary diversion in the autumn of 1939, which made it clear that shipping diversion was a policy best avoided unless imminent danger threatened. Thus, by early 1940, the Ministry of Transport's attitude to the problem crystallised around the belief that it was impracticable 'to make precise plans for transport in a series of assumed circumstances',¹ that diversion would make temporary dislocation inevitable, but that improvisation coupled with the flexibility of the inland transport system would enable this to be overcome.

There were, however, many reasons for persevering in the attempt to make a realistic, if broad, estimate of the United Kingdom's capacity to import through West coast ports. It was clear, moreover, that a key piece in this complicated jig-saw puzzle was the capacity of the railways to clear those ports. The railways themselves had realised this, when, in July 1939, the Chairman of the Railway Executive Committee had written to the Ministry of Transport regretting the fact 'that the attempt to quantify the diversion of East coast imports to Western ports has now been abandoned, since an estimate, however approximate, would enable the ports and the railway companies to satisfy themselves as to their capacity for handling the diverted tonnage'.² The question was not followed up

¹ See above, p. 179, fn. 2.

² The Chairman of the R.E.C. went on: 'In the meantime, doubts are being expressed in many quarters as to this ability and, as you know, the railways are particularly anxious to have the opportunity of examining this question, since they are of the opinion that the doubts expressed are without foundation.'

and nothing further was done about the matter until the spring of 1940. Following the War Cabinet's decision in March 1940 to have shipping diversion plans examined afresh, it was decided to appoint a Transport Planning Sub-Committee of the Ministry of Transport's Port and Transit Organisation with the following terms of reference:

to examine how far transport arrangements between the ports and terminal points can be planned in advance, having due regard to the requirements of the Supply, Food, and Exporting Departments, and to make recommendations.

The railways were asked, therefore, to estimate their ability to clear the West coast ports in the event of diversion. The problem they were set was still, in many ways, a difficult one. For although more information was now available about the volume and types of commodities which the ports received in war-time, the precise nature of the expected shipping diversion, and, what was more important, the conditions under which it was likely to occur, were still largely undefined. The railways were asked to work on the assumption that the East coast ports would be unusable for an indefinite period. They were provided with detailed statistics, worked out by the Port and Transit Standing Committee, about the quantities of commodities the principal importing departments expected to ship through the West coast ports in the event of diversion, and their contemplated scheme of inland distribution.

Thus, for the first time, the tasks that would fall to the railways in distributing diverted imports were defined. What were not defined, however, were the conditions under which the railways would have to perform them. Yet from the railway point of view, this information was equally relevant. How much would air raids dislocate railway operation? What heavy internal traffic movements would be going on at the same time as shipping diversion? Would imports come forward regularly and in a condition for forward conveyance? Would wagons be turned round quickly at the receiving end? Such factors would certainly make all the difference to the practical capacity of the railways—the difference between efficient port clearance and wholesale congestion—as indeed they did six months later. But at this time, there was apparently no answer to such questions. When the railways furnished their reply to the Ministry of Transport on 17th June, 1940, they could only give a conditional estimate of their ability to distribute imports if large scale diversion occurred.

In his reply, the Chairman of the Railway Executive Committee acknowledged the very full statistical information with which the railways had been provided. This had received the careful consideration of the railway operating experts, and the answer which the railways gave was based on three main assumptions:

- (i) that traffic would come forward with reasonable regularity;
- (ii) that the tonnages handed to the railways would be in a condition for forward conveyance to their destinations—i.e. the railways would not be asked to perform work of a 'dock' character;
- (iii) that the programme of works, already authorised in connection with the diversion proposals would be completed, and the works ready for use.

But apart from these assumptions about the problem set to them, the railways were forced to admit that 'no satisfactory answer [could] be given except by the artificial elimination of a variety of disturbing elements, which would, in actual practice, very materially affect the validity of the answer'. Such disturbing elements might be:

- (i) heavy rushes of other business, such as troop movements, etc.;
- (ii) abnormal interruptions due to frequent air raid alarms or to the destruction of railway facilities by bombing;
- (iii) abnormal weather conditions, heavy snow, fog, etc.

On the other hand, the Railway Executive Committee proceeded on the hypothesis that other traffics would continue at their normal level, that is, passenger traffic and non-essential freight traffic would not be curtailed. With these important provisos, the railway operating experts were of the opinion that the scheme of inland distribution from the West coast ports as contemplated by the importing departments and the Port and Transit Organisation was broadly workable.¹ In short, the railways estimated that, taking no account of the disturbing elements, or the help they might be afforded by road transport, they could distribute from the West coast ports some 42 million tons annually.

It seems that the railways provided the best answer they could with the amount of information at their disposal. But as a solution to an urgent practical problem, their answer was virtually useless because it begged the really fundamental questions. The artificial nature of the assumptions which the railways had made appears nevertheless to have escaped notice, for the Minister of Transport reported to his colleagues that the port and railway situation was 'relatively satisfactory'. However, while the railways had been busy working out their answer and the Ministry of Transport calculating import capacity on that basis, France had collapsed. The calculations were, in any event, vitiated by a catastrophe which made nonsense of the assumptions on which they were based. If an estimate of railway capacity to clear the Western ports was to have any practical

¹ The railways made but one exception. They said that they would not be able to move all the proposed diverted import traffic from Avonmouth and Sharpness to London, which was stated to be 'definitely beyond the capacity of the line concerned'.

value, it could scarcely now ignore the probability of heavy air attack or 'heavy rushes of other traffic'. While, therefore, the estimates of port and inland transport capacity, worked out by the Transport Planning Sub-Committee in conjunction with the railways, were still recognised as being 'of value in indicating the scale on which shipping might be diverted', it was admitted that 'they do not assist us greatly in forming a satisfactory judgment of our probable importing capacity in present circumstances, or in deciding what changes in our import programme transport considerations render advisable'. In fact, when the heavy air raids and the shipping diversion began in September 1940, the capacity of the railways to clear the West coast ports was still largely unknown.

The state of congestion on the railways that followed the beginning of the air raids on the South of England was closely related to the state of 'confusion'¹ that prevailed in the West coast ports in the autumn and winter of 1940-1941. This much was obvious to all who had practical experience of the transport problems of this period, and is plain enough to the historian from documentary evidence. Nor can there be any doubt that the rail transport difficulties inland were slowing down the discharge of ships and therefore limiting the country's ability to import. The situation was summed up by the Minister of Transport in a letter to the Chairman of the Railway Executive Committee on 31st October, 1940. The following is an extract:²

I am receiving constant complaints as to delays in the discharge of shipping at the ports, and I am very concerned at the position. Recent summaries of reports by the Port and Transit Organisation on the state of the ports tend to show that these delays are mainly due to shortage of wagons, not only of bolster wagons, of which there appears a particular shortage for imports of iron and steel, but also of open wagons and covered vans.

One thing is clear. Ships in ports are progressively taking longer and longer to turn round, with the result that our national importing capacity is being seriously diminished. I have no doubt that there are many reasons contributing to these delays but, as a port is dependent for clearance mainly on the railways, I look first in that direction to see if and where movement can be accelerated.

The recurring—and increasing—note in all the summaries to which I have referred is shortage of rolling stock. The position has been aggravated by slow discharge of wagons on the part of consignees, and this state of affairs has been brought specially to the

¹ *Merchant Shipping and the Demands of War*, *op. cit.*, Chapter VI.

² Remit to the Committee of Enquiry on Traffic Congestion, November 1940. See below, Chapter VI, Section (i).

notice of the Minister of Supply. Nevertheless, when all allowances have been made, it is undeniable that there remains a heavy shortage of wagons of all kinds, as well as sheets, and that the discharge of vessels is being held up thereby at a time when circumstances demand that shipping should receive the quickest possible dispatch. This is a matter which is engaging the closest possible attention on the part of the Government as a whole, and it is of vital importance to the war effort that nothing should be left undone which is likely to lead to an improvement. . . .

It would be misleading to conclude from this that railway inefficiency was the main cause of the difficulties at the ports at this time. Rail transport was only a part of the larger problem of receiving and distributing imports. Railway congestion was obviously hampering port clearance. But the job of clearing the ports was itself putting a heavy strain on the railways and assisting the growth of railway congestion. Here was a complex relationship of cause and effect, which we shall not attempt to disentangle here. Our attention is necessarily confined to the second aspect of the problem, the burden that port clearance imposed on the railways and how it interfered with their smooth working.

The task of port clearance put a heavy strain on the railways in the autumn of 1940 and the following winter for two reasons. The first and most important was the diversion of shipping to West coast ports from September onwards: this meant that particular ports were handling different commodities and supplying different destinations from those of peace. The second reason was the change in import policy after the fall of France; the United Kingdom as a whole was now importing abnormal types and quantities of commodities. It is evident that there are three possible ways in which these changes could have affected the railways; first by causing a greater volume of imports to pass through each or all of the West coast ports and to be railed away from them; second, by causing changes in the flow over the railway system of traffic moved away from West coast ports; third, by causing changes in the character of the traffic received by the railways at West coast ports.

How far were railway difficulties caused by changes in the volume of traffic that had to be railed from the West coast ports? It is doubtful how far diversion and the changed import programme between them actually resulted in a greater total volume of import traffic being railed from West coast ports in the autumn and winter of 1940-1941 compared with normal times. Statistics are unreliable and inconclusive on this point. No reliable comparison can be made between the volume of traffic originating on the railways at each or all of the West coast ports before the war and in the critical months of 1940-1941. It is, however, known that these ports as a whole did

not handle as large a volume of imports at this time as they had done a year earlier. The figures for Liverpool, for example, show that the total imports through that port (excluding petroleum) amounted to only 3.64 million tons in the six months October 1940–March 1941 as compared with 4.08 million tons for the corresponding period of 1939–1940. Even if a higher proportion of imports was cleared by rail from Liverpool at this time for destinations in the Midlands and the East, the absolute amount of traffic railed from the port over long distances¹ cannot have been much greater than in the previous winter. While there was possibly a slight increase in the tonnage railed from South Wales and Bristol, at neither place was the volume of imports considered abnormal.² In one important case however—the Clyde—total imports did increase substantially in the autumn and winter of 1940–1941.³

In the case of the Clyde, it is obvious that more traffic was being railed inland—or rather southwards—than normal. Railway facilities on the routes connecting the Clyde with the South therefore became heavily burdened, especially in the Carlisle area, through which several important Anglo-Scottish routes converged. And even though other West coast ports were handling a smaller total volume of imports, a higher percentage of those imports was almost certainly being railed for longer distances inland—that is, beyond the hinterland of the West coast ports—than was normal. This meant that there was a bigger volume of traffic passing through and over inland junctions and lines than in normal times. Thus Crewe was an

¹ In normal times Liverpool depended heavily on road clearance, and road transport probably moved a high percentage of its imports in the autumn and winter of 1940–1941 (though not necessarily over long distances). Liverpool and Manchester between them, however, accounted for more than one-third of the shipping tonnage entering West coast ports in the autumn of 1940 (between 2 and 3 times the figure for the Clyde ports and about 5 times that for either South Wales or Bristol) (*Merchant Shipping and the Demands of War, op. cit.*, Chapter VI, Appendix XX). Thus, a small proportionate increase in the amount of imports railed from the Mersey area at this time might have caused a fairly large absolute increase in the volume of rail traffic on the lines serving those ports. Even so, it is doubtful if the increase in tonnage of imports alone would have been sufficient to overburden the lines in the Liverpool area.

² Ports like Bristol, which were, in peace, mainly dependent on exports, must have been more difficult for the railways to clear, because the peace-time balance of import and export traffic had been upset.

³ See *Merchant Shipping and the Demands of War, op. cit.*, Chapter VI, Appendix XX. Miss Behrens' statistics, showing the percentage increase or decrease in the tonnage of shipping (net tons) arriving in the West coast areas, suggest that the tonnage of imports handled at each of the West coast ports—except the Clyde—was less than normal during the autumn and winter of 1940–1941 and that in the case of the Clyde there was a marked increase. It must be stressed, however, that it is impossible to draw accurate conclusions about the tonnage of traffic railed away from the West coast ports from statistics of net tons of shipping entering those ports, unless a strong positive correlation is assumed between these two variables. It appears highly probable, however, from the limited statistics available, that railway *tonnage originating* at most West coast ports was not much greater or even less than normal during the autumn and winter of 1940–1941, with the exception of the Clyde, where *tonnage originating* was pretty certainly considerably greater than normal.

important focal point for south-bound traffic moving away from the Mersey area as well as for traffic coming south from Scotland. Some of the traffic passing through Crewe and destined for the South of England moved on through the heavily-burdened exchange junctions like Bordesley and Banbury. Other traffics had to be hauled from the Clyde and the Mersey, sometimes over difficult cross-country routes, to Eastern England and the North-East coast. Abnormal amounts of traffic had also to be railed eastwards from the Severn ports such as Avonmouth¹ over the heavily-burdened lines and junctions on the Great Western Railway into the London area. It would be difficult, even after prolonged research, to discover in exact detail how the flow of traffic on the railways altered after shipping diversion, or to discover where all the commodities imported through the West coast ports ultimately went to, but these few examples provide a sufficient idea of the nature of changes. One conclusion is fairly clear. Port clearance caused difficulties for the railways in 1940-1941 not by throwing a larger total volume of traffic upon any or all of the West coast ports—except the Clyde—but by altering the flow of traffic over the railway system. Because traffic had to be conveyed over unusual cross-country routes or for longer distances inland, abnormally heavy pressure resulted on certain lines and junctions.²

For the railways, changes in the character of the traffic handled at West coast ports—that is to say changes in the volume of particular commodities moved in relation to the total volume of traffic—were no less important than changes in the flow of traffic. For in the autumn of 1940, the quantities of some commodities imported through the West coast ports were quite extraordinary. In the first place, there were commodities such as frozen meat, which were entering West coast ports in much larger quantities than usual because shipping diversion prevented them from going to London and the East coast. Secondly, since the German occupation of Western Europe had robbed the United Kingdom of the 'near' supplies of raw materials, these now had to be sought farther afield, principally in the United States and Canada, and imported through West coast ports.³ Other manufactured and semi-manufactured commodities

¹ Road transport was called in to help in the task of clearance here. See below, Chapter VIII.

² The demand for specialised railway facilities also increased. Frozen meat, for example, had to be moved from West coast ports, notably Liverpool, to cold stores in the London area. This caused a great increase in the demand for refrigerated and insulated rolling stock. These difficulties did not arise with grain imports, since enough grain ships were allowed into London to keep the mills going. See *Food*, Volume I, *op. cit.*, Chapter XVI, pp. 207-208.

³ *The Control of Raw Materials*, *op. cit.*, Chapter XI, pp. 155-164; also M. M. Postan, *British War Production*, in this series (H.M.S.O. 1952), Chapter IV, Sections (2) and (7).

[continued on opposite page

such as machine tools¹ were also being imported from North America on a much larger scale than in peace. Some of these imports, which neither the Western ports nor the railways were well equipped to handle, caused innumerable port and transport difficulties. The classic example was steel. Imports of crude steel into the United Kingdom in the four months September to December 1940 totalled 1,163 thousand tons, compared with a monthly average of about 50 thousand tons before the war. There were also large, though less striking, increases in imports of finished and semi-finished steel products.² Since the United Kingdom had lost her European sources of supply for high grade iron ore, the need for this steel was clearly urgent. But the capacity of the railways to move the traffic from the ports seems scarcely to have been taken into account when the steel import programme was drawn up. Long iron and steel are among the most difficult types of traffic for the railways to handle. They require specially constructed railway wagons—long, low wagons known as ‘bolsters’ or ‘macaws’—and cannot normally be carried in ordinary railway wagons. The enormous stepping up of the steel import programme therefore created a seemingly insurmountable problem for the railways, for their supply of bolsters was quite inadequate to cope with the task. The Railway Executive Committee admitted that there was definitely a shortage of bolsters for the conveyance of timber and long iron and steel and feared that, with the increase in imports from overseas, matters would get worse. It was hardly to be wondered at that the shortage caused constant complaints from the ports, where the quays were becoming blocked with steel cargoes awaiting removal. The difficulties caused for the railways by changes in the flow and character of traffic from West coast ports were much accentuated by deficiencies in organisation and planning. Some of the deficiencies were unavoidable: for example, there were complaints that, owing to convoys, a good deal of the traffic for the railways came in rushes. Other deficiencies were very understandable and could not be quickly remedied: for example, mixed cargoes such as steel and timber, which, in peace, could have been discharged separately at different ports, had now to be discharged together at the same port. The railways were then faced with the task of clearing the goods to destinations in widely separated parts of the country and, in not a few cases, had to make

continued from opposite page

The commodities mainly concerned were iron and steel, iron and steel scrap, aluminium and aluminium ores, chemicals and fertilisers, timber, paper and paper-making materials.

¹ *British War Production, op. cit.*, Chapter IV, p. 151; *Statistical Digest of the War, op. cit.*, Table 149, p. 170.

² The original programme of 232,000 tons of scrap, pig iron and steel was stepped up by order of the Prime Minister to 650,000 tons a month until the end of June 1941. Port and Transit Division showed apprehension at the strain the programme would throw on the ports.

long and unnecessary hauls that could have been avoided had careful planning been possible.¹

There were other less defensible shortcomings in organisation and planning. These mainly concerned inefficient movement controls and lack of liaison between Government departments and the railways. It must be remembered that a commercial revolution was now taking place. An overwhelming proportion of import traffic now came under Government control, mainly under the programmes of the Ministry of Food and the Ministry of Supply. Yet the existing machinery for the advance planning of transport in the ports proved sadly inadequate. The Movement Officers, who represented the various controls and commodity divisions of the importing departments, were still securing their transport independently. This led to competition for limited transport facilities, which increased rather than diminished the growth of transport congestion. Moreover, while the transport organisation of the Ministry of Food was, on the whole, good, the Ministry of Supply confessed that theirs was not. As late as November 1940, it was frankly admitted that their transport organisation was still 'in the melting pot'. Such lack of organisation and of good liaison between Government departments and the railways was a persistent cause of trouble at the ports and seriously dislocated normal railway working arrangements. In the effort to turn round ships promptly and to keep the ports clear, traffic poured on to the railways for them to dispose of as best they could. Often cargoes arrived at the ports and were loaded into railway wagons without proper instructions about their destinations or disposal. Traffic was frequently dispatched from ports to consignees much faster than it could possibly be accepted. The result was congestion at the railway terminal depots or in consignees' sidings. This congestion spread back into the marshalling yards and, in a few cases, traffic had to be 'stopped back' to the ports themselves.² There are on record large numbers of instances of waste of rail transport due to the absence of proper traffic organisation and planning, quite apart from delays caused by railway operating difficulties—of loaded wagons being detained or unable to move because consignees' sidings

¹ There is one case on record of a cargo of steel required at Cardiff having been unloaded at Immingham, resulting in the delay of 74 bolster wagons which could not be moved because of an embargo. Instances as bad as this were, fortunately, exceptional.

² Imported timber provides a good example of this. The Government had banned the storage of timber in port areas because of the danger of fire, so that it was necessary to remove the timber by rail from the ports immediately after its arrival. But, as one committee, investigating the congestion in South Wales, reported, '... in many cases at present, timber is being loaded into trucks, but still remains in the ports for long periods owing to transit difficulties and the inability of receivers to deal with the traffic'. The committee further complained of the 'serious delays at receiving points, owing to the timber being sent forward at a much higher rate than that at which the receiver can discharge the wagons'. Since hardwood timber competed with iron and steel traffic for the limited supply of bolster wagons, delays of this kind had serious consequences.

and Government depots were choked with import traffic they could not handle; of bad cases of cross-hauls and hauls of unnecessary length. These things both added to congestion on the railways and aggravated the problem of port clearance.

Bad planning for the reception of imports was certainly at the root of much of the trouble on the railways. An enquiry into port and transit difficulties at Liverpool by an inter-departmental committee of civil servants disclosed that 'much of the congestion now being experienced can be traced directly to the absence of . . . planning. The giving of inadequate disposal instructions for consignments of imports was,' in the words of the Committee, 'a common failing of Government departments and controls.' The Committee of Enquiry on Traffic Congestion, composed entirely of railwaymen, reached much the same conclusion—'Government departments have had to make many improvised arrangements . . . Government officials are necessarily dealing with problems of which they had no experience before the war. These factors merely emphasise the importance of the closest possible co-operation between the Government departments concerned. The instances of waste of transport and avoidable delay to wagons which have been brought to our notice are manifold . . . wagons have been loaded by fifties and hundreds and sent to consignees whose daily capacity for unloading is no more than three or four per day.' In the meantime, the Minister of Transport had been writing to the Minister of Supply:

I am sorry to say that we have large numbers of wagons engaged in your department's traffic or in traffic in which your department is interested, held up and awaiting acceptance by consignees . . . there are many cases of traffic on account of the Ministry of Supply, or in which the Ministry of Supply is interested, where the number of wagons on hand represents many days normal discharge, and I must press that the dispatches to consignees be regulated by the consignees' daily rate of clearance. . . .

But the Ministry of Supply had problems of its own. The Minister of Supply pointed out with justification how difficult it had become to plan the regular and even flow of wagons from the ports to consignees when air raids and railway congestion were delaying traffic in many areas.¹ Nevertheless he admitted the need for new methods on the part of the transport organisation of his department.

The inadequacy of transport organisation at the ports and the absence of good planning were reflected, at this time, in the functioning of many parts of the import mechanism: the stowage of ships in

¹ To quote from the reply of the Minister of Supply: 'A consignee able to accept and handle, say, 25 wagons a day is not able for that reason to handle an accumulation of 75 on the third day. Even one day's delay by the railways completely upsets any carefully pre-arranged plan.'

overseas ports; the reception of imports at United Kingdom ports; movement by rail inland; reception at inland destinations. All were necessarily parts of one transportation problem, but at the end of 1940 they were still being considered largely in isolation by different Government departments and controls, some of which had been hastily improvised after the collapse of France. Because no central organisation existed to consider these problems as a whole, and because there was a lack of close liaison between different Government departments and controls, planning for the reception and distribution of imports was weak.¹ This inevitably added to the difficulties of good railway operation. The difficulties that arose in handling mixed cargoes, in clearing the ports of steel and timber, in forwarding commodities without full knowledge of their destinations, and in congestion caused when wagons were forwarded to destinations faster than they could be received were all symptoms of a general weakness—the failure to plan.

To sum up this account of the burden that port clearance put on the railways. In the first place, the railway difficulties cannot be attributed to any significant increase in the total volume of import traffic they handled. Secondly, the difficulties can partly be explained by changes in the inland flows of import traffic, and increases in imports of particular commodities, difficult to handle. Thirdly, and probably the most significant point: poor organisation and an absence of good planning for the reception of import traffic caused a multitude of railway difficulties. Railway congestion thrived on bad organisation. Planned railway operation was upset; the turn-round of wagons was delayed; sidings and railway yards were choked with traffic unable to move. It would be an exaggeration to suggest that if planning had been good, difficulties of this sort would not have arisen. For one thing, there were other causes of railway congestion besides the difficulties of clearing imports. Yet there is no doubt that much of this confusion and congestion could have been avoided.

(iv)

Internal Traffic on the Railways, 1940-1941

The burden of internal traffic in the second winter of the war was also an important cause of railway congestion. Some of the changes in the flow and character of this traffic were hardly less startling than

¹ This judgment does not reflect on the remarkably efficient day-to-day supervision of diverted import cargoes undertaken by the Diversion Room at this critical time. This subject is fully described in *Merchant Shipping and the Demands of War, op. cit.*, p. 33.

those of import traffic. The closing months of 1940 saw the beginnings of the full mobilisation of manpower and productive capacity for making munitions. New war factories were at work; peace-time factories were changing over to war production.¹ Most important were the effects upon the railways of changes in coal traffic.

During the winter of 1940–1941, the maintenance of adequate coal supplies in some consuming areas became a task of considerable difficulty. Why was this? The tonnage of coal being produced and moved by rail was not much greater than before the war. It was, indeed, less than in the previous winter.² The explanation of the railway difficulties must be sought in the fact that they were carrying coal for longer distances, over unusual routes and under air raid conditions at the same time that they were harassed by the difficulties of clearing ports. For coal transport, the fall of France had two far-reaching results: first, the coal export trade disappeared; second, the enemy acquired new sea and air bases along the European seaboard from which to molest coastal shipping in the North Sea and English Channel. While the loss of the coal export trade did liberate some coasting tonnage for the domestic coal trade, this gain was largely offset by the new difficulties and dangers of supplying London and the South coast by sea.³ Colliers passing in convoy along the East and South coasts encountered constant perils in the shape of enemy mines, E-boats and air attack—especially in the dangerous waters of the Straits of Dover and the Wold Channel. The convoys moved slowly and reduced the effective capacity of the shipping available, and the losses suffered, particularly in the summer and autumn of 1940, were by no means light.⁴ This meant that deliveries of coal to London and the South coast had to be undertaken as far as possible by rail. The problems of supplying London by rail have already been described in our account of the first winter of war. Even greater obstacles stood in the way of railing large quantities of coal through from the North, the Midlands and South Wales to areas South of

¹ *British War Production, op. cit.*, pp. 115 *et seq.*

² See *Summary Table of Statistical Returns of Railways of Great Britain, 1938–1944* and *Ministry of Fuel and Power, Statistical Digest, 1944*, Cmd. 6639. Even if the amount of coal estimated by the Mines Department to have been lost through transport difficulties in 1940 is added to the figures of coal produced or tonnage originating on the railways in that year, the 1940 total still works out at less than that for 1939.

³ Did the coasters move more coal in the winter of 1940–1941 than in the previous winter or less? It is unfortunate that statistics of coal movement at this period of the war are so incomplete and that a precise answer to this question cannot be given. It is known that the railways carried considerably less coal to London in the second winter of war than a year previously, so that the coasters may well have carried more, in the absence of a serious coal famine in the second winter. It must, however, be borne in mind that London's coal demands were probably smaller in 1940–1941 because population had fallen and that the winter was begun with higher coal stocks. See *Coal, op. cit.*, Chapter V.

⁴ *The War at Sea*, Volume I, *op. cit.*, Chapter XVI, pp. 321 *et seq.* Captain Roskill aptly points out that 'few people in the south of England who at this time burnt a coal fire in their stoves can have realised the cost and sacrifice of carrying that coal to them'.

London, not only because of the long hauls, but because this traffic severely taxed the lines passing through and around London, especially the over-burdened inter-company exchange junctions where traffic was passed from one system to another.

This addition to the railway burden came at a time when the railways were having to contend with other coal transport problems caused by the loss of the export trade. There was now a surplus of coal, for which there was no ready outlet, in the two large export fields of South Wales, and Northumberland and Durham. Markets for much of this coal had to be found inland and so could only be carried by rail, frequently over difficult and unusual routes. South Wales coal, for example, instead of being shipped overseas, now had to be railed out through the difficult 'bottleneck' at the Severn Tunnel. Much Northumberland and Durham coal was railed southwards, which taxed the L.N.E.R. main line north of Doncaster; much of it was also being railed cross-country into Lancashire. Lancashire, in fact, typified another coal transport problem which the railways were now having to tackle: a rising demand for coal in new places. For although it had at one time been a self-supporting area, it was now consuming more coal than it produced. The strain of coal movement was greatest in these three areas: first, there was the East coast traffic to London and Southern England, second, coal movement out of South Wales and third, coal supplies to Lancashire.

The worst of these problems was the first. Even before Dunkirk, it was clear that keeping up supplies for London and the South in the coming winter would be the paramount coal transport problem. Immediately after the collapse of France, the Mines Department, taking advantage of the surplus coal production and the availability of transport, encouraged collieries, industrial and domestic consumers and merchants to lay in stocks of coal for the winter. It was also hoped to build up stocks at Government dumps, particularly in the London area, in case supplies should be cut off in the winter months. Stocking by consumers went ahead during the summer when transport, both coastwise and rail, was relatively plentiful. During the five months, April-August 1940, coastwise deliveries of coal to the Thames ports were well maintained. They amounted to 5.7 million tons in total, which was only 300,000 tons short of pre-war. Railborne deliveries into London had also been good. In the same five months they had amounted to a little under 4 million tons, which was about three-quarters as much again as in the same period of 1939. Compared with consumers' stocks, however, coal stocks at Government dumps were still very much lower than had been hoped for,¹ when, in September, the air raids started to dislocate the steady

¹ Merchants' stocks in London and the South also stood at a low level and were a cause for anxiety at this time.

flow of railborne and seaborne coal that had been kept up during the summer.

The beginning of the air raids brought immediate difficulties to the railways and shipping in moving coal to London and the South. In September there was a big drop in both seaborne and railborne deliveries. Coastal shipments fell to 670,000 tons—only 60 per cent. of the average monthly intake that summer, or 77 per cent. of the average monthly intake of the previous winter. Similarly, rail deliveries fell to 416,500 tons, or 52 per cent. of the average monthly summer intake or 56 per cent. of the average monthly intake of the previous winter. The capacity of the railways had been reduced by damage in the London area and the slowing down of railway movement generally during the air raids. Seaborne supplies of coal too were being seriously interfered with by the slower discharge of ships in the Thames, by bad weather and by convoy delays. It seemed that the limit of inland transport capacity to carry coal to London and the South had been reached, for road transport could give no great relief in the movement of coal, except for very short hauls. The canals could only make a trifling contribution.

Perhaps the greatest problem of all was to distribute enough coal to meet the needs of South London and South Eastern England. For this traffic had to be got across the Thames. Between 25 and 50 per cent. of the railway line capacity in the neighbourhood of the river crossings was out of action because of air raids and the number of wagons exchanged from North to South of the river had fallen to little more than 25 per cent. of the July figure. The whole of the southern part of England was, like London, a coal consuming area drawing the bulk of its supplies from further north—and now to some extent from South Wales. Normally a good deal of this traffic was moved by sea to the South coast ports, but the dangers to shipping in the Channel were so great that a large part of these supplies was cut off. Even under favourable operating conditions it is a big and difficult job to rail coal to the South and South-West of England from the North-East and North Midlands. A glance at any railway map will show that all the main railway lines converge on London. There are no good through routes from the North-East to the South-West, except the former Midland Railway, Derby-Birmingham-Bristol line. Most of the coal traffic for the South had therefore to be passed from the two northern systems to the Great Western and Southern railways at various exchange junctions, such as Bordesley, Banbury and Reading. In any case it had to pass over or across the Great Western system which was, at this time, congested with heavy import and passenger traffic.

South Wales was the nearest source of coal supplies for many parts of the South and South Western England. Moreover, with the loss of

its overseas markets, it had plenty of coal to dispose of at home. Unfortunately there was little transport available to do this and, by the end of 1940, the rail transport situation in South Wales had become very serious. After France had fallen, thousands of railway wagons loaded with 'duff' coal, originally intended for shipment to France, accumulated in the South Wales docks. Many of the wagons were still standing there several months later, not only because of congestion on the Great Western Railway, but because their loads could not be disposed of on the home market. This particular problem was, however, incidental to the more general one of moving coal out of South Wales. The possibility of increasing the amount of coal traffic railed from this area turned very largely on the line capacity of the Severn Tunnel—the only direct route out of South Wales into Southern England. Unfortunately, the lines through the tunnel were already fully occupied and there was no margin of transport capacity to move additional trains.

In the early months of 1941, the railways were asked to carry more coal from Northumberland and Durham into Lancashire to meet the growing demands of new war factories there. It was not an easy task to convey coal from the North-East of England into Lancashire. The main North-South routes were already occupied with south-bound coal traffic and the capacity of the cross-country routes was limited. The steeply-graded line across the Pennines through Barnard Castle, Kirkby Stephen and Tebay could only handle one additional coal train a day.

We shall describe in the next chapter how some of these area transport difficulties were overcome. It is clear, however, that these great changes in the flow of coal traffic inevitably complicated the task of efficient railway operation. There were now much larger quantities of coal traffic moving over cross-country routes which had not the capacity to carry them. In some cases, such as coal movement out of South Wales and coal supplies to Lancashire, line capacity was inherently insufficient to carry the traffic—the lines had not been built with a view to handling flows of this kind. This difficulty was further complicated when, as happened in London and the South of England, line capacity was severely reduced by air raid conditions causing congestion in the marshalling yards and exchange junctions, which began to spread throughout the railway system and back to the pits. It was said at the beginning of October that there was something like 300 coal trains held up on the railways and it is hardly surprising that the Secretary for Mines viewed the coal supply and transport situation as serious and alarming. The unfortunate fact was that the railways simply could not carry the same amount of coal as they had in the previous summer because air raid conditions were seriously reducing their capacity, and railway working was being

complicated by the diversion of shipping. It was no good attempting to forward more coal to particular destinations if the capacity of the lines over which it had to move was inadequate to take it.

In addition to these changes in the flow of coal traffic and the consequent shortage of line capacity, the railways were labouring with other difficulties. In spite of the demurrage regulations, the turn-round of coal wagons was not satisfactory, especially when wagons were forwarded in larger numbers than coal merchants could handle. Delays were made worse when coal merchants' premises were bombed so that delivery by rail was interrupted and wagons were held up awaiting discharge. Moreover, at this time, nearly all coal traffic still moved in single wagons according to the needs of individual merchants and customers. Indeed, many consumers still made it their practice to draw their supplies from as many sources as possible. This was wasteful of railway resources in war-time. It increased the work of the marshalling yards and exchange junctions where 'rough' trainloads had to be sorted according to their destinations. Now that so much traffic was being railed over cross-country routes and exchanged between different railway systems, this added to the burden of coal movement. The Ministry of Transport contended that nothing would increase the capacity of the marshalling yards so much as a movement which would enable the railways to carry traffic in ten wagon blocks instead of single wagons.

Altogether, these coal traffic difficulties profoundly influenced railway working in the autumn and winter of 1940-1941. Since coal forms such a large part of all freight traffic on the railways, it was inevitable that congestion of coal traffic led to difficulties all over the railway system.

Besides coal, there were changes in the volume and flow of other types of internal freight traffic, which necessitated the use of new and awkward routes. Iron ore was one of these. In 1939, the home production of iron ore amounted to 14,485,600 tons, while 5,239,900 tons were imported. In 1941, 18,974,200 tons were produced at home and imports fell to 2,283,300 tons.¹ The increase in home production of iron ore and the fall in imports after June 1940 made new demands on the railways, not only because the tonnage of iron ore increased, but because it had to be moved for longer distances over different routes from those of peace. The principal flows of this traffic were from the ironstone areas of Oxfordshire, Northamptonshire, Rutland and Lincolnshire to South Wales, North Eastern England and Scotland. The ton-mileage of iron ore traffic on the railways increased by 150 per cent. over the pre-war level. Moreover, the traffic had to

¹ British Iron and Steel Federation, *Statistics of the Iron and Steel Industry of the United Kingdom, 1939-1945*.

be carried in special wagons, known as 'hoppers'. Although a programme for the construction of additional 'hoppers' was put in hand shortly after the outbreak of war, clearly this could not have anticipated the magnitude of the changes in ironstone traffic following the loss of imports in the summer of 1940.

Among other factors which added to railway traffic at this time and caused it to flow over different routes from those of peace may be mentioned the expansion of production at new Government factories and the growth of the armed forces. The construction, completion and bringing into use of a large number of Royal Ordnance Factories during the latter part of 1940 and in 1941 caused a significant addition to railway traffic in building materials, raw materials, manufactured stores and munitions.¹ The Great Western Railway, in particular, had to carry an increased volume of traffic to and from the Government factories situated along that system. The expansion of the armed forces from a total of 2,212,000 in June 1940 to some 3,483,000 one year later² and the construction of airfields³ and military camps—often in areas not well served by rail,⁴ added similarly to the tasks of the railways at this time.

Passenger traffic too was another cause of the increasing strain on the railways in the second winter of the war. At first sight, this may seem surprising, since the number of passengers originating on the main line railways fell considerably during 1940.⁵ So too did passenger train mileage. Yet it seems probable, though there is no conclusive proof, that the average length per passenger journey increased in the early part of the war.⁶ Again, it is mainly a question of the flow of traffic over particular routes. If we examine the incidence of passenger traffic in particular parts of the country, it is easy to see how passenger traffic contributed to the railway burden in 1940 and 1941. Passenger traffic on the Great Western Railway was heavier, in terms of the number of passengers originating, than before the war. The West of England was popular for official and unofficial evacuation; Service travel was heavy in the South and

¹ See C. M. Kohan, *Works and Buildings*, in this series (H.M.S.O. 1952), Appendix X. The increase in war production was, of course, counterbalanced to some extent by the reduction of civilian production, though this did not alter the fact that much of the new railway traffic had to flow over difficult routes, which made proportionately more work for the railways than peace-time traffics.

² *Statistical Digest of the War*, *op. cit.*, Table 10.

³ *Works and Buildings*, *op. cit.*, Chapters XII and XIII. The number of airfields in use by the R.A.F. rose from 158 in 1939 to 353 in 1941 (*Ibid.*, p. 281).

⁴ The construction of airfields in parts of Lincolnshire, ill-served by transport, is mentioned in Chapter VIII below.

⁵ *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944*.

⁶ For example, the average receipt per passenger journey (exclusive of workmen and season-ticket holders) increased from 1·949 shillings in 1939 to 2·647 shillings in 1940. If account is taken of the increases in railway fares made during 1940, this still suggests a considerable increase in the average length of passenger journey.

South-West of England and a large number of Government special trains were operated over this line in the autumn of 1940. These several factors account for the heavy traffic on the Great Western Railway at the end of that year. The number of passengers originating on this system was 3·2 per cent. greater in the months October–December than it had been in the corresponding period of 1938. The main line railways as a whole were carrying 21·8 per cent. less. Though the Great Western had reduced the number of loaded train miles by 20 per cent., this decrease was less than on any of the other systems. The total decrease for the four main line systems was 29·5 per cent. Thus, the burden of passenger traffic in the closing months of 1940 bore most heavily on the Great Western Railway. It was carrying more passengers than before the war; its trains were longer and more heavily loaded than in peace. The railways as a whole, though carrying fewer passengers than before the war, were carrying more than had been expected and under abnormally difficult conditions.¹

It is not possible to paint an adequate picture of the burden of internal traffic on the railways in the winter of 1940–1941 merely by quoting a mass of statistics. The real strain on the railways was not just the result of carrying a greater tonnage—or even a greater ton-mileage—of internal traffic. It was caused by changes in the flow and character of traffic over the whole country and the resulting pressure on particular routes. The fall of France had its consequences for internal traffic no less than for import traffic. The well-defined flows of peace-time traffic had been disturbed and the process of readjustment was sometimes slow and difficult.

(v)

The Burden on the Railways

Such were the principal difficulties which contributed to the railway crisis in the second winter of the war. It is now possible to sum up the total effect on railway working of the various factors we have been considering: to analyse the nature of the total burden on the railways; to show how this strain proved more than the railways could properly cope with and how normal railway working became unbalanced; and to explain how congestion developed.

There is no simple formula by which the strain on the railway system at any given time can be measured. It is not difficult to list

¹ The number of special passenger trains worked on Government account by the railways rose from 3,456 in the first quarter of 1940 to 6,071 in the last quarter. The respective totals (including freight traffic) of special trains are 5,875 and 11,705. See R. Bell, *op. cit.*, Appendix 12.

the principal factors that added to the strain on the railway system during the crisis, but unfortunately, it is next to impossible to assess the relative importance of each. The railway traffic statistics for the period under discussion can be studied, but they are scanty and in any case they are not by themselves enough. There were other factors that defy accurate measurement which influenced the railway situation and these too must be examined.

We shall not reproduce all the statistics of railway traffic for this period of the war. It is better to summarise the few broad conclusions to which they point. They show that the total amount of traffic moved by the railways was very little greater than it had been a year earlier. The average monthly tonnage of freight traffic originating on the railways from September 1940 to March 1941 was only 96 per cent. of pre-war, compared with 103 per cent. in the corresponding period of the previous year. Merchandise tonnage, 123 per cent. of pre-war, and mineral tonnage, 109 per cent., both showed small increases over the previous year. Coal tonnage, only 87 per cent. of pre-war, was considerably less than a year earlier. The average length of haul for all freight traffic during the same period had, however, increased to 128.6 per cent. of pre-war, compared with 116.3 per cent. for the previous year. Even so, in the absence of complete figures of ton-mileage, it seems that the total ton-mileage of freight traffic moved by the railways in this period was not very much more than it had been in the same months of 1939-1940, though it was considerably greater than pre-war.

The railway difficulties cannot be explained by any big increase in the total volume of freight traffic they moved. Yet the composition of the total volume must have changed, for there were marked changes in the tonnages of particular types of traffic handled. A large increase in the tonnage of an unusual traffic, or of a type of traffic particularly difficult to handle—steel or iron ore, for example—would clearly have imposed a burden on the railways which no mere analysis of tonnage, or even ton-miles, would show. The same would be true where the average length of haul and the ton-mileage of particular commodities increased out of all proportion to those for all commodities. Though there are no detailed statistical data by which this can be verified accurately for particular traffics, it is quite certain that the railways were making many unusually long freight hauls at the end of 1940. Coal traffic was a notable example.

To the railwayman, an increase in the average length of haul or the ton-mileage of a particular traffic frequently matters less than the particular routes over which the traffic has to move. It makes all the difference to the burden on the railways whether a given tonnage of a particular commodity moves say 100 miles over an awkward cross-country route, having to pass through a marshalling

yard and be exchanged from one railway system to another, or whether it moves rapidly from North to South over a main railway artery. Here again, there is no formula for measuring the extent of the railway burden that resulted from the re-routing of war-time traffic. The Chairman of the Railway Executive Committee expressed the view in November 1940 that the development of war-time railway traffic had been mainly along other routes than the principal peace-time arteries. Our brief examination of coal traffic bears out this contention. Not only coal, but other traffics were moving over difficult cross-country routes. Most railborne imports flowed in a West-East direction; there was heavy movement of all types of traffic from North-East to South-West to avoid the London area. This type of movement, which put particularly heavy pressure on the marshalling yards and inter-company exchange junctions, was one of the principal causes of the strain on the railway system at the end of 1940.

The other factor that can influence the strain imposed on the railway system in moving a given tonnage of a particular commodity between two given points on the railway system is the manner in which the traffic is handed to the railways for forward conveyance, and received by consignees. As a rule, goods, whether imported or otherwise, are handed over to the railways in reasonable quantities, with proper instructions, and ready for prompt conveyance. Similarly, they are usually received and unloaded with the minimum delay and waste of railway resources. During the latter half of 1940, there was much disorganisation, and these conditions were frequently not satisfied. The results of the confusion at the ports have already been described. There were similar difficulties at inland destinations where reception and storage facilities were sometimes inadequate to cope with the new war-time traffic flows. Air raids, which delayed unloading, and sometimes resulted in damage to goods depots, warehouses, and business premises, added to the disorganisation. Such disruption of the normal commercial mechanism not only increased the strain on the railways by causing wagons to be unnecessarily detained but stimulated the growth of congestion throughout the railway system.

The increased strain on the railways in the autumn and winter of 1940-1941 appears to have been due, therefore, to the following causes:

- (a) An increase in the average length of haul for all freight traffic.
- (b) Large increases in the volume of certain difficult and unusual traffics requiring specialised facilities.
- (c) The development of war-time traffic on difficult cross-country routes.

(d) Disorganisation in the forwarding and reception of railway traffic.

It is reasonable to conclude that the burden of railway traffic at the time of the crisis had increased, not in terms of the total tonnage of freight traffic moved, but in terms of the character of the traffic handled, and the flow of traffic over particular routes. The tasks of the railways had become harder to carry out. They were putting increased demands on the reserves of railway carrying capacity generally, and, on some routes, had taxed carrying capacity to the utmost. But it was not only increased traffic demands that reduced the margin of surplus railway capacity, but the arduous conditions under which the railways had to work. Air raids, air raid warnings, and the blackout were seriously hampering the railways' ability to move traffic generally, and the effects of air raids were particularly acute in the South of England. The net result of all this was that on many routes, line capacity was no longer adequate to deal with the amount of traffic being forwarded. The capacity of lines that had been more than adequate in the summer of 1940 was now insufficient in the new and difficult traffic situation of the autumn and winter months. The result was that traffic had to be 'stopped back', freight trains moved more slowly, and wagons took longer to make their round trips. The congestion spread to other lines, and steadily reduced the efficiency of the railway system as a whole.

It is worth quoting a few examples to demonstrate how railway congestion developed at the end of 1940. The principal railway traffic problem at this time was the avoidance of London. For much of the congestion had its origins in the London area. More freight traffic was moving from the North to destinations in the South and South-West of England. Because there were few good cross-country routes by which it could move, this traffic became concentrated in the London area, where it had to be exchanged from the northern lines to the two southern systems. Exchange points between different railway systems are generally their weakest points, and it was confessed by the Chairman of the Railway Executive Committee that the London exchanges had always been inadequate to handle heavy freight traffic. Moreover, these exchanges and the Thames railway bridges were vulnerable to enemy air attack. Continuous air raid conditions in London severely reduced the capacity of the lines, yards, and exchange points, which thus became inadequate to handle the heavy flow of traffic now moving from North to South and North to South-West. The resulting congestion at the London end of the main lines had far-reaching consequences on railway operation all over the country.¹

¹ This was the opinion of the General Manager of the L.M.S. railway concerning the congestion at Willesden (L.M.S.).

The railways therefore made it their aim to move as much cross-country traffic as possible by routes and exchanges which avoided the London area. Yet although works had been begun early in the war for developing existing 'avoiding' routes, development had failed to keep pace with the growth of war-time traffic on them. Indeed, the Great Western line through Banbury–Oxford–Didcot, which was part of a principal 'avoiding' route, had become taxed to the utmost extent with military and general passenger and freight traffic, quite apart from its use for avoiding London. In November 1940, this section of line was considered 'to have become the most important central link in the whole system of British railways. It [was] also regarded as the weakest link, and its weakness . . . the principal cause of the congestion [then] existing' in the working of North to South traffic.

The Great Western Railway as a whole was the most congested part of the British railway system at the end of 1940. This railway had an abnormally large share of war-time traffic. It was moving more passengers than before the war while other railways were moving less; it was carrying a large volume of import traffic moving East from ports in South Wales and the Bristol area; it was being asked to move coal out of South Wales through the Severn Tunnel; while demands for coal in southern and south-western England meant that more coal trains from the North had either to cross over or pass along that railway. The Great Western suffered, in common with the other railways, from the effects of air raids on the London area. It is not therefore surprising that this railway became heavily congested, and that the congestion reacted on other systems.¹ Besides the Banbury–Oxford–Didcot route, there was also considerable congestion on the Great Western main line from South Wales, through Bristol, to London, and freight traffic had to be restricted. This was partly caused by the increased flow of cross-country traffic which overtaxed the Great Western main line at points between Bristol and London. There was also the persistent problem of the Severn Tunnel—the most serious limitation on the amount of traffic that could be moved over the main line out of South Wales. The lines through the tunnel were fully occupied. Passenger traffic was heavy and many trains had to be duplicated. While passenger trains took only six minutes to cover the distance, coal trains took fifteen. Each additional coal train moved out of South Wales by this route meant cutting out three passenger trains.

There were also severe strains on some other parts of the railway system. Not unnaturally, the main Midland route from Birmingham to Bristol was one of the routes most affected, since it was the

¹ In official correspondence about traffic from the Clyde ports for destinations on the G.W.R., it was reported that congestion at the G.W.R. exchange junction at Warrington had spread as far back as Carlisle, and showed signs of spreading back to the Clyde itself.

principal cross-country route running from North-East to South-West. Another route on which war-time traffic had developed, and which became heavily strained, was the London Midland and Scottish route out of South Wales via Hereford. This route is not, in peace, a main traffic artery, but its war-time burden was considerable, since it was carrying the Lancashire and North Midland traffic to South Wales as well as coal and import traffic in the reverse direction. There was heavy traffic too, at this time, on the Anglo-Scottish routes passing through Carlisle and Berwick.

It was on those routes that were overburdened with war-time traffic, and at those places where reception facilities were inadequate or badly organised that railway congestion had its beginnings. Once congestion had developed, it tended to spread to other parts of the railway system. Continued air raids, difficulties at the ports, and delays in the unloading of wagons only made matters worse. The more widespread the congestion became, the greater was the reduction of the carrying capacity of the railways. Embargoes had to be placed on the forwarding of goods traffic to some destinations—particularly on the Great Western Railway—which were already choked with more traffic than could be unloaded. Goods traffic was taking longer to move on the railways; wagons were moving more slowly, they were spending longer in the marshalling yards and exchange junctions, and taking longer to return empty to their loading points. As a result, shortages of empty wagons developed at some collieries and ports—not because wagons were really scarce in the sense of numerical insufficiency, but because they were taking longer to make their round trips. A shortage of empty wagons is, in fact, the normal symptom of widespread railway congestion. But a shortage of railway wagons meant that there was a shortage of rail transport for the movement of essential freight. The lack of rail transport was fast becoming a grave problem. ‘Railway congestion’, declared the Chairman of the Railway Executive Committee, ‘is cumulative, and over a period of emergency may be paralysing.’ By the end of 1940, overcoming the rail transport shortage had become a problem of the utmost urgency. The railways were unable to meet all the demands being made on them, and there was reason to suppose that future traffic requirements would increase.

The burden which war conditions in the latter half of 1940 had placed on the railways had proved a heavy one; they had been unable to bear the full weight of it. If the railway transport shortage was to be surmounted and the railways were to be able to perform their future war-time tasks with efficiency, drastic remedies were needed to meet the disabilities under which the railways were working. Precisely what these disabilities were, and what remedies were put in hand to overcome them are discussed in the next chapter.

Number of cases and percentages

<i>Month</i>	<i>April</i>	<i>May</i>	<i>June</i>
<i>(a) Effect on Facilities:</i>			
(1) Having little or no effect on facilities	205 36%	165 31%	33 41%
(2) Causing failure of phonic and telegraphic communications	27 5%	14 3%	8 10%
(3) Affecting facilities for more than 6 hours	60 11%	56 10%	17 21%
(4) Affecting facilities for more than 24 hours	104 19%	107 20%	12 15%
(5) Affecting facilities for more than 1 week	62 11%	68 13%	2 2%
(6) Affecting facilities for less than 1 week	19 3%	35 6%	1 1%
(7) Affecting facilities by bomb* (damage)	25 4%	39 7%	1 1%
(8) Affecting facilities by U.X.** bomb (delay)	62 11%	54 10%	7 9%
	564 100%	538 100%	81 100%
<i>(b) Effect on individual Companies:</i>			
G.W.R.	102 18%	77 14%	8 10%
L.M.S.	120 21%	195 36%	22 27%
L.N.E.R.	92 16%	138 26%	15 19%
S.R.	206 37%	107 20%	25 31%
L.P.T.B.	44 8%	21 4%	1 1%
	564 100%	538 100%	71 88%
		+ <i>Joint Lines</i>	10 12%
			<u>81 100%</u>

* Delayed action bomb
 ** Delayed action underground

CHAPTER VI

THE RAILWAY CRISIS— REMEDIES AND RECOVERY

(i)

Identifying The Railway Problems

AS EARLY AS OCTOBER 1940, the Government began to show anxiety about the growing congestion on the railways and the continued delays in the movement of urgent war supplies, food, and raw materials. Coal supplies for the London area and southern England had fallen alarmingly during September because of railway congestion. About this time, the Great Western Railway had been compelled to impose a formidable list of restrictions on the acceptance of traffic, including coal, and some of these restrictions had been in force for several weeks. From the ports came a steady stream of complaints that the shortage of railway wagons was delaying the turn-round of ships. On 18th October, the Ministry of Shipping sent the Ministry of Transport a list of ten ships carrying scrap and steel which had been compelled to wait for seven days or longer to obtain berths at Glasgow, mainly because of lack of wagons to clear their cargoes. At Manchester, between 28th September and 15th November, twelve ships, mostly carrying steel, were delayed in the process of discharge for periods varying in eight cases between 2 and 6½ days, and in the remaining four cases for 11, 12, 17½ and 28 days respectively. On 23rd October, eleven ports reported a shortage of railway wagons. Meanwhile the Ministry of Food had been complaining that refrigerated vessels were being held up in West coast ports for want of sufficient refrigerated and insulated railway vans.

It was undeniable that the railway situation was critical. Urgent traffic needs were not being met; much of what was being carried was being carried inefficiently. Railway and transport questions came up frequently for discussion at War Cabinet level, and as complaints grew louder, demands came from many quarters for resolute action to overcome the crisis. But what sort of remedies were needed? It was easy for transport users and others to criticise the existing condition of the railways; but the task of identifying the precise improvements needed to restore them to an efficient state was a

perplexing one for the Government. The railway crisis was highly complex, and immediate and really effective remedies were far from obvious. Indeed, its solution raised many complicated technical questions, better understood by railway experts than Government officials. Remedial action had to be preceded by a thorough understanding of the facts and many committees of inquiry were appointed at different levels in the hierarchy of transport control to report and advise; the members were not all railway experts and the composition, functions, and responsibilities of the committees were various.

At the beginning of November, the Railway Executive Committee, at the request of the Minister of Transport, formed a small *ad hoc* committee of inquiry to visit some of the worst centres of railway congestion, to ascertain the nature of the difficulties, and to make recommendations on how they should be surmounted. The committee was composed entirely of railwaymen, and had as its Chairman, Mr. C. M. Jenkin Jones, then Divisional General Manager of the North Eastern area of the London and North Eastern Railway. In the same month, the Lord President's Committee appointed a committee of officials to report on storage and warehouse capacity both at the ports and inland, having regard, among other things, to the 'economic and convenient use of the available transport facilities, both rail and road'. Meanwhile, a party of officials headed by Sir Cecil Weir went to Liverpool on the instructions of the Minister without Portfolio primarily to report on the hold up of exports there, and found itself also concerned with the discharge of imports and inland transport questions. In December, the Economic Policy Committee appointed a ministerial sub-committee to investigate and report on means to increase the rate of clearance at the ports. In the same month, an inter-departmental committee, meeting at the Ministry of Transport, was considering the re-organisation of forwarding arrangements for import traffic. In February 1941, the Railway Executive Committee appointed a special committee of railway operating experts to enquire into the organisation and operation of railway freight traffic. In April, yet another committee was appointed by the Minister of Transport to examine and report on the working of freight traffic through the more important inter-railway company exchange junctions. The Chairman was Sir Frederick Carson, formerly General Manager of the North West Railway of India.

There is, perhaps, more of interest to the student of railway working than to the economic historian in the reports these various committees produced but between them they threw considerable light on the deficiencies in the working of the railway system at the end of 1940 and their conclusions at any rate provided a basis for remedial action. What the Government did not learn from the

reports, it was learning from experience. Meanwhile the considerable decline in air raids in the early months of 1941, together with the longer hours of daylight as the spring approached¹ were making it a great deal easier for the railways and the Government to relieve congestion and to improve organisation.

The investigations disclosed that the deficiencies in the working of the railway system were of four kinds. The first was the defective organisation which existed for the movement of Government-controlled traffic. This, perhaps the most obvious deficiency, applied mainly to import traffic. For as long as liaison between Government departments remained poor, and advance planning for the reception of imports weak, full economy in the use of railway resources was impossible. The second concerned weaknesses in the operational unity of the four railway systems: peace-time methods of working exchange traffic between different companies had proved unsuited to the needs of war; the companies had also failed properly to pool their stocks of wagons. Thirdly, it became increasingly clear that existing railway facilities were inadequate. Even if substantial economies could be gained by the better organisation of traffic and improved operational methods, line capacity on a number of routes would still be inadequate, and some types of rolling stock would still be numerically insufficient. Finally the railway crisis had demonstrated the need for stronger Government control, not only over the railways, but of other branches of inland transport. This question had its controversial aspects. Since it covers a wider field than we are at present considering, a discussion of this topic will be deferred until the next chapter.² Let us for the present consider the other three. Broadly, the recommendations that had to be considered for improving railway efficiency were:

- (a) That the existing machinery for planning the movement of Government-controlled railway traffic should be overhauled.
- (b) That railway operating methods should be promptly adjusted to meet war-time needs.
- (c) That a large scale programme of physical development and re-equipment of the railways should be undertaken.

¹ There was a marked decline in the number of 'incidents' of damage and delay to the railways in the early months of 1941. After May, the extent of the air raids was relatively slight.

² See below, Chapter VII.

(ii)

Re-organising the Movement of Government Traffic

The first remedy for the railway crisis was the better organisation of Government traffic. Between the autumn of 1940 and the summer of the following year, numerous detailed improvements were made in the various machinery through which the Government controlled the railways and the traffic on them. As committees of enquiry produced reports and made recommendations, as new lessons were learned from the day-to-day experiences of the railway crisis, improved methods of organising traffic movements were continually being devised and applied. Many of these changes were short-term or temporary measures, aimed at meeting particular and urgent railway traffic problems—and capable of immediate application. There were other changes that went deeper—long-term measures designed to remedy fundamental defects in administrative machinery disclosed during the crisis. There were therefore two aspects of the various organisational improvements that arose out of the railway crisis: the first can, perhaps, best be described as a process of improvisation; the second as a fundamental re-organisation.

This distinction is of some importance. The second group of improvements had little influence on the solution of the crisis itself, whereas the first had. It was not until the summer of 1941 that the question of a fundamental re-organisation of inland transport came to be considered. The long-term changes then introduced were a logical sequence of the winter difficulties—made as a means of preventing a repetition of the experience—rather than a contribution to their solution. The railway crisis was, in fact, over by April 1941, before most of these long-term changes in administrative machinery were completed or even begun. Since the present chapter is concerned with the solution of the railway crisis rather than the far-reaching changes it necessitated, the emphasis for the moment will be on what we have termed 'improvisation'—that aspect of re-organisation which contributed to the solution of the crisis itself.

One possibility for speeding the movement of specially urgent traffics on the railways was the extension of priorities. But this could, at best, be little more than a palliative; moreover it could inflict disproportionate harm on less urgent traffics. This much had been learned by experience in the previous winter,¹ and it had since become a fairly well-established principle that priorities for the movement of urgent traffics should only be granted sparingly. An

¹ See above, Chapter III, pp. 117-118.

important exception was made, however, for import traffic in November 1940. At the end of that month, the Port and Transit Organisation announced that certain West coast ports would shortly be called upon to receive, within a period of four days, twice as many ships as normally. The situation was exceptional, and unless urgent steps were taken to meet it, traffic at the ports might be brought to a standstill. The Transport Priority Committee therefore agreed to grant absolute priority to railborne traffic from the Mersey and South Wales ports for one week. This step seems to have been justified by the result, although fewer ships than had been expected did, in fact, arrive. The effect on the clearance of the ports was said to have been excellent; moreover other traffics were not seriously interfered with. The expedient was not, however, resorted to again. And although priority was given to a limited number of special coal trains early in 1941, a general priority for coal traffic, such as had been given in the previous winter, was not again granted.

The organisation built up for the movement of coal traffic was, perhaps, the most effective machinery of any designed to meet the specific transport problems of that winter. The Government and the Ministry of Transport had learned a good deal about coal movement in the first winter of the war, and the coal transport problem was tackled early in the second winter as soon as rail transport difficulties showed signs of developing. When, at the beginning of October 1940 continued air raids and railway congestion began to cause alarm about coal for London and the South-East of England, the War Cabinet's advice was at once sought. The Cabinet invited the Lord President of the Council to take charge of the problem of coal supplies. An *ad hoc* committee, known as the Lord President's Coal Committee, was formed. It met regularly throughout the winter until the coal transport crisis was over in the spring of the following year and laid down policy on all questions of coal distribution during that time. The Lord President was Chairman of the Committee, on which the Ministers of Transport and Shipping, the President of the Board of Trade, the Secretary for Mines, and the Chairman of the Railway Executive Committee also sat, together with a number of departmental officials. The main Committee gave its attention only to questions of policy; the detailed measures required to carry out its decisions were the work of a small and able Executive Sub-Committee.¹

The first job of the Lord President's Coal Committee was to move the coal wagons which were choking the railway lines and yards in the London area. To this end was established a Standing Diversion Committee, whose duty it was to divert coal wagons to other

¹ A fuller account of the work of these committees appears in *Coal, op. cit.*, Chapter V.

consignees where bombing was preventing them from going through to their original destinations. The railways were asked to provide details of all such cases of 'ungoable' coal, and the Committee, which included a railway expert, was then able to keep track of undelivered coal and forward it to other consignees or else to the nearest Government dump. The Diversion Committee was immediately successful in clearing the congestion in the London yards, and by the end of October railway movement was eased—at least for the time being.

The coal transport problem was not, however, just a matter of relieving congestion. If coal supplies were to be kept up more coal would have to be moved by rail to meet the shortages of particular areas. This was the main question which faced the Lord President's Coal Committee throughout the winter. We have seen that the problem of London and the South-East was one of the most pressing of these area problems. One possible solution of this problem received early consideration by the Committee, and was put in hand. It was the establishment of coal dumps at sites on the northern outskirts of the London area. These sites would be equipped to receive and rapidly to discharge coal trains. The coal dumped on them would not be regarded as a permanent stock, but as a kind of reservoir. Deliveries to London consumers might then be undertaken either by road transport, or by rail when this was possible. In this way, coal could be delivered to the fringe of the London area without the coal trains being held up by congestion on the lines and at coal merchants' sidings nearer the city. Unfortunately, this was essentially a long-term solution, which would, in any event, be bound to require extensive use of road transport. Work on these sites was begun, but they were not expected to provide much relief to the London coal difficulties until the winter of 1941-1942, or, at the earliest, in the spring of 1941. The South London problem was, in fact, solved not by any one far-reaching remedy, but rather by good improvisation. The Ministry of Shipping made special efforts to maintain and improve seaborne supplies to ports on the South bank of the Thames by putting more ships into the coasting trade. Arrangements were made for railing increased quantities of coal to tipping stations North of the Thames; these were taken across the river by barge to wharves on the South bank and distributed by rail in South London, Kent and Sussex. Suburban passenger services were cut down to make room for additional coal trains for destinations in the South Eastern counties. As a result of these various measures and the falling off of enemy air activity, supplies to London and the South-East became easier in the New Year, and, though they remained precarious throughout the winter, showed a steady improvement from then on.

The difficulties of London and the South-East were overcome

earlier than those in other parts of the South of England. Many devices had to be employed to keep up supplies to southern coastal areas and the South-West. The Ministry of Shipping and the Admiralty performed a valuable service in organising the South coast convoys, which were able, in spite of enemy interference, to maintain some seaborne supplies of coal for the South throughout the winter, and thereby give much needed relief to the railways.¹ Other arrangements, such as the conveyance of coal 'northabout' by sea from the North Eastern coalfields; and by rail to Cumberland ports and thence coastwise to the small ports in North Devon and Somerset were also successful examples of improvisation to provide relief to the heavily burdened railways. Without the help of coasting shipping, the railways would have been faced with insuperable tasks. Additional trains were run over the Derby-Birmingham-Bristol line to relieve the coal shortage in the South-West, though passenger services in the Midlands had to be cut to make room for them. Further relief was found in shipping coal across the Bristol Channel from South Wales, but the capacity of the North Devon and Somerset ports limited the amount of coal that could be moved in this way.

The problem of moving coal out of South Wales occupied a good deal of the time of the Committee, particularly at the beginning of 1941. The Severn Tunnel problem seemed well-nigh insurmountable. The Lord President suggested that it might be solved by some unorthodox step. The only possibility was to run coal trains through the tunnel on Sundays when it was normally closed for the purposes of maintenance. The Ministry of Transport and the Great Western Railway were reluctant to agree to this, because the atmospheric conditions in the tunnel were so bad that constant maintenance work was necessary. However, the need for coal movement became so imperative that the tunnel was finally kept open on Sundays for additional coal trains, though at the cost of delays to long-term schemes for improving its capacity. Although by this means, the Lord President's Coal Committee was able to arrange for more coal to be moved by rail out of South Wales, it was, at best, a temporary expedient. Towards the spring of 1941, the increasing coal demands of Lancashire were creating a new problem. The Coal Committee had, once again, to resort to improvisation. Some coal was railed into Lancashire from Northumberland and Durham, and more was re-allocated from the Midlands to Lancashire. Further quantities of coal were shipped 'northabout' from the Northumberland and Durham ports. By this means, supplies to Lancashire were

¹ *The War at Sea*, Volume I, *op. cit.*, Chapter XVI; see also below, Chapter IX of this volume.

maintained without interfering with railborne supplies for the South.

The above examples of particular coal transport difficulties in the second winter of the war provide a general idea of the sort of problem with which the Lord President's Coal Committee and its Executive Sub-Committee had to deal. The full story of coal distribution in this period of the war has been told elsewhere,¹ and need not be repeated here. Although each part of the country experienced its own local problems, the general coal distribution problem was the same: there was not enough transport. The function of the Lord President's Coal Committee was to make the best use of what transport there was for coal movement and to take special steps to meet acute local coal shortages. Generally this organisation, hurriedly set up in the autumn, achieved a considerable degree of success in realising these aims. For although coal supplies remained precarious throughout the winter, without an organisation of this kind the railway crisis, not to mention the coal shortage, would have been much worse. One point is of special significance. The Executive Sub-Committee organised, for the first time, the detailed collection of statistics about the main movements of coal by rail and sea. This enabled estimated area coal requirements to be set off week by week against available transport capacity in order to disclose where the main transport difficulties lay. Co-operation to this end between the different Government departments and the railways was good. This was an example of the able solution of short-term difficulties that might usefully have been followed in tackling some other transport problems at that time.

It took longer to evolve a workable organisation for dealing with import traffic on the railways than for coal. Our earlier discussion focussed attention on the various deficiencies in the organisation and the lack of planning of this traffic, which resulted in congestion on the railways. By the end of 1940, these deficiencies were causing a serious reduction in inland transport, port, and shipping capacity. The need for re-organisation became urgent. Yet the problem of organisation to be faced was highly complicated—far more so than in the case of coal traffic. One reason for this was the large number of separate interests which were, in one way or another, concerned with imports. There were, on the one hand, the importing departments, chiefly the Ministries of Food and Supply. There were also the Ministry of Shipping, the port authorities, the Ministry of Transport, the railways, road hauliers, and coastal shippers. Finally there were the various authorities responsible for the reception of imports at the storage depots and factories inland. While it was clear

¹ *Coal, op. cit.*

that the problem needed to be attacked on a broad front, and not by way of a single Department, this could not be done all at once. The evolution of a complete organisation was a gradual process. The variety of expedients, and methods of re-organisation which were eventually adopted took some time to have their full effect. Yet many of them began to give relief to the railways before the winter was over.

Early in November, the Minister without Portfolio reported to the War Cabinet on the reduction in importing capacity which seemed likely to result from congestion in the West coast ports. The War Cabinet invited the Minister of Shipping and the Minister of Transport, in collaboration, to set up machinery forthwith to take prompt executive action to prevent congestion of goods in the ports, and the Minister of Transport to take similar action to secure a quicker turn-round on the railways. The Ministers therefore arranged to meet fortnightly to discuss ways of improving the position in the ports. Shortly afterwards, the committee under Sir Cecil Weir, which had been investigating the position in Liverpool, reported to the Economic Policy Committee of the War Cabinet. It emphasised the importance of planning by the various Government departments for the reception and distribution of their import traffic as early as possible before ships actually arrived in port. It also urged that the Supply Departments should review their existing arrangements for the reception of goods. The theme of this report was to be repeated by almost every committee concerned with import problems in the next few months, for it was recognised that deficient advance planning was at the root of many of the port and transport difficulties. One outcome of the Weir Committee's report was that the Economic Policy Committee agreed, on 21st November, 1940, to review the internal transport problem at fortnightly intervals. The Ministries of Shipping and Transport were to furnish a fortnightly report on the progress they had made, on the War Cabinet's instruction, in collaborating to relieve port congestion. Until this time, no committee of the War Cabinet had been specifically charged with responsibility for inland transport questions.

But the solution of the problem of receiving and distributing imports was not only to be found at the highest Government level. Re-organisation had to be carried out on the spot: in the ports themselves. On 19th November, a meeting was held at the Ministry of Transport to consider some of the difficulties being experienced in the ports. Representatives of the principal importing departments were present; the Ministry of Food was particularly in evidence with its strong criticisms of the Ministry of Transport's existing arrangements for supplying transport at the ports. It was agreed by the meeting that 'there was need for closer co-ordination of the demands

upon transport at the ports and of the resources for meeting those demands'. An inter-departmental committee was therefore appointed, consisting of representatives of the Ministries of Transport, Shipping, Food, Supply, and later of the Treasury. It reached the conclusion that the Movement Officers of the importing departments and the different commodity controls had hitherto been competitors for limited transport resources, and that these unco-ordinated demands were liable to cause overloading and congestion of one form of transport or another. It also attributed delays in the clearance of wagons on the railways and the wasteful use of transport to the lack of information in the hands of Movement Officers at the ports. These officers, it was said, were frequently ignorant of the cargoes expected, their ultimate destinations, and the ability of consignees to receive and unload the goods promptly. Nor was the committee satisfied that departmental demands were centred wholly in the hands of their Movement Officers, so that the efforts of the Port Emergency Committees to clear imports quickly had often failed. Much trouble was also attributed to the difficulties of dealing with the relatively small volume of imports on private account, for which no Movement Officer held responsibility. To help to overcome some of these difficulties, the Ministries of Food and Supply agreed to centralise all their transport demands in their port Movement Officers, who alone would have the responsibility of providing transport for imports on their department's account. Efforts would also be made to provide port Movement Officers with more complete information about import traffic. The Ministry of Supply had belatedly followed the example of the Ministry of Food in appointing a Director General of Transportation in November 1940. Finally, it was decided to appoint at each of the principal ports, a transport sub-committee of the Port Emergency Committee where the Movement Officers and representatives of the various providers of transport would meet, and through which the movement of all goods would be planned.

Another important step towards the better planning of import traffic to relieve the burden on the railways came in the spring of 1941. Serious trouble had been experienced on the railways when, because of diversion, ships arrived at a United Kingdom port from the North American continent loaded with cargoes of different commodities, destined for widely separated parts of the country. Timber and steel were the cargoes principally concerned, since they were frequently mixed for purposes of convenient stowage in ships. With the great scarcity of bolster wagons, and the need to avoid difficult cross-country hauls over congested railway lines, it became urgently necessary to reduce the number of these 'mixed' cargoes to more manageable proportions. This could only be done by improving

the loading of cargoes in the United States and Canada, so that, wherever possible, these could be shipped to the port most convenient for inland distribution in the United Kingdom. Most of this traffic was controlled by the Ministry of Supply, a department whose transport organisation at that time was far from efficient, and which had hitherto been slow to grasp the urgency of the transport problem. The Ministry of Transport, in collaboration with the Railway Executive Committee, and with the approval of the Ministry of Shipping, decided to send to North America two experienced railwaymen. Their duties were to establish liaison with the representatives of the Ministry of Shipping (later British Ministry of War Transport) and the other departments concerned, and advise them in arranging the loading of cargoes for the United Kingdom with the aim of economising in the use of railway and inland transport resources. The representatives were in America for several months. They went too late to affect the railway crisis, since it was over by April. Nevertheless, they achieved much in making British railway problems better understood on the other side of the Atlantic.

A further step which ultimately contributed to the smoother movement of import traffic by rail was the decision of the Lord President's Committee in December 1940 to establish a central control of storage and factory space.¹ A committee on warehousing, which had reported to the Lord President's Committee, pointed out in its report that 'the relation between transport and storage was too obvious to need emphasis here. An improvement in the capacity of the one provides immediate relief to the other.' The Committee came to the conclusion that the system of securing storage space previously in existence was unsatisfactory, since it gave rise to a competitive scramble between different interests, and the consequent wasteful use of storage space.

Finally must be mentioned the fundamental changes in the war organisation of the ports themselves. A Ministerial Committee, appointed on 19th December, 1940, by the Economic Policy Committee to submit a scheme to secure the most rapid clearance of goods possible through the ports, concluded that the existing Port Emergency Committees had either failed or been unable to take prompt decisions on disputes arising from the conflicting needs of Government departments. The Committee decided that a 'strong local controlling authority' should be established at both the Clyde and the Mersey ports. Action followed promptly upon this decision. Two men, styled Regional Port Directors, were at once appointed to

¹ See E. L. Hargreaves and M. M. Gowing, *Civil Industry and Trade*, in this series (H.M.S.O. 1952), Chapter XI.

Glasgow and Liverpool respectively. A third was appointed to the Bristol Channel one month later.¹

Thus was the organisation of import traffic on the railways adapted and re-built during the winter and early spring of 1940-1941. From the foregoing account, it is clear that not all these improvements were introduced at once; their application was gradual. Nor, except perhaps in the case of the introduction of a new, all-powerful control over the ports, did these changes necessitate any fundamental re-organisation. They were essentially measures of improvisation designed to solve specific problems in the light of experience.

Now the significance of all the organisational improvements we have just outlined was that they enabled railway resources to be used more economically. In particular they helped to eliminate the wasteful use of railway wagons. But, independently of these improvements, the railways and the Ministry of Transport had been exerting pressure on traders and Government departments to speed up the turn-round of wagons at the receiving end. For in November and December, the number of wagons standing under load had risen to over 90,000—the highest figure since the introduction of the new demurrage regulations a year earlier. The Minister of Transport had been instructed by the War Cabinet, in November, to secure a quicker turn-round on the railways. Apart from the improvements in planning Government traffic already described, the various departments were approached by the Minister of Transport to improve the rate of turn-round of wagons in which they were interested. The Ministry of Supply was asked to speed up unloading at Supply establishments; the Admiralty was asked to reduce the number of wagons used for storing explosives. The Ministry of Food was especially helpful in responding to an appeal, and promised to insist on the rapid unloading of wagons wherever they were held up. The Mines Department also helped generally to release coal wagons standing under load, and particularly in clearing the accumulation of loaded coal wagons in South Wales. On 4th December, 1940, the Minister of Transport appealed in the House of Commons to all traders, including coal merchants, for the utmost expedition in unloading wagons at the receiving end and for help in maintaining a steady and adequate supply of empty wagons.

Yet it is doubtful whether requests and appeals of this sort had more than a limited effect. Many traders and coal merchants were faced with difficult problems of their own, and were often slow or reluctant to break their peace-time habits.² The Railway Executive

¹ *Merchant Shipping and the Demands of War, op. cit.*, Chapter VI.

² A survey of 63 coal merchants in the South-West of England disclosed some of the main reasons why firms were unable to turn round wagons promptly. Most firms complained of the uneven flow of traffic from the railways; which resulted in the bunching

Committee, at any rate, remained convinced that the turn-round of wagons could best be speeded up by a rigid insistence on the payment of demurrage charges. For since the introduction of the new demurrage regulations, great difficulty had been experienced in exacting payments. The coal traders had, in fact, conducted organised opposition to these payments, since they argued, not without justification, that many instances of delay in the unloading of wagons arose from causes entirely beyond their control, such as bunching of wagons, weather difficulties, air raids, and labour shortages. Moreover, the railways had evolved no satisfactory machinery for examining the appeals of those traders who believed they had genuine grievances. While the demurrage regulations may have had some effect on speeding the turn-round of wagons, they had not provided a complete solution of the problem. The regulations had neither secured the full co-operation of the traders, nor 'had the desired effect in reducing the detection of wagons under load'. The Railway Executive Committee was anxious to take legal action against a few selected defaulters—mostly coal traders—in the hope of securing a general compliance with the regulations. The Lord President, however, made it known that he did not support this proposal. He pointed out that the real purpose of the regulations was to secure the freer movement of wagons, and that this object would not be achieved if there was a widespread feeling that the basis of the existing regulations was too stringent. To enforce the railways' claims might only increase the general opposition. It might, he suggested, be wiser to meet the opposition than to fight it. After protracted negotiations a compromise was reached between the railways and the coal merchants. The Minister of Transport, who was impressed by the difficulties experienced by the distributive coal trade in complying with the existing demurrage regulations, offered them a modest concession. Broadly this allowed retailers of household coal an extra day for unloading before they became liable to pay demurrage charges. At the same time, it was agreed that a joint committee should be established through which the railways and the coal trade could work out an improved procedure for settling appeals.¹ In return for this concession, the coal traders undertook to accept the

of wagons; eight firms complained of a shortage of labour for unloading; three said that empty wagons were left in their siding for longer than appeared necessary; three firms complained of a lack of siding accommodation when bunching occurred; two firms experienced difficulty in handling railborne coal because their unloading apparatus was designed for waterborne traffic.

¹ The exact nature of the concession granted to the coal traders was as follows: 'that the day following the day of arrival of a wagon will be deemed to be the day of receipt by the trader of notice of arrival. Thus in the case of a wagon arriving any time on Monday, Tuesday will be regarded as the day of receipt of notice of arrival. Wednesday as the free day, and Thursday as the first day for which Demurrage will be payable under the Order.' This applied only to merchants in the domestic coal trade.

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principle of the demurrage regulations, and to give their whole-hearted support in speeding the turn-round of wagons.

The measure of success attained by these various steps to improve the rate of turn-round of wagons is difficult to determine. The number of wagons standing under load for more than 48 hours certainly fell from over 90,000 in December to about 60,000 in April. Yet how much of this improvement can be attributed to the appeals for quicker turn-round and improvements in the working of the demurrage regulations is uncertain. It is more likely that the re-organisation of Government traffic, the decline in air raids, and the longer hours of daylight were each of greater significance. In the spring, the railway wagon shortage became far less serious. Indeed, by May 1941, it was said that the railway companies had about 100,000 wagons they did not know what to do with!¹ Although the Ministry of Transport had proposed to launch a 'quicker turn-round' publicity campaign in the spring of 1941, it was decided to postpone the campaign until the following autumn.

The various improvements we have been describing—organising the movement of coal traffic, adapting the machinery for handling import traffic on the railways, and speeding up the unloading of wagons—began to bear fruit in the early spring of 1941. It would be misleading to suggest that all necessary changes in organisation had been completed by that time, but those already undertaken were helping to ease the railway burden and speed the movement of traffic. Yet re-organisation did not alone solve the railway crisis that spring; it was only a contributory factor in the passing away of the acute congestion experienced in the winter months. Another important factor was the improvements under way at the operational level on the railways themselves.

(iii)

Remedies at the Operational Level

While economies in the use of the railways could be achieved through re-organising the movement of controlled traffics, such changes impressed the urgency of the need for a corresponding improvement in the efficiency of the railways themselves. For as the railway crisis developed, it became clear that many railway practices—appropriate enough, no doubt, in peace—were not suited to the needs of war. These shortcomings were, in a sense, analogous to the deficiencies in the organisation of Government traffics we have just

¹ This position was said to have come about 'mostly because of the longer hours of daylight and the fewer alerts'.

described: the railways' operating practices and their methods of handling traffic had never been designed to meet sudden and unexpected changes of the sort that came after France fell. In spite of this, however, there was no doubt that Government control had not instilled into the railway companies a practical unity in their methods of working. In the words of a senior official of the Ministry of Transport in December 1940, 'the Railway Executive Committee had been set up to weld the railways of this country into one system, and after fifteen months of war, this had not been achieved'.

There could, of course, be no question, even in war-time, of attempting the large-scale standardisation of railway equipment and rolling stock on four railway systems whose peace-time practices varied fairly considerably. Nor could any attempt be made to alter the general layout of the British railway system. Although this had been planned for peace-time needs, and was not always ideal for the needs of war, there was no possibility of making fundamental changes in the main railway routes in the country. What could and needed to be done to make the best use of existing facilities was to obtain the closest possible liaison between the operating and traffic experts of the four groups, to pool scarce resources, to organise through working, to cease peace-time practices which hindered war-time working, and generally to develop a unity of purpose among the four groups to meet war-time demands. Yet until the beginning of 1941, despite the unity which the four groups possessed in name through the Railway Executive Committee organisation, it emerged that the steps taken to achieve these ends had been inadequate. Some of the transport difficulties experienced in 1940-1941 must therefore be attributed to this deficiency.

The railway wagon shortage was a case in point. The scarcity of wagons that developed during the crisis was not generally due to an insufficiency in the number of wagons in service—except for specialised stock such as bolsters. The reasons for the shortage were first that wagons were being delayed at unloading points—a cause that has already been examined—and second that they were moving more slowly on the railways themselves. One important reason for the slow movement of wagons was that peace-time methods of distributing wagons between the main railway companies were inappropriate in war. This weakness first became apparent in the shortage of refrigerated vans for the conveyance of meat from West coast ports. Until November 1940, there was no proper pooling of railway meat vans, a cause of frequent complaints from the Ministry of Food. When, in the autumn of 1940, an acute shortage of refrigerated and insulated vans arose at the ports, and the turn-round of refrigerated ships was delayed, an inquiry was held, and it was agreed to bring all insulated vehicles into one central pool. From

the beginning of December, when the pooling was undertaken, there were no further complaints from the ports of shortages of refrigerated meat vans.¹

The absence of adequate pooling arrangements for railway owned resources applied to wagons of all types. It contributed to the shortages not only of wagons, but of the wagon sheets and ropes, essential for many traffics. Before the war, each company had its own stock of wagons, and had a domestic wagon control organisation which arranged the distribution of this wagon stock on its own system. Between the companies, there existed a 'common user' arrangement by which about four-fifths of these railway owned wagons could be run loaded over each other's lines in return for 'journey payments' which were settled through the Railway Clearing House. A 'balancing arrangement' existed by which differences in the exchange of loaded wagons were redressed twice weekly by an exchange of empty wagons between the companies—the principle being that each company had a right to a stock of wagons by number and class equal to that it actually owned. Although 'journey payments' were suspended at the outbreak of war, the peace-time common user system was still considered adequate. In practice, however, it failed. The Great Western Railway, for example, owned only 82,453 wagons out of a total railway stock of over 660,000, and had only one-quarter of the requisitioned privately owned wagons on its system. This railway, which, as we have seen, bore the brunt of the burden of increased war-time traffic, found that the wagon stock over which it had effective control was too small. The 'Jenkin Jones' Committee stated in its report that the principles on which the common user arrangement was set up had frequently failed since the beginning of the war, principally because the Great Western and Southern companies had not handed over to the other companies the wagons which they were due to pay—that is, in the form of returned empties. In the words of the Committee, ' . . . in time of war . . . changes in the shipping and dock position entail constant alterations in the flow of traffic, and, in addition, much other traffic is passing in exceptional quantities in unusual directions; in these circumstances it is no longer possible to guarantee that the principle of returning equivalent numbers of wagons to the owner company . . . coincides with the national interest'. The principle that ownership should determine the balance of wagons between the groups was clearly intolerable in war when changes in war-time traffic had entirely altered the wagon requirements of the different groups. Thus, on the one hand, the Great Western and Southern railways might have fewer wagons than they needed, and on the other, since

¹ *Food*, Volume I, *op. cit.*, Chapter XVI.

they were no longer liable to pay a fine for retaining wagons belonging to other companies, they might be tempted to keep an excessive number of wagons on their lines. There was, in fact, 'no provision for an equitable distribution of wagons between the companies according to their relative needs'.

The problem of wagon distribution was further complicated by the transference of the half million privately owned wagons from their owners to the control of the railway companies. For owing to the changes in the flow of war-time coal traffic—the private owner wagons were mostly coal wagons—the distribution of these also bore no relation to transport needs. It was therefore decided to suspend the common user arrangements and to create a pool of freight rolling stock that could be distributed among the four main groups according to their actual needs and the conditions prevailing from day to day. On 1st March, 1941, the Railway Executive Committee instituted an Inter-Company Wagon Control Organisation with Headquarters at Amersham. It had responsibility for all freight rolling stock, including requisitioned wagons, wagon sheets, and ropes. The organisation was staffed by a number of experienced wagon distributors drawn from all companies, and their work was supervised by an Inter-Company Freight Rolling Stock Committee, whose whole time chairman was directly responsible to the Operating Committee of the Railway Executive Committee.¹ Before the institution of this control, the railway companies had been of the opinion that technical difficulties were too great to establish a wagon pool of this kind. But technical difficulties had been even greater in the First World War, and they were surmounted in the end.² It is certainly surprising to find that the railways, who persistently blamed war-time shortages of wagons on traders and others who were slow to unload them, had failed among themselves to achieve complete economy in the use of their rolling stock. This was one example where Government control of the railways had failed to enforce their operational unity.

Besides these urgent measures to make better use of railway wagons, the Railway Executive Committee, with the approval of the Ministry of Transport, took a number of steps to improve the control and operation of freight trains on the railways. It is impossible in a history of this kind to provide a list of the variety of such local expedients introduced to improve railway working. Nor can even their broad significance be judged here, since only the railway expert could be expected properly to appreciate their

¹ See R. Bell, *op. cit.*, Chapter 14. The Ministry of Food also set up at Amersham a liaison organisation for the control of road and rail insulated meat vans, with responsibility for maintaining their supply to incoming ships.

² E. A. Pratt, *op. cit.*, Chapter XLVII.

importance. We shall content ourselves with outlining the nature of these improvements.

One of the most noteworthy was the extension of the practice of freight train control on the railways. Long before the railway amalgamation of 1923, many railway companies had developed a system of telephone control for the better supervision of traffic. This allowed details of traffic requirements and train running to be concentrated on central points, or District Controls, which were themselves connected to a company Headquarters Control. On the outbreak of the Second World War, these methods were in full operation on the London Midland and Scottish and London and North Eastern Railways. The control systems of the Great Western and Southern Companies were, however, less highly developed, because these two systems catered extensively in peace for passenger rather than freight traffic. Since war conditions had much increased the volume of freight traffic passing between the two northern companies and those serving the South, the 'Jenkin Jones' Committee recommended that improved train control arrangements should be introduced on the two southern railway systems. They advocated the institution of a fully-equipped Headquarters Control on these railways, and suggested that if necessary, the other companies should lend operating experts to help them evolve a control system. The Committee further recommended that the working co-operation of the four companies be made more systematic by the establishment of a small inter-company control, the broad functions of which were outlined as follows:

to obtain statistics from the Headquarters Control of the four companies and (to) be responsible for arranging from day to day the extent of the assistance which could be rendered by one company to another in matters such as the use of engine power, and, if one company is suffering from congestion, the full and prompt use of alternative routes available on another company's system.

These proposals were put before the Operating Committee of the Railway Executive Committee for consideration, and ultimately the Railway Executive Committee and the Ministry of Transport accepted them.¹ A special committee of enquiry was later appointed to report in detail on the proposed train operating arrangements, and finally work on the various schemes were put in hand. It was

¹ In accepting the proposals, a senior official of the Ministry of Transport 'could not help feeling, as a layman, that Mr. Jenkin Jones was on the right track. Had not the time come for the four Operating Managers to be taken from their respective companies and sit permanently at Down Street in order to deal with those problems, arising every day, which necessarily required solutions by an operating dictator?' The final sentence of this statement was quoted earlier in the text: 'The Railway Executive Committee had been set up to weld the railways of this country into one system, and after 15 months of war that had not been achieved. . . .'

some time, however, before they came into full operation, for difficulty was experienced not only in carrying out the construction work required but in finding competent staffs to man the controls.

Another important aspect of the co-operation between individual railway companies in improving the movement of freight traffic was the development of through train working. Normally, a company hands over freight traffic at exchange junctions in 'rough' loads—that is, with wagons not sorted according to destinations. The wagons a company receives from a 'foreign' line have to be sorted and blended with other traffic, and marshalled for economical and expeditious transport over its own system. Each company had therefore developed at or near each exchange point a system of sidings to deal with the peace-time traffic which moved in well-defined flows. Generally the layouts at exchange junctions were adequate to handle any likely fluctuation of peace-time traffic, and few difficulties were experienced in dealing with traffic during the first year of the war.

The air raids and the radical changes in the flows of goods traffic that occurred in the autumn of 1940 produced, as we have seen, considerable congestion and disorganisation of railway movement—particularly because of the slow clearance of wagons at destinations. This was promptly reflected in exchange working: the restriction on the amount of exchange traffic handled was a natural corollary of the congestion, though the cause of the restriction was often at points far distant from the exchange junction itself. These difficulties persisted throughout the winter. In February, the Railway Executive Committee decided to review the whole question of freight interchange, and a committee of the Assistant Chief Operating Officers of the four companies was asked to undertake this review. The committee decided to make a detailed analysis of the traffic passing through the main junctions, to study ill-advised routeing, and the possibilities of developing through freight train working without regard to pre-war routes. This was done through an Inter-Company Traffic Analysis Committee, composed of experts, which gave special attention to those points where exchange working could not be adjusted by local contact between companies. By this means it was possible to re-route traffic, and revise methods of working freight train services where changed traffic flows justified this. It was decided to keep this machinery in being so as to maintain a continuous review of changes and fluctuations in the flows of war-time traffic.

The extension of the technique of traffic analysis made it possible to extend through train working on some routes. The aim of through train working—the working of trains containing wagons for a single destination only, and usually passing from one company to another without re-marshalling—was to relieve pressure on marshalling and exchange facilities by reducing the amount of wagon sorting needed

en route. In their own interests, it had been the policy of the companies in peace-time to develop through—long-distance—freight trains, and to employ a system of traffic analysis at the principal yards and exchange junctions to explore possibilities of extending the practice. The marked changes in the flow of war-time traffic made it desirable to extend the application of the technique of traffic analysis. The aim was to devise the better routing of war-time traffic to relieve pressure on difficult routes and to organise freight movement in full trainloads, which could pass through exchange junctions without entering marshalling yards. But the organisation of through freight trains, in peace or war, depends on the volume of traffic offering and on marshalling facilities. Although through freight trains could usefully be organised for some traffics, most traffic exchanged between different companies still required to be sorted as it was handed over from one company to another.

One successful example of through train working was the movement of specially controlled coal traffic. It should be realised that the Government did not exercise direct control over more than a small percentage of all coal movements on the railways. Coal normally moved by the wagon according to individual merchants' and consumers' needs. It did not move in full trainloads. The statistical surveys made by the Executive Sub-Committee of the Lord President's Coal Committee often disclosed acute local shortages that could not be met by the ordinary means of supply. These needs were met by specially controlled traffic, organised by the Mines Department and the railways, and known as 'convoy' and 'nominated' trains. The 'convoy' trains had their origin in the difficult winter of 1939–1940, when they were organised to meet the deficiency in London's coal supplies caused by the reduction in coastwise coal movement. They continued to run throughout the summer of 1940 and the following winter between the North Eastern and Midland coalfields and destinations in the South of England up to a maximum of 230 a week. These trains were additional to normal coal traffic, but the programmes were drawn up weekly in advance and the trains were made up of wagons for one destination only, which eliminated the need for the sorting of wagons en route. Unlike the 'convoy' trains, the 'nominated' trains, which the railways also ran when they could, were not additional to normal traffic, but a convenient way of organising full trainload working to meet urgent needs. It was thus possible to pass more traffic through exchange junctions than if it had been allowed to go through in an unorganised way.¹

¹ The special trainload programme comprised not only full trains to one destination but also, as a later refinement, consignments which covered most of the journey as full trains but were split between two or more nearby destinations.

Controlled traffic formed about ten per cent. of all coal traffic on the railways at the beginning of 1941, and the advantages of full trainload working suggested that it might profitably be extended. Now that statistics about coal movements were being collected, it was possible to explore this possibility. There were certain drawbacks, however. If coal merchants and others were unable to handle large blocks of coal wagons and unload them promptly, the purpose of full trainloads might fail. The problem was not only a railway problem, but extended over a wider field—that of coal distribution.

Coal transport problems demonstrate clearly the inter-relationship that existed between railway operational methods and the organisation of Government-controlled traffics. Improvements in one required corresponding improvements in the other. The remedies we have outlined so far were certainly necessary and valuable aids to economy in the use of existing railway resources. But economy in the use of existing railway resources was only a partial solution, and a short-term one at that. The demands for transport were growing. Sooner or later, new facilities would be needed—indeed many additional facilities were already urgently required. Transport shortages had arisen not only because railway resources had been uneconomically used, but often because they were physically inadequate.

(iv)

The Need for Additional Railway Facilities

Railway facilities proved inadequate in 1940 because they had not been expanded to meet the strain of war. Those additional facilities provided since the start of the war turned out to be scarcely more than trifling by comparison with what was needed. To say this is not to imply that the full strain of war, as it was experienced in the winter of 1940–1941, could have been entirely foreseen, or even that a railway crisis could have been avoided. But the nature of the strain had, at any rate, been known beforehand. Shipping diversion not unlike the type experienced in 1940 had been expected for seven years; the diversion of coal traffic from coaster to rail had been foreseen before the war; continuous air attacks on railway facilities had been expected. The railways had known in general terms before the war many of the things that would be expected of them, and had expressed confidence in their ability to discharge their war-time burden—even to the extent of a 100 per cent. increase in traffic.¹ They had argued that the British railway system was of such a

¹ Memorandum 'Transport Conditions during First Three Months of War', by the Chairman of the Railway Executive Committee, May 1939. Appendix IV, p. 96.

character that, if one route were put out of action, another would almost certainly be available. In short, they had regarded extensive new works as unnecessary. The layman could only suppose that the experts knew their own job best and accept their arguments. The Ministry of Transport, at any rate, had not seriously challenged the faith which the railways had in their own abilities. But in 1940, experience showed that it was the experts who turned out to be wrong.

We have already seen that a limited number of new railway works were put in hand, under Ministry of Transport pressure, after the outbreak of war and that, by the end of 1940, the Treasury had authorised the expenditure of one and a half million pounds for this purpose. In spite of this expenditure, the carrying out of important railway works in time of war could not be a rapid process. Although new works were brought into operation as soon as they were finished, those completed by the end of 1940 accounted for less than a third of the total expenditure so far authorised.¹ Thus for example, the capacity of many of the routes for avoiding London had not apparently been much improved when the crisis of 1940 came. The routes between Banbury and Reading were particularly congested at the end of 1940, while the necessary improvements at Banbury and Bordesley exchange junctions were still not complete when, in the summer of 1941, the immediate railway crisis was over—though these works had been approved more than a year earlier.

By the end of 1940, it had become plain that whatever progress might be made in re-organising Government traffic on the railways, and whatever advances might be achieved in railway operating techniques, the physical resources of the railways would still be inadequate to handle the changed flows of war-time traffic under conditions of continuous enemy air attack. Railway experts at last admitted that they had shown unjustified optimism. The Chairman of the Railway Executive Committee acknowledged that what foresight had been exercised had largely come from the Ministry of Transport Inspecting Officers in insisting on diversion schemes for the avoidance of London. 'Everyone in these days', it was confessed, 'had the Square Deal campaign in mind, and economic considerations were predominant with the result that all, and especially the railway companies, had looked ahead in too small and unrealistic terms.' Thus at the end of 1940, old illusions vanished, and the railways reversed their views. The Chairman of the Railway Executive Committee declared:

The Railways have now experienced fifteen months of war and the last three months of it have been marked by intensified air

¹ The total estimated cost of works completed up to 19th December, 1940, was £483,515, out of a total authorised expenditure of £1,562,755.

attack. They are now in a position to gauge the extent of the demand made on them by war-time conditions and the extent of the interference due to air raid attack. It is necessary that they should avail themselves of this experience to consider the steps which they are now called upon to undertake to give the railway system of the country the proper physical development which will be required to meet war-time demands of the future.

It is evident that far-reaching measures of railway development will be necessary. Such physical developments may take many months for their completion; they will be costly both in men and materials. On both these accounts they must be planned well in advance.

On 27th November, therefore, the Chairman of the Railway Executive Committee placed before the Ministry of Transport a comprehensive programme of new railway works, to cost approximately ten million pounds, and to be spread over a period of two years. He considered that all the improvements previously submitted by the railway companies had been put forward on their individual merits without considering the problem of increased capacity as a whole. British railways had not been developed as a unified system nor with an eye to war-time economy. No new routes were proposed, however. The £10 million scheme—or ‘Wedgwood’ plan—was aimed principally at the development of existing routes to meet the needs of war-time traffic.

To plan a large programme of development so far in advance of actual needs, certain well-founded assumptions had to be made about the future course of the war. The Railway Executive Committee based their ‘ten million pound’ proposals on the following assumptions:

- (a) that there would be an increase of not less than 25 per cent. in railway freight traffic over the existing level;
- (b) that military traffic, whether freight or passenger, would not decline;
- (c) that civilian travel would not grow less;
- (d) that blackout conditions would continue;
- (e) that air raid alarms, interruption, and bomb damage would be on the recent scale;
- (f) that there would be a growing scarcity of labour;
- (g) that there would be increasing need for the quickest possible turn-round of shipping.

The military implications of these assumptions were accepted by the Chiefs of Staff, who considered that military freight traffic would probably rise slightly, and that interruptions due to air attack were likely to exceed the recent scale. The Lord President’s Committee

was consulted about the economic implications.¹ It advised the Minister of Transport to proceed with a programme of new railway works to be concentrated on points in the railway system where they would be of special value in relieving the war-time strain at present experienced.

The Minister of Transport had made known his opinion that, although he favoured a comprehensive scheme for developing railway facilities, it would be wiser to look on the programme, in principle, as one of spending £5 million in a year rather than of spending £10 million or more on heavy works needing two years or longer to complete. This view was taken because both labour and steel were expected to be scarce. The Railway Executive Committee therefore modified its original proposals, and submitted a revised programme of works in March 1941, which was to cost £5 million and most of which was to be carried out in one year. The programme was designed to increase the capacity and fluidity of traffic over sixteen principal routes, which were either already overtaxed by war-time traffic or expected to be burdened by future war-time developments. The scheme also included a number of telephone projects both for railway administrative purposes and for train control.

Perhaps the most urgent part of the revised 'Wedgwood' programme was that for improving the routes out of South Wales, where war-time import, coal, and passenger traffic was very heavy. The line between Newport and Severn Tunnel Junction had already been 'quadrupled'² over part of its length by the provision of loop lines. The Great Western Railway, supported by the Railway Executive Committee, submitted a proposal that the line should be 'quadrupled' the whole way. This was one of the first works under the 'Wedgwood' programme to receive the sanction of the Government. It was considered of sufficient urgency to warrant special action at the highest level to expedite its completion as well as to provide minor works on the line linking South Wales and the Midlands via Hereford and Shrewsbury. The Production Executive of the War Cabinet undertook to supply the materials and labour as a matter of urgency. Work was begun in April 1941, and the final stage was completed within seven months—well ahead of schedule—at a cost of a quarter of a million pounds.

Not all the original proposals in the 'Wedgwood' programme were approved and carried out. On the other hand, the programme itself

¹ Namely that in the winter of 1942 we should expect an increase of not less than 25 per cent. in railway freight traffic over the present level. 'Personally the Minister of Transport found this hard to believe, in view particularly of the fact that imports were not likely to exceed 35 million tons as compared with 43 million tons previously anticipated.'

² 'Quadrupling' is a railway term. It does not necessarily mean multiplying the existing number of tracks by four, but converting the existing line into four tracks.

was not exhaustive. Many works at points away from the principal routes defined in the proposals were being submitted by the Railway Executive Committee on behalf of the railway companies concerned at the same time. These were equally urgent for war-time traffic needs, and many were approved and executed. The Ministry of Transport in fact considered each scheme on its merits. No distinction was drawn between works which formed part of the 'Wedgwood' programme and other works which were equally necessary. Moreover, in approving the works, the Government had to take account of the supply of materials and labour, for which there were other competing demands.

The 'Wedgwood' programme did not provide the panacea for all railway ills. The crisis had demonstrated how great was the need for many of the works it embraced. But extensive railway construction work in a period of growing shortage of materials and labour was necessarily a long-term solution of railway difficulties. The real value of the works begun in 1941 was not apparent until the later years of the war. Nevertheless, the experiences of the crisis had at last brought the railways to realise that the transport needs of war almost invariably require extensive additions to those railway facilities that exist in peace. Until the end of 1940, the railways had shown a marked unwillingness to accept this principle, while the Ministry of Transport, relying largely on the Railway Executive Committee's advice, had seldom affirmed it. Altogether, Government expenditure on railway works during the war amounted to £11,500,000, the bulk of which was approved between 1941 and the end of the war.

While the 'Wedgwood' programme was under consideration, the Ministry of Transport was busy deliberating on another constructional scheme: the provision of inland sorting depots. The question can conveniently be mentioned here though it is a digression from our main theme. It can scarcely be regarded as a remedy for the railway congestion. Inland sorting depots were proposed as a means of relieving the ports. They were to be used for carrying on the various sorting processes, normally undertaken in the ports, at safe distances away. If the ports were bombed, the stocks of goods in them might otherwise be destroyed. The detailed arguments for and against the construction of inland sorting depots have been examined at length in the shipping history,¹ and need not be repeated here. As a means of avoiding port congestion, such depots had been urged even before the war, but the matter had not been pursued. When it was revived in the autumn of 1940, it produced widespread disagreement about whether or not they should be built. The Admiralty and the Ministry of Shipping were the strongest advocates of the

¹ *Merchant Shipping and the Demands of War, op. cit.*, Chapter VI, Appendix XXI.

scheme; the Ministry of Transport Port and Transit Division hesitatingly agreed. The Ministry of Food, on the other hand, opposed it;¹ the railways, while not unfriendly to the suggestion, were not enthusiastic about it. The railway argument, shared by the Ministry of Food, was briefly that a better way to avoid port congestion would be to improve the movement, and hence the supply, of railway wagons. Could not the materials needed for constructing the depots² be more economically used for new railway works or, if need be, constructing more railway wagons to improve transport away from the ports? This was a strong argument. Inland sorting depots would certainly make railway working more difficult. They would require elaborate siding and marshalling facilities, shunting locomotives would be needed and they would also make heavier demands on the stock of railway wagons. This view found acceptance in many quarters, notably in the Ministry of Transport Railways Division. This conflict of opinions presented the Ministry of Transport with a dilemma which had somehow to be resolved. It was all the more difficult because it was realised that the depots would take at least a year to build. The Ministry of Transport, however, decided in favour of the scheme, and the Lord President's Committee was asked for authority to construct six inland sorting depots. It agreed to this on 20th December, 1940. Even then, further difficulties arose about obtaining the land, labour, and materials, for which there were many competing demands—the new railway works for example. In the end the matter was settled by the Prime Minister's intervention in favour of the scheme. Work was started in the spring of 1941. The railway companies, who were then busy with their own new works, did not undertake but advised on the construction of the depots. Nearly a year elapsed before the first was ready for use.³ They were built too late to afford any relief to the ports while the bombing lasted. Whether their usefulness in relieving the ports in the later years of the war justified their cost in labour and materials is an open question. It is arguable that the demands that these depots made on railway resources, or on resources which might otherwise have been used for railway construction, were disproportionate to the usefulness obtained from them. For certainly, those demands were by no means light. But supposing the air raids had continued. Would the stocks in the ports have proved in the long run more vulnerable than the railway system serving them? To this question there is no

¹ *Food*, Volume I, *op. cit.*, Chapters X and XVI. The Ministry of Food later changed its views.

² Each of the six depots proposed was expected to require about 3,000 tons of steel, 350 standards of timber, and eight miles of railway track.

³ Six depots were constructed altogether. There were two in the vicinity of the Clyde, a double depot near Liverpool, one near Avonmouth, and another near Cardiff. The total cost was between £2 and £3 million.

conclusive answer. Here we can only record that inland sorting depots provided no relief to inland transport—they only added to its burden.

Meanwhile, what was being done about railway wagon stocks? The shortage of railway wagons experienced during the winter of 1940–1941 arose principally because the existing wagon stock was being used inefficiently—not because it was numerically inadequate. It was clear therefore that the best way of ending this condition of general shortage was by better traffic organisation and improved wagon distribution on the railways. Its nature did not justify an ambitious programme of new wagon construction. This conclusion is true of the general wagon position as it was at the beginning of 1941. There were, however, serious numerical shortages of some types of specialised wagons—‘bolsters’ and ‘hoppers’—which formed a relatively small proportion of all railway wagons. Even if the utmost economy could be exercised in using these types of wagons, it was clear that the existing stock would still be inadequate.

The expected heavy demands on ‘hopper’ wagons for iron ore traffic had been largely foreseen at the beginning of the war. When war broke out, the iron and steel industry owned about 7,700 hopper wagons, which were mainly used to convey iron ore to blast furnaces. This stock had been augmented in the early months of the war by the addition of 1,000 wagons, paid for by the industry. Early in 1940, however, the Iron Ore Committee of the Ministry of Supply stated that more ‘hoppers’ would be needed to carry out their proposed programme to expand home steel production. The Ministry of Transport agreed to a programme for the construction of 3,500 of these wagons to be paid for by the Government. The Treasury approved the expenditure, and construction work was put in hand in June 1940.¹ But early in 1941, this programme had to be curtailed to 2,500 wagons owing to scarcity of materials for their construction and even then this number took a considerable time to complete. They were still not finished in December 1941, when some 2,179 of the wagons were reported to be in service.

The expected difficulty in providing enough ‘hopper’ wagons for iron ore traffic proved, in the event, to be less serious than that of providing sufficient ‘bolster’ wagons for the conveyance of imported steel. The shortage of ‘bolsters’ at the end of 1940 became sufficiently acute to delay the unloading of ships in the ports,² and a good deal

¹ The L.N.E.R. undertook to absorb these wagons at the end of the war. The wagons were paid for and owned by the Ministry of Transport, and hired to the companies on the basis of interest plus depreciation.

² See *Tenth Report from the Select Committee on National Expenditure, Session 1940–1941*. ‘The Handling of Shipping in Home Ports’—‘To evacuate the ports rapidly there is already a pressing need for more railway wagons of special types. The type of import has in some important respects changed. Much fabricated material of greater length and heavier

of criticism was directed towards the Ministry of Transport for its alleged failure to provide enough of these wagons. But even in the summer of 1940, few could have foreseen that the rate of steel imports would increase to such unprecedented levels in the winter months. Moreover, owing to faulty planning, it was not until October 1940, that the Ministry of Transport was made properly aware of the need to increase the stock of bolster wagons on the railways. The Ministry of Supply, for reasons which it is not the province of this history to describe, had not previously told the Ministry of Transport that its revised steel import programme was to be permanent.¹ Nor until this time was the Ministry of Transport or the Railway Executive Committee told of the precise amount of imported steel that would require bolster wagons.² Thus the relevant information on which to base a proper programme of bolster construction had come too late—at least as far as the winter of 1940–1941 was concerned. The need for more bolsters had not been adequately foreseen though this was not the fault of the Ministry of Transport.

At this time, there were altogether about 30,000 bolster wagons, or wagons suitable for the conveyance of long iron and steel, in service on the railways. During 1940, the railways had decided to build an additional 631 bolster wagons—1,400 '10 ton units' to use the railway parlance—and about 400 of these were constructed and added to the railway stock by the end of 1940. But this scheme of new construction had never been designed to meet the needs of a steel import programme of the dimensions of that of the autumn of 1940, and can not have made more than a small contribution to the solution of the problem. Similarly, the decision of the Economic Policy Committee on 21st November, 1940, that home grown timber should be cut into lengths which could be carried in ordinary wagons, and the granting of priority in the use of bolster wagons to steel traffic was a palliative, but it did not solve the numerical shortage of these wagons. This shortage was ultimately overcome by capable improvisation. As it

weight is now obtained from overseas. This class of cargo can only be handled conveniently on the railways in wagons of special type. Some of these are building. The need for them is urgent. Their manufacture too should be speeded up.'

¹ As one Ministry of Transport official wrote in October 1940, 'The most important fact which has emerged is that the programme of imports from North America is to continue for the duration of the war. This, as far as I am aware, has never been made clear before, and in view of the time that would necessarily elapse before new bolster wagons could be put into production, it would have been of little use to increase the programme of bolsters if the imports were to cease in 6 to 8 months' time.'

² The Ministry of Supply told the Ministry of Transport on 25th October, 1940: 'Our present import programme includes 750,000 tons in all per month of steel, pig iron, and scrap, of which 650,000 tons are from the U.S.A. Of these 300 to 350 thousand tons per month are of billets, bars, plates, etc., of a length which necessitates the use of bolster wagons. . . . This rate of importation is to be maintained indefinitely if circumstances allow.'

was impossible to meet the immediate need for bolster wagons by new building, which would have taken many months even had materials been available, the railways displayed resource by converting 4,000 end-door wagons into 2,000 twin bolsters.¹ The expenditure for these conversions was borne by the Ministry of Transport, and by May 1941, about three-quarters of the conversion scheme had been completed. Together, the conversion programme, the completion of the railways' new construction programme, and the improvements in the supervision of wagon movements we have already described, brought the stock of bolster wagons up to a safe level by the summer of 1941. Moreover, there was a steady reduction in the rate of steel imports after the beginning of 1941, and the demand for these wagons was therefore smaller.

These various additions to railway facilities could only be made slowly. It was many months before new construction began to provide the relief which the railways urgently needed. Although particular shortages were cured in the end, new ones tended to arise. Locomotive power, for example, was not seriously scarce during the railway crisis. A year later, however, it was locomotives rather than line capacity that had become the main limitation on the ability of the railways. These developments will be examined in a later chapter.

(v)

Conclusion

Such were the remedies applied to cure the railway crisis of 1940–1941. Recovery came in the spring, when the railway position was substantially eased. Wagons became more plentiful, and moved more quickly along the lines. Railway congestion was no longer delaying shipping in the ports; the problem of coal supplies had become not one of transport, but of production. At no time in the war did inland transport congestion again threaten the war effort as it did in the period we have described, although the burden of traffic carried grew larger as the war effort reached its climax. The recovery of the spring of 1941—coming in a matter of months after the acute winter congestion—cannot wholly be accounted for by the remedies we have just outlined. Additional railway facilities like new works and rolling stock took many months to build, and had little effect until the latter half of 1941 at the earliest. Nor similarly was the application of improved railway operational techniques carried

¹ The credit for the first experiments in improvising these twin bolsters apparently belongs to the Manchester Ship Canal Co. The suggestion that the Railway Executive Committee should do likewise was made by the Ministry of Transport.

out overnight. The multitude of improvements in the supervision of Government traffic were more productive of immediate results. Here, the British genius for improvisation showed itself to advantage. Strengthened controls solved seemingly intractable problems and gradually produced order out of chaos. The capable handling of the coal supply problem was a noteworthy example. Similarly, the problem of controlling the flow of traffic from the ports to inland destinations was earnestly tackled, and, in the end, overcome. By the spring of 1941, the Government and the railways had begun to master their tasks. They were helped, however, because the tasks themselves were getting easier. Air raids were diminishing in intensity, and, as the spring came round, the hours of daylight were longer. Fewer air raids meant fewer railway interruptions and less disorganisation of traffic generally; longer hours quickened the unloading of wagons and their sorting in the yards.

With the passing of the crisis came the opportunity to take stock. The Government could now turn its attention from improvisation to meet day-to-day difficulties towards fundamental problems of inland transport policy, of which railway policy still formed the cornerstone. What had the railway crisis demonstrated about the adequacy of existing transport policy? In the spring of 1941, many aspects of this question were being discussed. Was the administrative structure of war-time inland transport weak? Had it been built up on insecure foundations? Could the railway crisis have been avoided and, what was much more vital, could a repetition of the experience be prevented? It was clear from the railway experience, at least, that the war effort would be likely to place yet heavier demands on the country's transport resources. Transport would not be plentiful, as had been implicitly assumed in the pre-war and early war-time days, but scarce. The urgent need was therefore to practise economy in the use not only of railway, but of all transport resources. This recognition of the need for transport economy meant that many of the assumptions on which early inland transport policy had been based, assumptions which had gradually been shown by experience to have been false, now had to be abandoned. Their abandonment implied that an attempt had to be made to plan the use of transport—in the sense of forecasting future demands on inland transport, and assessing the adequacy of inland transport resources to meet them. Such planning would be no easy task, but it was no less necessary because it was difficult. It would require a correspondingly tighter control over the provision and use of all the services of inland transport. Before the onset of the winter of 1941-1942, the foundations for such an approach to transport problems had been laid.

APPENDIX X

List of Important Railway Schemes carried out on Ministry of War Transport Account during the War

List includes:

'Insurance works', primarily undertaken to provide emergency routes (mostly for diversion clear of Central London), though also of everyday value in some cases. These are marked (R).

Other works (or groups of works with a common object) costing over £50,000, or else of special importance.

Works undertaken primarily for Bolero and Overlord movements are marked (B).

<i>Month in which works were completed or first used as a whole</i>	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
11/39	L.P.T.B.	£9,000	Kings Cross. Junction, Circle and 'Widened' lines	R
11/39	L.M.S.	£4,000	Gospel Oak. Junction	R
12/39	L.N.E.R.	£1,000	Marks Tey. Junction	R
12/39-12/40	Great Western	£68,000	Oxford-Didcot. Loops, Kennington Junction-Radley and at Didcot	R
1/40	L.N.E.R. and L.M.S.	£4,000	Harringay. Chord	R
1/40-5/40	Great Western	£8,000	Didcot-Reading-Basingstoke. Intermediate block posts and goods loop.	R
2/40-6/40	L.M.S.	£14,000	Bedford-Sandy. Longer crossing loops and doubling	R
2/40-6/40	Southern	£1,000	Dorking-Gomshall. Signalling improvements	R
4/40	L.M.S.	£12,000	Bletchley. Loops, Oxford and Cambridge branches	R
4/40-7/43	L.M.S.	£6,000	Emergency hydraulic power supply arrangements, London, Manchester and Glasgow	R
5/40	Southern	£4,000	Horsham. Marshalling sidings	R
5/40	Southern	£2,000	Ludgate Hill. Emergency crossover	R
6/40	L.N.E.R. and L.M.S.	£19,000	Sandy. Chord	R
6/40-3/42	L.N.E.R.	£158,000	Former Great Central main line. Marshalling yard extensions at Woodford and Annesley, loops at Charwelton, Rugby, Ashby Magna, Swithland, Loughborough, Ruddington and Hucknall	
6/40-2/41	Southern	£31,000	Micheldever, Eastleigh and Basingstoke. Sidings	
7/40	L.N.E.R. and L.M.S.	£3,000	Romford. Junction	R
7/40	L.N.E.R. and L.M.S.	£18,000	Calvert. Chord	
7/40-3/41	Great Western	£54,000	Llanwern. Loops	

<i>Month in which works were completed or first used as a whole</i>	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
7/40-1/41	Great Western	£117,000	Cardiff, Newport, Barry, Swansea. Sidings at Docks	
8/40	Southern	£22,000	Merstham. Reversing sidings	R
9/40	Great Western and Southern	£11,000	Staines. Chord	R
9/40	Southern	£21,000	Chichester. Marshalling yard	R
9/40	Southern	£19,000	Redhill. Loop and sidings	R
9/40	Southern	£26,000	Tonbridge. Marshalling yard	R
9/40	Great Western	£8,000	Colnbrook and West Drayton. Crossing loop extension	R
10/40	L.N.E.R.	£10,000	Benton. Chord, between Newcastle- Whitley Bay and Edinburgh lines	R
11/40	L.M.S. and Great Western	£10,000	Oxford. Junction	R
12/40-2/41	Great Western	£17,000	Banbury. Sidings	
During 1940	L.P.T.B.	£74,000	Cables for emergency power supply	R
2/41	Southern and Great Western	£91,000	Reading. Junction	R
2/41	Southern	£9,000	Canterbury. Chord between Chatham and Ramsgate lines	
3/41	Southern	£1,000	Kingsferry. Temporary rail and road span; Swale Bridge	R
3/41	L.P.T.B.	£4,000	Coaling, etc., facilities for emer- gency steam services	R
3/41	Great Western	£15,000	Tilhurst. Sidings	R
3/41	Southern and Great Western	£14,000	St. Budeaux. Junction	R
3/41-5/42	Great Western	£73,000	Didcot. Loops to Appleford Junc- tion and Milton	
4/41	Southern	£9,000	Deepdene. Protected offices and telephone exchange	R
5/41	L.M.S. and Great Western	£25,000	Yarnton. Exchange sidings	R
6/41	Great Western	£67,000	Tavistock Junction. Loops and marshalling yard extension	
6/41-1/42	L.P.T.B.	£27,000	Standby power supply from outside undertakings	R
7/41	L.M.S.	£33,000	Bordesley. Doubling goods branch to Great Western	
7/41	L.P.T.B.	£9,000	Bletchley. Reception line	R
7/41-1/42	Great Western	£51,000	Shrewsbury-Hereford line. Eight loops. Condover, Dorrington, Leebotwood, Church Stretton, Craven Arms, Bromfield, Woof- ferton, Leominster	
7/41	L.M.S.	£3,000	Watford Junction. Emergency con- nection, fast to electric lines	R
7/41	L.P.T.B.	£12,000	Emergency crossovers at Finsbury Park, Clapham Common, West Brompton and North Ealing	R
7/41-10/41	L.M.S.	£30,000	Carlisle-Stranraer. Lengthening 13 crossing loops	B
8/41-11/43	Southern	£17,000	Reading-Tonbridge. Signalling improvements	R

<i>Month in which works were completed or first used as a whole</i>	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
8/41-11/41	Southern	£86,000	Reading-Tonbridge line. Loops and sidings at Wokingham, North Camp, Shalford, Gomshall and extension of marshalling yard at Tonbridge	R
9/41	Great Western	£33,000	Moreton Cutting. Marshalling yard	R
9/41-2/42	Great Western	£43,000	Llantarnam, Penpergwm, Abergavenny, Pontrilas and Tram Inn. Loops	R
9/41	L.N.E.R.	£48,000	Blaydon. Marshalling yard	
11/41	Southern	£44,000	Emergency traction current supply, Western Section	R
11/41	L.M.S.	£21,000	Emergency traction current supply	R
11/41	Great Western	£257,000	Newport-Severn Tunnel Junction. Quadrupling	
11/41	Southern	£32,000	Waterloo. Protected telephone exchange	R
11/41	L.P.T.B.	£8,000	Standby power supply from S.R. at Victoria and Blackfriars	R
11/41	L.M.S.	£4,000	Emergency traction supply from L.P.T.B.	R
12/41	L.N.E.R.	£19,000	Northallerton. Avoiding line	R
12/41	Great Western	£18,000	Southall. Sidings	R
12/41-4/42	L.M.S.	£84,000	Derby-Bristol line. Loops and sidings at Elford, Kings Norton, Cheltenham, Gloucester and Charfield	
3/42-5/42	L.N.E.R.	£31,000	Holinwood and Kirkby Bentinck. Loops	B
3/42-8/42	L.N.E.R.	£22,000	Emergency goods terminals at Finsbury Park, Enfield, Palmers Green, Tufnell Park, Neasden and Wembley	R
4/42-9/42	L.N.E.R.	£76,000	Northallerton-Leeds line. Loops at Melmerby, Ripon, Monkton Moor, Harrogate, Thorp Arch, Tadcaster, Church Fenton and Sherburn-in-Elmet	
5/42	Southern	£39,000	Salisbury. Sidings	
6/42-10/42	Great Western	£128,000	Oxford. Loops to Wolvercote and Kennington Junction	R
6/42-9/42	L.M.S.	£18,000	Hendon and Brompton. Emergency goods terminals	R
6/42	Southern	£72,000	Rochester. Strengthening disused bridge over Medway for emergency road or rail use	
7/42	L.M.S.	£50,000	Shrewsbury (Harlescott Crossing). Marshalling yard	R
7/42-3/43	L.M.S.	£95,000	Ayr-Stranraer line. Holywood, Ruthwell, Eastriggs, Greta Green. Loops	
7/42	Great Western	£48,000	Westbury. Chord between Newbury and Bath lines	

<i>Month in which works were completed or first used as a whole</i>	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
7/42	Southern	£1,000	Wimbledon. Emergency goods terminal	R
7/42-2/43	Great Western	£53,000	Cheltenham-Andover line. Extension of nine crossing loops	
8/42	L.M.S.	£40,000	Swanbourne. Marshalling yard	
8/42	L.M.S.	£73,000	Northampton. Loops and sidings	
8/42	L.M.S.	£10,000	Bletchley. Chord to Oxford branch	
8/42	Great Western	£127,000	Oxford. Marshalling yard	
8/42-5/43	L.N.E.R.	£374,000	Pilmoor-Thirsk. Quadrupling	
8/42	L.M.S. and Great Western	£500,000	Gloucester-Cheltenham. Quadrupling	
9/42	L.M.S.	£23,000	Broom Junction. Chord to Stratford-on-Avon line	
9/42	L.M.S.	£28,000	Highland Section. Telephone circuits	
9/42-12/42	L.M.S.	£35,000	Highland Section. Five crossing loops and three intermediate block posts	
10/42	L.N.E.R.	£23,000	Woodford. Further marshalling yard extension	
10/42	L.N.E.R.	£24,000	Skelton Bridge (York). Through connection and river span	
10/42	L.N.E.R.	£65,000	Connington (nr. Peterborough). Marshalling yard	
10/42	L.N.E.R.	£28,000	Hull. Emergency office	R
10/42	Southern	£27,000	Dartford Junction. Chord	
10/42	L.M.S.	£11,000	Mickle Trafford. Junction with Cheshire Lines Committee	
11/42	Southern	£35,000	Southampton. Protected telephone exchange	R
11/42	L.N.E.R. and L.M.S.	£2,000	Stirling. Emergency connection	R
11/42-7/43	L.N.E.R.	£108,000	Reston, Ayton, Chevington, Preston-le-Skerne and Darlington. Loops	B
12/42	L.N.E.R.	£20,000	Newport (Middlesbrough). Locomotive depot improvements	
12/42	L.N.E.R.	£82,000	York. Reception sidings	
1/43	L.N.E.R.	£58,000	Cadder. Marshalling yard	
1/43	Great Western	£37,000	Banbury. Loop and sidings	
1/43-9/44	L.N.E.R.	£14,000	Emergency hydraulic power supply arrangements at London termini and Edinburgh	R
1/43-5/43	Great Western	£153,000	Newbury-Winchester line. Three crossing loops, extension of six already existing, chord to Southern near Winchester and improved telephone arrangements	B
2/43	L.N.E.R.	£59,000	Doncaster. Decoy yard extension	
2/43-4/43	L.N.E.R. and Great Western	£25,000	Wrexham. Exchange junction and sidings	
3/43	Great Western	£37,000	Chester-Newport-Birmingham. Control telephones	
3/43	Great Western	£42,000	Southall. Loop and sidings	

<i>Month in which works were completed or first used as a whole</i>	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
3/43	L.M.S.	£89,000	Carlisle. Additional bridge over River Eden and quadrupling	R
3/43-5/43	Great Western	£33,000	Didcot-Moreton. Loop	
3/43	Great Western	£34,000	Aldermaston. Loops	B
3/43-10/43	Great Western	£122,000	Witham, Castle Cary, Somerton, Athelney. Loops	B
3/43	Southern	£90,000	Shawford-Eastleigh. Loop and sidings	B
3/43	Southern	£56,000	Southampton. Rail access from west to docks and loops at Romsey	B
4/43-6/44	L.M.S.	£30,000	Walthamstow, Wandsworth Road, Lifford. Emergency goods terminals	R
4/43	Great Western	£64,000	Paddington. Protected telephone exchange	
4/43	Great Western	£41,000	Banbury. Locomotive depot improvements	
4/43	Great Western	£248,000	Didcot-Newbury. Doubling single line	B
4/43-8/44	Great Western	£54,000	Plymouth-Penzance. Loops at 4 points and telephone improvements	B
5/43	L.N.E.R.	£44,000	St. Margarets (Edinbro'). Locomotive depot improvements	
5/43-2/44	Southern and Great Western	£13,000	Launceston. Junction	B
5/43-12/43	Great Western	£91,000	Bristol-Plymouth. Loops and sidings at 5 points	B
6/43-2/44	Southern and Great Western	£51,000	Lydford. Junction and sidings	B
7/43	Mersey	£7,000	Emergency pumping plant	
7/43	Great Western	£54,000	Moreton Cutting. Marshalling yard extension	B
8/43	Great Western	£45,000	Severn Tunnel Junction. Housing scheme	
8/43	Great Western	£4,000	Shadow Signal Works vice Reading	R
8/43-10/43	Southern	£57,000	Additional sidings, etc., around Southampton at Micheldever, Eastleigh, Botley, Brockenhurst and Romsey	B
9/43	L.N.E.R.	£24,000	Heaton (Newcastle). Locomotive depot improvements	
9/43	Mersey	£14,000	Emergency traction current supply	R
9/43	Southern and Great Western	£42,000	Andover. Junction and doubling to Weyhill	B
10/43	Great Western	£106,000	Exeter. Loops and reversing sidings	B
10/43	Southern and Great Western	£10,000	Yeovil. Junction	B
10/43	L.N.E.R.	£30,000	Hawarden Bridge. Sidings	
11/43	L.N.E.R.	£21,000	Aberdeen. Control telephones	
12/43	Southern	£1,000	Waterloo and City Line. Emergency pumping plant	R
1/44	Great Western	£28,000	Paddington-Bristol-Plymouth. Carrier telephone circuits	

*Month in
which works
were completed
or first used
as a whole*

	<i>Company</i>	<i>Cost</i>	<i>Site and Nature</i>	<i>Purpose</i>
2/44	Great Western	£34,000	Westbury. Control telephones	B
4/44	L.P.T.B.	£2,000	Elephant. Emergency pumping plant	R
5/44	Great Western	£31,000	Didcot. Hostel	
5/44	Southern	£34,000	Chichester. Additional marshalling sidings	
6/44-10/44	L.N.E.R.	£38,000	Lincoln. Loops, sidings, etc.	
6/44-10/44	L.N.E.R.	£68,000	Trumpington and Cambridge. Sidings	
7/44	Southern	£211,000	Control telephones over whole system	
7/44	L.M.S.	£20,000	Manchester. Emergency office	R
7/44	Cheshire lines	£18,000	Birkenhead. Freight terminal in docks	
7/44	Cheshire lines	£28,000	Liverpool. Telephone control system	
8/44	Great Western	£27,000	Fairford Branch. Three crossing loops and additional station	
9/44	L.N.E.R.	£62,000	Welwyn Garden City. Marshalling yard	
10/44	Great Western	£22,000	Reading. Locomotive depot improvements	
12/44	L.M.S.	£8,000	Crewe. Emergency office	R
6/45	Great Western	£30,000	Severn Tunnel Junction. Locomotive depot improvements	
7/45	Great Western	£47,000	Oxford. Locomotive depot improvements	
4/46	Great Western	£20,000	Gloucester. Locomotive depot improvements	

CHAPTER VII

ADMINISTRATIVE RE-ORGANISATION,

1941

(i)

The Transport Situation at the Beginning of 1941

TO SET THIS CHAPTER in its proper perspective, it must be remembered that when the year 1941 opened the British Commonwealth stood practically alone in the conflict with Germany and Italy and German armies were in complete occupation of the West coast of Europe from the North Cape to the Pyrenees. Although the Battle of Britain had been won in the air, there was still the danger of an attempted German invasion of the British Isles, while London and the provincial cities came under almost nightly air attack. The power of the British people to wage war depended in the last resort on the country's ability to import from overseas, and at the beginning of 1941 the Government's concern over shipping and import problems was very great. The North Atlantic life-line stood imperilled by attacks from German submarines, surface raiders and aircraft, operating from bases in the newly conquered territories. Britain's ability to import was sharply reduced by sinkings, damage to ships and the elaborate defensive precautions that had to be taken to combat the enemy menace. At home the Armed Forces were indeed being steadily built up and the factories were working hard to supply them. Nevertheless the British people and their Government were waging a defensive struggle.

In the winter of 1940-1941, Britain managed to overcome most of her new short-term economic problems by skilful improvisation; among these were inland transport difficulties. The Government contrived, in spite of persistent transport difficulties, to get through the winter without coal supplies falling to a really dangerous level. Similarly, by many *ad hoc* and one or two fundamental improvements in organisation, it proved possible to avert the complete paralysis of port working, which congestion of inland transport had, for a short time, seemed to threaten. Gradually congestion on the railways was loosened and inland transport began to adapt itself more adequately

to its new and difficult tasks. But as the defensive phase of the war began to give way in the spring of 1941 to a period of greater stability, there remained many major questions of inland transport policy to be settled. As we have seen, the administrative framework of inland transport control had been built up on the old general assumption that there would be a surplus rather than a scarcity of inland transport resources for war needs, but the experiences of railway working in the months that followed the fall of France finally undermined this belief. At the beginning of 1941, therefore, one need was obvious: to reconstruct the framework of inland transport control to meet conditions not of surplus capacity, but of scarcity. By the end of that year, this reconstruction had been practically completed. Our concern in this chapter is to describe these developments. By way of background, the organisation of the central Government on the economic side at this stage of the war and its functions in relation to inland transport will first be outlined. Then, having probed a little more deeply into the nature of the problem of inland transport at the beginning of 1941, the chapter will indicate the direction of the changes in organisation which were to be undertaken in 1941. Then these changes will be examined in greater detail.

When Mr. Churchill re-organised the central machinery of Government in June 1940,¹ responsibility for economic and home affairs was entrusted to five Ministerial bodies. These were the Economic Policy Committee, authorised to 'concert and direct general economic policy', the Production Council, the Food Policy Committee, the Home Policy Committee and the Civil Defence Committee. The work of these five bodies was supervised by a 'steering committee', the Lord President's Committee. It was given the task of co-ordinating the work of the five Ministerial committees and ensuring that no part of the work was left uncovered. Various aspects of the general problem of inland transport came up from time to time for discussion by different Ministerial bodies, though no committee, at the outset, had been given specific responsibility for inland transport matters. As the railway position deteriorated, however, the Economic Policy Committee undertook in November 1940 to review inland transport problems at fortnightly intervals.

A further re-organisation of War Cabinet machinery was undertaken at the beginning of January 1941. The Economic Policy Committee was abolished along with the Production Council. Two new 'executives' were now appointed, a Production Executive and an Import Executive. The Lord President's Committee meanwhile expanded the scope of its activities to include those larger issues of policy which had formerly been handled by the Economic Policy

¹ For a full account see *British War Economy, op. cit.*, pp. 216-223.

Committee, but which had not been expressly transferred to either of the new executives. While the other Ministerial bodies, including the two executives, continued to handle the special inland transport problems appropriate to them, it was now agreed that the Lord President's Committee would, in future, keep the general problem of inland transport under continuous review.

In the opening months of 1941, when transport difficulties were imposing continued limitations on the movement of coal, imported commodities and munitions of war, these Ministerial bodies found themselves frequently occupied with a variety of inland transport problems. Indeed, there was reason for thinking, at this time, that inland transport might become one of the slenderest of the many 'bottlenecks' limiting war production and supplies for the civil population.¹ 'It would be disastrous', the Select Committee on National Expenditure was writing, 'if the exceptional efforts made at the factories to secure the production of urgently-needed goods were wasted through delays in getting factory products transported to the destinations at which they are urgently required.'² Even more urgent in these difficult days was the need to keep inland transport working efficiently in order to keep the ports clear and avoid delays to shipping. Shipping was a precious asset which Britain could ill afford to waste. 'It is . . . in shipping and in the power to transport across the oceans, particularly the Atlantic Ocean', the Prime Minister pointed out, 'that in 1941 the crunch of the whole war will be found.'³

So crucial did shipping become in the spring of 1941, that the Prime Minister constituted another special body at the highest level to tackle all aspects of the problem. 'The Battle of the Atlantic Committee', as it was called, was presided over by the Prime Minister himself and attended by the Ministers of Shipping and Transport, as well as other Ministers, high officials and Service chiefs concerned directly with shipping and import problems. At the first meeting on 19th March, the Prime Minister once again emphasised the vital need for reducing the time of turn-round of ships and urged that every effort should be directed to this end. Certainly, in the early months of 1941, the better working of the ports and the inland transport system serving them were two obvious prerequisites of a more economical use of shipping. Inland transport was, therefore, a matter for frequent deliberation by this new committee.⁴

¹ See *The Economist*, 11th January, 1941, leading article entitled 'Efficiency of Transport'.

² *Eighth Report from the Select Committee on National Expenditure, Session 1940-1941*.

³ Quoted in *British War Economy, op. cit.*, p. 254.

⁴ As the Select Committee on National Expenditure wrote: 'To improve the use of shipping, the crying need is to speed up the passage of goods through the ports . . . this

Thus, inland transport was now more frequently discussed at War Cabinet level than hitherto. But so far there had been no significant change in the way in which the whole problem of inland transport was approached—no proper separation of policy-making and planning from matters of routine administration. Even at War Cabinet level, attention, as far as inland transport was concerned, was almost always confined to particular matters of a technical nature, such as quickening the turn-round of railway wagons, new railway works, inland sorting depots, overside discharge from ocean-going ships into coasters, and so on. There was, moreover, a tendency to treat each of these technical questions in isolation: inland transport was not looked at as one economic problem but rather in relation to one or other of its specific functions where the greatest difficulties were being encountered.

To practical men, such technical questions were obviously of great importance. The handling of big steel cargoes and their haulage across the country away from the ports; the transportation of coal by rail to London and thence across the Thames to the South of England; the abnormal coastwise movements that had to be resorted to to relieve pressure on the railways: such tasks called for much skill and organisation. Yet it was important that the Government should not be so busy with the study of the individual trees that it could not see the shape of the wood as a whole. It was not enough to study in isolation each problem that came its way, for all the functions which inland transport had now to perform were inter-connected. Many demands for inland transport competed for the same scarce resources. For example, the amount of coastal shipping tonnage available to help in the discharge of deep sea shipping was limited by its uses for other purposes. Each additional ship diverted for overside discharge might have to be taken out of some other branch of the coastwise trade; and the relief thus given to the railways in clearing the ports would be offset by an increase in some other traffic, which coasters could not now carry. On the railways themselves, additional freight trains often meant fewer passenger services. How many coastal ships should be allocated for use in overside discharge as against use in other trades? What amount of line capacity on overburdened routes should be given over to freight trains as against passenger services? Wherever demands for inland transport exceeded the capacity of resources to meet them, problems of this kind were bound to arise and some attempt to solve them was necessary. No specific diversion of inland transport resources for the fulfilment of any one of its functions could be considered out of relation to the others. Transport

is not a shipping but a transport problem.' (*Tenth Report from the Select Committee on National Expenditure, Session 1940-1941.*)

was scarce: its use presented not only a variety of technical problems, but an economic problem.¹

As yet, in spite of the many committees, from the Ministerial level downwards, which concerned themselves with inland transport matters, there was no one organisation responsible for looking at inland transport as a whole. The position was very aptly summed up at the beginning of 1941 by a senior Ministry of Transport official as follows:

The present trouble (is) that imports, coal, military movements, etc., (are) dealt with by separate bodies with no clear idea of each other's problems, and the tendency is for success in dealing with one problem to aggravate the others.²

Now it has already been explained that the original controls over inland transport were framed to regulate the general policy of the transport industries and to provide machinery to meet particular and local shortages rather than conditions of general scarcity of inland transport. Clearly the growing realisation that inland transport must be looked at as a whole would be bound to have important implications for inland transport policy; not so much, perhaps, at War Cabinet level, but for Departmental organisation. At the beginning of 1941, the machinery of Government control over inland transport differed but little from that which had gone into action when the war started. Two quite separate Government departments were responsible for control of the inland transport industries. The Ministry of Transport had complete responsibility for the railways, road transport and the canals; it also had the important task of

¹ For a discussion of the distinction between an *economic* and a *technical* problem, see L. C. Robbins, *The Nature and Significance of Economic Science*, pp. 34–35. Professor Robbins' discussion is not without relevance to the kind of problem we are here considering.

² The transport situation in South Wales at the beginning of 1941 provides an excellent small-scale example of the problem of transport scarcity that was now fairly general. While no serious difficulties existed in South Wales itself, the amount of traffic that could be moved into England—most of it had to come by rail—was limited by the capacity of the railway line from Newport–Severn Tunnel Junction. Until the new works to increase the capacity of this route could be brought into use, it was impossible to move as much traffic over the route as was needed. There were four main claimants to the limited transport available: there was heavy passenger traffic; there was a considerable volume of import traffic moving away from the South Wales ports; traffic from new Government factories in the area was growing; 30 per cent. more coal traffic than normal was being railed inland from South Wales and more coal was there to be moved when the transport could be provided. With inland transport facing all these demands, all of them in one way or another essential to the war effort, it would have been useless to approach any one of them independently of the rest. The transport authorities were therefore compelled to devise some means of allocating transport among the competing claimants—however unwittingly or arbitrarily it might have been carried out. To solve such a problem along scientific lines would clearly have been a difficult matter. Who, for example, could judge whether greater advantage to the war effort would result from running say 'x' trainloads of coal traffic and 'y' trainloads of import traffic as against some other allocation of traffic between these two claimants? There was no way of measuring these relative advantages and disadvantages, though plainly the problem could not be avoided. It was a question which only the Government—not the inland transport authorities—could properly decide.

control over the home ports, with the specific duty of supervising the discharge and loading of cargoes as well as port clearance.¹ Coasting shipping, on the other hand, was controlled by the Ministry of Shipping, whose larger responsibility was the control of deep sea shipping. Such was the broad framework. Within this framework, the inner structure of control remained almost exactly as has been described in earlier chapters of this narrative. Railways continued to be controlled through the Railway Control Officer, who passed on Ministry of Transport policy to the Railway Executive Committee. The Railway Executive Committee, which, in spite of its name, combined the provision of advice with its executive functions remained responsible for the operation of the railway system as a unified whole. Road transport control was centred in the Ministry of Transport's Road Transport Divisions and devolved on the Regional Transport Commissioners. Both sides of the road transport industry were controlled through the fuel rationing system; road passenger services were supervised directly by the Commissioners and road goods transport were organised under the grouping system. Although the Regional Transport Commissioners were chiefly concerned with road transport matters, they kept in close touch with the local representatives of other branches of inland transport as well. In each of the Regions they were helped by an Advisory Committee representing local transport interests. At headquarters, a Road Haulage Consultative Committee had been set up in September 1940 to provide a regular meeting ground for the Ministry and prominent men in the road haulage industry. It was through this body that the Government's original road haulage scheme of 1941 was worked out.² Responsibility for canal policy also fell to the Ministry of Transport, but apart from those under railway ownership, the canals had not been taken under control. The Canal (Defence) Advisory Committee, which met at headquarters, and the six Regional Committees continued to exist as a medium for the discussion of canal problems.

The vital matters of port operation in the United Kingdom and transport away from the ports were controlled by the Ministry of Transport Port and Transit Division. This Division had two closely-related functions. One was the allocation of incoming ships between ports; the other was supervision of the operation and clearance of each port. The first function was discharged by the Diversion Room, a well-devised piece of machinery at the Ministry of Transport, where all the main users and suppliers of port and transit facilities together with the authorities responsible for the control and protection of

¹ *Tenth Report from the Select Committee on National Expenditure, Session 1940-1941.*

² Road transport developments during 1940-1941 are discussed in Chapter VIII below.

merchant shipping met every day.¹ The second function devolved on the Port Emergency Committees, which existed in each of the home ports and represented the port authority, the transport users and the suppliers of transport, including the railways. Because these bodies proved unwieldy, the machinery was strengthened in January 1941 by the appointment of Regional Port Directors for the principal groups of ports. They were able to exert wider powers than the Port Emergency Committees had hitherto enjoyed. The latter were also now strengthened by their Transport Sub-Committees, which met daily, if necessary, under the chairmanship of the Regional Port Directors and were endowed with full powers to allocate the type and quantity of transport away from the ports among the importing departments.²

Coastal shipping remained under the control of the Ministry of Shipping, Coasting and Short Sea Division. Control was decentralised into nine Area Control Committees, composed in the main of prominent shipowners in the coasting and short sea trade. These bodies were represented on the Port Emergency Committees. Voyages and freight rates were regulated through a licensing system in the case of tramp tonnage. Coasting liner tonnage was now requisitioned.

Thus three branches of inland transport, together with the home ports, came under the control of the Ministry of Transport; the other branch was controlled independently by the Ministry of Shipping. Within the Ministry of Transport, apart from the normal contacts between the various Divisions, the day-to-day working of the different Divisions was focussed in the Defence (Transport) Council. The heads of the Divisions met here daily under the chairmanship of the Permanent Secretary to review the inland transport situation and to discuss the wide variety of difficulties that cropped up.³ This

¹ The Ministry of Shipping also had its Shipping-in-Port Division, which was represented at the Diversion Room as well as on the Port and Transit Standing Committee, both parts of the Ministry of Transport headquarters machinery. The functions of the Shipping-in-Port Division were: 'the general supervision of the handling of ships in ports at home and abroad, and (to advise) as to the manner in which the general conditions affecting the handling of cargoes can be improved. It also co-ordinates the loading, bunkering etc., of ships so as to adjust their sailings to fit in with the convoy dates.' It is not altogether clear how far the Ministry of Transport and the Ministry of Shipping functions overlapped in the ports, though there is no doubt that the main responsibility fell to the Ministry of Transport. As the Select Committee on National Expenditure explained: 'To remove misconception in many quarters, the Sub-Committee find it necessary to make it clear that on the arrival of ships at home ports, and until they sail again, the Ministry of Transport and not the Ministry of Shipping is responsible for the discharge and loading of cargoes. That Ministry is also responsible for clearing the ports of goods. . . .' See *Tenth Report from the Select Committee on National Expenditure, Session 1940-1941*.

² *Merchant Shipping and the Demands of War*, *op. cit.*, Chapter VI, for a fuller discussion of questions of port organisation at this period.

³ A typical meeting of the Defence (Transport) Council on 14th January, 1941, discussed the following matters: the situation reports, double summer time, the railway wagon position, damage to highways, drop forgings for motor vehicles, new vehicle production, inland waterways, port charges, fire watching, land development, port clearance, road construction.

was not a body for policy making or initiating long-term Departmental action, but a useful means of keeping the daily working of the Department under review. At any rate, it helped the Divisions in the Ministry to be aware of one another's problems, though, since it lacked a representative of coastal shipping, its day-to-day knowledge of the inland transport situation was never altogether complete.

Such was the structure of inland transport control about the New Year of 1941. No attempt is made here to disentangle from the records the precise functions of each of the many committees which, at this time, dealt directly or indirectly with inland transport questions. Perhaps the most useful generalisation that can be made about the war-time organisation of inland transport at this time is that, although controls existed by which inland transport services could be curtailed or suspended in accordance with Government policy, the use of inland transport was not generally restricted from the consumer's point of view. Although the priority system gave preference to a limited amount of Government traffic, the services of the railways were available at the prevailing rates and charges to all who wished to use them. Road transport services, within the limits imposed by the fuel rationing control, and the services of canal carriers were similarly available to transport consumers. Demands on coastal shipping were firmly regulated but not severely restricted. Although detailed arrangements were now made centrally by a number of Government departments about the movements of traffic under their control—coal was the outstanding example—this was not the general practice.

The severe demands on the railways in the winter of 1940-1941—and it must be remembered that the railways were the mainstay of the inland transport system—disclosed a number of weaknesses in the existing war-time inland transport organisation. From the beginning of 1941, what remained of the old assumptions about 'surplus capacity' was swept away. In the process of reconstructing inland transport policy and organisation more emphasis would need to be laid on four points—first, the more efficient operation of inland transport resources by employing under-used resources like canals and pooling scarce resources; second, the expansion of inland transport resources where necessary; third, the measurement, wherever possible, of future demands for transport taken together, leading to the assessment of the probable future scarcity of inland transport and the control of demands to eliminate the least essential traffics; fourth, the strengthening of control over the inland transport agencies. Something has already been said about the first two points—of the measures being taken to improve railway working and the programme of new railway facilities. The other two points, however, raise more fundamental issues of inland transport policy: the possi-

bility of establishing machinery for the war-time allocation of inland transport; and the question of creating a single authority to exercise strong control over all the branches of inland transport.

The inter-departmental Railway Communications Committee, which had been set up in pre-war days to plan and allocate transport to meet the needs of Government departments, still existed, but it had failed to realise its aims. At the beginning of 1941, there existed no inter-departmental committee where the needs of Government departments for transport services could be focussed and related to the ability of the various branches of the inland transport system to meet them. There was no ready link at the centre between the user Departments and the transport controls and thus no means of estimating in a general way how scarce inland transport resources might become at any given time. Nor, as yet, had anyone studied ways and means of allocating inland transport.

There were two matters of transport organisation and control to be settled. The most important concerned the relations and responsibilities of the Ministry of Transport and the Ministry of Shipping. The division of responsibility between these two Ministries for port matters was by no means clear. Overlapping of functions in the ports had caused friction in the working of the machine during the autumn and winter crisis. Furthermore, the fact that coastal shipping was divorced from the authority responsible for the rest of inland transport would clearly handicap any attempt to approach the problem of inland transport as a whole. The other part of the question of organisation and control concerned the need for stronger Government control over the transport agencies themselves. In particular, it was necessary to dispense with the policy of encouraging traffic on to the railway system, which was inherent in the first financial agreement with the companies. It was also necessary to re-examine the whole question of the relationship between the Government and the railways.

(ii)

The Central Transport Committee

The first important step in the reconstruction of transport organisation was to provide a meeting ground between Government departments using inland transport and the transport controls: a place where the future demands of the user Departments could be matched against the supply of inland transport. This took the form of a Central Transport Committee, which began to function early in 1941.

It is no secret that the transport crisis of 1940-1941 caused frequent and sometimes serious, disputes between the Ministry of Transport

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on the one hand and the user Departments and the Ministry of Shipping on the other. Those Departments which found their traffic held up on the railways, particularly the Ministry of Food, soon made their complaints heard. The Ministry of Shipping protested strongly against transport delays which held up shipping in port while the Ministry of Transport had its grievances against the Ministry of Supply over delays in unloading railway wagons. Moreover, both the Ministry of Food and the Ministry of Shipping had pronounced views of their own on how inland transport should be managed.

Such inter-departmental friction was less a reflection of the weaknesses of the Government's control over inland transport than of each Department's ignorance of the others' problems. Although many well-meaning proposals for inland transport reform came forward from other Departments, few of them understood, or even recognised, the complexities of inland transport operation under existing conditions and the obstacles to full Government control.¹ Dissatisfied Departments saw the inland transport difficulties only as they affected their traffics. The Ministry of Transport, though by now much alive to the need for improvements, was aware that there was no simple or ready-made formula by which all inland transport problems could at once be solved.²

It was, however, clear that a means had yet to be found of getting the user Departments to understand the problems of the Ministry of Transport and the transport industries on the one hand, and on the other hand of keeping the Ministry of Transport properly informed of the user Departments' prospective transport needs. The volume of traffic put on to the inland transport system would, in future, need to be much more carefully planned beforehand so that transport would not again be overwhelmed with more traffic than it could handle. The need was admirably summed up by the late Lord Stamp in March 1941, shortly before his death:

Our great Service departments have been so concerned in time of peace with strategy and the programme of requirements it entails that they have not given adequate thought to transport, particularly as affecting industrial output. They have assumed that it would be available in any degree as and when wanted.

¹ As one Ministry of Shipping official wrote after attending an inter-departmental meeting to discuss inland transport problems: 'At one time the chairman made the remark that the operation of the railways was a much more complicated business than the operation of the ports, to which both Mr. — and I took strong exception.' Without attempting to pass judgment on this question, it is clear that the atmosphere which engendered this comment can scarcely have been conducive to close inter-departmental co-operation and understanding concerning inland transport problems.

² One leading railway official, in reply to a criticism of railway control, 'did not think any more could be done than was being done. It was condition' largely outside the railway control such as air raid damage, slowing down during warning periods, the blackout, shortage of labour and shortage of unloading facilities, which were slowing down traffic.'

Indeed, only slowly have they been learning to translate their requirements into the primal elements of raw material, manpower, ground space, and equipment. Only when these have been ascertained and aggregated has it been possible to demonstrate that, however reasonable one department might be, taken together, their demands may make nonsense.

The controller of the supply of one of these elements has not, till then, been able to see what priorities and allocations must be given and what steps taken to increase supplies of facilities, to reduce exports and civil consumption—indeed to know what real pinch was coming and where. Only now is transport coming into the picture—the next item in the ignorance of unknown aggregations to be thought worthy of notice.

Departments and contractors prefer the easy course of treating the railway system as something upon which any goods, in any quantity, at any time, by any sender, for any destination, can be dumped, without prior notice, but with full rights to acquire prompt and complete delivery. The idea that everyone will gain if they take the trouble to think out the transport implications of any piece of work, and advise a central Government agency, which by aggregation and co-ordination will be able to tell us what the demands upon us for particular places at particular times are likely to be, is only slowly gaining ground. It ought to be impossible for a Government department or a contractor suddenly to forward 50 wagon loads to a consignee who has only facilities for unloading two or three a day, or for several departments, unbeknown to each other, to make simultaneous demands upon a particular track to the extent of two or three times its capacity.¹

There were many who shared this belief in the need for a policy of conscious allocation of inland transport—as for example shipping and raw materials were allocated among competing demands. Yet it was clear that the obstacles in the way of putting such a policy into practice were formidable. How far was it possible to allocate inland transport at all?

A policy of allocating all transport in the sense of collecting together all prospective demands on the inland transport services, whether private or from Government departments, of sifting the demands and then allocating sufficient transport to meet those demands approved by the central authority would, if pushed to its logical conclusion, prove an administratively impossible task. An enormous variety and quantity of traffic is moved over the inland transport system in the course of a single year. There are tens of millions of separate consignments to be carried and numbers of passenger journeys reach astronomical proportions.

¹ Extract from the speech of Lord Stamp at the Annual General Meeting of the London Midland and Scottish Railway, March 1941.

On the other hand, an effective policy of allocation would have to be more than a mere matching of a few generalised statistics of demands for transport against statistics of estimated transport capacity. Transport statistics are indispensable for the effective control and operation of inland transport in war, but their uses are limited. Transport is not a homogeneous commodity and neither the total demand for transport nor its total supply can be accurately measured by any simple statistical device. To ask the railways, for example, to provide *x ton-miles* per annum of additional transport to meet the demands of a certain Government department is to provide information which is of little or no value to the railway operating or traffic expert who must decide whether or not the traffic can be carried, unless he can also be provided with such details as the nature of the traffic to be handled, the points between which it is to move, the nature of the route, the time of conveyance, the need for specialised facilities and so forth. The capacity of a particular section of railway line is difficult enough to assess. The capacity of the inland transport system as a whole is a nebulous concept, incapable of being measured statistically in advance.¹

The desirability of planning in advance and allocating inland transport could not therefore imply a rigid rationing system. It did, however, imply something more than a crude system of priorities or generalised statistical calculation. Those Government departments that argued from the success of their own allocation machinery that the Ministry of Transport could follow a similar policy for inland transport clearly over-simplified the problem. To the Ministry of Transport the most promising approach seemed to be in developing a closer liaison at the centre between the Government departments concerned with transport. While there was still a large movement of passenger and freight traffic over which Government departments had little or no control, the volume of traffic moving on Government account was now much larger than in pre-war days and was growing; moreover, Government-controlled traffic was more easily planned in advance and generally more essential. The obvious need was for an organisation where officials of those Government departments such as the Ministry of Food and the Ministry of Supply,

¹ The virtual impossibility of measuring the capacity of the railway system statistically was touched on earlier (p. 175, fn. 4). It is hardly necessary to point out that the capacity of the railway system cannot be measured as say an output of *x ton-miles*, which can be divided up and allocated to meet the demands of A, B, C, D, etc. The very nature of transport services precludes any conception of transport in terms of units of output. The plant and facilities of the inland transport industries are rarely specific to any one use, but frequently common to many; the same railway tracks are used for both passenger and freight traffic; the same motor lorries may carry one type of traffic over one route at one time and may move an entirely different type of traffic over a different route at another. Statistics in the form of *ton-miles*, *tons conveyed*, *passenger journeys*, etc., are useful in giving a rough idea of the work done by the transport industries at any given time, but they do not give a precise measure of the capacity of the inland transport system.

which were now the principal consumers of inland transport services, could have regular meetings with and state their requirements to the Ministry of Transport and representatives of the inland transport services. Transport suppliers and users could thus discuss each other's problems, plan large departmental traffic movements in advance to avoid clashing with the movements of other Departments and decide the form of transport to be used in meeting the demands.

A preliminary meeting was summoned at the Ministry of Transport on 31st January, 1941, 'to consider the case for the setting up of some new machinery for linking up at the centre the demand for internal transport, as represented by the Government departments principally concerned and the supply of inland transport, as represented by the services for which the Ministries of Transport and Shipping are responsible'. It was argued that lack of information about the probable demands on transport had hitherto prevented the planning of the use of transport, but now that the Supply departments had so far advanced their own plans, better forward planning could be undertaken. The proposal was supported by the Ministry of Food, but somewhat damply received by the other Departments concerned. Three preliminary meetings were held during the first three months of 1941, in the course of which it became clear that there were many problems that could be usefully discussed, particularly since the meetings were attended by the Chairman of the Railway Executive Committee or his representative, who was able to give the transport using Departments an idea of what the railways could or could not do, and to hear these Departments' particular grievances for himself.

This inter-departmental committee was formally constituted as the Central Transport Committee, and held its first meeting on 22nd April, 1941. Thereafter it met regularly throughout the war years—usually once a fortnight. It was the first official body where both the supply of inland transport and the prospective demands for it were considered together.¹ For the first time an attempt was made to measure the total demands on inland transport, and to allocate large blocks of Government traffic among the various forms of transport—i.e. rail, road, canal, and coastwise—according to the capacity

¹ The committee originally consisted of the heads of the railways, port and transit, and road transport divisions of the Ministry of Transport, the Chairman of the Railway Executive Committee, and representatives of the Ministries of Shipping, Supply, Food, the War Office, and certain other transport using departments. The Deputy Secretary of the Ministry of Transport was the chairman. During 1941 the membership of the committee was expanded, following the formation of the Ministry of War Transport, to include the head of Coasting and Short Sea Division, a canal representative, as well as the new Controller of Railways and representatives of the operating and commercial sides of the railways.

they had available, and not necessarily in accordance with financial considerations. The exact terms of reference of the committee were:

... to consider large transport requirements (immediate or prospective) of Departments with a view to their co-ordination and allocation to the means of transport; to consider questions as to the ability of transport to meet departmental demands and any proposals for planning large transport programmes or important developments of the means of transport.

These terms of reference at first represented an ideal whose realisation seemed a long way off. Ultimately, however, the Central Transport Committee went a long way towards reaching that ideal. It proved to be not only a useful but a necessary organisation, and during the later years of the war it was the central piece in the machinery of transport allocation. The committee's ability to discharge its functions obviously depended on a number of factors over which its influence was at first limited. On the one hand it relied on the ability of Government departments to control their demands on transport and to forecast them, in terms that could be translated into transport requirements, with reasonable accuracy. On the other hand it relied on the practical control by the Government over the supply and provision of all forms of transport. It was not long, however, before many of these conditions necessary for the successful working of the committee were satisfied. Its effectiveness was much increased during 1941 by the formation of the Ministry of War Transport and by the strengthening of Government control over the railways—developments that will shortly be described. Another important result that was to follow the formation of the new Ministry was that coastal shipping came within the scope of the Central Transport Committee. It should be understood that the Central Transport Committee did not replace, but supplemented local liaison such as had already been developed through the Regional Transport Commissioners' organisation and the Transport Sub-Committees of the Port Emergency Committees. These local arrangements were a necessary part of the allocation machinery, through which the policies agreed on by the Central Transport Committee could be embodied into specific tasks.

Of the more detailed aspects of the committee's work more will be said in later chapters of this narrative. One of its most noteworthy achievements was the regular compilation of estimates of future demands on the railways in the face of considerable statistical difficulties. It was necessary to reconstitute statistical work at the Ministry of Transport and to collect fuller statistics from the railway companies. It had proved a mistake for the Ministry of Transport

to have permitted a considerable reduction in the collection of railway statistics at the beginning of the war. Although, as has already been stressed, transport statistics require careful interpretation and cannot provide the sole basis for the central planning of inland transport, clearly the allocation of traffic at the highest level could not be undertaken without a general statistical picture of the facts. In inland transport, as in all fields of economic administration in the Second World War, trained statisticians and adequate official statistics proved themselves essential to the war effort.

The new committee set about its main task of economising in the use of inland transport in a number of ways. During 1941, for example, much time was given to the problem of reducing travel by passenger trains to give more space to freight traffic. Attention was also directed to reducing the strain on the railways by allocating large blocks of traffic, like timber, seed potatoes and cement to other forms of transport such as coastal shipping and canals. One important principle which the committee established was that when any Ministry proposed to authorise the building of a new factory or other establishment, or the extension of existing premises, it should, at an early stage, put the facts before the Central Transport Committee. The information to be provided included an estimate of the daily numbers of workpeople to be conveyed, and details of the places from which they would be drawn, together with the flow of freight traffic into and out of the establishment, so that the likely effect on transport facilities could be properly considered. Transport was not, of course, the only factor to be taken into account, but it was necessary that the transport implications of the matter should be fully weighed. As a result of this reporting procedure, several adjustments were made in the plans to locate new factories so as to simplify the transport problem. One difficult problem was the building of hostels in the neighbourhood of Government factories. The Ministry of Aircraft Production held that for reasons of security, the hostels should not be less than one and a half miles from the factory. On the other hand, the workpeople did not like walking between the hostel and the factory, and the Ministry of War Transport usually found it anything but easy to arrange bus services.

The Central Transport Committee was also able to make a start during 1941 in other fields of transport economy. Long and unnecessary cross-hauls were discouraged, and Government departments asked to place their contracts so as to avoid them. Manufacturers were also requested to purchase their home-produced raw materials—such as bricks and coal—from their nearest source of supply. The advance planning of large-scale commodity movements also simplified bulk loading and avoided waste of transport. During 1941, the Committee began to explore the problem of rationalising the distribution of

goods—including the retail distribution of consumer goods, over which there was as yet little Government control.¹

Another big task undertaken by the Central Transport Committee was the working out of plans to make inland transport ready to meet enemy invasion during 1941—this work was given over to a special sub-committee. A sub-committee was also appointed to investigate those localities where ‘bottlenecks’ in the transport system were causing acute and prolonged traffic difficulties.

Such were the main fields of the Committee’s work. It is impossible to discuss every detailed problem with which it grappled. The Central Transport Committee soon justified its existence as a central allocating body, and as a common meeting ground where Government departments could properly appreciate the problems of inland transport and make their own needs clearly understood.

The Central Transport Committee superseded the now ineffective Railway Communications Committee, though the Transport Priority Committee continued to function as before with its decisions subject to a right of appeal to the Lord President’s Committee. The Central Transport Committee was instructed to report to the Minister and to the War Transport Council. The latter was an advisory body brought into being by the Minister of Transport, Lt.-Col. Moore-Brabazon, in April 1941. The War Transport Council, subsequently renamed the Inland Transport War Council, consisted, apart from the official members, of a number of prominent men connected with the transport industry including Mr. W. P. Allen, Secretary of the Amalgamated Society of Locomotive Engineers and Firemen, Mr. Arthur Deakin, Acting General Secretary of the Transport and General Workers Union, Sir Arthur Griffith-Boscawen, Chairman of the Transport Advisory Council, Sir Frederick Heaton, Chairman and Managing Director of Thomas Tilling, Sir Maxwell Hicks, the head of a large independent road haulage concern, Sir William Prescott, Chairman of the Metropolitan Water Board and Lee Conservancy, Sir Douglas Ritchie, General Manager of the Port of London Authority, and Lord Stamp, Chairman of the L.M.S. Railway, who lost his life in an air raid after the first meeting. The aim of the Council was to have men ‘untrammelled by sectional interests’ to ‘discuss freely the larger problems affecting the nation’s transport’. The Council necessarily differed from the pre-war Transport Advisory Council, which had been constituted for a different purpose, in that it did not include representatives of the local authorities or of specific users of transport. It was a small body of experienced transport men to which the Minister could refer transport problems

¹ See further, Chapter XII below.

for discussion and advice, and whose members were free at any time to make their own recommendations to the Minister.

The chair at the meetings of the Council was usually taken by the Minister. The Council had no formal character or exact terms of reference, but had access to the minutes of the Central Transport Committee to whose birth it gave approval. The precise relationship between the Committee and the Council was that the former would 'provide a link between the War Transport Council and Government departments'. In practice, the value of the Inland Transport War Council depended largely on the interests of its members. For example, Sir Frederick Heaton gave much useful advice on measures for economising in the use of buses. With his assistance, a scheme to convert single-deck buses to carry 60 passengers—30 seated and 30 standing—was tested and put into practice. Among the many other problems on which the members of the Council gave advice and help were the experiments with producer gas vehicles, and the development of local schemes for staggering factory hours to relieve the strain on transport. The Council also provided constructive criticism and advice on the establishment of the first road hauliers' pool. Other suggestions put forward in the Council, such as means to reduce passenger travel on the railways—for example, through a permit system which had been agreed to be unworkable in the First World War—were less fruitful. It seems fair to say that the chief value of the Council was that it enabled the Minister to hear direct criticisms from the transport industry and the trade unions of improvements in the control and use of inland transport during the war, and at the same time enabled them to discuss their common problems in the presence of the Minister. It could be said that it was precisely because its members were 'trammelled by sectional interests' that the Council was of value. For it was primarily in the technical and expert advice that its members could provide from their own experience that the Council's contribution to the solution of war-time problems lay. The meetings of the Council grew less frequent as the war progressed, and the last meeting was held on 16th June, 1944. In contrast, the Central Transport Committee, consisting of officials who were actually grappling with the problems of planning large traffic movements in advance, met more frequently and functioned for a longer period.

(iii)

The Formation of the Ministry of War Transport

We turn now to the larger problems of war-time inland transport organisation. Perhaps the most important unsolved problem at the

beginning of 1941 was that of responsibility for the home ports. The discharge and loading of cargoes at the ports from the time of a ship's arrival until her sailing date had been unmistakably assigned to the Port and Transit Organisation of the Ministry of Transport, with its headquarters organisation in the form of a Standing Committee and the Diversion Room; local responsibility for port clearance was the task of the Port Emergency Committees and, from the beginning of 1941, the Regional Port Directors.

The appointment of Regional Port Directors was only one of the ways in which the Ministry of Transport's original organisation at the ports had been strengthened during the winter of 1940-1941. But the organisation was still complicated by the fact that the Ministry of Shipping also had responsibilities in the ports. Apart from the general control which it exercised over shipping and voyages, it was concerned with the loading and bunkering of ships in port as well as with arranging their times of sailing to fit in with convoy dates. For the purpose of exercising these responsibilities, the Ministry of Shipping had its own representatives at the ports, though these were not, in many cases, members of the Port Emergency Committees. It would, perhaps, be an exaggeration to describe the Ministry of Shipping port representatives as a 'duplicate set of officials', but it is clear that in the ports themselves the work of the two Departments tended to overlap, while contact and understanding between Ministry of Transport and Ministry of Shipping officials was not all it should have been. At the centre, although the two Ministries had close contact in the Diversion Room, the division of responsibility between them inevitably focussed attention on the shipping and inland transport aspects of port clearance as separate rather than closely-related matters.

Where then should responsibility for the home ports lie—at the Ministry of Shipping or the Ministry of Transport? One point of view maintained that the Port and Transit Organisation should come not under the Department controlling inland transport, but under that which controlled shipping; for, the argument ran, the Department responsible for planning the use of shipping could only carry out its task properly if it also had complete responsibility for ships while they were being unloaded and turned round in port. On the other hand, the rate at which ships can be turned round is dependent on the rate at which quays can be cleared; since this is very largely a problem for inland transport, it could be argued that port clearance had been rightly assigned to the Ministry of Transport.

Some attempt was made to solve the problem by improving co-ordination between the two Ministries. The War Cabinet agreed in November 1940 that the Minister of Transport and the Minister

of Shipping should collaborate in avoiding congestion at the ports. Joint meetings were accordingly held, at which the two Ministers, each with a small group of advisers, discussed such matters as the supply of mobile cranes, bolster wagons, storage accommodation, the provision of inland sorting depots and better lighting at the docks. These, of course, were questions that would normally have been settled at the ordinary departmental level and referred upwards only if a policy decision were needed. The records suggest that the meetings, though long, were of a somewhat desultory character and, after seven such meetings had been held between November 1940 and March 1941, they came to an end. Subsequently from 6th March, 1941, a standing committee consisting of the Assistant Chief of Naval Staff (Trade), the Director of Shipping in Port (Ministry of Shipping), and the Director of Ports (Ministry of Transport) met nearly every day to consider and remedy the causes of delay in the turn-round of ships.

In the spring of 1941, the shipping struggle reached a crucial stage. Figures for shipping losses in the first half of the year rose to new heights,¹ while many other factors, notably the time spent by ships in port, combined to reduce shipping performance. The urgency of speeding the turn-round of shipping was to be underlined by the heavy air attacks on the ports early in 1941, culminating in the raids on Liverpool in May. The turn-round of shipping and the clearance of the ports came up frequently for discussion by the new Battle of the Atlantic Committee—that is, at the highest level. This committee considered, among other possibilities, the appointment of a Controller of Inward Transport with executive power to co-ordinate all forms of inland transport with the object of keeping the ports clear. It was concluded that the situation did not call for this, but ‘the view was expressed that there might be some advantage in a closer co-ordination of the Ministries of Transport and Shipping’. Although therefore in April it was shown statistically that the time spent by ships in port had been noticeably reduced, an improvement not entirely due to the longer hours of daylight, the view was still widely held that the shipping, port and inland transport controls could be brought more closely together.

Towards the end of April, it became known that the Prime Minister had decided to combine the Ministry of Shipping and the Ministry of Transport into a single Ministry to be known as the Ministry of War Transport. (The title originally proposed was the Ministry of War-time Communications.) Henceforward one Division of the new Ministry of War Transport, called the Port and Transit Control, combined all the functions previously exercised by the

¹ *British War Economy, op. cit.*, p. 205, Table 3 (d).

Ministry of Transport Port and Transit Division and the Ministry of Shipping Directorate of Shipping in Port. Thus, responsibility for the various aspects of the turn-round of shipping was now given over to one controlling authority. Undoubtedly this was the principal argument for the change:¹

The main sphere in which the Shipping and Transport Ministries overlapped was in the handling of ships and cargoes in port; liaison was close, but contact by messenger and telephone cannot be so good as if one department only is concerned. Therefore the prime reason for merging the two Ministries was to provide one division only to deal with port and transit control.²

Another advantage of the fusion was that coastal shipping was now controlled by the same Ministry that had charge over the railways, road transport and the canals. For these two reasons it cannot be doubted that the solution was the logical one. It was, however, realised that the administrative task confronting the new Minister would be a very heavy one and it was even considered whether a Deputy or Under Minister might have to be appointed. Instead, however, it was decided to appoint two Joint Parliamentary Secretaries to the new Ministry—one for Shipping and one for Inland Transport.

On 9th May, 1941, Mr. F. J. Leathers (subsequently Lord Leathers) was appointed Minister of War Transport and all functions hitherto exercised by the Minister of Transport and the Minister of Shipping were transferred to him. The new Ministry was organised under a permanent head—the Director General—and three Deputy Directors General, two of whom dealt with shipping and one with inland transport. Certain other officials and advisers also had direct access to the Director General. The re-organised Port and Transit Control came under one of the two Deputy Directors General (Shipping), as did Coasting and Short Sea Division. Apart from this, inland transport, which came under the Deputy Director General (Inland Transport), who had formerly been Deputy Secretary to the old Ministry of Transport, was left largely as it had been organised before the amalgamation.

For inland transport, the advantage of the amalgamation was that

¹ So far as the author is aware, none of the official papers sets down a precise list of reasons for the fusion of the two Ministries. There seems, however, to be no doubt that the main reason was to make one authority responsible for the turn-round of shipping, although the Prime Minister may have had in mind at the same time a number of changes within the Shipping Ministry itself.

² *Modern Transport*, 14th June, 1941, article entitled 'Organisation of Ministry of War Transport'. See also Sir Cyril Hurcomb's address to Royal Empire Society, 13th June, 1945—'Among other advantages the fusion prevented any overlap of functions in the ports, where shipping and the inland transport agencies meet.' Sir Cyril Hurcomb was permanent head of the new Ministry from 1941 until the end of the war.

it brought the various inland transport controls into daily contact. The daily meetings of the heads of Divisions, which had met previously under the name of the Defence (Transport) Council, continued as before. Both the Port and Transit Control and Coasting and Short Sea Division were now represented on the Central Transport Committee; while the Inland Transport War Council, as the War Transport Council was now called, added to its numbers an expert on coastal shipping.

(iv)

Railway Control and the Second Financial Agreement

The other important, but unsolved, problem of war-time inland transport organisation at the beginning of 1941 concerned Government relations with the railways. The fundamental lesson of the autumn and winter transport crisis was that the railways were neither equipped nor organised to carry as much traffic under the full impact of total war as had been expected. It became increasingly plain from the autumn of 1940 onwards that the old policy of encouraging traffic from other branches of inland transport on to the railways needed to be drastically modified. It was, however, equally clear that the railways, because of their indispensable function in the movement of bulk traffics such as coal and because of the handicaps which war imposed on the use of road transport and coastal shipping, would continue to be the mainstay of the inland transport system. The Government's inland transport policy still hinged on its railway policy. It was therefore particularly necessary that railway policy should match the conditions of inland transport scarcity that now prevailed.

The two principal instruments of the Government's railway policy in the early days of the war were the machinery of control exercised through the Railway Executive Committee and the financial agreement with the controlled undertakings. These were closely related instruments, since one of the main objects of the financial agreement was to buttress the control machinery by giving the railway companies 'a direct financial interest in securing efficiency and economy'. It was therefore inevitable that when railway policy came to be revised, not only the control machinery, but also the original financial agreement should be called into question. To make this clear it is necessary to remind the reader of four points concerning the Government's original railway policy. First, that the financial agreement with the railways had been negotiated at a time when the Government's declared policy was to encourage the railways to carry more

traffic. Second, that this agreement provided an incentive to railway managers, responsible to their Boards of Directors, to carry more traffic by allowing the companies to retain a share in higher profits if they could earn them. Third, that the railway managers, as members of the Railway Executive Committee, had a direct responsibility to the Minister of Transport as his 'agents' to carry out the policy of the Government. Fourth, that as long as the policy of the Government was to encourage the railways to carry more traffic, the machinery of control, together with the financial agreement, were supposed to provide the railways with the maximum incentive to carry out the Government's policy. This was the theory on which the first financial agreement had been built. When, however, the Ministry of Transport realised that traffic must be diverted away from, instead of towards, the railways, the assumption underlying the original financial agreement was no longer valid. This was one reason for revising the agreement. Another was that the financial arrangements with the railways would, in any case, have to be revised to accord with changes in the Government's general financial and price policy. Furthermore, once the case was established for revising the railway financial agreement so as to remove the incentive of higher profit, then logically there was a case for strengthening Government control over the railways; though this was also necessary for other reasons. The new Ministry of War Transport was therefore faced with two closely related problems. First, it was necessary to decide how far the existing form of Government control of the railways should be changed—or even whether the railways should be nationalised. Second, a revised, or entirely new, financial agreement had to be worked out between the Government on the one hand and the railways and the L.P.T.B. on the other.

It will be recalled that there were four main provisions in the financial agreement with the railways announced in February 1940:

- (i) The railways were guaranteed a net pool profit of £40 million. If they earned another £3½ million, they kept it. Above this they retained one half of any additional net pool profits up to £56 million.¹
- (ii) Rates, fares, and charges were adjusted to meet variations in working costs, without reference to the volume of traffic,² on the principle that the railways must be self-supporting and that a Government subsidy was undesirable.

¹ The figures are approximate.

² It may be mentioned that the increase in war-time traffic on the railways (mainly Government traffic) was such that, even when, under the revised agreement, charges were stabilised at a figure of increase considerably less than the increase in costs, the railway pool net reserves were substantially greater, during the war, than the guaranteed payments to the railways. See below, p. 291.

- (iii) War damage up to a maximum of £10 million a year could be charged to revenue, and charges raised to meet it.
- (iv) Either the Government or the railways might propose a revision of the agreement for any cause of a major character.

The first important result in the working of the agreement had been that the railways applied for permission to increase their fares and charges to meet their rising costs. A first increase had been granted in May 1940, and two months later the R.E.C. had applied for a second. This second application led to considerable heart-searching in the Ministry of Transport about the working of the railway agreement; a number of alternative suggestions were put forward for meeting the second application for increased charges and for modifying the existing agreement. The essence of the problem was how to meet increased costs due to the war. Should the Government stand fast on the terms of the railway agreement, allowing the railways to pass on their increased costs to the transport consumer, or should increased costs be met by a Government subsidy? If the no-subsidy principle were adhered to, it was suggested that the terms of the agreement might be modified in favour of the users—i.e. by reducing the railways' chances of making profits. A further suggestion put forward for consideration was that irrespective of what was done about the present increase, plans should be made for bringing the railway system under Government ownership 'by way of a public corporation as part of a comprehensive plan for co-ordination of all forms of transport on similar lines'.

The whole question of the railway agreement was submitted to the War Cabinet which shared the misgivings about it; the Minister of Transport was accordingly invited to initiate discussions with the railway companies for its revision. He was instructed to aim at:

- (i) A limitation of net pool profits to the pre-war average of £40 million;
- (ii) The avoidance of any continued general increase in railway charges, particularly fares. The opinion of the War Cabinet was against a policy of raising rates and fares, especially since the railway companies were earning higher dividends than before the war.

In the light of these instructions, the problem was studied by the Treasury and the Ministry of Transport. It seemed that in fact the railways' second application for increased fares and charges must be accepted since the increase would do no more than offset increases in wages and other working costs which the railways had had to incur through no fault of their own; the only alternative was a subsidy which was to be strongly deprecated. As for the existing

agreement as a whole, it was felt that its basic principle was sound; this recognised that the railways were entitled to a reasonable and modest reward for efficient and economic working—an incentive that would be lacking in any arrangement for a fixed guarantee. However, as a result of the Government's general policy on War Damage Compensation, which would clearly apply to the railways in common with all other public utilities, an important modification of the present railway agreement would be necessary.¹ It was therefore proposed that a new agreement should be negotiated with the companies, but that it should preserve the main principles of the old one.

The War Cabinet, to which these matters were referred, approved the second application for increased fares. It also agreed that a fresh railway agreement should be negotiated. But since it was felt that the terms of the original agreement had perhaps been rather generous, the War Cabinet did not think that a new agreement should necessarily preserve the principles of the old one.

There was, as yet, no decision by the Government about the form an agreement would take—whether it would still give the railways an 'incentive to economy and efficiency' through the prospect of higher revenues, or whether the profits of the companies would be stabilised in the form of a fixed guarantee. For, in spite of the general unpopularity of the old agreement, the Government was aware that the alternative of a fixed guarantee carried with it the ominous prospect of a subsidy. As the Minister of Transport (Lt.-Col. J. T. C. Moore-Brabazon) put it to the House of Commons: 'I would say this about the agreement: it is true that the more I look at it the less I like it, but, on the other hand, the more I look at it the more difficult it is for me to find something better . . .'²

The arguments in favour of the existing agreement claimed that the arrangements with the railway companies had not cost the taxpayer a single penny by way of subsidy and that the railway undertakings had been maintained in a healthy economic condition.³ To this was added the highly dubious argument that the railways were given an incentive to carry traffic and to exercise economy. Against this position the following arguments were advanced: first, that the position of the railway managers had been made impossible because of their dual responsibilities, on the one hand to their companies and on the other to the Minister as members of

¹ Under the Government's new War Damage Scheme, war damage to public utility undertakings was to be treated as a capital charge, 50 per cent. of which was to be met out of public funds, whereas under the first railway agreement the cost of war damage (up to a maximum of £10 million) was to be met out of railway revenue.

² H. of C. Deb., Vol. 365, Col. 1767, 13th November, 1940.

³ It was said that increases in rates and fares granted since the war began yielded £35 million a year and represented a corresponding saving to the taxpayer.

the R.E.C.;¹ second, that the inevitable increases in rail charges contributed to the 'vicious spiral' of inflation; third, that there existed the temptation for the railways to accept more traffic than they could handle efficiently and that the effective control of the railways was hampered by the difficulty in which the Minister was placed in asking the railways to take any step calculated seriously to reduce the receipts of the pool.

Despite these weighty objections, the Ministry of Transport was not yet convinced that there was a case for more than a partial change in the existing arrangements. A strong line of thought still favoured the 'incentive' principle, though it was realised that the companies might have to be subsidised even under this arrangement if they were not to be allowed to pass on their future increased costs to the consumer in the form of higher charges. The other point of view was that the objections to the agreement would be completely removed if the companies were given a flat guarantee irrespective of what traffic they moved, as in the First World War. Nationalisation was also considered as a possible solution, though it was recognised that the transfer of the railways to public ownership in the middle of a war might be a prolonged and difficult process.

During the winter, as we have seen, the case for preserving the principles of the existing agreement was weakened by the overloading and congestion of the railways, while the investigations into railway working difficulties brought the existing control machinery under close review. The view was widely expressed that the present system whereby the General Managers met as a Railway Executive Committee had not given effective unity of direction. The Lord President's Committee therefore asked the Minister of Transport, who was already, at the War Cabinet's request, examining with the Chancellor of the Exchequer the basis of a revised financial agreement, to 'consider further how the operational organisation of the railways could be improved'.

In the meantime, the Treasury had made it known to the Ministry of Transport that the Budget speech in April would include an announcement of the Government's general policy to stabilise prices. This meant that the Government would aim in future at keeping railway charges at their existing level.² This policy, which ran

¹ The railway managers disliked the existing agreement because it tended to create a 'division of interest between the Railways and the Ministry'.

² 'Transport costs, which affect prices generally, are an important factor in determining the general price level and I propose to take upon the Exchequer increases that would otherwise become inevitable. I am also examining the question of how far the Exchequer may help in averting further increases in railway rates and fares. This is part, but only a part, of a very large complicated and important question which is now under close consideration.' Extract from the Chancellor's Budget Speech, April 1941, H. of C. Deb., Vol. 370, Col. 1321.

counter to that inherent in the first railway agreement, constituted a second 'major cause'—in addition to the question of war damage compensation—for approaching the railways for a revision of the agreement so laboriously completed a year before.

Revisions to the financial agreement and to the mechanism of control over the railways were discussed well into the summer of 1941. It was decided fairly early in the discussions about the financial agreement that to substitute in the existing agreement an Exchequer subsidy in place of higher charges to offset further increased costs would be likely to attract just as much criticism as increased rates and charges themselves. Since it would be an unsound policy for the Exchequer to subsidise railways to earn higher profits than before the war, the only solution was to allow the railways a guaranteed fixed income on the lines adopted in the First World War. It seemed probable, however, that agreement would not be possible without some fairly substantial advance on the existing minimum guarantee of £40 million.¹ When Lord Leathers, the new Minister of War Transport, was authorised by the Lord President's Committee in May 1941 to begin negotiations for a new financial agreement, he opened his discussions with the railway chairmen by telling them that 'in the Government's view the basis of the new agreement must be a fixed guarantee'.

The discussions in Government circles about the mechanism of control called for some difficult decisions on policy. When the discussions began in the spring of 1941, the general feeling was that the whole relationship between the Government and the railways must be altered. It was proposed that in order to remove the difficulties caused by the 'insufficient co-ordination and unity of effort secured by the present method of management' the Minister of Transport should appoint a Controller of Railways who would be responsible, under his direction, for the control of the undertakings during the war. It was also suggested that still further steps were necessary in order to promote greater unity of purpose among railway managers in running the railways as a single system during the war. According to this view, the chairmen of the railway companies should be told that when the present period of control ended after the war, the railways should not operate again as separate units but should continue under unified control; the preparation of a scheme of unification—including the adjustment of the relations between railway and road transport—would be undertaken as time and opportunity offered.

Would a declaration of this kind contribute to the greater efficiency

¹ The actual sum guaranteed to the four main line groups and the L.P.T.B. was £39,444,776, the round figure of £40,000,000 being reached by adding payments to the minor companies taken under control.

of the railways during the war? Some thought it would. Others felt that it might defeat its own object. Experience of railway amalgamation after the First World War and of the formation of the London Passenger Transport Board in 1933 had not been encouraging. It suggested that amalgamations were apt to give rise to 'a period of uncertainty among the staffs concerned, which at times resulted in something approaching chaos'.

The Minister of War Transport, Lord Leathers, came to the conclusion during the summer of 1941, that the fullest possible effort could be secured from the railways during the war without radical change from the existing control machinery. The proposed fixed guarantee in the railway agreement instead of the minimum guarantee and participation in profits, would assist in providing the response that was needed from the Railway Executive Committee and the General Managers. Undoubtedly, however, several changes in organisation were needed to improve the operational working of the railway system. In particular, the Minister proposed to modify the status of the R.E.C.¹ There had been a tendency in the past to regard the Committee as nothing more than a Conference of General Managers: in future it should be brought more closely into relation with the Ministry of War Transport, and a person 'with energy and initiative' should be appointed as Controller of Railways, to exercise on the Minister's behalf an effective influence over the work of the Committee. The Controller would not be a Civil Servant, but the administrative Division dealing with railway matters in the Ministry was to be re-organised so that operational matters would be under his final direction and he would have direct access to the Minister and Director General.

The War Cabinet was asked to decide whether these modified proposals were adequate and whether a public declaration that the railways were to be unified *after* the war would, or would not, be the best way to get the greatest co-operative effort from them during the war. It decided that the modified proposals for re-organising the R.E.C. would be adequate to enable the Minister of War Transport to bring about closer working between the different railway systems and to develop a spirit of more willing co-operation than had sometimes existed in the past. The War Cabinet further agreed that this decision did not prejudice the future consideration of any schemes for

¹ The Minister of War Transport was advised that 'hitherto the work of the (Railway Executive) Committee has been completely centralised in the hands of the Chairman under a somewhat elaborate system of minuting and correspondence with the Ministry of Transport, and that he has, in effect, been the sole channel of communication with the Government. More recently, the Railway Control Officer (himself the General Manager of the Southern Railway) has been a member of the R.E.C. . . . a happier atmosphere might be created by some modification of procedure and relationships, which it should not be impossible to bring about.'

re-organising the national transport system either in preparation for, or as part of, reconstruction after the war.

Once the War Cabinet had approved this policy, the Minister of War Transport was able to go ahead and work out the details of the intended changes. Turning first to the financial negotiations, we have already seen that the sum guaranteed to the four main line railways and the L.P.T.B. under the first financial agreement was equivalent to the average net revenues of the main line companies for the years 1935-1937 plus the 1938 net earnings of the L.P.T.B. The total amount was approximately £40 million. In the course of discussions between the Ministry of War Transport and the railway companies, the railway chairmen claimed that they were now entitled to a larger sum for three reasons: firstly, because the net earnings of the 'pool' during 1940 had been £42,300,000; secondly, because, they argued that they would be worse off under the new war damage compensation plan; thirdly, because they considered that account ought to be taken of the loss they had incurred owing to the delay by the Government in agreeing to increased charges to meet increasing costs. This loss, known as the 'lag', would have been recovered under the terms of the old agreement. The Government answer was that the increased revenue the railways had earned in 1940 was due to war-time traffic and that any settlement must be related to pre-war earnings; that it was impossible to foretell whether the railways would be better or worse off under the new war damage policy, but they would be expected, like all other industrial undertakings, to fall in line with the new scheme; and that, as to the 'lag', the railways had a legitimate claim, but had over-estimated the figure. There were in fact so many complicated questions that entered into the financial negotiations, that there was no simple objective criterion for deciding what was a fair figure for the fixed guarantee. The Minister of War Transport thought that, taking all the railways' claims into account, they were entitled to something more than the old minimum guarantee of £40,000,000. He made an original offer of £41,000,000, which was eventually raised to £43,000,000,¹ and was accepted by the companies' representatives in August 1941. The negotiations can, however, scarcely be described as hard bargaining, for the railway companies accepted these terms under pressure, having been told that in the absence of agreement, a settlement might be imposed on them, and if this were done it would 'mean the re-opening of questions not then at issue'. The Government, at any rate, appears to have been well satisfied with the result of the negotiations. The Lord President's Committee considered the settlement 'a very satisfactory achievement', and this view was reflected by the War Cabinet.

¹ The railway chairmen felt that they could fairly claim a rental of £47½ million.

The main provisions of the revised agreement, which was made retrospective from 1st January, 1941, were straightforward. In future, the net result of the 'pool' was for the account of the Government, who were to receive any surplus above the agreed sum of £43,000,000 and make good any deficiency.¹ The arrangement for the accumulation of funds to meet arrears of maintenance, continued as in the first agreement. War damage was to come into line with the Government's general policy for public utility undertakings, the Government and the railways each paying 50 per cent. of the total cost. Henceforward, in accordance with the declared policy of stabilising the cost of living, there was to be no question of raising railway rates, fares, and charges.² Government traffic carried by the railways continued to be paid for, the rates to be charged being left to future negotiation. Government control of the railways was to continue for at least a year after the cessation of hostilities.

The results of the second financial agreement were in many ways spectacular: each year the pool paid a substantial surplus over the fixed guaranteed sum³ to the Exchequer. The approximate figures are as follows:

<i>Year ended</i>	<i>Net revenue of pool</i>	<i>Surplus over fixed guaranteed sum</i>
	£	£
31st December, 1941	65,125,000	21,656,000
„ „ 1942	89,126,000	45,657,000
„ „ 1943	105,568,000	62,099,000
„ „ 1944	90,256,000	45,787,000
„ „ 1945	62,547,000	19,078,000

These large sums retained by the Government were, of course, largely due to payments by departments for the movement of Government traffic, particularly military traffic, and may therefore be described as transfer payments. (In the First World War, it will be remembered, most Government traffic was not charged for, so that there was no satisfactory means of measuring railway earnings.) The Government may be said to have done well financially out of the revised agreement. Moreover the agreement had other advantages over the original one: for one thing, it enabled a simplified accounting procedure to be worked out for Government-controlled traffics; secondly, since the controlled railway undertakings no longer had a direct interest in the level of their profits, they were no longer

¹ The main heads of the agreement were summarised as a White Paper, Cmd. 6314. The agreement was embodied in The Railways Agreement (Powers) Order, 1941, S.R. & O. 1941, No. 2074.

² The actual amount of the fixed annual sums paid to the controlled railway undertakings, including the minor railway companies, was £43,469,000.

³ These figures are to be found on the following Command papers: 1941, Cmd. 6349; 1942, Cmd. 6436; 1943, Cmd. 6512; 1944, Cmd. 6619; 1945, Cmd. 6797.

distracted from giving over their entire energies to the war effort. As for the loss of the 'incentive' principle, this was made up for by a tighter financial control exercised by the Ministry of War Transport, as well as the changes in the status of the R.E.C. in relation to the Ministry.

Turning now to the changes in the form of Government control over the railways, it will be recalled that at the outbreak of war a Railway Control Officer was appointed. This officer acted as a link between the Minister of Transport and the R.E.C., and communicated Government instructions to the controlled railway undertakings. The first Railway Control Officer, a senior Ministry of Transport official,¹ had been replaced on his promotion to Deputy Secretary of the Ministry in August 1940 by Mr. G. S. Szlumper, who had formerly been the General Manager of the Southern Railway and subsequently Director General of Movements and Transportation at the War Office.

It has been explained earlier that the R.E.C., though responsible to the Minister, was quite separate from the Ministry of Transport. For a long time, the Railway Control Officer was not a member of the Committee, nor did he attend its meetings; liaison between the Committee and the Ministry of Transport being carried on through 'a somewhat elaborate system of minuting and correspondence', with the Chairman of the R.E.C. becoming in effect 'the sole channel of communication with the Government'. The great weakness of this system was that it gave the individual railway managers little or no opportunity to meet senior Ministry of Transport officials and discuss those traffic and operating problems peculiar to their railway systems. For it needs to be stressed that unity of purpose among the railway managers did not necessarily imply complete uniformity of practice on four railway systems, where methods of working and traffic conditions inevitably varied according to individual characteristics and local peculiarities. A first move to bring the R.E.C. into closer relationship with the Ministry of Transport was made in March 1941 when the Railway Control Officer was made a member of the Railway Executive Committee. As General Manager of the Southern Railway, Mr. Szlumper had actually been a member of the R.E.C. for a short period when the war began. The significance of the change made in March 1941, however, was that for the first time either in the First World War or the Second, a person holding an official position in the Ministry of Transport was made a member of the Committee responsible for supervising railway operation.

When, in July 1941, Mr. Szlumper left the Ministry of War Transport to take up a position with the Board of Trade, Lord Leathers

¹ Mr. R. H. (later Sir Reginald) Hill.

fulfilled the proposal made by his predecessor, and subsequently reiterated by himself, to appoint a Controller of Railways in the Ministry of War Transport. At the same time he followed the precedent of having a representative of the Ministry on the Railway Executive Committee. For on 7th August, 1941, it was announced¹ that Sir Alan Anderson, G.B.E., was to be appointed both Controller of Railways and Chairman of the Railway Executive Committee in place of Sir Ralph Wedgwood. Sir James Milne, General Manager of the Great Western Railway, became the Deputy Chairman.

Sir Alan Anderson was a man of wide experience, who had formerly been a director of the L.M.S. Railway. His appointment fitted in with the feeling which was at that time in the ascendant that successful business men were especially well suited to undertake large administrative tasks in war-time. He had not, of course, the same expert knowledge of railway operation possessed by his predecessor as Chairman of the Railway Executive Committee, or by the former Railway Control Officer. Nevertheless, as a former railway director of many years' experience, he was on the one hand able to explain railway problems to the Ministry, and on the other well-fitted to enlist the support of the railway managers in carrying out Government policy.

Following Sir Alan Anderson's appointment, a number of organisational changes were made with the object of bringing the leading railwaymen into closer contact with Government officials. The main machinery instituted for this purpose was the Controller of Railways' Conference.² At these meetings—held usually once a fortnight—Ministry of War Transport officials met the members of the R.E.C. for a general review and discussion of railway traffic, operating and maintenance problems. At the same time, the opportunity was taken to define more clearly the functions and procedure of the R.E.C., whose Chairman now had a direct responsibility to the Director General and the Minister. The duties of the R.E.C. were laid down as follows:

to ensure that the railways are operated in accordance with the policy of the Minister, whether expressed in formal directions or not, and to apply their knowledge of the actual and potential capacity of the railways so as to secure that they make the greatest contribution to the war effort. To this end they will provide a unified direction so that the railways may be operated so far as possible as one system.³

The Railway Executive Committee was told that the Minister had

¹ Statement by Col. Llewellyn in the House of Commons, 7th August, 1941.

² This met under Sir Alan Anderson's chairmanship.

³ See Appendix XI, p. 297, for the detailed instructions outlining the new relationship of the R.E.C. to the Ministry.

combined the office of Chairman of the Railway Executive Committee and Controller of Railways in order to bring about closer relations between the R.E.C. and his Department. The holder of this double office would be responsible for communicating and interpreting the Minister's policy to the railways and bringing the Minister's views before the Committee; the Deputy Chairman would give his attention to the more detailed aspects.

Thus, the purpose of the changes was primarily to bring the R.E.C. under stricter supervision by the Ministry. With this re-organisation, the machinery of Government control over the working of the railways became complete. No other significant war-time changes followed the appointment of Sir Alan Anderson. It is fair to say that already, as a result of the winter railway crisis, steps had been taken to remedy most of the deficiencies disclosed in railway working. If the intention behind the appointment of the new Controller was to have a person with energy and initiative to put things right on the railways, Sir Alan Anderson was fortunate in that many of them had been or were being put right before he took office.

The second financial agreement and the tightening of Government control of the railways completed the main administrative changes resulting from the railway crisis of the previous winter. By the autumn of 1941, the foundations of war-time railway policy had been firmly laid and the Ministry of War Transport had built up an organisation for controlling the railways, which was to remain, without radical alteration, until the end of the war.

One important result of the second railway financial agreement was that it became possible to carry out a drastic simplification of railway charges for traffic on Government account. It was explained earlier that, in May 1940, a Government Traffic (Railway Charges) Committee was set up to work out agreed percentage reductions on standard charges for the principal classes of Government traffic.¹ The task facing this Committee was a large one. The original railway agreement, as has been explained, provided that Government departments should pay for their traffic at rates fixed on commercial considerations, for example, the volume and regularity of the traffic (disputes being determinable by the President of the Railway Rates Tribunal as Arbitrator with two other members as assessors). Pre-war exceptional rates existed for much Ministry of Food traffic, but most of the traffic of other Departments was new, or over routes on which no exceptional rates existed. Detailed negotiation of exceptional rates would have necessitated a new expert staff in the Departments and years of negotiation. The problem, therefore, was to find a formula (percentage reductions from standard charges were

¹ See above, p. 128.

accepted) which would reflect any existing exceptional rates and those which might have been expected from detailed negotiations. Pre-war exceptional rates were very often low because of road competition, which practically ceased after the outbreak of war. An immediate difficulty, therefore, was the basis on which exceptional rates would have been negotiated. In these circumstances, and in view of the amount of money involved, the settlement of the percentage reductions was a matter of great complexity and entailed much hard bargaining. By the summer of 1941, however, after protracted negotiations, agreement was reached on this question between the Government departments concerned and the railways. From 1st June, 1941, a system of percentage reductions from standard charges, varying with the class of traffic, was applied to merchandise traffic consigned on Government account.¹

Four months later, following the second financial agreement between the Government and the railway companies, it became possible further to simplify this whole procedure. From 1st October, 1941, a system of flat rates per ton was adopted for most Government traffic and was subsequently extended to nearly all Departments.² Each Department had a separate flat rate per ton, irrespective of distance conveyed or description of traffic, which applied to all the controlled railways. The flat rates were based on the average charge per ton paid by the Department for merchandise traffic in July 1941.³ This system enabled considerable all-round savings in manpower and book-keeping to be made. It did, of course, mean that the cost of rail transport to the Departments for particular consignments bore no relation to the real cost of carrying them or to the charges

¹ The Ministry of Food received a further special discount of 5 per cent. on its total bill. For this and the question of Government charges for Ministry of Food traffics, see *Food*, Volume I, *op. cit.*, pp. 212-213.

² The flat rates were analogous to the 'agreed' charges made by the railway companies to private traders under the Road and Rail Traffic Act, 1933.

³ The following were the flat rates charged to Government departments and the Services:

	<i>per ton</i>
Admiralty	35s. 0d.
War Department	36s. 0d.
Canadian Military Authorities	36s. 0d.
Air Ministry (including M.A.P.)	36s. 3d.
Ministry of Supply	30s. 0d.
Ministry of Home Security	32s. 0d.
Ministry of Food	26s. 5d.
General Post Office	32s. 6d.
Ministry of Works	38s. 9d.
H.M. Stationery Office	64s. 6d.
Ministry of Agriculture and Fisheries	45s. 0d.
Prison Commission	56s. 0d.
Department of Agriculture for Scotland (applicable only to traffic between stations in Scotland)	36s. 9d.
Ministry of War Transport	29s. 5d.

Source: R. Bell, *op. cit.*, Appendix 2.

made by other forms of inland transport. The Treasury, however, gave strict instructions to Departments that comparisons between the amount of the flat rate and the cost of carriage by other forms of transport must be disregarded. The only criterion to be applied by Departments was whether, in existing circumstances, consignment by rail or other means of transport made the best use of available facilities. To ensure that these instructions were carried out, a Charges (Vigilance) Committee was appointed to draw attention to any undesirable diversion of traffic from or to the railways as a result of the system of flat rates and to suggest appropriate remedies.

APPENDIX XI

Future Functions and Procedure of the Railway Executive Committee

MINISTER OF WAR TRANSPORT TO CHAIRMAN (Leathers to Anderson)

It will, I think, be convenient to set out briefly the lines on which the Ministry and the Railway Executive Committee will work together with your assumption of the double office of Chairman of the Committee and Controller of Railways. I send you, therefore, the attached note with which I understand you are in complete agreement . . .

LEATHERS.

1. By virtue of the Railway Control Order, made under Defence Regulation 69, the Minister of War Transport is in full control of the Railways. He has appointed the Railway Executive Committee as his agents for the purpose of such control. It is the responsibility of the Executive Committee to ensure that the railways are operated in accordance with the policy of the Minister, whether expressed in formal directions or otherwise, and to apply their knowledge of the actual and potential capacity of the railways so as to secure that they make the greatest contribution to furthering the war effort. To this end they will provide a unified direction so that the railways may be operated as far as possible as one system.

2. The Chairman of the Railway Executive Committee will bring the Minister's views and requirements before the Committee, and will be responsible for ensuring that the necessary instructions are given. He will guide the Committee, and through it the railway managements, in carrying out Government policy and giving effect to the conception that the railways are to be operated as one network with a single aim.

3. The Chairman will be assisted by a Deputy Chairman who will pay particular attention to the more detailed and technical aspects of the operation of the railways as a whole.

4. The Minister has combined the offices of Chairman of the Railway Executive Committee and Controller of Railways in one person. By this step, the relations of the Railway Executive Committee and the Department are brought closer. The holder of the double office will be at once responsible for communicating and interpreting the Minister's policy to the Railways through the Railway Executive Committee, of which he is Chairman, and for putting before the Minister and his officers the views and advice of the Committee, which he will be able more effectively to do by virtue of his position in the Department itself.

The Railways Division of the Ministry of War Transport will be fully available to him for purposes of consultation, advice, and information. On matters of major importance, communication in both directions will be made personally by Sir Alan Anderson, and where written communications between the Ministry and the Committee take place they will ordinarily be conducted by minute.

The Railways Division is responsible administratively to the Deputy

Director General (Inland Transport) and will submit to him, or through him, to Director General or Ministers, questions of policy (including Parliamentary work) or questions affecting other divisions of the Ministry or other Departments of the Government, civil defence emergency plans or labour.

Questions affecting railway expenditure and matters falling within the normal sphere of the Chief Inspecting Officer of Railways or the statutory duties of the Railways will also be submitted as necessary to the Deputy Director General.

5. *Controller's Conferences*

In order further to facilitate and strengthen consultation between the Ministry and the Railway Executive Committee, the Controller will hold weekly or at other intervals a Conference at the Ministry consisting of the members of the Railway Executive Committee, the Deputy Director General (Inland Transport) and the heads of the Railways Division.

The Parliamentary Secretary and Director General will be furnished with copies of the agenda and minutes of these Conferences and will attend ex-officio when desirable.

CHAPTER VIII

ROAD TRANSPORT

IN 1940 AND 1941

(i)

The Motor Fuel Situation

BETWEEN the fall of France and Pearl Harbour, the availability of fuel supplies continued to determine the extent of the activities of road transport. Before examining road haulage and road passenger transport developments in that period, it is appropriate first of all to trace the main trends in the motor fuel situation.

The oil stocks of the United Kingdom were increasing when the German advance into Europe began, and the fall of France brought an immediate further improvement in the oil position. The import requirements of the French were no longer an allied responsibility and, at the same time, the number of tankers under British control was materially increased by the German invasions of Norway and Holland—two of the most important tanker-owning nations.¹ This improvement was temporary, for in the long run the German control over the European seaboard, coupled with the Italian entry into the war, substantially increased Axis ability to interfere with allied shipping. Nevertheless, during the summer and autumn of 1940, oil-importing requirements for which the British were responsible decreased—France alone had been expected to need 10½ million tons—while British oil-importing capacity increased. The number of tankers available at that time was more than enough for total needs.² Some relaxation in the restrictions on fuel consumption could therefore be permitted for road transport.

Regional Transport Commissioners were told in July of the temporary improvement and authorised to issue fuel rations up to 90 per cent. of pre-war consumption for goods vehicles in each region where necessary. This was expected to help the new seven-day

¹ e.g. out of 268 Norwegian tankers, the Germans secured only 35, the Italians 2 and Vichy France detained 4.

² The Executive Committee of the Oil Control Board produced a new forward estimate of British supply requirements in July 1940. They calculated that the new programme would require 580 neutral tankers. The British at that time controlled 629 tankers with the prospect of securing more if necessary. There could be no long-term complacency however, as the German rate of sinking was increasing.

production drive for munitions, which, it was thought, would make additional demands on road transport.

Two months later, R.T.C.s were asked:

... whether ... (they were) ... of the opinion that, assuming no general deterioration in the condition of the means of transport, the War effort (could not) be speeded up by more liberal issues of motor fuel, nor difficulties smoothed out where the use of rail instead of road transport for essential traffic had been causing considerable inconvenience at substantial extra cost.

All but two regions reported that more liberal issues were not necessary in the interests of the war effort; the two that expected to have to issue more fuel to road transport were those where rail transport was already being disorganised by enemy bombing.

During the autumn of 1940, however, the consumption of fuel for road haulage rose because the railways needed help.¹ For example, grants of extra fuel were given for 'considerable increases in the tonnage of coal roadborne', while there were also specific instructions to R.T.C.s to divert a substantial proportion of suitable traffics from rail to road. Lorries were needed in considerable numbers to clear sheds and quays at the ports even when goods would ultimately be moved by rail² and extra fuel was also issued for carrying goods to ports by road as part of the export drive.³ The road haulage industry was in fact being used to its full capacity. For indeed, when extra vehicles were needed for special jobs of carrying tarmac and cement for airfield construction, it was found that there were few vehicles which could be spared. Long-distance vehicles, for instance, were loaded on an average to 80 per cent. of their capacity, including return journeys. On the passenger side of the industry, fuel consumption also increased. The improvement in the fuel position during the summer of 1940 enabled Regional Transport Commissioners to allow extra fuel for buses and coaches for recreational purposes. Motor spirit consumption for goods and public service vehicles therefore rose from a weekly average of about 25 thousand tons in June 1940 to 27·4 thousand tons by November. Similarly DERV fuel consumption rose from 7·8 to 8·3 thousand tons.⁴ This increased rate of consumption continued through the 1940-1941 winter.

¹ See above, pp. 221 *et seq.*

² An investigation into conditions at Liverpool in November 1940 estimated 80 per cent. of Liverpool's total imports were taken from the sheds by road. Many of the goods were only moved to warehouses in the city, of course.

³ e.g. on 14th November the Lord President's Committee decided that R.T.C.s should be asked to treat sympathetically applications for additional fuel for conveyance of export goods by road to Liverpool. Special arrangements had been made from March 1940 onwards for supplying fuel to vehicles transferred away from their home area to port areas.

⁴ See Statistical Appendix, Table 10.

By the end of 1940, however, the general oil stock position was worsening again. Consumption had increased, but United Kingdom importing capacity was rapidly decreasing because the shipping diversion was by October causing such congestion in the oil importing Western ports that not only was the oil lost which normally came into the United Kingdom through the South and East coast ports, but the Western ports themselves were handling less oil than they had before shipping diversion started.¹ At the same time heavy tanker losses² and roundabout tanker journeys to avoid the closed Mediterranean and the German-held Atlantic seaboard were reducing the effective carrying capacity of the tanker fleet.

The period of relaxation of fuel restrictions was therefore over. By early 1941 user Departments were being asked to make drastic economies. Goods and public service vehicles were the biggest civilian users of fuel—(122 thousand tons and 41 thousand tons a month respectively out of a total civil consumption of 292 thousand tons), but in February the Lord President's Committee decided against cuts in their allocation because road transport was necessarily being used to help when railways were damaged and trains were delayed by bombing. As spring approached, however, the intensity of enemy air attack diminished while the fuel position was growing more serious. A revised report was made to the Import Executive by the Oil Control Board on 20th March, 1941. Whereas the previous reports had shown a fairly satisfactory situation, stocks were now shown to have fallen sharply. Imports were falling. During the month of December 1940 at 180 thousand tons they were the lowest ever and the February and March imports were also well below consumption.

In March 1941 the Ministry of Transport was therefore invited to consider what economies it could make in fuel consumption. It recommended a cut of one-sixth in the basic ration for goods vehicles, i.e. the basic was to be reduced to $2\frac{1}{2}$ units of fuel for each $\frac{1}{2}$ ton of the vehicle's unladen weight. It also recommended that issues to public service vehicles should be cut to save 3 million gallons of fuel a year (i.e. just over one week's consumption). The Ministry was however reluctant to recommend the almost complete elimination of all long-distance express services until the vehicles and drivers were definitely required on other essential work, on the ground that it would 'destroy a reserve of vehicles, drivers and organisation which might prove extremely valuable in the event of serious disorganisation of the trunk railway services'. The fuel position was considered

¹ A full account of the difficulties of importing oil through the Western ports will be given in *Oil* by D. Payton-Smith in this series.

² In July and August 1940, for example, the rate of tanker losses was three times the rate of new building.

sufficiently serious for the Lord President's Committee to accept the recommended cut in the basic ration and the reductions in bus and coach services in April 1941, as a part of economies planned to save at least 172,000 tons of motor spirit per annum in civilian consumption as a whole. Although oil imports did increase during March, April and May, and there was a certain amount of lend-lease oil from the U.S.A., this was offset by increasing consumption,¹ and the need for economy continued. Although long-distance bus services had been reviewed twice and heavily pruned since the outbreak of war, R.T.C.s were told that there was still further room for cuts, even if alternative rail routes were inconvenient or liable to dislocation. During the coming summer, fuel issues for summer pleasure services were to be very limited and recreational services were to be restricted to 'reasonable facilities' for industrial workers or the military where no alternative facilities were available.

Goods operators did not receive the cut in the basic ration well. They had come to regard the basic as a right and considered it hard that private cars should continue to have a basic ration for pleasure motoring when they, who depended on their vehicles for a living, had to be cut. Many commercial vehicles running entirely on the basic ration, it was pointed out, were doing work as essential as were those which received supplementary rations. For example, former pleasure coaches used for workmen's services were often run by operators who only got a basic ration.

Nevertheless, if cuts had to be made, the Ministry of Transport considered it was the right policy to reduce the basic ration for goods vehicles, even if supplementary rations had to be increased by exactly the same amount, for the discretionary supplementary ration gave the Ministry of Transport more control over the road haulage industry and over the use of fuel, than the automatic basic issue.

As the summer proceeded it became clear that still further reductions in fuel consumption would be necessary and a Joint Conference

1

TOTAL PETROLEUM PRODUCTS (GREAT BRITAIN)

Thousand tons

<i>Weekly averages</i>	<i>Imports (all products)</i>	<i>Consumption motor spirit only</i>	
		<i>Civilian</i>	<i>Total</i>
September 1939	131	n.a.	266
September 1940	150	56	223
December 1940	180	57	221
March 1941	201	59	254
April 1941	237	63	253
May 1941	210	65	253

on Motor Fuel Rationing and Economies was set up in August 1941 under the chairmanship of the Parliamentary Secretary to the Ministry of War Transport. On the 20th September it was decided to abolish the basic ration for public service vehicles, making the whole issue of fuel to them at the discretion of the Regional Transport Commissioners. Although the abolition of this basic ration made little difference to the bus services provided, as bus owners could in any case only operate approved services, it gave the R.T.C.s a closer control over the operators.

In October the basic ration for goods vehicles was again reduced by one-fifth (i.e. to 2 units of motor spirit or DERV oil for each $\frac{1}{2}$ ton unladen weight of the vehicle). The road transport industry on this occasion had been warned of this cut beforehand, and was told that few supplementary rations of fuel for retail delivery would be issued.¹

These successive cuts in the basic ration were particularly aimed at reducing the use of fuel for retail delivery. The amount of fuel said to be used unnecessarily for this purpose had received considerable attention throughout the summer of 1941. A letter from the Minister of Food to an M.P. in June 1941 received wide publicity. In this he stated:

we still have brought to our knowledge almost every day cases where a number of food vehicles running half empty are delivering the same commodity in the same area, and we continually hear of vehicles carrying virtually the same kind of foodstuffs in opposite directions passing one another on the same road. Moreover, retail distributors of milk, bread and other foodstuffs still continue to distribute these commodities from several vehicles in the same street.

The Ministry of War Transport however was not so convinced that substantial savings could be made. A senior official wrote, 'One form of goods traffic which is constantly attacked as wasteful is retail delivery. Here the possible savings are, I am sure, much exaggerated.' Nevertheless the Ministry entered wholeheartedly into schemes to reduce fuel consumption for retail delivery. Organisers of groups engaged mainly in retail (or indeed wholesale) distribution were urged to arrange pooling schemes and to exercise the utmost economy in the use of fuel for these purposes, and R.T.C.s were instructed that it would be necessary to refuse any issue of supplementary rations for retail delivery unless they were satisfied that the goods were 'essential to the war effort and life of the community and had

¹ Applications for supplementary rations, of course, always rose after a cut in the basic ration.

to be delivered by road', and finally that all efforts had been made to pool vehicles.

In July 1941 a press notice was issued to traders to encourage the pooling of deliveries, and offering the help of the Ministry of War Transport's officers in arranging such schemes. Although some were arranged—for example, laundries—there was an absence of co-operation among many retail distributors who preferred to stop deliveries rather than to co-operate with their trade rivals.

These rationalisation schemes, although only as yet of limited application, showed some results. Sub-district Managers had been asked to make a return in December 1939 and in August 1941 and again in December 1942, giving an analysis of goods vehicles according to the type of goods carried.¹ This analysis showed that in December 1939 the percentage of total fuel consumption represented by retail deliveries had been 21·7 per cent., whereas in 1941 it had fallen to 16·7 per cent. and by 1942 to 11·7 per cent. The change in the pattern of fuel consumption by goods vehicles is illustrated by the following rough estimates, based on the same return:

	<i>Local work</i>	<i>Semi-local work</i>	<i>Trunk and long distance</i>
1939	56·2 per cent.	28·2 per cent.	15·6 per cent.
1941	53·8 per cent.	32·8 per cent.	13·4 per cent.
1942	48·8 per cent.	35·2 per cent.	16·0 per cent.

To sum up, at the fall of France a temporary improvement in the fuel position gave an opportunity for road transport to increase its services, but from the end of 1940 the port crisis and then the tanker shortage altered this favourable picture into one of fuel shortage. From 1941 onwards the use of road transport was increasingly limited not primarily by a shortage of capacity as in the case of other forms of inland transport, but by a shortage of fuel and, after the Japanese victories in the Far East, of tyres.

(ii)

Road Haulage: The Evolution of Positive Control

It has already been mentioned that road haulage was called upon to help the railways both in port clearance and other tasks during the critical autumn and winter of 1940-1941. Like the railways, the road haulage industry encountered many difficulties at this time and its resources proved insufficient to meet all the demands made upon

¹ This return was originally intended as a guide to the transfer between road and rail carriage.

them, principally because they were not adequately organised for the purpose. By the end of 1940, the supply of road vehicles suitable for carrying substantial loads was no longer equal to the demand. The Ministry of Transport discovered, as it had feared, that really urgent needs could only be met with difficulty, since the system of control by discretionary petrol rations did not operate rapidly enough to divert vehicles from the work they were doing to work of a higher order of priority. It was this experience that finally convinced the Ministry of Transport of the need for a greater degree of organisation in the road goods transport industry—something more thorough-going than the control hitherto exercised through fuel rationing.

The weaknesses of the existing form of road transport control which became apparent at this time had not been unforeseen. Road Transport Division had realised, many months earlier, that its Emergency Road Transport Organisation might not prove equal to the strain that might arise from an event such as shipping diversion, and had sought to devise a stronger organisation, with the aim of giving the Ministry operational and financial control of vehicles. This was found to be difficult. It proved a good deal easier to set down the broad aim of policy, namely to possess an organisation able to exercise positive control, than to overcome the obstacles to its achievement. These obstacles were considerable. Since the Ministry had no operating experience, men from the industry would have to be called on to help. If operational control was to work, the industry as a whole would not only have to be persuaded that this was necessary, but be willing to join the organisation through which control was to be exercised. For the road goods transport industry still composed a highly individualistic and keenly competitive industry. The grouping scheme imposed on the industry at the outbreak of war had not greatly diminished the rivalry between firms and there was still little unity of purpose within the industry as a whole. In these circumstances the Ministry of Transport inevitably faced a long and uphill task, not only in building up an organisation that would give it positive control, where none had previously existed, but in handling the delicate question of getting the industry to take part in the scheme. It was to take two years of prolonged negotiations with the industry to achieve this. Not until the early months of 1942 was the Ministry of War Transport able to launch its first experiment in the operational control of road haulage, and then only after many setbacks and much compromise. It is now necessary to trace these developments in some detail. Starting with the Emergency Road Transport Organisation, it will be shown how the need for positive control first arose and how the character of the industry prevented its immediate application; how the need for operational control was

confirmed by the experiences of the autumn and winter of 1940-1941; and finally, how the first road haulage scheme was worked out and negotiated with the industry during 1941.

EARLY DEVELOPMENTS

The aims of control over the goods side of the road transport industry had, in the early days of the war, been necessarily limited. Since it was assumed before the war that petrol would be scarce, and the railways had capacity to spare, it was decided that road transport would have to be restricted. This, as was explained earlier, was one factor which influenced the pattern of war-time control of road transport. There was also another: direct operational control over the 200,000 firms and half-million vehicles which composed the industry was, however desirable in theory, an administrative impossibility in 1939. The original Emergency Road Transport Organisation therefore aimed, as was explained in an earlier chapter,¹ to do three things: to save petrol by restricting long hauls; to enable the Government, through petrol rationing, to encourage, though not to compel, hauliers to divert their resources from the less to the more essential needs; and finally to give the Government information about the availability of vehicles throughout the country. In the early months of the war, this machinery worked well enough, and achieved the aims it had set out to fulfil. But these early months brought few abnormal demands for transport, and the machinery was not then submitted to a thorough test. It remained to be seen how adequate it would prove if railway communications were broken or a large-scale shipping diversion instituted. Would a form of control which relied mainly on ordinary commercial incentives be able to provide enough road transport to meet such urgent needs?

The existing control machinery had, to a limited extent, provided for emergencies of this sort. If the demand for commercial road transport at a particular place could not be met out of the resources of that Region, the Regional Transport Commissioner could ask the Ministry of Transport to arrange for vehicles to be moved from those Regions with a surplus. It was hoped that operators would then transfer their vehicles voluntarily.² But if voluntary means failed to provide enough lorries, the Ministry proposed to requisition them and attach them to the larger operators in those parts of the country where they were needed. The Ministry did not however like the idea of requisitioning. It had the power to requisition vehicles, but not drivers. If, therefore, the normal driver of a requisitioned lorry

¹ See above, Chapter IV, Section (i).

² The opinion was expressed before the war, and repeated later by responsible persons in the industry, that a situation of this kind could be met without difficulty by voluntary effort on the part of the operators, i.e. if the goods were there to be moved, the operators would come and fetch them.

refused to go with it, a casual driver would have to be found. There would also be difficulties in providing adequate maintenance services for vehicles away from their home bases, while complicated financial problems were expected to arise between the Government and the operators. Since the Ministry of Transport lacked an experienced organisation to handle difficulties of this kind, it was far from convinced that requisitioning would make possible rapid transfers to meet sudden emergencies.

Road Transport Division was not, for these reasons, wholly satisfied with existing arrangements. There could be no certainty that voluntary transfer would always produce enough vehicles when and where they were needed, while the Emergency Road Transport Organisation did not provide the Government with the machinery for positive control. From the spring of 1940 onwards, it became increasingly apparent that some form of operational control was called for if emergency transport needs, such as might follow heavy air raids or shipping diversion, were to be met. Tentative proposals in this direction were first put to the Road Transport (Defence) Advisory Committee in April 1940, where it was agreed:

that it was necessary for some form of organisation to be set up to deal with road transport problems in special emergencies such as shipping diversion . . . (and) . . . that the Minister be advised to ask certain persons to form a Committee . . . (to) consider the setting up of an organisation for operational and financial management of vehicles transferred, either on requisition or voluntarily from their normal bases.

The Regional Transport Commissioners opposed this step. They argued that the existing arrangements were adequate, and that a large Government-sponsored organisation would be unworkable. It might, it was suggested, cause 'great jealousy among those hauliers who were outside the organisation and probably among those who were within it'. They considered it would be wiser to proceed on the principle which control had hitherto followed, namely, 'that the ordinary channels of trade should function in the normal manner'.¹ They saw no point in moving vehicles to bases in other Regions, since it was the normal practice in the road haulage industry to send vehicles to fetch goods from the area where they were required. To move vehicles from their home bases to West coast ports during a shipping diversion would only result in overcrowding.

In May 1940, however, the Ministry of Transport decided to invite a committee of men prominent in the road haulage industry to

¹ 'This is the principle underlying the "grouping" system on which the organisation of the Ministry is built; and the Commissioners desire to suggest that it is not desirable to abandon the practice of grouping on almost the first occasion when the application of such principles for something more than rationing might be contemplated.'

study the problems of operational and financial management of transferred vehicles. The Road Goods Transport Special Emergency Committee, as it was called, under the chairmanship of Mr. S. E. Garcke, produced its report at the end of that month.¹ It deprecated the use of requisitioning powers, which, it said, should only be used in the last resort. It also concluded that 'the principle of entrusting the actual operation of transferred vehicles to other operators on a management fee basis (was) uneconomical, wasteful, and unsound'. The Committee, however, 'reached the very definite conclusion that in the event of a transport dislocation of any magnitude, the voluntary transfer of vehicles could suffice only if properly co-ordinated by means of a scheme involving centralised control'. Such a scheme would have to be equally suited to the operation of either voluntarily transferred or requisitioned vehicles; it would have to be flexible, and designed to supplement ordinary commercial practices where these did not suffice. Centralised control would be obtained through a proposed statutory board, to be financed by the Government, with area offices at key points throughout the country. It would be staffed by experienced men from the industry, have the power to make contracts with hauliers, and direct the operation of transferred vehicles. Primarily the board would carry Government traffic, and orders for transport would be placed with the local board instead of with individual hauliers.

The Ministry of Transport saw a good many objections to this scheme. It agreed with the Committee about the undesirability of requisitioning vehicles, but rejected the 'Garcke' proposal for a statutory board. This had been well thought out, but would leave too much power in the hands of the industry and not enough in the hands of the Ministry of Transport. The Ministry of Transport thought that it would lead to a certain group of operators working to their own pecuniary advantage under the aegis of the Government, with high rates and a monopoly of traffic. It was also feared that a 'serious risk of confusion' would arise if the plan were suddenly put into operation at the onset of an emergency, and 'under conditions which have become considerably more acute since the Committee reported'. This was in July 1940.

As the autumn approached, there were already signs of the impending transport crisis. The Ministry of Transport was far from certain that road haulage could meet all expected demands through the control machinery then working,² but time was getting short,

¹ Mr. Garcke, who was not himself a representative of the road haulage industry, but a person of much experience in the road passenger transport industry, did not give his unqualified approval to the Committee's proposals.

² A senior official of Road Transport Division wrote: 'I have been trying to work out a possible organisation of the road haulage industry in order to have some positive

and the war situation changing rapidly. Few could foretell accurately the measure of road transport requirements in the months to come. In these circumstances, it seemed wiser, for the time being, to make the best of the existing organisation, whatever its imperfections, rather than launch a hurriedly-devised and untried scheme in the middle of a crisis.

In the District Transport Offices throughout the country, lists of vehicles which could be transferred to hard-pressed Regions had already been prepared. On 3rd September, all Regional Transport Commissioners were asked to report to the Ministry on the progress made towards the formation of these so-called 'shadow groups'. At the same time, instructions went out to the Regional Transport Commissioners and Port Emergency Committees to strengthen their arrangements for supplying road transport at the ports. The road transport members of the Port Emergency executive committees were asked to form committees representative of local hauliers to help in organising, and if necessary pooling, road transport resources in the port areas. The Ministry of Transport did not expect that these measures would suffice to meet all expected demands, but short of complete re-organisation, these steps went about as far as it was possible to go in consolidating the arrangements then in being.

ROAD HAULAGE AND THE TRANSPORT CRISIS

The doubts which the Ministry of Transport had entertained about the adequacy of the Emergency Road Transport Organisation were amply confirmed in the autumn and winter of 1940-1941. For in these months road transport became steadily scarcer. New and heavy demands for road haulage were arising as a result of congestion on the railways, the diversion of shipping, and the growing war effort. The supply of road transport, on the other hand, could not be much increased because of the lack of new vehicles and spare parts, and the calling up of drivers into the Armed Forces.¹ Fortunately, as we have seen, motor fuel became temporarily more plentiful after the French collapse, though it was to become a serious problem in the spring of 1941. The road transport problem was no longer only a matter of restricting fuel supplies, but of organising all the industry's scarce resources to meet increased demands and giving priority to the most essential needs. This problem had its different aspects. First, there

alternative to the Garcke Committee's recommendations by means of a system of registered hauliers who would have certain privileges and undertake certain obligations. It is already evident, however, from the preliminary consideration I have been able to give to it that serious difficulties are involved, and I am by no means certain that I can find a way out of them.'

¹ In January 1941, the supply of drivers was reported by the Ministry of Labour as being 'down to bedrock'.

were the problems which arose from the diversion of shipping to the Western ports in September. In some ports, particularly those mainly dependent for their clearance on road haulage, the problem was, in the main, one of mobilising all local road goods transport resources to give rapid clearance. In other ports, those in the Bristol Channel area, for example, road transport had to be called in from further afield to help the over-burdened railways. In the second place, road transport was now being called on not only at the ports, but in varying degrees throughout the country, to relieve railway congestion. In October, an instruction went out to all Regional Transport Commissioners to divert a substantial proportion of suitable traffics from rail to road. Thirdly, in some parts of the country, especially in the West of England, the intensification of the war effort was making new calls on road transport. New aerodromes, munition factories, and camps were being built and brought into use, and made more work for the road hauliers to do. As a result of these demands, it was necessary not only to mobilise local resources, but in some places, to obtain more long-distance transport than was available in nearby districts. As had been expected, some Regional Transport Commissioners had to call on other Regions for help.

To meet these local shortages of road transport, a variety of expedients was used. A certain amount of use was made of the 'shadow groups' and road transport emergency pools were set up in some of the larger ports. In the most hard-pressed areas, army lorries had to be called on to help commercial road goods transport. The emergency pools, which were formed in Bristol, Liverpool, Manchester, and elsewhere, provided a channel through which import traffic could be allocated to the large number of private haulage firms. Methods of operating the pools varied at different ports to suit local conditions. They were organised locally through the road transport members on the Port Emergency executive committees, and run by bodies of local hauliers. Although they worked closely with the Regional Transport Commissioners' organisation, they were all voluntary bodies, neither controlled nor financed by the Government. They became in effect clearinghouses for import and other Government traffic, and their managements worked on a commission basis. Many road haulage firms willingly joined these pools, and their services were much used by the importing departments of the Government. The 'shadow groups' were a kind of counterpart to the pools at inland centres. They aimed to provide a reservoir of vehicles that could be called on at short notice either for port clearance or other urgent work. These groups had been formed at the request of the various Regional Transport Commissioners, though, like the port pools, they relied on the voluntary efforts of the firms that joined them. They were used to fetch goods destined for the London area and

inland from hard-pressed places like Avonmouth and Bristol, where local resources were insufficient.

But neither the pools nor the 'shadow groups' were able to provide enough road transport to meet all needs. It became steadily more difficult to get enough vehicles of the right type at the right time. The most serious difficulties were experienced in places such as the West of England where no spare vehicles were to be had locally and where help was not always forthcoming from other parts of the country. The response to the Government's appeals for help in the movement of urgent traffic, though valuable, was not complete. While large and small haulage firms alike joined the pools and 'shadow groups' and did useful work, there were others less able or willing to assist. Some only did so under pressure and threats of withdrawal of their fuel rations. Many hauliers were reluctant to abandon their regular connections and traffics. Since the pools and 'shadow groups' were voluntary bodies, firms could not be compelled to join them, though they could be induced through the fuel rationing system to turn to the more essential forms of work. But the hauliers' regular traffics frequently paid much better than the work they were offered through the groups and pools. Although the Government was anxious not to increase the transport costs of essential traffics, higher rates often proved the only way of getting operators to carry them. Since road transport was becoming scarcer, and operating costs increasing, there was, at this time, a tendency for road haulage rates in general to rise. The Ministry of Transport had powers to control these rates, but found it difficult to do so in practice because there was no established structure of rates in the industry. To say that hauliers had to be offered attractive rates to induce them to join the pools and 'shadow groups' is not to imply that the majority of firms in the industry were devoid of patriotic motives or indifferent to the needs of the time. On the contrary, many of them did yeoman service for the war effort at this time. But it was not always easy for the man in a small way of business to turn a blind eye to his own finances, or to risk losses for which he could expect no compensation.

The 'shadow groups' and pools encountered many difficulties which not only discouraged firms from joining them but raised embarrassing financial questions. There were occasions, fortunately rare, where transport was inefficiently ordered, and lorries were called out only to find no work waiting for them. There was also the troublesome question of 'waiting time'. Vehicles loaded with export cargoes were, on occasions, held up for as long as two or three days at the ports before they could unload. This not only kept lorries idle, but made hauliers unwilling to carry this traffic without some compensation for their lost time. Further difficulties arose in agreeing on rates for one-way loads. When vehicles had to be mobilised at short notice,

it was not always possible to provide them with loads in both directions. This again was uneconomical and tended to put up costs. Moreover, it raised delicate questions of rate fixing which the pools found it hard to settle. Such difficulties are typical of the many with which the pools and groups had to contend. They demonstrate the disadvantages under which these organisations had to work, handicapped as they were by their voluntary nature and financial instability.

Because these organisations were voluntary bodies, they received no financial backing from the Government. What little working capital they had came from the pockets of their individual members. When, as often unhappily occurred, Government departments and private traders were slow to settle their accounts for the transport services they had used, individual hauliers had to go short of working funds. This became a serious problem by the end of 1940. Firms which had provided their services willingly were often put to considerable financial embarrassment—an unfortunate development in every way. For it not only left the virtuous unrewarded, but did much to bring the 'shadow groups' into disrepute. Most small hauliers, and some large ones, could not carry on their work unless their accounts were settled quickly. Many operators, it was reported in February 1941, had already refused to undertake any more port clearance work, and were transferring their vehicles to work where they could rely on prompt payment.¹ The Ministry of Transport, fearing that the goodwill of many road haulage firms might soon be lost, was compelled to intervene on their behalf. The Ministries of Food and Supply were asked as a matter of urgency to pay their outstanding debts without delay, and individual appeals were made to a number of private traders to do likewise.

Such were the weaknesses of the pools and 'shadow groups'. They failed in the first place because they had to rely on voluntary efforts, secondly because they lacked financial stability, and thirdly because, with the general scarcity of road transport, they were unable to obtain many more vehicles than would normally have been available.

THE DEVELOPMENT OF THE FIRST ROAD HAULAGE SCHEME

The experiences of the transport crisis gave the Ministry of Transport conclusive proof of the need for a positive form of control over

¹ The Regional Port Director gave the following account of conditions in Liverpool: 'Transport has been made more difficult by the shippers' own failure to organise transport, but the difficulty has been accentuated by the failure of Government departments to pay the accounts due to the small hauliers. Evidence has been produced to me that accounts have been outstanding for anything up to eight weeks, and the amount in cases submitted to me has run into four figures. It should be recognised that there are comparatively few hauliers in the country who are in a position to carry debtors to such an extent, even though the debtor is a Government department. I am informed that many of the smaller hauliers have withdrawn their vehicles.'

long-distance road haulage. Since the resources of the road haulage industry were now scarce, they could no longer be dissipated. The case for full control over their use was clear. The essential needs of war had to be given the first claim to the services of long-distance road transport, and there was only one authority—the Government—that could judge the relative importance of conflicting needs for these services. Experience had proved that reliance on the virtually uncontrolled operation of the price mechanism did not guide road transport resources to the places where they were most needed in the interests of the war effort. The control exercised over the use of road haulage through the fuel rationing system did not stop hauliers seeking the best paying, rather than the most essential traffics. But the Government could not limit itself merely to deciding what were essential transport needs. The Ministry of Transport was convinced that it must have an organisation of its own to see that they were promptly met. Voluntary pooling schemes could not be relied on to do this, for not only were they financially weak; they also had only a limited control over the use of vehicles. The ideal organisation would, it was thought, give the Government full control over finances, and command over the use of vehicles. This, briefly, was the case for positive control.¹ The argument had been strengthened by experience, but still had to be transformed into reality. If the end of the Government's road haulage policy had now become more sharply defined, the conditions for achieving it had not become much easier to attain. The road haulage industry remained, for the most part, unorganised, and more than a little suspicious of Government control.

When the Ministry of Transport had rejected the 'Garcke' proposals, it had not abandoned its intentions to work out a scheme of positive control over road haulage acceptable both to itself and the industry. A Road Haulage Consultative Committee had been set up in the autumn, 'to facilitate discussion between the Ministry and the road haulage industry on matters of common interest'. The Committee² had frequent meetings, and spent much time discussing the many detailed difficulties which the road hauliers were experiencing at this time, particularly in the working of the port emergency pools. But its main preoccupation was to be in working out the principles of a scheme of positive control, which would be an improvement on

¹ A secondary reason for a road haulage organisation was that, with heavy restrictions on fuel, operators might not be able to keep their vehicles in service. Vehicles might be laid up and drivers dissipated into other occupations. In such circumstances, the Government would have no available reserve of vehicles to meet a crisis.

² The Committee was composed of representatives of the road haulage industry (excluding 'C' licence holders) who were chosen by the Minister of Transport from nominations made by the Standing Joint Committee of Road Hauliers' National Organisations. The new Committee superseded the now obsolete Road Transport (Defence) Advisory Committee, which had been appointed before the war.

the 'Garcke' scheme. This was the job of a small sub-committee. After much study of the defects of the 'Garcke' proposals, and with its first-hand knowledge of the unfortunate experiences of the pools, it was able, by December 1940, to produce the basis of a scheme for the operational control of trunk haulage, which was acceptable to the industry, so far as it was represented on the committee, and to the Ministry of Transport.

The new proposals were partly based on the idea of combining central and local control which the 'Garcke' committee had put forward. They differed, however, because it was now proposed to take direct control through an organisation which would be an integral part of the Ministry of Transport. It would be staffed partly by civil servants and partly by experienced men from the road haulage industry. In this way, the Government would not have to finance an organisation which it did not control. Briefly, the scheme, as first put forward, amounted to this: the Ministry would charter a number of vehicles to carry goods on Government account, but leave the running and maintenance to their owners. Thus the Government would have its own fleet of vehicles to meet an emergency—the word 'emergency', so commonly and euphemistically used in official documents, meant a breakdown or congestion of transport due to a heavy air raid, a heavy influx of shipping into a port, or even invasion. But the vehicles would not be left standing idle until an emergency arose. Instead they would be usefully employed at other times in carrying the more essential Government-controlled traffics. The advantages the Ministry hoped to gain from the scheme were cheaper transport for Government traffic, economy in the use of vehicles through fuller loading in both directions, and quick movement in a crisis. The road haulage industry, so far as the Road Haulage Consultative Committee could be considered to represent it, accepted the scheme, and the Ministry of Transport received Treasury approval to go ahead with it early in 1941. A haulier who entered the scheme under charter was to be assured of the same net revenue per ton of payload as he had earned in a standard year. This system of payment was similar to the arrangements that existed between the Ministry of Food and the Meat Transport Pool, for it was on the experience of that organisation that the Ministry of Transport's new organisation was to be largely based. As the first step in the development of the new road haulage scheme, the Meat Pool was taken over from the Ministry of Food in March 1941 to become a separate branch of the Ministry of Transport's new organisation.

There were three stages in the development of the Meat Transport Pool. In the first stage the Wholesale Meat Transport Association had been a voluntary commercial organisation, whose working

capital had been provided by its members. In the second stage, it entered into financial arrangements with the Ministry of Food and the use of its vehicles was paid for on the payload basis just described. In the third stage, it was taken over by the Ministry of Transport and its directors became whole-time temporary civil servants. The Pool, which was principally concerned with the movement of meat in London and South Eastern England as well as with long-distance meat movements, was an experienced and efficient concern. There were several reasons why the Ministry of Transport looked on the acquisition of the Meat Transport Pool as a prerequisite to the development of its own new organisation. First, the Ministry of Transport needed to draw on the experience of its staff, and proposed to use the Pool as a nucleus on which to expand its own organisation for moving Government-controlled traffics. Second, it was hoped that, by including the Meat Pool as a part of the larger scheme to be built up, it would achieve economy in the use of the vehicles engaged in both. Third, duplication was expected to arise if the Meat Pool and the Ministry of Transport's organisation were separately administered.

The Ministry of Food, however, was not without misgivings about the transfer. It would have preferred the Wholesale Meat Transport Association to have remained a 'separate commercial entity' managed by its existing committee. It feared that the goodwill which existed between itself and the executive committee on the one hand, and the Association and the hauliers on the other, might be lost if the controlling executive officers became civil servants. Now the difference between the Ministry of Transport's new scheme and the earlier 'Garcke' proposals turned on just this point. The principle of full operational control, inherent in the Ministry of Transport's new scheme, implied that the experts who ran it should become whole-time temporary civil servants and discontinue active association with their private businesses for as long as the war lasted. To have accepted the Ministry of Food's view, would, in the judgment of the Ministry of Transport, have meant the abandonment of the principle of full control.¹ The Ministry of Transport was, however, able to go a long way towards allaying the Ministry of Food's apprehensions. Apart from the Pool's officers becoming civil servants, control would continue to be exercised in much the same way as before. The vehicles taken over would remain as a separate unit, and meat would continue

¹ The Ministry of Food's plea for maintaining 'a separate commercial entity' applied only, of course, to the Meat Pool. Had the Meat Pool alone been under consideration, this argument might have been a cogent one. Since, however, the Ministry of Transport needed the experience of the Meat Pool for the larger organisation, of which it would have to become a part, and since there were sound reasons against that larger organisation being run as a private commercial concern, there was a strong case for bringing the Pool under the direct control of the Ministry of Transport.

to have the first call on them. Similarly, a Ministry of Food liaison officer would continue to have the right to make direct contact with the Pool, and the Minister of Food would be consulted about live-stock rates. Nor did the Ministry of Transport interfere with the elaborate arrangements for controlling long-distance meat movements. Since November 1940, all long-distance meat transport, both road and rail, had been supervised through a Meat Stock Distribution Committee at Amersham, which decided on the means of transport to be used in moving meat from the ports. This machinery was left undisturbed, and the Ministry of Food continued to appoint the Chairman of the Committee. Although therefore the Meat Pool had been formally absorbed into the new road haulage scheme, its day-to-day working was virtually unchanged. As far as the cost of transporting meat was concerned, the Ministry of Transport was hopeful that it might even be cheaper through the integration of the Meat Pool into the road haulage scheme that was being planned. For meat vehicles often lacked back loads, or, on the other hand, extra vehicles were needed for meat movement.

The development of the Ministry of Transport's larger scheme, for which the Meat Pool was to some extent to provide the model, advanced slowly. It had still not been worked out in all its details by May 1941, when the Ministry of Transport was fused with the Ministry of Shipping to form the new Ministry of War Transport.¹ By this time, however, the broad outlines of the proposed road haulage scheme were at least clear. The Ministry was to charter a fleet of vehicles from road haulage firms who were prepared to put not only their vehicles but the facilities of their businesses at the Ministry's disposal. These would be used to carry regular blocks of Government traffic. Operational control of the chartered hauliers was to be exercised through a Road Haulage Branch of the Ministry, decentralised into fifteen Area Offices throughout the country with six Divisional Offices to supervise them. General haulage vehicles would receive their day-to-day instructions direct from Area Officers at their home bases, or in the Areas to which they had delivered loads. Chartered hauliers would be under contract and paid weekly at a settled rate. They would obtain their fuel rations direct from the Area Offices and cease to come under the control of the Regional Transport Commissioners. The staff of the new organisation, both at headquarters and throughout the country would be largely recruited from the industry itself, so that the use made of the chartered vehicles would be directed by people with operating experience. Only in the case of specialised transport such as meat and tankers, was operational control to be exercised direct from headquarters.

¹ See above, pp. 281-283.

Now that the scheme had been worked out in some detail, it was plain that it amounted to nothing less than the entry of the Government into road transport operation. Although the Ministry's detailed scheme was still little more than a paper plan in May 1941,¹ it had every appearance of being sound and workmanlike. Permanent operational control would obviate the many difficulties of mobilising vehicles voluntarily. The problems which the voluntary pools and 'shadow groups' had encountered could now be overcome. The principle on which the scheme was based, namely, control by the Ministry with the help of the industry, as opposed to control by the industry on the Ministry's behalf was sound. But there were many outside the Ministry of Transport who argued against it. Why could not the industry run the scheme itself without the interference of civil servants? The industry had a monopoly of expert knowledge, so why not leave the task to them? Such views were strong among the hauliers themselves, but were largely superficial arguments which the Ministry of Transport sensibly resisted. If any form of priority or allocation between traffics was to be exercised, the Government was the only authority which could do so. Moreover, if the Ministry's aim—at this time unrealised—of conscious allocation of traffic between different branches of transport was ever to be achieved, it presupposed the existence of a strong control over transport resources and their use. It could hardly be left to the road haulage industry to make the vital decisions these matters obviously required.

But if full Government control was fundamental to the successful organisation of the resources of the road haulage industry, so too was the willing co-operation of the industry itself. Unfortunately, it was the strong element of Government control that the industry liked least about the Ministry's plan. As the details of the new scheme came to be filled in, the Ministry of Transport encountered mounting opposition to it. This came principally from the hauliers. The Standing Joint Committee of Road Hauliers' National Organisations now had second thoughts about the scheme to which it had agreed in principle several months earlier, maintaining that 'the scheme as now being developed differs materially from that originally expounded to us'.² The Regional Transport Commissioners

¹ At this time, the new organisation consisted of no more than the recently acquired Meat Pool and two road haulage officers—men from the industry—at Ministry of Transport headquarters.

² The basis of the industry's complaint was that the scheme had been altered, in that, instead of dealing immediately with large blocks of Government traffic by chartering the vehicles of the firms which were already carrying that traffic, the Ministry proposed to start by bringing into the scheme the larger trunk hauliers who were carrying ordinary commercial traffic. The Ministry of Transport argued that this was inevitable since it had proved impossible to find out who was carrying the Government traffic since so much of it passed through clearinghouses. The change over to Government traffic would have to be gradual.

formed another centre of opposition to the scheme. They had un-
 animously opposed the idea of operational control from the first,
 and as a body, still felt uneasy about the scheme. At their Conference
 in June 1941, they passed a resolution which they asked should be
 placed before the new Minister of War Transport:

The Regional Transport Commissioners do . . . most strongly
 press upon the consideration of the Department that the Govern-
 ment's pooling obligations should not be extended at this present
 time or until the effect and implications of control of a large fleet
 of vehicles under Government dominance have been tested under
 practical conditions.

When the new Ministry of War Transport came into being under
 Lord Leathers, these developments had reached a crucial stage. The
 new Ministry was confronted, on the one hand, with the conviction
 of Road Transport Division that the scheme for full control must go
 ahead on the lines laid down. On the other, it faced the growing
 opposition to the plan which was being led by the road hauliers
 themselves,¹ many of whom now suspected that this represented
 'merely the first step towards nationalisation', and, in consequence,
 had no confidence in it.² This was an unfortunate dilemma, par-
 ticularly as it came to a head almost before the new Ministry had
 firmly established itself. The Road Haulage Scheme had taken more
 than a year to work out. No doubt it would have had its imperfec-
 tions and teething troubles, but the principle of full control on which
 it was built was sound enough. Road Transport Division was natur-
 ally reluctant to compromise on such fundamental principles merely
 to allay the fears of a section of the industry. It was indeed doubtful
 if any scheme could have been devised which would have found
 universal support from all parts of the road haulage industry. But
 the strength of the opposition and the reluctance of the industry to
 enter the Ministry's scheme suggested that some form of compromise
 might have to be sought. Despite the misgivings of Road Transport
 Division,³ who hoped in the end to bring the industry to agree to the

¹ It was also criticised by Sir Maxwell Hicks, who was the road hauliers' spokesman on
 the Inland Transport War Council.

² See leading article in *Motor Transport*, 19th July, 1941.

³ Road Transport Division was naturally reluctant to compromise with the opponents
 of the scheme. It was stated in a memorandum from a senior official of that Division:
 'The Standing Joint Committee have made it very clear that the concession of an advisory
 committee has not gained us their support, and unless we stick to RHCC 36 (the document
 outlining the scheme) I fear that we shall shortly have neither support nor scheme.
 Moreover, any power of negotiation which I may have had with the Standing Joint
 Committee will have gone if the Ministry does not back me in my agreement with them.
 It remains my considered view that if we stand firmly on RHCC 36 we can make progress
 with what will clearly be a difficult task in any case. If not, I can see nothing but a vista
 of disagreements which will have to be referred to you or the Minister for settlement . . .'
 This memorandum was supported by the Deputy Director General (Inland Transport).

scheme as it stood, the new Ministry came to the conclusion that the only way to get adequate support from the road hauliers was to re-examine the principles on which the scheme was based.

This was work for still another fresh committee. In July 1941, the Minister of War Transport appointed the Road Haulage (Operations) Advisory Committee, whose intended task was, as the name implied, to advise the Minister on the development of the road haulage scheme. Its chairman, and all the members, were chosen from the industry, and a sub-committee, which included representatives of the Regional Transport Commissioners as well, was added with the aim of dovetailing the road haulage scheme with the 'ear-marking' and pooling arrangements which still existed under the Emergency Road Transport Organisation.

The solution offered by the Advisory Committee was not so much a proposal for making the Government's scheme acceptable to the industry, as a plain statement of the industry's own ideas. It was not a promising solution, since it amounted to little more than a flat rejection of the principle of Government operational control. Instead of the Government's scheme, the Committee suggested that the Ministry should set up a central clearinghouse with local branches, which would allocate traffic to voluntarily-formed pools of hauliers. These pools would be set up throughout the country under the supervision of the Regional Transport Commissioners. It is hardly surprising that the Ministry rejected this plan, since it had already learnt enough from experience about the inadequacies of voluntary pooling schemes. The Ministry's road haulage experts, who had joined the Ministry from the industry when the Meat Pool was acquired, thought this proposal unworkable, and Road Transport Division could see no merit whatever in the proposals:

It is obvious that whether from the point of view of meeting an emergency or carrying Government traffic there is no comparison between the two schemes. Ours is coherent, definite, and workmanlike; theirs is vague and incomplete. Ours could be put into operation at short notice and could be rapidly expanded; theirs so far as their report goes has not even been fully worked out.

The autumn of 1941 had come, and the progress made towards the full control of road transport had been disappointingly slow. The difference of viewpoint between the Ministry and the industry was nevertheless clearly defined. The industry, as represented on the Advisory Committee, opposed Government control by chartering vehicles, and believed that Government traffic could be adequately carried and emergency road transport needs met through a voluntary pooling system, supplemented by a reserve of 'earmarked'

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vehicles which could be called from their normal work at short notice—the 'defence lines' as they were designated. The Ministry, on the other hand, remained firmly convinced that voluntary means alone would not suffice, and insisted that it should operate a 'hard core' of chartered vehicles, which could be used to move bulk Government traffic over long distances and could be called on to carry out tasks anywhere in an emergency.

The Minister of War Transport wanted to get an organisation working without more delay. The third winter of the war was approaching, and continued discussion seemed likely to prove fruitless. The Advisory Committee was therefore told that the Government had no intention of abandoning the plan to build up a 'hard core' of vehicles, and it was hinted that this would have to be expanded if the full support of the industry was not forthcoming for the war effort. The Minister agreed, however, by way of compromise, that if greater needs than could be met by the 'hard core' arose, these might be met by the complementary scheme put forward by the Committee. In short, the ultimate size of the fleet of vehicles under the Ministry's direct control would depend principally on how far it could be supplemented by the voluntary scheme run by the industry. The Ministry's scheme, in a modified form, and the industry's voluntary scheme would thus be run together. This was the plan ultimately agreed to by the industry as well as the Ministry.

In theory at any rate, the compromise plan went a long way towards meeting the Ministry's need for operational control by giving it a fleet of vehicles at its command. At the same time it left the industry with scope for the voluntary co-operation for which it had pleaded. Furthermore, the Regional Transport Commissioners' organisation was to be used in the new plan for Government co-partnership with the industry. The modified road haulage scheme was ultimately announced in October 1941.

The new organisation was to be of a four-fold character:

- (a) The 'Hard Core' of Chartered Vehicles. This was to be the fleet of vehicles run by the Ministry on charter, and would be built up to a strength of 2,500 vehicles (exclusive of the 1,600 in the Meat Pool). Continuous operational control would be exercised through a Ministry organisation covering the country—six Divisions sub-divided into fourteen Areas—which would act as a clearinghouse for Government-controlled traffics. The Ministry would have the right to send its chartered vehicles anywhere at any time for any traffic. They would all be large capacity vehicles suitable for long-distance transport.

- (b) The Hauliers' National Traffic Pool. The Ministry's fleet would not handle all Government-controlled traffics moved by road. Some of these would be allocated to the industry for movement. For this purpose, the industry was to have its own organisation of traffic pools with paid managers, attached to the Area Offices of the Ministry's organisation. Through this machinery, that part of the traffic accepted by the Ministry's organisation, but not conveyed in its chartered vehicles, would be allocated to private hauliers. The Ministry and the industry would thus form a sort of joint clearinghouse for Government-controlled traffics, though no commission would be paid by those who joined in these voluntary pooling arrangements. Where voluntary pools already existed, as in some of the ports, these would be absorbed into the new organisation.
- (c) The Defence Lines. Thirdly, the owners of all classes of vehicles, whether they had held 'A', 'B', or 'C' licences before the war, were invited to place an agreed part of their fleets at the Ministry's disposal for use in a critical emergency—i.e. invasion or heavy air attack. They would only be called on when other vehicle resources were no longer enough, in which event the Ministry would hire them and operate them through their own organisation. The preparation of these so-called 'Defence Lines' was to be undertaken by the Regional Transport Commissioners.
- (d) The Meat Transport Pool. Finally, there was the Meat Transport Pool, already under the Ministry's direct control. This was to be a sub-section of its Road Haulage Branch. The Area Officers of the Meat Pool would notify the Area Road Haulage Officers if they had meat vehicles to spare for carrying general traffic, or if they needed extra vehicles for meat transport. The Meat Pool in practice preserved its own identity within the new scheme.

Several more months were needed to get this modified organisation working. The Road Haulage Branch of the Ministry of War Transport became an operational organisation in February 1942, nearly two years after the proposal for direct Government control of vehicles had first been put forward, and after three winters of war had passed. It would be tempting to suggest that the Government's road transport policy in the early years of the war had failed to meet the obvious need for positive control over road goods transport. From official documents, however, it is plain that the evolution of a positive war-time organisation for long-distance road goods transport was inevitably a slow process. The story of the prolonged negotiations

between the Ministry and the industry, and the compromise nature of the final solution, shows how wide was the gap between the ideal of full control with the help of the industry, and the realities of the existing situation as exemplified in the highly individualistic nature of the industry, its lack of unity or central organisation, and its suspicion of Government control. It could be argued that compulsory measures should have been applied early in the war to organise the resources of the road transport industry. It is nevertheless difficult to see how such a solution could in any way have diminished the magnitude or length of the task of organisation facing the Ministry of Transport. Such a premature attempt might well have resulted in the disorganisation and breakdown of transport services. It may be that the price paid for the co-operation of the road haulage industry, in the shape of the compromise scheme agreed to by the Ministry of War Transport in 1941, was too high. But if the pressure brought to bear from the industry and elsewhere on the Ministry to modify its scheme for direct control was successful in 1941, when Britain was at the nadir of her military misfortunes, such pressure would almost certainly have been more successful if the Ministry had attempted to introduce such a scheme at an earlier stage of the war. As it was, the 1942 road haulage scheme was evolved in a form which was an obvious compromise, and, as will be explained later, it was a compromise which failed.

(iii)

Road Passenger Transport

Between the wars, the motor bus had become a well-established necessity for most sections of the community. While it afforded a means to greater recreation and leisure, its most important function was to cater for the ordinary daily travelling needs of townsman and countryman alike.¹ In the war years, this function of road passenger transport was to assume a new significance. From 1939 onwards, and especially after Dunkirk, regular bus services became an indispensable part of a sustained war effort on the home front. As the war effort grew, the distribution of population over the country changed. Men and women were called from their homes to construct and man the munition factories, to work on the land, and in other war jobs. All of them had to be carried daily between their homes or lodgings and places of work. At the same time, evacuation, and the needs of Service men at outlying camps and aerodromes brought bigger demands for

¹ In 1937, over 6,500 million passengers were carried on stage services alone. See *Seventh Annual Report of the Area Traffic Commissioners, 1937-1938*, Appendix 2.

local bus services in many districts. Road passenger transport thus became, like many other civil industries, part of an extensive war machine, and the needs of war called for something more than a continuance of the regular services provided in peace.

Broadly speaking, the war altered the demands for regular local bus services in the following ways: journeys became longer as people travelled further to their work; passenger transport needs which had not previously existed arose, and new services had to be run to meet them; finally, because of air raids and the heavy volume of travel to and from the war factories, peak hour traffic became more concentrated than in peace. These tendencies were only partly offset by the enforced cutting down of non-essential services. The supply of bus services in war, on the other hand, became steadily more limited by the scarcity of resources. Fuel was scarce from the beginning and, after Dunkirk, services were further limited first by a shortage of new vehicles and maintenance facilities for existing ones, and later by the difficulty of getting the manpower for crews. Thus, as the country's road passenger transport resources became gradually fewer, the demands for bus services changed and increased. There arose the familiar problem of allocating scarce resources among competing demands for them. Decisions had to be made as to which services were most essential to the war effort. Scarce resources had to be controlled and made available where the need for them was considered greatest. Some services had to be greatly expanded to meet new and changed war needs; others, which were less essential had to be drastically pruned to economise in fuel, vehicles, and manpower. All this called for decisions and increased control by the central Government.

When the war started, there were, as we have seen, approximately 50,000 public service vehicles in Great Britain, owned by some 4,800 operators. Although 90 per cent. of these operators owned fewer than 10 vehicles each—there were over 1,800 who possessed only one bus—more than 80 per cent. of the buses in the country were in the hands of about 400 large- and medium-sized operators with fleets of 10 or more vehicles.¹ The large operators fell principally into three groups: the London Passenger Transport Board, with its 6,000 buses and coaches; the various municipalities which ran their own bus services; and the 'associated' private concerns—that is to say, the firms controlled by one of the big financial groups in the industry. Many medium-sized, and almost all the smaller concerns were independent private operators. Although in a few places like South Wales and North Staffordshire small independent operators provided a high proportion of the regular local services, the majority

¹ *Seventh Annual Report of the Area Traffic Commissioners, 1937-1938.*

of regular stage and express services throughout the country were run by the larger undertakings.

Control of road passenger transport in war therefore presented few difficulties comparable with those encountered with road goods transport. Concentration of ownership in the hands of a relatively small number of operators simplified the problem of controlling the supply of services. Bus services were already restrictively controlled through the peace-time Area Traffic Commissioners, and it was a simple matter to strengthen this control at the outbreak of war by giving the Regional Transport Commissioners the sole powers to give out fuel rations¹ and to issue or withhold defence permits in place of peace-time road service licences.

At the beginning of the war, bus and coach operations were limited by only one serious scarcity—that of fuel. The aim of the Ministry of Transport in controlling road passenger services at the beginning of the war was to save fuel by reducing vehicle mileage and concentrating bus services on essential needs. This control, which devolved on the Regional Transport Commissioners, was intentionally restrictive rather than positive, though while vehicles and manpower were not seriously scarce, positive action, such as compelling operators to provide necessary new services, was rarely needed, since most operators were both able and anxious to extend their services when they had the opportunity. Where positive measures were needed, the Commissioners were not without powers of persuasion which sprang from the generally good relations they had with the principal operators in their Regions.

Control in the first year of the war was therefore largely successful in realising its aims of saving fuel and maintaining sufficient bus services to meet war needs. Its weaknesses were only disclosed as the increasing amount of essential travel by bus began to overwhelm the steadily diminishing resources, not only of fuel, but of vehicles, maintenance facilities, and crews. It then became clear that control had to be expanded to cover an increased number of scarce resources, to initiate new services where war needs were pressing and operators were no longer able to provide them without help, and to smooth out peak period demands. The Ministry of Transport was slow to recognize this. By the time it had become impressed by the need to strengthen its control and pursue economy in the use of road passenger transport with greater vigour, essential travellers in some districts had suffered hardship. As will be shown, however, the

¹ Although the Commissioners issued both basic and supplementary rations (until the basic ration was abolished in September 1941, after which all issues were made at their discretion), operators got their basic ration of 50 per cent. of their pre-war consumption automatically. But they only got supplementary rations if they could prove that their basic ration was insufficient to meet essential needs, so that, in practice, the Commissioners were in a strong position to direct fuel supplies to the services where they were most needed.

changes needed were made without abandoning the system of control through the Regional Transport Commissioners' organisation, which proved adaptable and capable of expansion.

Although the first twelve months or so of the war brought no really big road passenger transport problems, it is worth examining the main trends of that period to disclose some of the later problems in their early stages. On the supply side, the first effects of war on road passenger transport were to reduce the number of buses available for service in the country, and to curtail the total mileage run. It is impossible to know precisely how many buses were available to meet civil needs in the early war years because the collection of adequate statistics was stopped when war broke out. Some of the country's 50,000 public service vehicles were requisitioned by the Government. By the end of 1941, for example, the War Office had 2,290 in use, the Air Ministry, 1,050, while others were in the hands of the Admiralty and other departments. Moreover, in peace, the annual rate of wastage of buses was in the region of 6,000 a year, and when war came, most manufacturers turned over to the making of war material so that this wastage rate was not met. Some of the older buses could be kept in service by repairing them, but even in wartime, old buses cannot be made to last for ever. It is thus reasonable to conclude that from the beginning of the war, the total fleet of buses in the country diminished steadily.¹

Although there must have been fewer buses in service from the beginning of the war, the mileage they covered was fairly drastically cut. In terms of the cut in petrol supplies, mileage in the early months of the war was reduced to less than 60 per cent. of the peacetime figure. The most severe restrictions fell on long-distance coach services, pleasure services, and regular services during the off-peak hours. Fuel rationing did not therefore necessarily free large numbers of spare vehicles suitable for diversion to essential services at short notice. Luxury motor coaches, for example, could not always be suitably or easily converted for more austere uses. Moreover, the reduction of off-peak services did not reduce the size of the fleets needed to meet the rush hour demands every morning and evening, but simply increased the number of buses standing idle at other times of the day. Peak hour services generally offered little or no scope for restriction, since, for the most part, they catered for the essential needs of workpeople. Economy in fuel did not therefore necessarily bring with it a corresponding economy in the use of vehicles.

The cut in fuel supplies and the consequent reduction in vehicle mileage were not apparently accompanied by a corresponding reduction in the demand for services in terms of the number of

¹ Though this process was arrested and probably reversed by some new production in the closing years of the war.

passengers carried. It is difficult to get an accurate measure of how the demands for bus services were changed by war, because in the first place, there are almost no statistics and secondly, the changes in demand varied widely in different localities. Demand for bus services was subject to several war-time influences. Restricted services automatically choked off some demands, but other factors made for an increase, particularly at peak hours. Petrol rationing for private cars and taxicabs thrust more passengers on to the buses at rush hours, and in spite of official exhortations to induce travellers to use local train services rather than buses, the public was not responsive where the buses were cheaper or more convenient. Evacuation too brought its problems. While it reduced the demand for services in London and the big cities, it frequently threw a disproportionate strain on bus services in the country and outlying districts. The growth of war production, increased employment, the dispersal of businesses and Service travel were adding to bus travel in many districts; in particular they concentrated more traffic at peak periods.

An example of this kind of thing was the West country, where it was reported in the closing months of 1939, 'they are now having far more trouble with the peak hour problem than formerly'. In many places there had been 'a definite increase in population . . . In some cases it is suggested to be as much as 15 per cent.' This increase was attributed principally to the evacuation of schoolchildren and London offices, which, together with military camps and aircraft factories, brought fresh demands for local bus travel. South Wales was another area where travel by bus was soon on the increase. Here it was a question of providing transport for war workers, and as early as February 1940, the Regional Transport Commissioner reported that it had become difficult to run enough services for them. Workpeople wanted to get to work at about the same time, and in some parts of the Region only the large operators could cope with the numbers needing transport. The small operators were not finding it economical to increase their fleets of buses to meet growing war demands in the area because buses had to stand idle during the off-peak hours. Here were the beginnings of a problem that was to become serious enough by 1941 to call for action at War Cabinet level.

The pattern of change in war-time demands for bus services was not, of course, uniform throughout the country. Generally, however, it appears that war affected the demand for regular local bus services in the following ways: first, by causing a re-distribution of population, which altered the incidence of demand throughout the country; second, by causing more people to travel and make longer local journeys; third, by concentrating and increasing traffic at peak

hours. By 1942, most bus undertakings were carrying more passengers than before the war—some of the larger ones were carrying between one-third and one-half as many again—while the average passenger journey tended to be longer. The mileage run by the buses of these undertakings, on the other hand, seldom exceeded 80 to 90 per cent. of pre-war.¹

Thus, as the war effort gained momentum, buses, like trains, became more crowded.² Restricted services, coupled with sustained demands for them and concentrated peak traffic undoubtedly caused some inconvenience and discomfort for the travelling public. Yet so long as there were enough buses in the different districts to meet peak demands, and while there remained a margin of relatively inessential long-distance and pleasure services, which could be progressively restricted as fuel became scarcer, there was no general difficulty in maintaining necessary regular services. While, therefore, the main trends that were to cause trouble later in the war were already apparent, the first twelve months of war passed without causing great hardship to bus travellers.

Only after Dunkirk, as demands for essential bus services grew and resources became more limited was the problem of scarcity exposed. Demands for regular local services to meet the needs of Servicemen, war workers and others received a new and powerful stimulus as more munition factories came into production, as the Armed Forces were built up and as the air raids brought fresh evacuation and dispersal of industry. Meanwhile, the lack of new buses was beginning to make itself felt, so that the country's road passenger transport resources soon became barely adequate for the needs of the war effort. Shortages of buses did not suddenly occur everywhere at once. Some districts experienced them earlier and more acutely than others, while local peculiarities altered the nature of the problem in different districts. Generally, however, by the middle of 1941, the limited resources available to road passenger transport were threatening the maintenance of services to meet essential war needs. While fuel was a big limitation on the use of buses, the scarcity of vehicles and spare parts was now in many ways more serious, while that of bus crews threatened to become even more acute.

One of the first road passenger transport problems to call for urgent attention was that of London in the autumn of 1940. Here population had declined in the early part of the war with a consequent reduction in the number of passengers carried by London

¹ These figures have been taken from information supplied to the Ministry of Transport by some of the largest bus undertakings. They do not provide a picture of the situation in the whole country and need to be interpreted with caution.

² From 26th September, 1939, double-decker buses had been permitted to carry eight standing passengers on the lower deck instead of the five permitted normally.

Transport buses. Evacuation had caused the population of central London to decrease, but more people had moved out to the fringes of the London area. The number of passengers originating on 'central' buses fell in 1940 and 1941 to about 70 per cent. of pre-war. Passengers originating on London Transport 'country' buses rose, on the other hand, in 1940 to 116 per cent., and in 1941 to 146 per cent. of pre-war; 'country' bus services however accounted, even in 1941, for only 15 per cent. of the total vehicle mileage run by London Transport buses.¹ Although as a whole, London's buses were carrying fewer passengers, the London peak hour problem, difficult enough in peace-time, became more acute with the coming of the war. Movement of population into the country area brought suddenly increased traffic demands for which services had not been designed. The homeward peak traffic, formerly spread over about three hours, became concentrated within a period of two or less.²

When the air raids began, the problem became even more acute, because of accentuated peak hour traffic and abnormally difficult operating conditions. The regularity and intensity of the air attacks on the capital naturally made Londoners want to leave their places of work in time to get home before the night raid began. This put an added burden on the already strained peak hour services. It was feared that if no steps were taken to alleviate the peak load before the dark winter evenings, the evening peak of about two hours would become concentrated into about an hour. This would create an insoluble traffic problem, particularly as the blackout had already slowed down the movement of buses. On 8th October, 1940, therefore, the Civil Defence Executive Sub-Committee of the War Cabinet decided to set up a special inter-departmental committee under the chairmanship of the Minister of Transport who was to work in close consultation with the Minister of Home Security, to study ways of overcoming the expected strain on London's passenger transport services in the coming winter.

The committee gave its main attention to ways of smoothing out the peak traffic travelling to and from the centre of London. It proposed that shops should be closed at three in the afternoon, that the availability of day return tickets be curtailed to encourage shoppers to go home before the rush hour, that half-days should be varied for

¹ See *L.P.T.B., Twelfth Annual Report and Accounts, 1945*, pp. 28-29. The precise figures of passenger journeys are:

PASSENGER JOURNEYS ORIGINATING (millions)		
	<i>Central buses</i>	<i>Country buses</i>
1938-9	2,062	136
1940	1,471	158
1941	1,438	198

² *Ibid.*, p. 21, para. 31.

different businesses, and that hours of work should be staggered. Staggering did not hold out much hope of solving the peak problem while the hours of darkness were long and the air raids lasted, though it was later to become a general practice both in London and elsewhere. Finally the committee recommended that certain classes of business should be encouraged to leave London altogether for the Midlands and the North of England. The Minister of Home Security supported these proposals in a memorandum to the War Cabinet and stressed that even without air raid warnings it would be difficult to clear the central London area in customary hours with the public service vehicles available. Without special steps to meet the problems created by air raid warnings and bombing, large crowds of people would be exposed to risk without adequate shelter or means of movement. The War Cabinet accepted the committee's recommendations, and acted promptly to put them into effect. The question of 'rationing' bus services by the issue of priority passes was also studied by the committee, but since it was estimated that 90 per cent. of travel in London's central area was essential, and because of the practical difficulties in the way, the system was not adopted in London. Such passes were, however, introduced in one or two places during the war.¹

London's problems were also tackled from the supply side. Continued air raids caused much damage to London Transport property and dislocated transport services. Interrupted services had to be restored and substitute buses provided in place of broken rail, tram, and trolleybus services. Although the L.P.T.B. maintained its own emergency fleet of buses to meet these needs, the demand for these extra bus services, damage to vehicles, and the need for keeping scheduled services going made it necessary to call on provincial undertakings for help. The Ministry of Transport therefore aided the dispatch of buses from the provinces² and similar action was again taken to meet the acute problems caused by air raids at Coventry and Bristol. As the enemy directed his air attacks away from London towards other parts of the country, the London Passenger Transport Board was able to loan some of its own buses to other undertakings in return.

London, though it shared with most areas the problem of concentrated peak traffic, was in other respects a special case. No other area possessed a comparable network of services, so highly organised, and elsewhere in the country, notably in the industrial Midlands and places to the West of London, population had not declined but grown. More people were making longer journeys in the rush hours

¹ See below, Chapter XIII, Section (ii).

² *L.P.T.B., Twelfth Annual Report and Accounts, 1945*, p. 17.

and bus services had to be expanded to meet these changed travelling habits. This was well brought out in May 1941, when the Regional Transport Commissioners were asked to make further cuts in supplementary fuel rations for buses. From the Southern Region, the Regional Transport Commissioner reported:

At the present time, towns like Reading, Oxford, Henley, Maidenhead, High Wycombe, Slough, Aylesbury, etc., all have increases of 40 to 60 per cent. in their normal population. At or near all of these centres new industrial concerns have been springing up, largely owing to the dispersal of aircraft and other factories from the coastal area or from London. These have required the organisation of a large number of special workmen's services, on which many small operators who had practically gone out of business are now fully engaged.

From all of these centres I have received frequent complaints as to the inadequacy of passenger services by road, both from the point of view of the transport of workpeople, of members of the evacuated population who have to come into the nearest town for shopping and other purposes, and of personnel of the Services in camps and stations. Undertakings like the Thames Valley Traction Co., the City of Oxford Motor Services, the Reading Corporation Transport and the Aldershot and District Traction Co., are working to full capacity and their traffic returns show large and steady increases.

On top of all this, the intensive air raids on Southampton and Portsmouth have led to a wide dispersal of a substantial section of the population. Special services for workpeople and others over distances of 15 miles or more have taken the place of the penny or twopenny bus or tram ride . . .

With conditions such as this prevailing in the Region as a whole, any hope of a reduction in the consumption of fuel on passenger services must prove illusory.

Similar experiences were reported by the Regional Transport Commissioner for the North Midland Region:

I am becoming alarmed at the rate of the demands for fuel which are being made for purposes falling within those operations set out in the circulars.¹

In this Region, many new airfields were coming into use. When the R.A.F. took them over, demands were at once raised for a bus service to the nearest town. In Lincolnshire, where many airfields were sited at places far removed from towns, rail facilities were almost

¹ The Ministry of Transport's circular to Commissioners had authorised the issue of supplementary rations for a reasonable measure of recreational facilities for industrial workers and military personnel.

non-existent.¹ Evacuation had also brought fresh traffic to the buses in this Region. This growth of travel by bus inevitably made heavy demands on fuel and, since nearly all the journeys were more or less 'essential', it was hard to know where further cuts to save fuel might be made.²

In such circumstances the scope for further fuel economies among buses was small. The decision, taken with the support of the Regional Transport Commissioners, to abolish the basic ration for public service vehicles from 20th September, 1941, helped to tighten control over bus services since every operator was now called on to justify every mile run. It is doubtful, however, if this step resulted in any significant saving in fuel.³ In any case, fuel was no longer the most serious limitation on the supply of bus services. The Regional Transport Commissioner at Edinburgh reported in June 1941 that, in addition to the overriding difficulty of greater demand, there were shortages of fuel, vehicles, spare parts and crews. If fuel had been the chief reason for operators' difficulties, he did not think that so much would have been heard about the others. In fact, the Ministry of War Transport was henceforth compelled to shape its road passenger transport policy to meet other scarcities besides fuel.

THE SCARCITY OF BUSES AND THE TRANSPORT OF WAR WORKERS

Of the many heavy demands which the war was imposing on road passenger transport by the middle of 1941, the transport of war workers stood out in importance. It certainly imposed the greatest strain on the country's shrinking resources of vehicles, and from 1941 onwards was the most persistent problem facing road passenger transport. In essence, the problem was to provide enough buses to meet the inflated peak demands which arose in many areas as new war factories came into production. The discomforts which many people endured on their daily travels in the winters of 1940-1941 and 1941-1942—long waits without shelter, and long journeys in crowded buses were common occurrences—undoubtedly came near to causing

¹ As a result of the influx of servicemen, the Lincolnshire Road Car Company's traffic increased from 298, 138 passengers in the week ending 8th June, 1940, to 458, 544 passengers in the week ending 8th June, 1941.

² The Regional Transport Commissioner, Nottingham, went on to say, 'I feel you do not appreciate the extent of the demand for fuel which all this travelling . . . will entail. Discrimination between applications which have no essential differences (in order to restrict "to a reasonable measure") is invidious.'

³ It is clear that most bus undertakings were already using up their basic issues for essential traffic, as they would not otherwise have been granted supplementary rations. Criticism directed against the decision to abolish the basic ration for buses on the ground that private cars still received a basic petrol ration was largely based on a false analogy between the two 'basic' rations. The basic ration for cars was intended solely for private use whereas the basic fuel ration for buses was commonly used to provide ordinary essential services.

positive hindrance to war production,¹ to say nothing of the social and domestic difficulties they created. Such hardships were borne, for the most part, without grudge. But large numbers of people were now being drawn into war production, and their travelling grievances could not be overlooked. The Minister of Labour had these grievances very much at heart, and in the summer of 1941, the hardships encountered by war workers in getting to and from their work were strikingly exposed in a Report from the Select Committee on National Expenditure.² Both the Ministry of Labour and the Select Committee were now calling on the Ministry of War Transport to tackle the problem of workers' transport with greater energy than it had so far shown. There was good reason for these demands. It was, of course, easier to see what was needed than to provide the resources to meet the need, and some complaints about alleged bad bus services were clearly exaggerated.³ Yet it was only as the volume of complaints grew that the Ministry of War Transport became conscious of the size and importance of the problem of workpeople's transport. At this time, the Ministry seems to have been remarkably lacking in precise information about how many buses there were in the country, of where the numerical shortages of vehicles were greatest and where reserves, if any, might be found. Not until the Minister of Labour had raised the question of workpeople's travelling difficulties at War Cabinet level were energetic steps taken to meet the expected acute scarcity of buses in the autumn of 1941. These efforts did not succeed in removing workpeople's travelling difficulties, though they did come in time to avert a breakdown of essential bus services in the winter of 1941-1942.

Generally, war workers travelled greater distances to and from their work than was usual in normal times.⁴ They also tended to travel at the same times of the day, so that their demands for transport were peak demands, which put the maximum strain on operators' fleets of buses. Bus services had therefore to be increased, new routes operated and longer journeys made—nearly always at the busy hours of the day when bus resources were already stretched. The

¹ Transport difficulties encountered by war workers were said to be a cause of high labour turnover and a deterrent to recruitment.

² *Twenty-first Report from the Select Committee on National Expenditure, Session 1940-1941.*

³ One such example will suffice. In Shaw, near Oldham, complaints were made of the loss of production caused by late arrivals which were blamed on bad transport. The General Manager of the Corporation transport undertaking decided to test the evidence, and had complaint forms printed. These were to be filled in by workpeople arriving late, and show the time and date of the occurrence when it was ascribed to inadequate transport, the point at which the passenger waited, and the number of any bus which passed full or ahead of time. After this system was instituted, it was found that the numbers of late comers who blamed bad transport for their lateness declined appreciably.

⁴ It was said to be no uncommon thing for people to travel 20 or 30 miles to and from their work every day. See *Twenty-first Report from the Select Committee on National Expenditure, Session 1940-1941*, para. 53.

strain was greatest in the winter months, when cycling or walking to work was less popular and the air raids added their complications.

Different districts had their own peculiarities. Generally, it was easier to run new services and provide the necessary vehicles and crews where local services were in the hands of a large and stable undertaking rather than a host of smaller ones. The most acute shortages of bus services were experienced in the industrial Midlands and South Wales. In the Midlands, where a large part of the engineering and armament industry was concentrated, the difficulties were the result of the growth of the working population there. At the end of 1940, because of air raids, most of the factories in the area were working one shift daily, from 7.30 a.m. to 5.30 p.m., which inevitably caused a big concentration of rush hour traffic and made it very difficult to carry all the workpeople at the same time. It was said at the end of 1940 of Coventry and Birmingham that if the transport conditions were allowed to continue they would lead to a breakdown in the supply of vital labour for war industries. At both places it was not only a question of finding the buses at peak hours, but of getting the crews to man them. This local shortage of drivers and conductors, which became acute at the end of 1940, seems, in the main, to have been caused by the drift of labour into better-paying work in the munition factories.

South Wales was an area of particular difficulty. The war factories there were drawing their labour from the remote villages in the Rhondda valleys. Before the war hardly any of this labour had been employed outside the valleys so that new bus services had to be introduced for many thousands of workpeople. Of the four large bus undertakings in South Wales, only one had any vehicles to spare. The others, already busily occupied in running services for workpeople, could not take on any more services even with hired buses because they were short of drivers and maintenance facilities. There was also in South Wales a large number of small operators who ran workmen's services, and some of these possessed only one bus. In many cases their buses were old, their employees badly paid, and they had little or no system of maintenance. Before the war, they had specialised in running regular, but cheap, services for workmen, most of whom were miners, and compared with the bigger undertakings their services were not very efficient. Most of them found it difficult to run sufficient and reliable services to cater for the expanding war-time needs of the munition workers and miners. Many of their buses were wearing out, and they were finding it steadily harder to maintain them and to provide crews. Moreover, the control exercised by the Regional Transport Commissioners over small operators proved less effective than in the case of large undertakings. While larger operators could normally be induced to run new

services without difficulty, small undertakings often lacked the vehicles or facilities to extend their services, and could not be expected to run them if they did not pay. These difficulties were formidable, and caused the workpeople of South Wales much hardship in their daily travel. The Regional Transport Commissioner summed up the position in June 1941:

whilst it would not be right to say that all the workpeople are comfortably carried, it can be fairly stated that in the main the arrangements are adequate and are working as smoothly as can be expected in the exceptional circumstances, particularly when it is remembered that South Wales had never been, apart from coal mining and heavy metal industries, an industrial area where workpeople have had to travel long distances to their work.

South Wales was the most complex example of the type of problem that was now developing in many parts of the country. By the middle of 1941, the apparent general shortage of buses for war workers was causing general uneasiness. It is not easy to judge how real the scarcity of buses was: whether there were fewer buses in the country as a whole than were needed to keep up necessary services at peak periods, or whether inadequate services could have been improved by a more complete mobilisation of vehicle resources in the country, including the transfer of buses into the needy areas. Without statistical information of central and regional bus resources at this time, these questions cannot be answered. Nor does other evidence throw much light on the matter. The supply of new buses in 1941 was but a trickle compared with peace-time, and can not have significantly added to the total of the country's bus resources. Until the abolition of the basic fuel ration for buses in September 1941, however, some buses, which afterwards were put to better uses, were still employed on pleasure services. Similarly there was an unknown number of buses in the country which, for various reasons, were not being used at all. It appears, therefore, that there was still a margin of buses in the country, albeit small, which had yet to be diverted to essential uses. From the summer of 1941 onwards, greater attention was directed to mobilising such reserves of vehicles as there were to meet workpeople's needs.

It was the normal practice of the Ministry of Transport to delegate responsibility for meeting local demands to the Regional Transport Commissioners and their advisory committees. The transport needs of workpeople were raised locally through the Regional Boards of the Production Executive, or, where special difficulties existed, through the local transport consultative committees, which were set up in many districts during the winter of 1940-1941. The Regional Transport Commissioners were also in close touch with individual

factory managements and Ministry of Labour Welfare Officers. Local arrangements of this sort went a long way towards getting the most from local road passenger transport resources, but the prospects for the winter of 1941-1942 called for stronger measures, not only in each part of the country, but over the country as a whole. This need was stressed in a letter from the Minister of Labour to the Minister of War Transport on 27th June, 1941:

I am seriously alarmed at the transport position which I see facing us in the autumn unless something is done now to ensure adequate services for workers. Wherever I go in the country I hear accounts of the difficulties being encountered, which must inevitably be aggravated as the days get shorter. I feel it to be imperative to give the question urgent attention now.

The Minister of Labour felt that the biggest single grievance of factory workers at that time was the inadequacy of transport facilities. The Minister of War Transport refused to admit that there was any existing shortage of transport for workers engaged on war production, but expected that the position in the coming winter would be very difficult.¹

Shortly afterwards, the Select Committee on National Expenditure, which had been directing its attention to workers' travelling difficulties, complained that the 'cause of loss of output which received the widest support in the evidence . . . was the difficulties of transport'. It was said that workers had often to wait an hour and a half or more for a bus, that there was no shelter at the waiting places and that, when they were able to find a place on a bus, they might have to stand during a journey of anything up to two hours. Particular criticism was directed to the services in rural areas operated by owners of one or two vehicles, where breakdowns were frequent, repair facilities inadequate and there were no reserves which could be called upon. Though the Committee agreed that the services were better in the summer months than they had been in the autumn and winter, when the air raids, long hours of darkness and severe weather had helped to dislocate services, they reached the conclusion that 'unless measures more energetic than those at present

¹ The Minister of Labour wanted a drastic remedy for the alleged widespread inadequacy of transport for war workers. He proposed the pooling of rail and road transport under Traffic Authorities in the various parts of the country. The Ministry of War Transport rejected this proposal. While it agreed that war workers' transport may have been suffering from some local ailments which did not readily respond to treatment, it argued that the major operation proposed by the Minister of Labour would be more likely to kill than cure the patient. The Minister of Labour had doubtless been impressed with the difficulties in South Wales, though the difficulties elsewhere were not so acute as his memorandum might have led one to believe. The Ministry of War Transport, on the other hand, seems to have been remarkably hesitant in admitting the urgency of the workpeople's travelling problem, until the matter was brought home to it by the Ministry of Labour.

contemplated by the Ministry of War Transport are taken, and taken rapidly, the conditions of last winter will recur.¹ The Select Committee went on to suggest remedies. They thought that improvements would be found by strengthening the powers of the Regional Transport Commissioners, by providing more vehicles, by making arrangements to train more drivers for small operators, and by pressing forward more energetically with staggering hours of work. If the Report had, perhaps, exaggerated the extent of the problem, and had over-simplified the ways in which a solution might be found, it was nevertheless a timely document, which exposed a genuine grievance of many travellers.²

During the autumn of 1941, the Ministry of War Transport took various steps to meet the complaints of the Ministry of Labour and the Select Committee. The Ministry would have liked to meet the expected shortage of buses in the winter months by constructing new double-decked vehicles. These provided the maximum seating capacity with the greatest economy in labour and fuel. Since productive capacity was largely taken up for the manufacture of fighting vehicles, however, the Ministry of Supply was not able to promise delivery of more than two or three hundred new vehicles before the end of 1941, and the complete programme to the end of 1942 allowed for only 1,600. The Ministry of War Transport was therefore left with two possibilities for meeting the needs of workpeople in the coming winter. One was to make the fullest use of all the buses in the country by calling into service every vehicle lying idle, by repairing old buses, and adapting vehicles to carry more passengers. The other was to relieve the strain on bus services by spreading peak traffic and diverting passengers to local trains. Both courses were followed in the autumn of 1941 with some success.

Machinery already existed for ensuring that all deliveries of new buses went where they were most needed. After France fell, and new vehicle production and the manufacture of spare parts was much reduced, the supply of new buses had been controlled. From 20th July, 1940, an Order³ was enforced by the Ministry of Transport which prevented any person obtaining a new passenger or goods vehicle without a licence. In the following January, the Ministry of Supply had been made responsible for the production of wheeled vehicles of all purposes, and from that time only 10 per cent. of

¹ *Twenty-first Report from the Select Committee on National Expenditure, Session 1940-1941*, para. 54.

² The Minister of War Transport had 'not been privileged to see the evidence on which paragraph 54 of the Report was based'. The Regional Transport Commissioners 'could not understand why, if evidence was given by the Department, the Committee were able to make such sweeping statements'.

³ The Emergency Powers (Defence) Acquisition and Disposal of Motor Vehicles Order, 1940, S.R. & O. 1940, No. 1352.

production was given over to civilian use; the Service departments got the rest.¹ Thus, the production of vehicles for civilian use was estimated to be only about a quarter of what was required. Not only, therefore, had new vehicles to be allocated among competing claimants, but old ones had to be kept on the road for as long as possible. The work of concentrating the limited amount of new production on the most essential civil needs, and of allocating them was undertaken by the Vehicle Supply Branch of the Ministry of War Transport. Operators needing new goods or public service vehicles applied for licences through the Regional Transport Commissioner, who scrutinised their claims and made appropriate recommendations to headquarters. The sale of second-hand public service vehicles, though not goods vehicles, was also controlled by licence.

As new vehicles became harder to get, more attention was focussed on the maintenance and repair of existing ones. Early in 1941, therefore, a committee was set up under the chairmanship of Mr. W. E. Rootes to advise the Ministry of Transport and the Ministry of Supply on the maintenance and repair of civil road vehicles.² This Committee recommended, in May 1941, that the age of reservation for certain men in the tyre manufacturing industry and in repair work should be extended, that the Essential Work Order should be applied to repair shops, that there should be a more generous allocation of steel for spare parts, that hoarded parts should be requisitioned, and also asked for, and was granted, railway priority for the movement of motor vehicle spares. Finally the Committee urged that the Ministry of War Transport should be strengthened by persons from the motor repair industry. Most of these recommendations were soon to be carried into effect. On 23rd August, 1941, Mr. F. G. Smith, President of the Motor Agents' Association, was appointed Repairs Adviser to the Ministry of War Transport. His title was subsequently changed to Director of Vehicle Maintenance. The new Directorate was staffed by engineers both at Headquarters and in the Regions, and henceforward the Ministry became actively concerned with all matters of production and allocation of spare parts for civilian road transport, especially goods and public service vehicles. Briefly, the job of the Directorate was to make up for the deficiency of new vehicles by keeping old ones in a good state of repair. Firstly, it kept a close watch, in collaboration with the Ministry of Supply, on the production of sufficient spare parts by manufacturers. Secondly, steps were taken to keep sufficient skilled labour in the vehicle repair industry, to economise in the use of repair shops and garages, and to safeguard them from indiscriminate

¹ The civilian allocation was later increased to 20 per cent.

² The Vehicle Maintenance Advisory Committee had its first meeting in February 1941. It also dealt with the repair of Service vehicles in civil establishments.

requisitioning. Finally, the Directorate was responsible for pooling all spare parts, and allocating them to operators according to need. Scarce spares could only be had on the production of a 'Certificate of Need' issued by the Ministry of War Transport. For parts particularly hard to obtain, 'Spares Shortage Certificates' were issued. These were passed on to the Ministry of Supply to provide the essential information about the types of spares on which production needed to be concentrated. In addition, from the beginning of 1942, steps were taken to obtain from operators of both goods and public service vehicles, proper returns of vehicles laid up and the reasons for their idleness.

This machinery was to remain throughout the war years. While it was still being built up, the Minister of War Transport was looking into short-term possibilities for improving the supply of buses in the winter of 1941-1942, and relieving workpeople's transport difficulties. There was not much prospect of diverting buses from one route to another, as most services then running were already meeting war needs. Nor was there much hope of getting new buses from America, and a proposal to build 'articulated' vehicles had to be rejected on technical grounds. What of the buses in the country that were laid up or being held in reserve? Their numbers were not known precisely, but it was thought that about 2,000 buses—some of which were designed for excursions and tours rather than stage carriage operation—could be brought into service if crews for them could be found. A more promising remedy was the conversion of standard single decker buses to carry 60 passengers—30 seated and 30 standing—which was the normal capacity of a double decker.¹ This was put in hand during the autumn of 1941. The idea owed much to the advice of Sir Frederick Heaton, who represented the road passenger transport industry on the Inland Transport War Council, and to the agreement of the Transport and General Workers' Union. Certainly it meant discomfort for the passengers and harder work for the bus conductors, though it was more satisfactory to workpeople than being without buses at all. To mitigate the hardship, the Regional Transport Commissioners were advised broadly to limit the use of converted buses to journeys about ten miles long. Although there were objections from some operators, who no doubt were hoping to get new buses, some overhasty conversions, and some delays because of the scarcity of labour and materials, already by the early months of 1942, over a thousand conversions had been made.

The local complexities of South Wales came in for special attention. Fundamentally the problem there was due to the existence of a

¹ By The Standing Passengers (No. 2) Order, 1941, 30 standing passengers were allowed on suitably converted buses and up to 12 on other buses.

large number of small bus operators. The Minister of War Transport did not follow the Minister of Labour's suggestion for setting up pools of vehicles in this Region, because he thought that this would mean long negotiations and meet with opposition. It was considered wiser to strengthen the voluntary mutual aid schemes which already existed among the operators in the area, and which would now be brought under the direct approval of the Regional Transport Commissioner. Small operators would be instructed to organise mutual aid arrangements by forming groups, members of these groups would have to assist one another if necessary to the limits of their resources. There would also be created in the Region a reserve of vehicles and drivers, which, although held by the larger companies and used by them to support their own services, would always be available to supplement the resources of small operators. If operators showed reluctance to join in this scheme, the Regional Transport Commissioner would not hesitate in requisitioning their vehicles and handing them over to other operators to run. If difficulties like those in South Wales were found elsewhere in the country, similar action would be taken there also. To strengthen the hands of the Commissioners, the Minister of War Transport made it known that he would, if need be, use his powers under the Defence Regulations to compel operators to provide the services necessary. These powers were never, in fact, exercised.

While these measures for improving the supply of buses were being approved by the Lord President's Committee, action was being taken to control and cut down demands for bus services where that was possible.¹ One method was to encourage more workpeople to use local train services instead of buses, but if this was to succeed, rail travel had to be made attractive to them. Local train services were less popular than the buses for three reasons: the timing of trains, the relative inconvenience of terminals, and the higher rail fares. The Railway Executive Committee was therefore instructed to review its local time-tables, to consider building platforms on lines where new war factories had been established, and was asked for suggestions 'on the basis that an artificial shortage of transport for workers owing to differences in fares (could) not be contemplated'. There was clearly no object in reducing local train fares to attract traffic, or equalising road and rail fares, except where this would transfer traffic from overburdened road services to rail services which were not being fully used. Where these conditions were satisfied, rail transport was convenient, and the distances about the same, workmen's rail fares

¹ The Central Transport Committee had agreed on 17th June, 1941, that, in future, where new Government factories and other establishments were being built, their expected transport needs—both the numbers of workpeople to be conveyed, as well as likely freight movements—should be notified in advance to the Ministry of War Transport.

were to be reduced to the level of bus fares. The Regional Transport Commissioners were made responsible for getting these schemes going. Where the rail journey was longer than that by bus, fares would not be equalised. Instead, the Regional Transport Commissioners would ask employers to encourage their workpeople to use the trains, and pay the difference in fares. At the Royal Ordnance Factories, the Ministry of Supply adopted the practice of instructing workers how they should travel and paying their expenses where they were more than three shillings a week. The policy of transferring workpeople from road to rail seems to have met with some success, especially in South Wales.

Another way of reducing the strain on buses was by staggering hours of work. The Select Committee had considered this to be the most hopeful way of solving workers' travelling difficulties, and this view found strong support at the Ministry of War Transport in the autumn of 1941. The concentration of peak loads into short periods in the morning and evening, with its consequent extravagant use of vehicles and manpower, is a problem that most omnibus undertakings have to face in peace-time. Although voluntary staggering had been encouraged at a few factories from the beginning of the war, the practice was not widespread. The air raids in 1940 and 1941 had intensified the homeward peak hour rush and had made staggering schemes more difficult to apply. Besides the social and domestic problems which staggered hours caused for workpeople, there were technical obstacles to staggering in some industries. It was not therefore until the autumn of 1941, when it definitely looked as if there might not be enough buses to meet workers' winter travelling needs, that a thoroughgoing policy of staggering working hours came to be contemplated. The technical and other obstacles had now to be balanced against the loss of output that might otherwise result from a lack of transport. The Minister of War Transport had already warned the Lord President's Committee that transport facilities in the coming winter would not be sufficient to get everybody home just before blackout, and the latter accepted his proposal for a general policy of staggering in September 1941. Since sufficient staggering was not expected to be achieved voluntarily, schemes were to be devised locally under the aegis of the Production Executive's Regional Boards.¹ Where agreement by the interests concerned could not be reached, the Minister of Labour was to have the power to apply compulsion. Although, in practice, compulsion was not resorted to, this decision of the Lord President's Committee marked the beginning of extensive schemes of staggered hours all over

¹ The representation of the Regional Transport Commissioners on these Boards would ensure that the schemes were practicable from the transport angle.

the country. Efforts were also made in other directions to relieve the peak period congestion, and ease workpeople's travelling difficulties. Shops were closed earlier—the hours varied to fit in with local conditions, and propaganda was directed to housewives and others not to travel in the rush hours. The Lord President's Committee also approved a proposal to erect simple shelters and queue barriers for the benefit of workers travelling by bus.

Although these various measures all helped to mitigate the travelling difficulties of workpeople, they did not remove them. When, in December 1941, the Minister of War Transport said that so far that winter he had heard of no substantial hold-up of war production because of a lack of transport,¹ the Minister of Labour refuted this sanguine view. He pointed out that women were now being asked to work on night shifts, and many more of them would shortly be directed into industry. These new measures of compulsion would mean that steps must be taken to remove the sources of complaints about bad transport. The Lord President's Committee therefore, to which this question was referred, recorded the view that there was room for improvement in the facilities for transporting war workers. This opinion had been voiced at a meeting of the War Cabinet a fortnight earlier, and the Prime Minister had asked the Service Ministers to help by releasing buses to meet this need. Once again, therefore, attention was centred at the highest level on ways of getting more buses and organising better services. The upshot was a decision that, during the present lull in air attack, fewer vehicles need be held in reserve, and some could therefore be directed to workers' services. The War Office gave temporary loan of 420 buses—seven military motor coach companies—to strengthen workers' services, and also released some coaches for civilian use. They also offered to release 800 coaches in their changeover from motor buses to troop carrying lorries, but as most of these vehicles were worn out and only fit for scrapping, the relief they provided was not very great.

Such were the many devices adopted to keep up essential bus services in the closing months of 1941. Between Dunkirk and the end of 1941, the greatest obstacle had been the supply and maintenance of vehicles. So far, the supply of bus crews had not, except in one or two districts, constituted a serious limitation to essential services. Bus drivers were covered by the schedule of reserved occupations at 25, though conductors were not. At the end of 1940, some drivers had been released from the Army to meet the local shortages in London and elsewhere, and conductors training as drivers granted deferment in their call up. As men conductors were either called up or trained

¹ 'There had been breakdowns here and there, as was probably inevitable in a complicated transport system, but he believed that the position as a whole was not unsatisfactory.'

to replace the younger drivers, they in turn were replaced by women. This gradual changeover went ahead during 1941 without causing any widespread insufficiency of bus crews. By 1942, however, the position had altered and a shortage of conductresses was soon to become at least as formidable a limitation as the shortage of vehicles. Moreover, further restrictions on supplies of fuel and rubber tyres were inevitably to have a powerful effect on the operation of all forms of road transport after Pearl Harbour.

CHAPTER IX

COASTAL SHIPPING AFTER THE FALL OF FRANCE

(i)

Outline

THE FALL OF FRANCE changed the coastal shipping situation in three ways: by increasing the supply of tonnage, by altering the functions of the coasters and by making the tasks of coastal shipping more difficult and dangerous.

The events on the continent of Europe in the summer of 1940 directly increased the supply of coastal shipping by causing a considerable tonnage from France, Holland, Belgium, Norway and elsewhere to pass into the control of the British coastal shipping authorities.¹ Indirectly, the end of coal exports to France meant that much of the tonnage hitherto employed in that trade was now available for other uses. Thus the transport users at the Railway Communications Committee learned 'with surprise and pleasure' in July 1940 that coasters would be able to carry an additional 50,000 tons of freight a month during the 1940-1941 winter 'as a relief to the railways'.

The principal function of the coasters after Dunkirk continued to be the distribution of home-produced commodities from one part of the United Kingdom to another. It was still vital that coal should continue to move from North Eastern England to London and the South coast. Other home-produced commodities had also to be moved by coaster: some of them familiar cargoes like cement, others, like seed potatoes, new to the coasting trade. The second function arose out of the large-scale shipping diversion which the collapse of France made necessary. In order that they should not be risked in the dangerous East and South coast waters, deep sea ships, loaded with goods needed by industrial centres, processing plants or populous regions near the East coast, were now, as has already been described, discharging in the main at ports in the West. Coastal shipping helped in the clearance of the West coast ports, in so far as it was able to do so. There was also a third subsidiary task which the coasters had to perform, namely, to ply on the shorter sea routes which remained

¹ See *Merchant Shipping and the Demands of War*, *op. cit.*, Chapter V.

open to them—a function which otherwise deep sea ships would have had to perform. After the fall of France, coasters continued to trade with Ireland and Iceland and were frequently employed on voyages to the Mediterranean, Gibraltar, North Spain and Algiers.

These various tasks the coastal ships had to carry out under conditions of unusual difficulty and great danger. The German occupation of Europe gave the enemy control over the entire seaboard which, until then, had been the short sea trading limit of the coasters, namely, Narvik to St. Jean de Luz. It was now much easier for the enemy to obstruct and interfere with the coastal seaways by using aircraft, E-boat, mine and long-range gun, so that, during the eighteen months from mid-1940 to the end of 1941, and possibly afterwards, the Straits of Dover and the Wold Channel (Hell's Corner and E-boat alley) became the most war-dangerous waters in the world. This, of course, was the primary reason for re-distributing the shipping round the coasts of the United Kingdom. Coasters continued to use all ports, but ships over 1,600 g.r.t., after September 1940, ceased to travel up the English Channel and could only make limited use of East coast ports. Every effort was made to avoid sending refrigerated or tanker tonnage, or any ships of over 6,500 gross registered tons to East coast ports. Diesel-driven vessels could not come south of the Forth and timber ships were not allowed into London. Not more than 59 ships, even within these restrictions, could be in the Port of London at any one time.¹ The bulk of United Kingdom imports therefore came to West coast ports and anchorages and Liverpool took the place of London as the chief port of England.

Although coasters continued to make use of all British ports, coaster traffic through the Straits of Dover and along the South coast was reduced to a bare minimum. Towns like Plymouth, Southampton and Portsmouth could not produce gas or electricity without coal, but as we have seen, great difficulties prevented the supply of all their needs by rail, especially while the heavy air raids lasted during 1940 and the early part of 1941. Essential traffic of this kind had therefore to pass coastwise through the Channel, but no other merchant ships were allowed through the Straits of Dover.² All other cargoes moving from the Bristol Channel or the Mersey or the Clyde

¹ The original instructions were more rigid than this. The first idea had been to close London entirely to deep sea ships, but this had not proved practicable. In order to relieve port congestion, the Ministry of Shipping suggested further modifications early in 1941, namely that ships up to 10,000 tons should be allowed on the East coast if fast convoys could be provided for them and that timber ships, at least those carrying short lengths of sawn timber, should be allowed into London. Although these concessions added 14 days to the deep sea ships' sailing time, they took 4 days off their discharging time and 6 days off their loading time.

² For a description of the operation of the Channel convoy, see below, pp. 367 *et seq.*

to the Thames or Humber had to be carried northabout by way of the Pentland Firth—a long voyage and, in winter, an unpleasant one.

This is the general outline of coastal shipping from the fall of France not only until the end of 1941, but throughout the war until the preparations for Overlord altered the pattern. The real contribution which the coasters made to winning the war was not at Dunkirk or even at Arromanches, but in performing their unspectacular, ordinary jobs, in conditions of difficulty and danger, day in and day out around the coasts of Britain. The following more detailed account of these problems is concerned principally with the period from mid-1940 to the end of 1941. Some parts of this chapter are, however, projected beyond that time limit, for the tasks and problems of coastal shipping remained very much the same over the whole period from mid-1940 to the autumn of 1943.

(ii)

The Capacity of the Coastal Shipping Fleet and the Demands on it

CAPACITY

The immediate effect of the German victories in Europe was to increase the size of the United Kingdom coastal shipping fleet. It is, however, difficult to say how large this increase was, because the available statistics are neither adequate nor readily comparable. Before the war, as far as is known, there were about 1,300 ships of all kinds (excluding ships of less than 100 gross registered tons) normally employed in the home and coasting trades.¹ An analysis made for the year 1936 shows that there were, at that time, 1,145 dry cargo coasters (i.e. excluding passenger vessels, tankers and sailing vessels). 610 of these were normally employed in the coasting trade, 209 normally in the home trade and 326 normally in both. These ships represented a total dry cargo deadweight tonnage of 1,088,309.² During the first months of the war, the coaster fleet was considerably depleted, mostly by demands from the Services, and it is known that much more tramp tonnage could have been employed in normal trading in the winter of 1939–1940 if it had been available. During the spring and summer of 1940, however, the fleet was augmented partly by the chartering of some neutral tonnage, but mainly by the

¹ 1,260 in 1936, according to Dr. Isserlis' figures in the footnote below: 1,335 in the 1938 Census of Seamen, including sailing vessels. (See above, Chapter I, Appendix II.)

² These figures are taken from L. Isserlis, 'Tramp Shipping Cargoes and Freights',

acquisition of Allied tonnage from the conquered nations of Europe.¹ It was stated in the spring of 1941 that there were about 350 foreign ships available for the coasting trade—including 200 useful shallow draught Dutch motor vessels. Until the employment returns start in April 1941, however, there are no reliable statistics of the total tonnage in the war-time coastal shipping fleet.² From that time

Journal of the Royal Statistical Society, Vol. CI, Part 1, 1938, Table VI, p. 102:

CLASSIFICATION OF UNITED KINGDOM TONNAGE ON 30TH JUNE, 1936
Analysis of Steam and Motor Tonnage of 100 gross tons and upwards on United Kingdom register (excludes sailing vessels)

	Coastal trade only		Home trade only		Partly in coasting and partly home trade		Totals	
	No. of ships	d.w. tons	No. of ships	d.w. tons	No. of ships	d.w. tons	No. of ships	d.w. tons
Tramp . . .	407	351,768	51	50,138	312	332,091	770	733,997
Cargo Liners .	111	114,969	120	153,756	13	9,354	244	278,079
Mixed Cargo and Passenger Liners . . .	92	57,117	38	17,792	1	1,324	131	76,233
<i>Total Dry Cargo Tonnage . . .</i>	610	523,854	209	221,686	326	342,769	1,145	1,088,309
Passenger Liners	45	12,665	32	8,316	—	—	77	20,981
Tankers . . .	30	41,509	1	690	7	7,613	38	49,812
GRAND TOTAL	685	578,028	242	230,692	333	350,382	1,260	1,159,102

Note. As home trade vessels came under Coasting and Short Sea Control in war-time and as the majority of them became part of the coasting fleet after the fall of France, any comparison of the size of the fleet before and during the war must include them.

¹ *Merchant Shipping and the Demands of War, op. cit.*

² There do exist a number of estimates:

- (i) Appendix VII, p. 182 of this volume, shows dry cargo tonnage between 750 and 5,000 d.w.t. employed on 31st January, 1940. This estimate excludes the numerous (perhaps as many as 500) small ships of the coasting trade below 750 d.w.t. and includes, at the other end of the scale, some ships large enough to be classed as ocean-going tonnage. This is borne out by the fact that, although only 689 dry cargo vessels are listed, the deadweight tonnage is 1,342,000—larger than the entire pre-war coasting and home trade tonnage.

- (ii) A statement prepared in April 1940 for the Transport Advisory Council gives the following figures:

	Number	Deadweight tons
Liners	318	301,000
Tramps under 800 d.w.t.	542	218,000
Tramps 800 d.w.t. and over	469	966,000
Tankers	54	33,000
<i>Total</i>	<u>1,383</u>	<u>1,518,000</u>

This total cannot be relied on as it includes 'a number of ships on Government service under requisition'.

[continued on opposite page]

onwards, the monthly average of dry cargo tonnage *in service* and *employed* was as follows:

	1941 (average, April- December)	1942	1943
Tonnage employed . . .	1,127,400	1,138,650	1,090,900
Tonnage in coasting and short sea service ¹ . . .	1,389,000	1,390,500	1,319,600

These figures indicate that, on an average, between the fall of France and the preparations for D-day early in 1944, there were about 300,000 more deadweight tons of shipping *in service* in the coasting trade than before the war—in spite of the requisitioning of ships by the Services.² Moreover, despite heavy losses in 1941³ and the large number of ships under repair, there are good reasons for thinking that the tonnage of coastal shipping *employed* was considerably higher than before the war. There is no doubt that, in the main, the increase in the tonnage of the coaster fleet was due to the influx of three or four hundred Allied and neutral ships from Norway, Denmark, Holland, Belgium, France, Poland, Esthonia and later Greece, when these various countries were over-run, together with some additional ships from elsewhere.⁴ There was also a certain amount of new tonnage built, but probably not more than enough to replace losses. The increased tonnage made available by the cessation of the French coal trade is not, if course, reflected in the statistics as an increase in tonnage *in service* or tonnage *employed*, because this ought properly to be regarded as a reduction in the demands on the coasting and

continued from opposite page]

- (iii) By July 1940 there appear to have been 1,200 British tramps and about 215 British liners in coasting employment (of which 65 were in the Irish cross-channel trades and trading to the Scottish islands, 55 were short sea liners without regular employment after the fall of France and 95 were on regular established services around the coast). There were, in addition, an unspecified number of Allied and neutral ships, stated in March 1941 to be 350. At that date, the carrying capacity of all this fleet was put at about 1,700,000 tons. This figure also seems to be unreliable as it is considerably higher than the totals in the employment returns for April 1941, which show 1,192,500 deadweight tons of coastal shipping *employed* out of 1,445,400 tons *in service*.

¹ The figure for tonnage *in service* has been worked out from the employment returns as tonnage employed plus vessels in salvage work, vessels undergoing minor repairs, vessels being degaussed or fitted with defensive equipment, vessels out of commission (undergoing or awaiting repair or laid up), vessels engaged in estuarial work, in ballast unfixed and employment not known.

² In July 1940 out of 320 coasting liners, 105 had been requisitioned by the Services.

³ More than 100 coasters were lost at sea during 1941.

⁴ For example, 8 Canadian lake steamers were chartered by the Ministry of Shipping in June 1940, but did not prove suitable for work at sea during the winter. 'The ships (were) little more than half-tide rocks in any but the calmest weather' and, despite efforts to improve them, they were below Ministry of Shipping normal standards and proved useful only for summer work.

short sea fleet. About two-thirds of the ships formerly in the French coal trade were used to augment the United Kingdom coasting services after Dunkirk. The rest went into deep sea employment.

While there was almost certainly more tonnage employed in the coasting trade from mid-1940 onwards than before the war, the carrying capacity of coastal ships continued to be much reduced compared with peace-time.¹ The reasons for this were the increased length of war-time voyages when cargoes had to be carried north-about, increased voyage times owing to convoy delays and enemy action at sea and increased loading and discharge times owing to the blackout, bombing and the shortage of dock labour in port.² Comparisons of coastal shipping performance in peace and in war or in the early and later war years can be misleading partly because of the inadequacy of statistical data and partly because of differences in the lengths of voyages, time taken to load and discharge, etc.³ All such comparisons ought, therefore, to be treated with caution. A very rough calculation indicates, however, that in peace-time (1936), each thousand deadweight tons of shipping in the coasting trade carried between 44 and 50 thousand tons of cargo. During the war years, each thousand deadweight tons of coastal shipping carried:

1941	1942	1943	(000 tons)
20·9	22·2	22·9	

This admittedly rough estimate⁴ does confirm other evidence that war-time conditions at least halved the efficiency of the available tonnage, though there were improvements after 1941 probably owing to improved voyage times and convoy arrangements made possible

¹ See above, Chapter IV, p. 160, for a discussion of the reasons for the reduction in the capacity of the coastal shipping fleet in the early months of the war.

² Normal voyage times of 6 days between Newcastle and London were more than doubled. Voyages sometimes took as long as 16 days, though there is evidence that the times improved as the war progressed. They averaged about 12 to 13 days in 1942 and 1943.

³ For example, if deep sea shipping diversions from East to West declined as the war proceeded, the ton-mileage carried by coastal ships would tend to decrease. This would tend to increase the ton weight of commodities moved by each million deadweight tons of shipping.

⁴ This calculation has been made as follows: Dr. Isserlis' figures for 1936 show that 523,854 deadweight tons of dry cargo tonnage were employed in the coastal trade and 342,769 deadweight tons partly in the home and partly in the coastal trade in that year. If it is assumed that ships engaged partly in both trades spent two-thirds of their time in the coastal trade, this gives an effective dry cargo tonnage of 750,000 deadweight tons for 1936. The pre-war figures of 44 and 50 thousand tons of cargo per 1,000 d.w.t. are arrived at by dividing the estimates of cargo carried before the war, namely 33 million tons for 1935 and 38 million tons for 1936 (see Chapter I, Appendix III) by 750,000. The war-time figures for 1942 and 1943 are based on the average monthly deadweight tonnage *in service* in the coasting trade and the total tonnage of cargoes discharged in each year (Statistical Appendix, Table 8). For 1941, the tonnage of cargo discharged during the whole year has been estimated from the available figures for the period April–December. This has been divided by the average d.w.t. of shipping *in service* in the coasting trade between April and December 1941.

by the slackening of enemy attack. On the whole, however, the increase in the tonnage of coastal shipping available did mean that the effective capacity of the coasting fleet was now greater than it had been in the first ten months of the war. The worst coastal shipping shortage was over.

Government control over coasting tonnage between the fall of France and the end of the war remained substantially as has already been described in Chapter IV of this volume. The flexible system of voyage licensing enabled tramp tonnage to be employed to meet changed conditions and changing demands on the fleet. The position of the coasting liners was, however, somewhat different. These had been under-employed even when the coastal tramps had been hardest pressed during the first winter of the war. When the general coasting fleet was augmented after Dunkirk and the short sea trades, except to Spain and Portugal, were lost, there was a real danger that liner owners would be forced out of business, their ships laid up and their crews disbanded. The liners could not be allowed to go out of commission, for shipping diversion, which was expected to increase the demands on all coastal shipping resources, was imminent and the crews, once disbanded, could not have been found again. The situation was not equally serious on all the liner routes: liners trading to the West of Ireland, for example, experienced few such difficulties; while the Ministry of Shipping was able to transfer suitable liners to deep sea employment. Nevertheless, most of the coastal liners were seriously under-employed in the summer of 1940 and for this reason the War Cabinet agreed on 19th August, 1940,¹ to requisition them and run them on Government account. The owners thus received reasonable remuneration whether their ships were employed or not and the Exchequer bore the loss, if any, of running the ships. Requisition meant that, with the heavy war risk insurance costs borne by the Government, liner freight rates² could remain competitive with road and rail rates and coasting liners could run again with full cargoes. Government traffic was increasingly consigned to them.

The rates of requisitioning a ship were based on the average daily operating costs for a typical ship of each class, plus 5 per cent. for depreciation and 5 per cent. for interest on capital. About 250 vessels were affected. All these ships were formed into a coasting liner pool and Area Committees issued permits to them instead of the licences necessary for non-requisitioned tramps. As licensing control by one of the early Orders could not be applied to the requisitioned ships, this permit had to be obtained from the Area Committee for each voyage undertaken. There was little practical difference between a

¹ See above, Chapter IV, p. 169.

² At that period, 33½ per cent. above pre-war, except in the Irish cross-channel trades, where the increase was 65 per cent.

permit and a licence, except that a permit was specific and not general like most of the licences.

Ministry owned and time-chartered vessels, that is foreign and Allied ships taken over by the Ministry of Shipping, were controlled in the same way as the requisitioned liners and had to get voyage permits. Suitable shipowners were appointed as managers of these foreign vessels and Area Committees were told which Dutch, Danish, Norwegian, etc., ships had fallen to the managers in their area. Managers operated the ships as their own, but the Ministry of Shipping paid all war and marine risk insurance for the ships.¹ The managers received a consolidated sum of £450 per annum for each of the first six foreign ships managed by them (£350 for ships under 1,600 gross tons) to cover management and brokerage fees. These sums were halved for any ships in addition to the first six.

DEMANDS

We turn now to the demands on the coasting fleet after the fall of France. Unfortunately, while the official records disclose much about the nature of the principal war-time demands for coasting services, there exist no official statistics, until the employment returns first appear in April 1941, to tell us the relative size of these demands. It is probably more difficult to measure precisely the size of the demands on coasting tonnage during the crucial autumn and winter after Dunkirk than it is to estimate the capacity of the United Kingdom coasting fleet during that period.

There is, however, no doubt that by far the largest part of United Kingdom coastal tonnage—probably between 85 and 90 per cent.—continued to be employed in moving coal and other home-produced bulk commodities. The consequences of the loss of the coal export trade and the changes in the pattern of internal coal distribution which followed the French surrender have already been examined in relation to railway problems.² For coastal shipping, the net effect of these changes was that the movement of coal around the coasts of the United Kingdom remained just as vital after Dunkirk as it had been in the early months of the war, but this task was, on the whole, more difficult and dangerous.

The most important contribution which the coasters made to the domestic transport of the United Kingdom continued to be in the East coast coal trade. As we have seen, the bombing during the 1940–1941 autumn and winter seriously disrupted railway communications in and around London, which made it difficult to supply London and sometimes almost impossible to supply areas farther

¹ The managers had to pay workmen's compensation and employer's liability insurance.

² See above, Chapters IV, V and VI.

south with coal by rail. The reason in the first place for sending coal by rail from as far afield as Northumberland and Durham (and some from the Midlands) to London and southern districts had been the reduction in the capacity of the coastal tonnage moving along the East and South coast. While the transfer of tramp tonnage from the French to the domestic coal trade after Dunkirk was a windfall which undoubtedly helped coastwise coal movement, this gain must have been partly offset by the further loss of capacity caused by the increased difficulties and dangers of voyages off the East and South coasts and the limited number of ships that could use the English Channel after the North West European seaboard came under German control. Yet despite the obstacles to coastwise coal movement, it was equally clear, especially after the German air raids and shipping diversion started in September 1940, that the railways only had the capacity to relieve the coasters of a small proportion of East coast coal. To ensure that the needs of London and the South were met, seaborne coal supplies had to be maintained at the highest possible level and the railways used as sparingly as possible for long coal hauls.

During the winter of 1940-1941 and in subsequent war-time years, coastal shipping was in fact able to carry a substantial tonnage of Northumberland and Durham coal, not only into the Thames, but by way of Hell's Corner route to the South coast ports. But the tonnage moved coastwise fell short of the peace-time figure and of total war-time requirements. Statistics show that this was the case from 1941 to the end of the war and we already know that it was the case in the 1940-1941 autumn and winter. Throughout the war therefore, some Northumberland and Durham coal had to be moved south by rail in order to fill the gap. Moreover, some of the coal moved coastwise still had to be carried by rail for part of its journey and a number of unusual devices resorted to to keep London and Southern England adequately supplied—particularly in the 1940-1941 period. For example, some coal was railed from North Eastern England across to Cumberland whence it continued by sea to small ports in Devon and Somerset. Some parts of Southern England were supplied coastwise from South Wales and coal was also carried by coaster from South Wales to Southampton and Newhaven and then railed to London.¹ Improvised arrangements of this kind largely enabled the coasters and the railways to keep London and the South supplied with coal during the worst period, 1940-1941, and, in some cases, were continued as regular coastwise and rail movements until 1944.

¹ The original ruling that coasters must not discharge coal involving the railways in a long haul was waived during the port crisis in the autumn and winter of 1940-1941.

Besides the movements of coal along the East and South coasts, the other main tasks of the colliers were to supply Northern Ireland and to deliver coal to the West coast of England and Scotland, particularly to Lancashire. Part of Lancashire's supplies had to be shipped from Northumberland and Durham northabout.

How large were the various tasks of coal movement that were carried out by coastal shipping and what was their relative importance? Until April 1941, this was not known, but it may be assumed that the tonnage of coal moved by sea during each month between Dunkirk and that time was slightly less than the average monthly tonnage moved after the employment returns start. The abnormal difficulties of the 1940-1941 winter suggest that less coal was moved coastwise during that period than say in 1941-1942 or 1943-1944. But it seems unlikely that the proportion of total tonnage which went to each of the main consuming areas varied greatly between 1940 and 1943. The statistics from April 1941 onwards indicate that coastal shipping carried about 21 million tons of coal each war-time year¹ (compared with a peace-time figure of 24 million tons a year). Roughly, between 55 and 60 per cent. of all coal cargoes were discharged in the Thames and 3½ per cent. at other East coast ports in England and Scotland; 13 per cent. were discharged on the South coast; 9 per cent. at places on the West coast of England and Scotland; 12 per cent. were shipped to Northern Ireland and a further 6 per cent. are not classified by destination.² This was the pattern of the coastwise coal trade from Dunkirk until 1944. The figures bring out strikingly the importance of the East and South coast coal trades, which, in spite of some war-time curtailment and diversion to the railways, together accounted for about 75 per cent. of all coastwise coal cargoes. The total tonnage of coal moved coastwise, 21 million tons per annum, may appear small by comparison with the average of 160 million tons a year of coal class traffic moved by the railways between 1941 and 1943. A rough calculation in terms of ton-miles helps to put the war-time contribution of coastal shipping in its proper perspective. If the 21 million tons of coal cargoes per annum is multiplied by 277 miles, which was the average length of a collier's voyage in 1943, it appears that the coasters moved, on an average, about 5,800 million ton-miles of coal a year after Dunkirk. The railways moved between 9,000 and 10,000 million ton-miles of coal a year.³

¹ Employment Returns, Statistical Appendix, Table 8, to this volume.

² *Statistical Digest of the War*, *op. cit.*, Table 171 (i). The percentages are averages for the years 1942-1943.

³ This comparison of ton-mileage moved is not entirely valid, because a collier's voyage between two ports is necessarily much longer than the rail distance. By multiplying coal tonnage by the length of voyage, it is easy to make a virtue out of the disadvantage of moving coal by ship—i.e. the long and slow voyage time.

These few facts are sufficient to illustrate the fundamental contribution made by coastal shipping in the coal trade throughout the middle years of the war. It is difficult to compare adequately the contribution of coastal shipping to coal movement during the war and before the war because the average pre-war length of a collier's voyage is not known. It is clear, however, that if the coastal colliers had ceased to ply up and down the East coast during the war—or even if shipments of coastwise coal had been much further reduced—no other form of transport could have filled the gap in deliveries to the South. Coal movement was therefore a demand of first importance for coastal shipping throughout the war and was treated as such.

No exact priorities for coal were laid down by Coasting and Short Sea headquarters, but Area Committees were instructed that no collier regularly carrying coal to London and the South was to be taken off its route and that coal cargoes to London were to have equal priority with trans-shipment work.¹ They were also told in general terms that overside discharge and the 'use of tonnage to relieve the railways' were to be considered as extremely important priorities. If shippers could not get tonnage for the movement of coal through ordinary commercial channels, they asked through the Mines Department for shipping priority.² If the demand was sponsored by the Mines Department as a vital one, it was passed to the Coastal Shipping Division of the Ministry of Shipping (later War Transport) which sent the demand to the appropriate Area Committee which allocated a vessel. For example, in 1940, the public utility undertakings on the Isle of Wight advised that their stocks were running low and were granted priority for a number of ships to supply them with coal.

It has been frequently stated that the main war-time function of coastal shipping in moving coal was to relieve or to help the railways. Since the coasters moved a smaller tonnage³—and probably a smaller ton-mileage—of coal in war than in peace, it is not immediately obvious that this was so. While it can be argued, quite rightly, that if coastwise coal shipments had ceased, the railways would have been faced with an impossible task, it is, of course, equally true though less frequently asserted, that if railborne coal traffic had declined by say 10 or 20 per cent. no other form of inland transport could have moved the traffic either. Neither statement is particularly constructive. The fact is that the coasting colliers had to work under conditions of unusual difficulty and danger after Dunkirk and

¹ Described later in this chapter.

² Large numbers of official files consist entirely of such requests for priority.

³ Namely 21 million tons per annum compared with 24 million tons a year before the war.

succeeded beyond all pre-war expectations in maintaining coal movement at a rate as high as 21 million tons a year. But since this was less than the peace-time rate of delivery of 24 million tons a year, the gap had to be filled by the railways. The coasters did not therefore 'relieve' the railways in the movement of coal in any general sense. In a more limited sense, however, they did. Coasters were often able to relieve the railways of particularly difficult and long cross-country hauls which inevitably characterised war-time coal distribution after Dunkirk. By helping to economise in the use of railway line capacity and locomotive power on these long and difficult hauls, coastal shipping contributed towards keeping the inland transport system as a whole fluid.

Besides coal, there were other important bulk traffics carried by coastal ships, for example, cement, seed potatoes, sulphate of ammonia, sugar beet and scrap iron. Discussions about large blocks of traffic which it was considered could be most economically moved by sea took place in the Central Transport Committee and Coasting and Short Sea Division arranged with the appropriate Area Committees to allocate tonnage for the expected traffic. Such deliberate allocation of traffic to one particular form of transport was made possible through the improved administrative machinery created early in 1941. It was considered particularly economical for coasters to move bulk traffics which would otherwise mean long rail hauls. The best example was seed potatoes, a cargo not carried by coasters before the war because it was feared that it would be easily damaged. During the season, October 1940–April 1941, 26,000 tons of Scottish seed potatoes were conveyed to England and Wales by coaster out of a total Scottish crop of 312,000 tons. The first year's experiment of carrying them by sea was judged successful and in subsequent years a much higher proportion of the crop was shipped coastwise. In 1941–1942, 119,000 tons¹ out of an estimated Scottish crop of 350,000 tons was moved by coaster and in 1942–1943 the tonnage moved coastwise rose to 215,000 from Scotland and 22,000 from Northern Ireland and Eire. In co-operation with the Ministry of Food, the Coasting and Short Sea Division issued detailed instructions to Area Committees.² The seasonal movement of the seed potatoes was planned in advance by Transport Division, Ministry of Food, in consultation with the Railway Executive Committee and the Coasting and Short Sea Division of the Ministry of War Transport, the plans being subsequently submitted to and approved by

¹ It had originally been hoped to move 150,000 tons coastwise.

² The potatoes were loaded from Aberdeen, Arbroath, Dundee, Kirkcaldy, Leith and Glasgow in Scotland and from Eire, mostly from County Donegal. Of the 150,000 tons it was hoped to move by coaster from Scotland to England in 1941–1942, 100,000 tons were to be delivered to East coast ports, mostly to Lincolnshire and Cambridgeshire, and 40,000 to the West of England and Wales, mostly to Lancashire, Cheshire and North Wales.

the Central Transport Committee. The Ministry of Food's Potato Transport Officer in Scotland was responsible for moving the potatoes and he kept in touch with both the railways and the local Coasting Area Committees, advising them in advance of his transport requirements. The main difficulty was the difference in cost between rail and sea transport. The higher cost of coasting freights compared with those of the railways was said to make as much as 10s. a ton difference to the English merchant. The Treasury therefore agreed to recompense the merchant for the difference between rail and sea freights.¹ Merchants who received potatoes by the sea route had to send the receipted account of the coasting ship charges to the Ministry of Food and were reimbursed for the difference between this and the rail cost. To ensure that potatoes went by coaster when this was considered desirable, the Ministry of Food made an Order forbidding carriers to accept traffic except in accordance with that Ministry's directions.² This Order applied not specifically to potatoes, but to Ministry of Food traffics generally and gave the railways legal authority to refuse traffic except under Ministry of Food licence. By these methods, the Government was able to allocate specific traffics to the coasters where this was considered the most economical means of using scarce transport resources.

The main difficulty about allocating large blocks of traffic to coastal shipping was that coastal tonnage was frequently already fully employed. Sometimes, the Central Transport Committee had to be told that coasters could only be released to carry out a bulk movement at the expense of coal traffic, as for example in the autumn of 1941 when it was suggested that coastal tramps could relieve congestion on the Great Western Railway by moving steel. In such circumstances it was a question of deciding whether the relief given to the railways in shipping a bulk traffic coastwise was greater than the burden imposed by making them move more coal.

The second function of coastal shipping after Dunkirk—albeit a minor one by comparison with the large task of moving coal and home-produced commodities—was to help in the clearance of the West coast ports. Plans had been made before the large-scale shipping diversion started and instructions had already been circulated to Area Committees. They had been asked to notify Headquarters, as soon as diversion began, of any coasters which could be spared for use on the West coast, so that arrangements could be made, in conjunction with the Shipping Diversion Room, for as much coasting tonnage as possible to be sent there.

Once diversion actually started in September 1940, coastal ships

¹ The Treasury authorised the expenditure of up to £75,000 for this purpose in the 1941 season.

² See below, Chapter XII.

were called on to help in four ways. First, they were used to distribute imports from the West coast ports to smaller or East coast ports nearer to the point of consumption or manufacture, or to the processing plants situated on the East coast. This not only helped to clear the ports, but when deep sea ships came loaded for mixed destinations the rest of their cargo could be carried on by coaster. Not only was the big ship kept in comparatively safe waters, but her turn-round time was materially decreased. Second, the coasters helped to clear the ports by distributing those goods which were either difficult for the railways to handle or meant long rail hauls. Third, coasters were useful as a mobile reserve in dealing with sudden congestion at a particular port. Fourth, they were used at the emergency port at the Clyde Anchorages for overside discharge direct from the big ships.¹

From September 1940, many commodities like iron ore, wheat, oilseeds, sugar and so on, which in peace were imported and processed at or near the East coast ports, were arriving at ports on the West coast. In peace-time, 50 per cent. of United Kingdom wheat imports, for example, came into London and Hull port areas and were milled on the waterfronts, being discharged from the river. About half of the United Kingdom iron ore imports came to the Humber, Tyne and Tees. All such commodities were vital to the British economy and, although imports were reduced by restricting home consumption to some extent and home production was increased where possible, large quantities of these commodities now had to be moved across from West to East. The coasters gave valuable assistance in this task. Not only grain, sugar and oilseeds were carried around the coasts by sea, but timber, pulp and newsprint also went northabout to the East coast ports—or sometimes to the smaller West coast ports inaccessible to deep sea ships, but from which the railway or road haul was less difficult.

As was pointed out earlier,² the congestion of the port and inland transport system in the autumn and winter of 1940–1941 arose not so much because of any increase in the total volume of traffic entering the western ports, but rather because much of the traffic entering the United Kingdom ports at that time was unusual. Some of the traffic was difficult to handle and had to be moved to its destinations for longer distances and over more difficult routes than in peace. Here coastal shipping performed a useful function, similar to that which it was carrying out in handling awkward coal movements. The coasters carried by sea from the West coast ports some of those commodities which would have meant difficult cross-country hauls

¹ See *Merchant Shipping and the Demands of War*, *op. cit.*, p. 82.

² See above, Chapter V.

for the railways or the use of special wagons which were scarce. Long lengths of timber proved particularly suitable for conveyance by coaster.

It is impossible to tell precisely how much help was given by coastal shipping during the 1940-1941 port crisis, but it may be surmised that more use might have been made of coastal shipping to relieve port congestion in the autumn of 1940 if port and transport organisation had been more efficient at that time. Coasting and Short Sea Division of the Ministry of Shipping did indeed point out frequently in the autumn of 1940 that the maximum assistance could not be given at the ports while each commodity control of the Ministry of Food and the Ministry of Supply, together with other transport users, competed with each other for transport. It was explained above¹ how this deficiency was remedied early in 1941 when each of these Departments appointed one Port Movement Officer in each port to be responsible for all its traffic needs. In addition, the appointment of Regional Port Directors early in 1941 helped to overcome the reluctance to move goods coastwise, frequently a more expensive means of transport, for the Directors were responsible for deciding, in the last resort, which form of inland transport should be used. Coastal shipping interests were also represented on the Transport Sub-Committees of the Port Emergency Committees, set up at some ports in the spring of 1941² to give special attention to the most effective and prompt way of clearing the ports.

One special aspect of the trans-shipment of cargoes from deep sea ships into coasters, namely, the overside discharge scheme in the Clyde estuary, is of particular technical interest. In peace, the Port of London is the only British port at which a high proportion of overside discharge is normal and there ships are discharged simultaneously on to the quay and into barges on the other side. The overside discharge which started on 12th September, 1940, at the Clyde Emergency Port at the Tail of the Bank was different. It had been devised to operate when normal berths were full and deep sea ships would otherwise have to wait, or when the port was so congested that cargoes had to be loaded into coasters and carried away without further crowding the quays, sheds or railway sidings. The tendency of the convoy system to cause ships to arrive in bunches could mean that ships were kept waiting for berths, since it was possible for more ships to arrive than the ports could accommodate

¹ Chapter VI, Section (ii).

² Transport Sub-Committees were functioning at Liverpool, Manchester, Cardiff and Avonmouth by June 1941. On the Clyde, their work appears to have been done by other means: 'this sub-committee has ceased to function. Its work is being done under the Quay Clearance Scheme with the institution of the Port Transport Executive and Dock Cartage Ltd.'

at any one time. The Anchorages in the River Clyde, which were sheltered but with plenty of seaway, in effect increased the capacity of the Port of Glasgow. Deep sea ships anchored in the river and the coasters clustered round on both sides while the ship's cranes unloaded the cargoes straight into the coasters to be carried away to other ports. Alternatively, the deep sea ships unloaded direct into barges¹ or small coasters, which could carry the goods up river to the Glasgow docks or to emergency wharves for unloading in the ordinary way.

The main limitation to the more widespread use of overside discharge was, as the Committee which had studied the question at the end of 1939 had discovered, that there were not enough coasters to clear more than a very small proportion of United Kingdom imports by this means without taking coasters away from their normal employment. Coastal tonnage could not be spared from its necessary tasks of moving coal and other commodities to make overside discharge feasible on the scale that had at one time been envisaged.² It was only possible at the Clyde because of the welcome addition of such ships as the shallow-draught Dutch motor vessels (*schuyts*) which had joined the coastal shipping fleet after the fall of France. Although schemes had been prepared for overside discharge at the other ports, no other emergency ports were in fact set up.³ More overside discharge could have been undertaken as a stop-gap remedy, though at heavy cost to other coastwise traffics, had the West coast ports been completely immobilised.

As soon as the Clyde Emergency Port started working, a whole-time coastal shipping liaison officer was appointed to organise the supply of coasters in co-operation with the Port Emergency Committee (and later with the Regional Port Director) and the Area Committees concerned. Coasters were made available in the same way as for other trans-shipment jobs and were governed by similar rules regarding rates of freight and so forth.⁴ The overside discharge

¹ Many barges which were no longer required in the Thames during the diversion were towed through the Caledonian Canal round to the Clyde and other West coast rivers by coasters and coasting tugs.

² Especially as overside discharge required coastal tramps and not coastal liners.

³ There was some overside discharge at Belfast and discharge of dangerous cargoes such as explosives outside port areas; for example at Holyhead. The shortage of coasters was one reason why no other emergency ports were set up; another was the fact that some deep sea ships continued to be able to use East coast ports on a scale greater than had been expected. As early as October 1940, a senior official of the Ministry of Transport explained that the Clyde Anchorages Scheme was not needed to the extent expected. 'London has been partially re-opened and the East coast ports down to Hull are being used by vessels up to 6,500 g.r.t.'

⁴ 25 Dutch *schuyts* were sent immediately (approximately 9,500 d.w.t. of shipping). They were needed, together with other small coasters and barges, for Clyde estuary working, carrying goods to docks and emergency wharves, etc. Coasters up to 1,000 tons were needed for carrying cargoes to such ports as Troon down to Barrow and coasters up to 1,500 tons were needed to carry to the Mersey and South Wales ports. The Regional

scheme proved particularly useful for unloading ships carrying mixed general cargoes and for transferring the cargoes of ships loaded for mixed destinations.¹ It was also useful for such awkward cargoes as explosives, which were too dangerous to be handled in the port itself. During 1941, about half the cargoes discharged overside at the Tail of the Bank went into coasters and the rest into barges. In 1942 and 1943, however, coasters received between three-quarters and four-fifths of the cargoes discharged overside. The rate of discharge was calculated to be 760 tons a day, compared with 560 tons elsewhere. The help the little ships gave to the big ones was unusual and by no means unimportant; but it must be remembered that it was marginal. From the point of view of the deep sea ships, only about 2 per cent. of United Kingdom imports were discharged overside in the way we have described. From the point of view of the coasters, only a small proportion of their total cargoes, so far as can be ascertained, could have been ocean cargoes discharged overside at the Tail of the Bank and carried coastwise. During 1941, it was only 5 per cent. of non-coal cargoes, and a little more than one per cent. of all coastwise cargoes including coal. Indeed, the coasters probably contributed more to efficient port clearance by continuing their normal duties of carrying coal and other commodities, and so preventing a diversion of these traffics to the railways, than they did by giving direct assistance at the Tail of the Bank.²

When it was decided that goods must be sent by coaster, either from the quays or unloaded overside direct from the ocean-going ship, and the necessary coasters had been found and worked into position, there were still various problems which had to be handled by the Area Committee. The owner or consignee's agreement was with the ocean shipowner to deliver goods either at the port at which the big ship had unloaded so that they could be carried on by rail or road to the place where they were wanted, or to some other port into which the big ship could not go either because the Shipping Diversion Room had diverted it or because it was on the East or South coast. Now as we have seen, cargoes were sometimes transhipped into coasters either to relieve pressure on road and rail

Port Director also asked for coasters up to 1,800 tons for carrying homogeneous cargoes and up to 2,500 tons for large cargoes of grain, timber and sugar. The smallest craft were made available from the shipping-in-port pool of small craft; the rest from coastal shipping control.

¹ Appendix XII at the end of this chapter illustrates a typical cargo ship unloaded at the Tail of the Bank shortly after the emergency port started functioning. Of her 7,000 tons of mixed cargo, about 4,000 tons was moved by coaster to Liverpool, South Wales and London.

² The amount of cargo discharged overside at the Clyde Anchorages into coasters was 264.6 thousand tons in the last 9 months of 1941, 404.9 thousand tons during 1942, 321.0 thousand tons during 1943 and 15.2 thousand tons in 1944. Total non-coal cargoes moved coastwise amounted to 5,511 thousand tons in the last 9 months of 1941, 8,963.7 thousand tons in 1942, 9,025 thousand tons in 1943 and 7,610 thousand tons in 1944. These figures are taken from the Ministry of War Transport Coastal Shipping Employment Returns.

facilities or to get cargoes through to their ordinary port of discharge. Freight rates and insurance had therefore to be fixed for the coaster journey when the owner or consignee could be found.¹ In deciding the freight rates, Area Committees were guided by the current maximum freight rates in the trade, where appropriate. Otherwise, they took over the coaster on a daily hire basis plus port and bunker charges, especially if it was difficult to calculate the length of the proposed voyage. This applied to both liner and tramp coasting vessels. So far as insurance was concerned, all trans-shipped cargoes which had been imported by the Ministries of Food or Supply were covered under the Government War Risk Insurance Committee's comprehensive war and marine risk insurance. Other cargoes were covered by the owner's or consignee's policy. Where, however, goods had already arrived at their destination port and were re-directed to another port by coaster, a new insurance venture was started and the Area Committees had to arrange a new policy to cover the cargo. The War Risk Insurance Committee covered the cargo, until it was delivered to owners or consignees, at 12s. 6d. per cent.

Under the Anchorage Scheme² the ocean-going liner companies (or their agents) were responsible for trans-shipping the cargo from their ships either to its intended destination, or to the port notified to them by the Port Movement Officer of the Food or Supply Ministries. They had to apply to the Area Committee for the necessary coasting tonnage and they were reimbursed by the Ministry of Shipping for the on-carriage costs. In the case of ocean-going tramps, the Area Committees chartered the necessary coasting ships and the Ministry of Shipping (War Transport) debited the Ministries of Food or Supply for the coasting freight and other charges. These two Departments were responsible for about 90 per cent. of the United Kingdom import programme and, from August 1940, took responsibility under the Anchorage Scheme for all imported commodities—the Ministry of Food for all imported foodstuffs and the Ministry of Supply for all other imports, including manufactured goods.

What proportion of total coastwise cargoes were cargoes trans-shipped from ocean-going ships at West coast ports? No information is available for the period of crisis in the ports and from April 1941, when statistics became available, it is only possible to make a rough estimate, since the employment returns only record the loading and

¹ Sometimes he could not. Or when the consignee was the Ministry of Food or the Ministry of Supply, the final destination was difficult to discover because the local representative (especially before the appointment of Port Movement Officers) did not always know it.

² This governed cargoes trans-shipped from ocean liners at anchorages whether overside or by landing at the quay or by barges.

discharging areas of coastal ships but tell us nothing about the origin of cargoes. It is known that, in the last nine months of 1941, a total of 21·8 million tons of cargo was moved coastwise, of which 5·5 million tons (about one quarter) consisted of cargoes other than coal.¹ Since cargoes loaded into coasters on the East and South coasts are unlikely to have been ocean cargoes in 1941 (and cargoes loaded in Eire and Northern Ireland are counted in the Irish cross-channel trades), it is possible to narrow the field to cargoes shipped coastwise from West coast ports.² During the same nine months of 1941, these totalled 2·75 million tons,³ or 12 per cent. of all cargoes moved coastwise. Some of this 2·75 million tons consisted of bulk commodities and mixed general cargoes moving round the coast in the ordinary way, but it is not known what proportion. All that may safely be said is that trans-shipped cargoes in the last nine months of 1941 could not possibly have exceeded 12 per cent. of all coastwise cargoes and probably accounted for a good deal less. The same must have been substantially true of the winter of 1940-1941. Compared with what the railways were carrying, the tonnage moved coastwise from West coast ports during the eighteen months after Dunkirk was therefore quite small.⁴

To sum up: coastal shipping was only one of the branches of inland transport moving goods from East to West because of shipping diversion after September 1940 and its contribution, taken in relation to the whole, was a small one.⁵ Its contribution was, however, important in at least three ways: it helped to free the railways of the burden of some of the more lengthy and most difficult hauls; it carried cargoes to places which were difficult of access for other

¹ Taken from Employment Returns, see Statistical Appendix, Table 8, to this volume.

² More precisely, ports on the coast of: (a) Scotland (including the Western Isles and Faroes and including Clyde Anchorage); (b) Area Silloth and ports North of Milford Haven (including Isle of Man); (c) Area Milford Haven to Land's End.

³ These figures are taken from Ministry of War Transport Coastal Shipping Employment Returns.

⁴ 2·75 million tons for 9 months represents an annual rate of 3½ million tons. Considerably less than 3½ million tons per annum was the total of cargoes trans-shipped at West coast ports in 1941. A total of 123 million tons of merchandise and mineral traffic were moved by rail in 1941, though it is not known how much of this was loaded at West coast ports. (*Statistical Digest of the War, op. cit.*, Table 165.)

⁵ It is important to remember that some deep sea ships, especially deep sea tramps, continued to carry cargoes to the East coast. These ports were never entirely closed to deep sea ships; indeed, they could not have been. The Port of London alone in peace-time serves 16 million people. All the imported commodities needed to feed the population and to fight a total war could not have been imported through the West except under circumstances of great difficulty. In fact, only about 75 per cent. of United Kingdom war-time imports came to the West coast. The rest had to continue to be imported through the East coast ports, discharging from deep sea ships in the normal way. In 1941, perhaps the most difficult year, there were always on an average 30 deep sea ships in the Port of London at any one time and they discharged about 15 per cent. of total United Kingdom dry cargo imports in 1941. Another 9 per cent. were discharged from deep sea ships in the Humber in 1941.

forms of inland transport; and it helped to avoid the need to risk more deep sea ships in East and South coast waters.¹

The movement of coal, other home-produced commodities and ocean cargoes trans-shipped at West coast ports constituted the main tasks of coastal shipping after the fall of France. From 1941 until the end of 1943, cargoes were moved coastwise at a rate of about 30 million tons a year. 71 per cent. of the tonnage of cargoes consisted of coal; the remaining 29 per cent. consisted of commodities carried in bulk, mixed general cargoes and trans-shipped cargoes. The proportion of trans-shipped cargoes to total non-coal cargoes is not known, but it was certainly less than one half. The average dead-weight tonnage of coastal shipping employed on 15th December of each of the years under consideration was 1,205,000. 68 per cent. of this tonnage was, on the average, allocated to coal movement and 32 per cent. to the movement of cargoes other than coal.²

What principles governed the allocation of coastal shipping tonnage between its several main tasks? It was clearly important for the Government, if coasters were to be used to the best advantage, to allocate the right amount of tonnage between moving coal, moving other particular home-produced commodities and trans-shipment work, taking into account the ability of other branches of inland transport to carry out these tasks. Until the employment returns were collected in 1941, information about the supply of coasting tonnage and the uses to which it was being put was not available centrally. This lack of information was an inconvenience to Coasting and Short Sea Division and might have led to mistakes in the allocation of tonnage with a consequent overloading of other means of inland transport. In practice, however, this does not seem to have happened.³ In allocating tonnage, the coastal shipping control relied to a considerable extent—even after statistical information became more plentiful—‘on the judgment of people with long experience of the industry, who knew by instinct the right course to take’. This is tantamount to saying that the officials of coastal shipping control relied to some extent on rule-of-thumb methods and it is undoubtedly true that they did. It is also true on the whole that this method worked with reasonable success, for there were, during the war, no substantial changes in the methods by which coastal shipping was allocated and controlled.

The merit of the coasting control scheme was its flexibility. Coasting

¹ In the last nine months of 1941, 85 coastal ships, representing a deadweight tonnage of 155,700, were lost through enemy action. The loss of an equivalent number of deep sea ships would have represented a much larger tonnage.

² All these figures have been calculated from the Ministry of War Transport Coastal Shipping Employment Returns. See Statistical Appendix, Table 8, to this volume.

³ It happened in the winter of 1939–1940, but for a different reason: the railways had given an inflated estimate of their capacity.

tramps were unrequisioned and no fixed programme had to be laid down in advance. Since coasters are in and out of port every few days, they could be sent off at short notice if any sudden emergency arose. The seaways are broad, there is no complication of line capacity and the voyage licence system enabled Area Committees to control their ships quickly and effectively. In addition to the licensing control over the movements of coasters, Area Committees were empowered to charter ships or space on ships if necessary. These two powers were all that was necessary to enable Area Committees to ensure that tonnage was available to move goods by coaster when they were so directed by, for example, a Port Emergency Committee or Regional Port Director. The Minister of Shipping (later War Transport) also had powers to requisition any ship, powers which could have been applied to coasting tramps had this been necessary.

Regular discussions with the shipowners enabled Area Committees to plan in advance for those demands which could be foreseen. The number of coastal ships is not large and the Area Committees, composed largely of local men with a life-long experience in the local coasting trades, could be relied on to know their ships and their ships' movements intimately. The absence of employment returns in the early part of the war was therefore less important in planning the movement of coastal ships than might be thought, though it did help to delay the time when the central allocation of traffic between the four means of inland transport was possible. Plans and movements for the coasters themselves were, however, not made centrally, except in the broadest possible terms. There was always a certain amount of coastal tonnage—that part which served as a mobile reserve—which could never be planned for, except locally and *ad hoc*.

One other subsidiary function of coastal shipping, which really has little direct connection with inland transport and therefore stands apart from the subjects treated in this volume, needs to be recorded: this was the trade carried on by coastal ships in the short sea passages which remained open to them. First there was the continuance of the cross-channel trade with Ireland. It was not large, and British exports, especially coal, were reduced to a minimum. Area Committees were instructed in the autumn of 1940 that coal cargoes to London from the East coast and coal cargoes to South-East England were to have preference over coal to Ireland. There was still, however, a sizeable cross-channel trade with Ireland. In July 1940 there had been about 65 liners trading regularly to Northern Ireland and Eire (including the Scottish islands), and these were augmented by some of the liners previously in the Continental trade. They carried general cargoes between the two countries, mostly importing dairy produce and cattle into Great Britain. In the season (May to August) Britain normally imported 150,000 head of live cattle a month from

Ireland. Coastal tramps mostly carried coal to Ireland and brought back agricultural products, sometimes seed potatoes. In the nine months of 1941 after employment returns started, 680,000 tons of goods were imported from Northern Ireland and Eire, while 3·7 million tons were exported, nearly 3 million tons consisting of coal.¹

Other coastal ships—many of them tramps and liners of the former French trades—were needed to bring back valuable tungsten, cork and pitwood from Spain and Portugal and to carry in exchange the manufactured goods and coal needed by those countries. Some coasters, among them peace-time Isle of Man pleasure steamers, went into northern waters, to the Shetlands and Faroes and to Iceland. There the enemy was not so much the Germans but the sea—‘nine months of winter gales and three months just bad weather’. Heaving to a whole convoy in darkness and in full gale and getting under way again still in darkness when the weather moderated, without the straying or loss of a single ship, called for fine seamanship and was not an unusual experience on the Iceland route. Ships on that route had to maintain a large army and most of the civilian population’s needs. They went from Leith to Reykjavik and back (an average of a month for the whole trip), carrying anything from stores to E.N.S.A.² actors and bringing back an average of 100,000 tons a year of fish and fish products.

(iii)

The Dangerous Waters

It has been shown that the main contribution which coastal shipping made towards winning the war was to carry on with its normal tasks by moving 30 million tons of cargo a year round the coasts. But the story of coastal shipping after Dunkirk would be unbalanced if it concentrated solely on objective statistical analysis. A true estimate of the coasters’ war-time achievements must contain some account of the unusual dangers and difficulties encountered by these ships and the men who sailed in them, and of the means by which adversity was surmounted.

The German occupation of the entire coastline of Western Europe gave the enemy an unprecedented opportunity to molest the British coasting seaways. Attacks could be launched from the air, by surface craft and submarine, or with mine and long-range gun. The most dangerous of all the sea passages were the Straits of Dover and the

¹ Figures taken from Ministry of War Transport Coastal Shipping Employment Returns.

² Entertainments National Service Association.

Wold Channel, but the other routes used by the coasters, through the Pentland Firth, up the West coast, or to Ireland were also frequently attacked.

Travelling in these dangerous waters the coasters had to be given protection against magnetic mines and also, as much as possible, against bombers. An early danger was the magnetic mine and from early 1940 coastal ships were degaussed or more frequently wiped as quickly as the overworked facilities at the ports could treat them.¹ Preference was given to ships trading on the East and South coasts. Coasters had to be provided with defences against bombers as well as against magnetic mines. Until the fall of France it had only been possible to provide the coasters with a team of 120 pairs of Lewis guns manned by Defensively Equipped Merchant Ships naval ratings who transferred from ship to ship as the need arose. There were some 12-pdr. guns for the largest coasters. After the fall of France it became more urgent to arm the coasters. Area Committees had lists of ships which had not been armed, and had to arrange for them to put in for arming as and when it was possible. The shortage of A.A. guns and of naval gunners to man them² meant that the ships could only be armed slowly. Not until March 1941 was it found possible to mount one machine gun in each coaster. The scale of armament agreed for coasters was one 12-pdr. gun (or Holman projector), two machine guns and two lethal rocket outfits for each ship over 500 gross tons, and one Holman projector, one machine gun and one lethal rocket outfit for each ship under 500 gross tons. One permanent naval rating or gunner was to be carried for each 12-pdr. or Holman, and one for each machine gun, thus averaging 2-5 naval or military personnel for each coaster.³ The shortage of naval personnel to man the coasters' guns was overcome by recruiting machine gun teams of soldiers with their own weapons who ran a shuttle service to defend the unarmed coasters. Later they became the Maritime Royal Artillery (M.R.A.) and served with Defensively Equipped Merchant Ships' personnel in the coasters when they got their own armament. By the middle of 1942 Oerlikons were coming

¹ 'Wiping' was a process that only took a ship off her run for about 12 hours instead of the 3-5 days necessary for 'degaussing', but 'wiping' had to be repeated at frequent intervals.

² The Admiralty had at first envisaged that Defensively Equipped Merchant Ships' armament could be manned by the normal crew of the ship reinforced by a naval rating or two. This was sufficient for anti-submarine defence, but heavy air attacks after the fall of France necessitated instant readiness at the guns for 24 hours a day, and coasters' normal crew proved insufficient in numbers and training to handle the Defensively Equipped Merchant Ships' equipment on this scale.

³ It was extremely difficult for some of the small coasters to find accommodation (or cooks, for sailors on small coasters cook for themselves) for the naval or military personnel. There were considerable complaints passed on from the Admiralty to the Ministry of Shipping about the lack of adequate quarters or catering.

forward in substantial numbers, but many of the coasters had to be specially stiffened to take these guns.

There were also various other items of equipment installed in the coasters in order to give them a better chance of survival in enemy attack. Additional bridge protection was installed to protect men particularly exposed; for example, concrete wheelhouses were erected on almost all coasters to protect helmsmen from machine gun bullets; and chart and wireless rooms were sandbagged. By July 1940, 800 coasters which had no wireless telegraphy had been supplied by the Government with automatic wireless transmitters (similar to those supplied for lifeboats in foreign-going ships), which enabled men untrained in wireless telegraphy to send out signals for help when attacked by enemy aircraft. By the spring of 1941 the Admiralty required¹ all ships under 1,600 gross tons to carry broadcast receivers capable of receiving B.B.C. bulletins so that instructions could be issued to them at sea in an emergency. Three days' emergency stores of food had to be carried by all coasters (a provision which had at least one happy result when during the air raids on Liverpool a coaster took three days to travel from Birkenhead to Liverpool²). Automatic devices were also fitted in early 1942 to warn masters of approaching aircraft, but some of them proved to be of little value for coasters as opposed to deep sea ships,³ because friendly aircraft were almost continuously overhead.

The Admiralty paid for stiffening vessels, fitting guns and paravanes, de-magnetising and so on, and also for any repairs to this equipment. The Ministry of Shipping (later War Transport) met the cost of various A.R.P. precautions such as the protection of wheelhouses, hatch covers, sandbagging of chart and wireless rooms, and so on. The Ministry of Shipping also paid coasters working on scheduled freight rates a grant equal to 13 days' hire for time lost in gun stiffening and fitting, plus another 7 days' hire if the ship was degaussed by the coil method. Shipowners were left to pay for extra accommodation for gun crews, blackout, additional life-saving equipment for the crew, and so on.

Immediately after France fell, however, most coasters were still unarmed. They were not, therefore, well prepared for the enemy attempt in the summer of 1940 to disrupt all traffic passing through

¹ Wireless Receivers (Ships) Order, 12th February, 1941.

² An air raid started as soon as the ship left Birkenhead and the Port Closed signal went up. 'The raid lasted for three days so for these days and nights we dragged up and down the river with both anchors out. . . . The emergency stores were a blessing, for we never expected to be three days from Birkenhead to Liverpool.'

³ The acoustic warning device flashed a light and rang a bell when aircraft were five miles distant. 'It was ingenious', said some of the masters, 'but it had to be switched off during the voyage. Not only did it give warning of friendly aircraft but it was so sensitive that the warning sounded every time the stokehold was opened, or if a neighbouring ship sounded her siren.'

the English Channel. On 25th July, 1940, a convoy off Dover was attacked by aircraft and five coasters were sunk and six damaged. From this time onwards the air attack was intensified and the passing of merchant ships through the Channel became almost a military operation. The great air battles of the summer of 1940 were largely fought over the shipping in and around the Channel ports. Air attacks on shipping with bombs and torpedoes were pressed home with torpedo and gun attacks from E-boats and with fire from the heavy guns now aligned on the cliffs of France facing Dover.¹ It is scarcely surprising that the coasting tramps on the regular Straits of Dover route had to be requisitioned as if for military service. As we have seen, after the fall of France no ships of over 1,600 tons gross were allowed to use the Channel at all,² and those that did had to be escorted the full length of the Channel between Southend and Falmouth, or vice versa.³ No coasters except those going to the South coast east of Plymouth could pass through the Straits of Dover and these were the ships that were requisitioned and formed into the special South coast convoy fleet. It started as about 40 ships and by June 1941 the number had risen to 75. It was composed of ships capable of at least 9 knots, so that the Channel convoys could maintain an average speed of about 7 knots. Each convoy was limited to a maximum of 16 ships, and provided with strong naval and air escorts, in addition to the coasters' own defensive equipment. It was at first intended to run Channel convoys at regular intervals, averaging one every four days in each direction, but it proved impossible for coasters to be worked into position to maintain this flow, and the convoys ran at irregular intervals every three to ten days during 1940 and 1941. They were usually smaller than the maximum permitted. It was difficult for those concerned to keep a balance between having convoys so small as to be wasteful of naval escort vessels and having them big enough to be an easy target. There were the normal commercial difficulties of having the coasters discharged or loaded in time, of having to keep whole convoys waiting or else having to leave a ship without convoy for several valuable days, often in a port vulnerable to enemy attack. The Channel is also well known for its bad weather. Crew trouble—especially before the ships were

¹ On an average throughout the war one out of every five convoys passing through the Straits was attacked by the heavy shore guns—about 30 rounds being fired in each attack. The gunfire was too inaccurate to do much damage on small and moving targets, but it was an unpleasant—even alarming—experience for the crews of the coasters.

² See above, p. 344.

³ Beyond Falmouth, coasters had to approach from the west, but could travel independently. After May 1941, this was extended. Ships not requisitioned for the South coast convoy and travelling from Southend to Portsmouth for onward routing to the west, or vice versa, could now travel independently.

properly equipped with guns¹—was not unknown. During the autumn and winter of 1940 the 'round' trip of the Channel convoys (i.e. loading port to discharging port, including discharging) took a coaster an average of 25 days. In May 1941 an 8-day average cycle of convoys was started which reduced the round trip to 14 days. During the summer of 1942 when coal stocks were in need of replenishment, the South coast fleet was temporarily increased to 81 ships and a 2-day cycle of convoys came into operation for a month, later decreasing to 4 and then 6 days. By October, when the emergency was over, the fleet was reduced again to 60 ships and a regular 4-day cycle of convoys introduced. This reduced the normal 'round' trip to 12 days (excluding loading time).

Considering the extreme vulnerability of the ships using the Straits of Dover, the losses were not as large as might have been expected. Up to October 1943, of the whole Channel fleet, only 20 vessels had been sunk—nine by mines, seven by bombs or torpedoes and four in collision. Thirteen of the original Hell's Corner ships were still with the fleet after more than three years' service with it. The enemy never closed the Straits of Dover to British shipping, and up to April 1942 an average of 130 vessels a month passed through the Straits in both directions (this figure excludes tugs and barges which would raise the figure considerably). They continued to deliver about two million tons of coal a year to the South coast throughout the war—a considerable achievement.

The Wold Channel too earned an unenviable reputation as E-boat alley. It was a busy seaway for coasting ships—12½ million tons of coal came through it every year during the war, plus 2 million tons of general cargo, mainly cement, seed potatoes, sugar, timber, grain, etc. Many coasters spent most of the war going through it about once a week. They received a certain amount of attention from hostile aircraft, but the main attack was by E-boat. E-boat technique was to wait for a dark night with sufficient sea running to make their bow wave invisible, and then to take up position on the landward side of the swept channel. E-boats are low in the water, and therefore hard to see from the deck of even a small coaster and equally hard to hear. When a convoy approached, the E-boats could see it against the skyline and could attack, selecting their targets; they gave no warning of their approach and after aiming their torpedoes they could make off seawards at full speed across the protective minefield where only shallow-draft ships could follow them.

Even in port, of course, the coasters were still in danger during 1940 and 1941. 'At this period', wrote a Master, 'there was very

¹ During 1940, ships of the Channel convoy were sometimes putting to sea with one Ross rifle as their total armament.

little sleep to be had once we were south of Flamborough Head until one got back to it.' Fire-watching and a 24-hour standby for machine guns¹ together with the normal tasks of cargo stowage and engine repairs while the ship was in port meant little home leave for an average crew of 12 men.

The losses sustained by the coastal ships, both ships sunk and damaged, must have been considerable during the winter of 1940–1941. In the six months July 1941 to December 1941, a period of less activity than the previous winter,² it was stated that the enemy made 304 successful attacks on coastal shipping. From April 1941, it is known how many coastal ships were sunk by enemy action: 85 in the last nine months of 1941 and a further 51 in 1942.³ Not until the end of 1942 did the losses greatly diminish. Between April 1941 and December 1942, the coasters lost 250,000 deadweight tons of shipping, about 20 per cent. of the coasting tonnage normally employed. In addition, large numbers of ships were damaged.

Attack by the enemy was by no means the only danger the coastal ships had to face. Defensive precautions, particularly the need to sail in convoy, made navigation unusually difficult, especially at night and in bad weather. 'Our anxiety for navigation . . . made us forget our danger from enemy action.'

All ships hate proximity at sea, though deep sea ships as well as coasters had to sail in convoy. The coasters, however, had added disadvantages. They had less room to manœuvre than ships on the high seas; for, unlike the deep sea ships, they spent nearly all their time while at sea in convoy in a narrow swept channel. The swept channel was varied from time to time and it was extremely dangerous to stray out of it into the minefield. The strain on the men who sailed in the coasters was therefore unusually great.⁴

Convoy voyages were not restful, even with the enemy absent and the weather good, for navigators or for engineers.⁵ Coastal ships are of all sizes, shapes, ages and speed.⁶ A small ship laden in a head wind would have to go full out to keep station—bucking like a horse

¹ Naval ratings were not usually available for manning machine guns in port. The shuttle services only came aboard when the ship was due to sail.

² War Risk Insurance premiums, for example, were reduced for coasters in March 1941 from 7 per cent. for 91 days to 4 per cent.

³ Statistical Appendix Table 9, to this volume.

⁴ 'After a lifetime's experience gained in many waters and many types of ships in war and peace,' wrote one Master of a coaster, 'I have come to the conclusion that of all the many war-time conditions and activities in which merchant ships are engaged, last of all, if my own personal desires only were concerned, would I serve in coastal convoys.'

⁵ For this account of coastal convoys I am indebted to *The British Coaster* (H.M.S.O.).

⁶ Coasters tend to show greater variation in speed than deep sea ships, and coastal convoys also frequently included deep sea ships. Small vessels might have great difficulty in keeping up, big ships might be slowed to a speed which made them almost unmanageable.

and almost completely awash. A loaded flat-iron (collier), scarcely appearing above the water except for her funnel, in anything but the quietest weather, might be immediately ahead of a large tramp in ballast. At night if the flat-iron dropped astern or the tramp forged ahead of station, the tramp would have a hard job to see the other ship before she rammed her; and the consequences of a collision at sea could be serious for both ships.

When ships 'buttoned on' or joined the convoy from another port, with the two columns of ships straggled out over ten miles of sea, it was easy on a dark night for them to get into the wrong position in the convoy. Or some ship might leave her place and cut across the columns, intent only on making a certain tide which would mean a night at home for her crew. In the day in good conditions, such things were fairly easy to sort out. After dark, with no lights showing and wireless and sound signals forbidden, except in emergency, nothing was easy, even in the best weather.¹

In such conditions of difficulty and danger, the coasters continued to carry 30 million tons of coal and other commodities round the

¹ One Captain, with considerable experience of coastal convoys in two wars, graphically described his work. 'Imagine a convoy leaving the Thames estuary composed of say 50 ships—at least 5 miles in length—threading its way during the night (without lights of any kind) between sandbanks, shoals, and numerous wrecks in a narrow swept channel, seldom more than 6 cables wide, with strong tides erratic in direction and rate. Then navigation becomes more a matter of intuition and chance than mathematical precision. Logs cannot be towed but by leading ships. Compasses are not dependable because of degaussing or of local attraction. Navigational aids (dimly lighted buoys) are difficult to discover and during poor visibility have to be searched for by escort vessels. Ships in the van of convoy have some hope of seeing these aids under such conditions, but the further one is down the convoy the more is one's vision screened by the ships in front. If, during the night, the Master risks going into the chart room to look at the chart, on return to the bridge he is almost totally blind for about 5 minutes. This 5 minutes is a period of agony, knowing as he does that he is surrounded by ships weighing hundreds, perhaps thousands of tons, rushing through the water at anything up to 10 knots and totally unseen by him. The only way of finding accompanying ships is by discovering shapes made visible by being darker than the surrounding night. During bad weather when visibility is low, with rain or snow, bodily discomfort is added to the mental weariness occasioned by the above conditions and copious draughts of black coffee have to be resorted to.'

'Dark nights with bad visibility and stormy weather are bad enough, but our worst enemy is fog. Imagine the convoy steaming along at 8 knots on a clear night amidst the sandbanks and wrecks of the East coast and suddenly running into a dense fogbank. Pre-arranged signals for such occasions are given by the Commodore's ship and repeated down the line. After several ships have repeated the signals the sounds simply merge into a riotous uproar without meaning, nerve racking in intensity and making confusion only more confused. Rule of the road signals, "ports" and "starboards" and "full asterns", mingle with fog signals. How order emerges out of the resultant chaos is something to be wondered at, as ships crowd on to one another. Ships in the van going astern, taking way off and anchoring to the accompaniment of fog signals from ships only beginning to feel the fogbank and who, perhaps, have not heard the "reduce speed" and "anchor" signals and may still be steaming at 8 knots. Realisation soon comes to them however, and they too are taking frantic action to keep out of the crowded mass of shipping ahead. Fog bells are now mingling with action signals and the sound of dropping anchors and the rattle of cables being paid out. This continues, until, it would seem, that only exhaustion brings the pandemonium to an end, and an unnatural silence ensues. But vigilance cannot for a moment be relaxed. Ships are all bunched together. Slight liftings of the fog curtain show us the grey ghostly shapes too close for comfort of mind. The very first opportunity must be taken to get under way again and into convoy form. Ships so crowded are an ideal target for torpedo attack.'

coasts of Britain in each war-time year. Enemy attacks were less successful after 1942, though the hazards of bad weather and the blackout remained. The price paid for keeping the coastal shipping lanes open was high in terms of lives lost and human hardship suffered, but the coasters' cargoes were vital to the war economy. 'Throughout the war', said one official, 'there has been no phase in which the country could have managed without the use of a substantial coasting and short sea fleet.'

APPENDIX XII

Overside Discharge

Destination and route of cargo of a typical cargo ship which was discharged
overside at the Emergency Port on the days following 30th September,
1940.

SCOTTISH STAR = cargo vessel of 7,300 g.r.t. carrying 6,940 tons of
cargo.

Started to discharge at Emergency Port, 30th
September, 1940.

<i>Tons</i>	<i>Goods</i>	<i>Destination and consignee (where known)</i>	<i>Loading port or place</i>	<i>Route</i>
750	Sleepers	L.M.S. Rly Co., Stirling	Bowling	Rail from Bowling
1,800	Plywood	Ministry of Supply, Edinburgh	Leith	Coaster
26	Shooks	Co-operative Society	Liverpool	Coaster
274	Shooks	Unilever, Liverpool		
1,500	Lead	Private firm, Glasgow	Glasgow	Coaster to
500	Lead	Private firm, Renfrew	Docks	Glasgow Docks. Then by road transport
100	Zinc	Non-Ferrous Metals Control, Swansea	Swansea	Power barge to liner coaster
400	Zinc	Private firm, London	London	Coaster
927	Tinned salmon	C/o Shipping Line, Liverpool	Liverpool	Coaster
560	Borax	Private firm, Liverpool	Liverpool	Coaster
96	Woodpulp	Private firm, Caldercriux } Private firm, Clarkston }	Liverpool Greenock Docks	Rail and road from Greenock Docks
10	Sundries	As directed		
6,943				
50,000 ft.	Dunnage	Agents for Timber Control, Glasgow	Glasgow Docks	Coaster (with lead above)

PART IV

The Years of Austerity

CHAPTER X

RISING DEMANDS ON TRANSPORT, 1941-1944

(i)

The Railway Traffic Forecasts

IN PART III of this volume it was shown how, in the second war-time autumn and winter, inland transport resources first became really scarce in relation to the demands of war. During the greater part of the period covered by the remainder of this volume—that is to say between 1941 and the allied invasion of North-West Europe in 1944—the demands of war for all forms of inland transport continued to grow. In spite of this, however, a variety of measures—such as improvements in the organisation of traffic and in the allocation of traffic, and restrictions on the movements of inessential traffic—which strengthened Government controls over the means of transport, together with the absence of heavy enemy bombing, combined to prevent any recurrence of dislocation and congestion as acute and widespread as that experienced in the second autumn and winter of the war. This did not mean that inland transport resources were generally any more plentiful. On the contrary, many of those resources became scarcer than they had been before. Locomotives, motor fuel, rubber tyres, buses, railway rolling stock, manpower, to select only a few, at one time or another restricted the supply of inland transport services. But the story of inland transport from 1941 onwards is more than a story of continued and increasing scarcity. It is the story of the functioning of a Government organisation which possessed or was acquiring, for the first time, the machinery it required to cope with inland transport scarcity. The sequence of the following chapters is therefore straightforward. The present chapter considers the size of the demands on inland transport from 1941 to the beginning of 1944. In the next chapter, the main factors affecting the supply of inland transport in that period will be examined; this will lead logically to an examination of some of the more important measures put in hand by the Ministry of War Transport to match the demands made on inland transport with its supply.

While the summer of 1941 brought a welcome improvement in the flow of traffic on the railways, it was no time for the Government to

be lulled into a false sense of security about future inland transport prospects. The new Ministry of War Transport, however, took a realistic view from the start. It was well aware, even before the entry of Japan into the war in December 1941 interfered with supplies of motor fuel and tyres, that, as the national war effort grew, a greater tonnage of freight traffic than hitherto would have to be moved over an inland transport system already working with little or no spare capacity. However, one welcome advantage of the relief from air raids and the freer movement of railway traffic in the summer of 1941 was the opportunity that was given to officials to turn aside from the many detailed difficulties with which they had hitherto been beset to plan for the months ahead. Official inland transport policy was no longer encumbered, as it had been in the months following Dunkirk, with improvisation and the settlement of day-to-day difficulties. That broader approach to the problem of inland transport as a whole and that greater degree of forward planning of the transport needed for the war effort, which had long been desirable, were now becoming increasingly possible. During the summer of 1941, a serious and concerted attempt was made for the first time to estimate the size of the task ahead. To many it seemed that this attempt was overdue. Hitherto, the Government had largely learned of the severity of the pressure on inland transport resources by hard experience. It had, in the main, lacked such foreknowledge as could be provided by statistical assessment of the future. The Government realised that it badly needed some yardstick by which it could measure the urgency of the needs of the transport industries for labour, new works, motor vehicles, and so on.

The task of furnishing all the information needed was a formidable one for the statisticians. For some branches of inland transport, data were fragmentary or even non-existent. A start was therefore made by attempting to measure the future volume of freight traffic on the railways. In this branch of inland transport the need for information appeared to be most urgent, while data on which an estimate could be made were more readily accessible.

In forecasting the tonnage of freight traffic to be carried on the railways in the six months from October 1941 to March 1942, two statistical methods were employed. The first was an estimate based on information from Government departments; the second was an estimate based on the existing trend of rail traffic.

In making the first estimate, the tonnage of freight traffic moved over a known period in the previous year was taken as a base. Government departments using rail transport then supplied figures for their expected traffics from October 1941 to March 1942 compared with the base period. Where Departments could not state what proportion of their total traffic would be railborne, they supplied figures

of output in tons for the commodities with which they were concerned. The pre-war percentage relation between total production and tonnage sent by rail was then applied to estimates of future production. (It was assumed, for example, that 71·5 per cent. of coal output and 50 per cent. of the traffic on Air Ministry and Ministry of Aircraft Production account would be carried by rail.) These estimates necessarily lacked a good deal of precision; for one thing, some Departments found difficulty in making accurate estimates of their expected imports. In making the estimates, the further assumption was made that traffic not coming under the direct control of any Government department would remain static.

The results of this first estimate are shown in Appendix XIII.¹ Apart from the usefulness of the estimate itself, these departmental figures throw some light on the proportion of the total traffic under Government control that was controlled by each of the several user departments. The departmental forecasts for the period October 1941 to March 1942 showed that 41 per cent. of estimated tonnage was merchandise and mineral traffic; the remaining 59 per cent. was coal class traffic. The 41 per cent. merchandise and mineral traffic was made up as follows: the Ministry of Supply controlled 24·5 per cent. of all tonnage, the Ministry of Food controlled 7·5 per cent., Air Ministry and M.A.P. traffic amounted to 6·1 per cent., Ministry of Works 1·5 per cent., the War Office 0·8 per cent. and the Board of Trade 0·6 per cent.

For the second estimate, the rail carryings of merchandise traffic for the first half of 1941 were compared with those for the first half of 1940. After allowing for certain ephemeral factors, the following percentage increases were arrived at:

Merchandise (Classes 7-21 G.R.C.) and live-stock	7·0 per cent.
Merchandise (Classes 1-6 G.R.C.)	10·0 per cent.
Total	8·5 per cent.

On the assumption that the same tendencies would continue, these percentage increases were applied to rail carryings of merchandise traffic for the period October 1940 to March 1941. For coal class traffic, the Mines Department figure was used as in the first estimate. The results of this second method of calculation are also embodied in Appendix XIII.

To sum up the results from the two calculations: in the first, the increase in total merchandise traffic for the six winter months was estimated at 10·7 per cent.; this, together with the expected increase of 8·8 per cent. in coal class traffic, gave an estimated 9·6 per cent. increase in total freight. In the second, the estimated increase in

¹ See below, p. 389.

total merchandise traffic was 8.5 per cent.; this, together with the expected 8.8 per cent. increase in coal class traffic gave an estimated increase in total freight traffic of 8.7 per cent.

Thus, from the two calculations, the statisticians concluded that the tonnage of freight traffic to be moved over the British railway system would be approximately 9.0 per cent. greater in the winter of 1941-1942 than it had been in the previous winter.

The method of calculation was, admittedly, subject to a fairly wide margin of error and the estimated increase for the first six months turned out to be too high. The detailed comparisons may be seen in Appendix XIII; the actual average four-weekly tonnage moved during the period October 1941 to March 1942 was 5.5 per cent. greater than in the previous year compared with the estimated 9.0 per cent. Subsequent forecasts also tended to over-estimate expected freight traffic on the railways, in spite of improvements in the technique of estimation. These over-estimates were not the result of deficiencies in the statistical methods employed, but appear to have been due to the difficulties experienced by Government departments in ascertaining precisely what their expected transport needs would be. Departmental import programmes, for example, depended on the allocation of shipping tonnage and were, for this reason, subject to some uncertainty. Again, where traffic estimates were provided on the basis of output 'targets' they were frequently too optimistic. Actual tonnages of coal traffic were, for example, consistently lower than the tonnages estimated in advance by the Mines Department.

Nevertheless, this system of traffic forecasting continued to be used for subsequent six-monthly periods during the war and statisticians of the Ministry of War Transport worked in close touch with those of the R.E.C. It should be stressed, however, that these six-monthly forecasts attempted nothing more ambitious than to estimate the volume of expected railway freight traffic in terms of tonnage originating. For a full assessment of the work done by a railway system it is, of course, necessary to know not only how many tons of traffic are carried but how far the traffic is moved. Between the outbreak of war and 1942, the average length of haul for railborne freight traffic increased considerably. Comparing the 1942 figures with those for 1938, the increase amounted to 27 per cent. for coal class traffic, 7.5 per cent. for merchandise traffic and 26 per cent. for minerals.¹ A possible weakness of the six-monthly traffic forecasts was that by neglecting the element of distance and concentrating on figures of tonnage originating they were apt to under-estimate the likely strain on the railways. Yet in practice this does not appear to

¹ *Statistical Digest of the War, op. cit.*, Table 166.

have been the case. By 1941, the main war-time changes in direction and length of haul for the principal classes of rail traffic were complete. The average length of haul for all classes of traffic did not increase much after 1942. The figures are as follows: 1938, 59 miles; 1942, 75.90 miles; 1944, 78.64 miles.¹ In these circumstances the six-monthly estimates provided a better guide to the size of the railway burden during this period than they would have done had the changes in the length of haul been greater.

Moreover, statistics of estimated ton-mileage were of less practical use than more detailed estimates of the directional flows of the principal war-time traffics, and in January 1942 Government departments were asked to provide all the information they could of this kind to supplement their forecasts:

Wherever this is possible an indication of the intended destination or at least direction of the flow of traffic should be given . . . For example, it would be of assistance to railways if an indication could be given of the flow of munitions output from South Wales to the Midlands and the North (via Hereford-Shrewsbury line) and to the South (via Severn Tunnel) respectively. Iron ore and coal are instances of traffic for which estimated tonnages could probably be given in terms of areas of origin and destination. The more specific the information of this kind which can be given, the closer shall we get to matching supply and demand.

Early in 1942 the extent of the information which Departments could provide was subjected to an inquiry. Attention was directed primarily to the three big transport-using Departments, the Mines Department, the Ministry of Food and the Ministry of Supply, which together accounted for more than 90 per cent. of all railway freight traffic. The inquiry showed that these Departments could provide detailed information which would throw light on the movements of some of their principal traffics, though there remained some dark patches about which little or nothing was known. Under its normal programming of production and distribution, the Mines Department gave full details of places of origin, tonnages and destinations. For imports, the Ministry of Food proposed to estimate the arrivals of the principal foods and feedingstuffs and to give in broad outline the general direction of the flows of these commodities. For its internal food traffic, the problem of estimating directional flow was one of much greater difficulty, though it was being followed up. The Ministry of Supply was less optimistic about providing details of the directional flow of its imports. As for its internal movements, forward programmes for certain bulk commodities such as ore, cement, nitrogenous and phosphate fertilisers and scrap metal were

¹ *Statistical Digest of the War, op. cit.*, Table 166.

already being provided and the possibility of preparing similar information for timber, semi-finished metal and steel was being examined.

Thus from the beginning of 1942 onwards, considerably more information about expected demands on the railways was available to the Ministry of War Transport than had been available in the first two years of the war. The fact that the forecasts did not always turn out to be accurate did not detract from their general usefulness. Statistical perfection was not required; what was needed was adequate information on which the Minister and his advisers could direct war-time transport policy:

. . . the main object of the forecast is to give the Minister of War Transport a picture of the traffic, which the transport for which he is responsible may be required to carry, and thus provide a basis on which to formulate the best policy for developing all forms of transport and for using each to the best advantage.

In the main, therefore, the purpose of the railway traffic forecasts was to aid policy rather than to provide the basis for detailed movement planning. The forecasts themselves provided little more than the salient facts about the expected railway situation in a simple and readily understood form. This information was perhaps of greater use at the 'strategical' level rather than in the 'tactical' handling of transport—that is, to the policy makers rather than the traffic and operating experts. Where, however, the summarised departmental forecasts were supplemented by more detailed information about movements of large blocks of traffic and the main traffic flows, clearly this was a valuable aid to forward planning. Thus, not only the movement of coal, but the movement of a number of raw materials, semi-finished products, foodstuffs and other large blocks of traffic were now being 'programmed' in advance, and in some cases allocated to other forms of transport where this gave relief to the railways.

But forward planning of this kind was by no means universally possible.¹ Neither the traffic forecasts nor the supplementary data given by Government departments were designed to supersede the ordinary routine machinery composed of the transport divisions of

¹ Indeed, the Allocation of Traffic Sub-Committee of the Central Transport Committee, which undertook an inquiry into the extent to which Departments were able to provide advance information about their transport needs, was by no means optimistic about the feasibility of forward planning at all:

'While we appreciate the value of forecasts and forward programmes we doubt if the information that Departments could reasonably be asked to furnish will in fact go far towards producing the desired result. To obtain a complete picture would involve an expenditure of time and labour which no Department could contemplate undertaking in the present circumstances . . . much of the information for a survey is not centralised but would have to be obtained specially from many scattered units, e.g. controls and contractors. . . . We can, therefore, tender advice in general terms only and leave the Departments to proceed on the lines suggested as far as their individual circumstances permit.'

the user departments and their movement officers working in close touch with railway staffs and the Railways Traffic Division of the Ministry of War Transport. It would therefore be misleading to suggest that all the credit for the efficient use of railway transport in the later years of the war belongs to the central planning of rail movements. The amount of traffic which could be planned centrally in advance, other than coal, was always limited if only because of its sheer variety. And, however well undertaken, the effectiveness of central transport planning relied in the last resort on the efficiency of departmental movement controls and the ability of railway traffic and operating staffs.

With the advent of traffic forecasting, the Minister of War Transport now had a basis on which to judge the adequacy of railway resources, such as locomotives and rolling stock, to meet future demands for transport. Similarly, Government departments using transport could now see more clearly the general railway situation into which their block movements had to be fitted. Moreover, when seeking approval in principle at War Cabinet level for such things as transport economy measures or the additional manpower or raw materials needed for locomotive and rolling stock construction, the Minister of War Transport was now able to give due weight to his requests by providing the statistics of expected future traffic.

Traffic forecasting was not, therefore, expected to work miracles in the control and management of inland transport; nor did it in fact. Its main purpose was the provision of information through which more realism could be infused into transport policy decisions.

(ii)

The Size of the Task

We must now turn from examining the techniques employed in forecasting railway traffic to the traffic trends themselves. The Table in Appendix XIII shows the forecast and actual railway freight carryings for the five six-monthly periods from October 1941 to March 1944. This provides a basis for examining in outline the nature and extent of the demands on the railways in this period.¹

If the period as a whole is first of all briefly surveyed, it appears that, in the autumn of 1941, railway freight traffic was rising steadily.

¹ These statistics should be interpreted alongside the 4-weekly freight traffic figures in Table 1 of the Statistical Appendix to this volume and also Tables 165 and 166 of the *Statistical Digest of the War* and the *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1945*.

Moreover, it showed every sign of continuing to rise with a consequent mounting strain on railway resources. The steady increase was, in fact, sustained during 1942 and 1943 as the statistics show. Total freight tonnage (excluding free-hauled traffic) amounted to 286,737,000 tons in 1941, 295,083,000 tons in 1942 and 300,858,000 tons in 1943. In 1944, traffic declined to 292,083,000 tons.¹ 1943 may thus be taken as the peak war-time year for railway freight traffic and the four-weekly statistics show that the heaviest volume of freight traffic was moved in the period from August to November of that year.² The gradual increase of freight tonnage up to the peak of the autumn of 1943 reflects the growth of war-time traffics: increased production of raw materials (excluding coal); the growth of munitions and aircraft production; the construction of airfields and other military works; military traffic connected with the invasion of North Africa; Bolero—the movement and reception of American forces in Britain; and finally the intensive military activity in the months preceding Overlord—the invasion of North West Europe. For the purpose of a more detailed analysis, it will be convenient to divide the period under consideration into two parts: first, October 1941 to September 1942; second, October 1942 to March 1944.

The six-monthly traffic forecasts made for the period October 1941 to September 1942 both turned out to be too high. For the winter months, from October 1941 to March 1942, as we saw, the actual increase in rail traffic was 5.5 per cent. over the previous year compared with a forecast of approximately 9 per cent.; both mineral and coal class traffic fell below expectations.³ For the summer months, April to September 1942, the actual increase was 1.7 per cent. over the previous year compared with the forecast of about 4 per cent. This was largely the consequence of a fall in coal class traffic reflecting the decline in coal production, though mineral traffic was slightly higher than had been expected. A significant trend in this twelve-month period as a whole was the marked rise in merchandise traffic, a bigger increase than had been forecast. The fall in coal class traffic during 1942 and its continued failure after that time to reach the expected level was a portent of the serious decline in coal production which was to persist for the rest of the war and indeed for

¹ *Summary Table, Railway Returns, 1938-1945.*

² Table 1 of Statistical Appendix to this volume. The decline in railway freight traffic after this time does not necessarily reflect a corresponding reduction in the demands for rail transport. It may have been due to the increasing congestion on the railway system at the close of 1943 and in early 1944 and to restrictions imposed on the movements of certain traffics. Railway traffic statistics are not conclusive evidence on this point.

³ In order to avoid the need for continual lengthy explanation in the text, it must be made clear that, in the present chapter, the following terms have been used: 'minerals' or 'mineral traffic' to refer to minerals and merchandise in classes 1-6 G.R.C.; 'coal' or 'coal class traffic' to refer to coal, coke and patent fuel in classes 1-6 G.R.C.; 'merchandise' to refer to general merchandise in classes 7-21 G.R.C.

long after the war ended.¹ Up to the close of 1941, the transport of coal had been a perennial problem facing the Ministry of Transport. Indeed, during the autumn of 1941, local difficulties in South Wales and North Eastern England had already given cause for anxiety about winter coal prospects. By mid-1942, however, the situation had changed. From this time up to the end of 1943 at least, the coal problem was one of production rather than transport. There can be no doubt that falling coal production materially reduced the strain on the railways at a time when they were finding increasing difficulties in moving steadily larger quantities of other traffics. Serious though the decline in coal production was for the war economy as a whole, there is good reason for thinking that, had coal production been maintained at the level hoped for during these later war years, the consequences for the railways would have been grave.

The second part of the period, from October 1942 to March 1944, was the period of maximum war production and the heaviest demands on rail transport, coal traffic being the one notable exception. Total railway freight traffic continued to rise at any rate up to the autumn of 1943. For the six winter months, October 1942 to March 1943, the increase amounted to 5·3 per cent. over the previous winter, compared with a forecast of approximately 8 per cent. For the six summer months, April to September 1943, traffic increased by 2 per cent. over the previous summer—roughly the amount forecast. From October 1943 to March 1944, total railway freight traffic was 4·2 per cent. less than in the corresponding period of the previous year, compared with a forecast decline of 0·5 per cent.

Throughout the period October 1942 to March 1944, actual coal class traffic continued to fall short of expected traffic, based on Ministry of Fuel and Power forecasts. Moreover, as has been shown, there was at this time an absolute decline in coal class traffic, tonnage originating amounting to 150·7 millions in 1944 compared with

¹ *Coal, op. cit.*, especially Chapters VI–IX. The following statistics provide a comparison between coal production and coal class traffic on the railways from 1938 to 1944:

Year	(1)	(2)	(3)
	<i>Saleable output of mined coal</i>	<i>Railways: Coal class traffic</i>	<i>Tonnage of coal lost through transport difficulties</i>
	<i>Million tons</i>	<i>Million tons</i>	<i>Tons</i>
1938	227·0	172·8	not known
1939	231·3	185·0	not known
1940	224·3	177·3	4,768,100
1941	206·3	163·3	1,229,200
1942	203·6	162·8	12,500
1943	194·5	156·7	500,800
1944	184·1	150·7	587,900

Source: Columns (1) and (3) from *Ministry of Fuel and Power, Statistical Digest 1944*, Cmd. 6639. Column (2) from *Statistical Digest of the War*, Table 165.

162·8 millions in 1942. In spite of this, the relief afforded to the railways by having to move less coal was, by the end of 1943, more than counterbalanced by increases in other forms of traffic coupled with the now almost chronic shortage of railway resources and equipment of many kinds. For during the difficult winter of 1943-1944, coal transport became a serious problem once again. Unprecedented traffic conditions and periodic congestion hampered the movement of coal and caused stoppages at a number of collieries.

While coal class traffic continued to fall, merchandise traffic displayed a marked increase over the same period. Moreover, the actual volume of this traffic usually exceeded the expected volume. The increase in merchandise traffic for the period October 1942 to March 1943 was forecast at 23 per cent. over the previous winter's figure; the actual increase was somewhat lower at 18·9 per cent. From April to September 1943, actual merchandise traffic increased by 18·1 per cent. over the previous summer, compared with an expected increase of 5·3 per cent. From October 1943 to March 1944, actual merchandise tonnage rose once again by 10·2 per cent. over the previous winter's figure, compared with the increase forecast of 2 per cent. These sharp increases in merchandise traffic in the years 1942 and 1943 may be shown more strikingly by comparing the figures for 1943 and 1944 as a whole with those for 1941. In 1941, 61·8 million tons of merchandise and livestock were moved by rail; in 1943 the figure was 82·0 million tons and in 1944, 87·4 million tons.¹ Similar results are given by the statistics in Appendix XIII, if the first and final six-monthly periods are compared.

The effects of this increase in merchandise tonnage on railway working were even more serious than the statistics themselves suggest. Merchandise traffic, in classes 7 to 21 of the General Railway Classification, 'loads' substantially lighter than traffic in the lower classes such as coal and minerals. In other words, more railway wagons are needed to move a million tons of high-classed merchandise than are needed to transport a million tons of traffic in a lower class, other things being equal. Moreover, the higher-classed merchandise traffic requires more labour per ton for handling than other traffics. These were matters of no small importance in the difficult conditions in which the railways had to work during 1943 and 1944.

Several factors may be adduced to explain the increase in general merchandise class traffic during 1942 and 1943 and its maintenance at a high level during 1944. Up to the end of 1943 at any rate the dominant factor was the growth of munitions output and aircraft production. The Index of Munitions Production² shows that the

¹ *Statistical Digest of the War, op. cit.*, Table 117.

² *Ibid.*, Table 132.

output of most classes of munitions rose steadily in 1941 and 1942, reaching a peak at some time in 1943. Similarly, war-time aircraft production reached its climax in the early months of 1944. Railway merchandise traffic nevertheless remained at an abnormally high level for some time after the peaks of munition and aircraft production had been reached. The continued high level of merchandise traffic is explained by the abnormally heavy military traffic in 1944. During 1943 and the early months of 1944, troops and munitions were being moved in increasing numbers inside the United Kingdom in preparation for the invasion of France. This was a period of intensifying activity as American troops and their equipment were disembarked at British ports and dispersed to camps and airfields throughout the country. The amount of constructional and other work needed in meeting the demands of the American forces¹ inevitably imposed additional heavy demands on the British transport system. At the same time, British, Dominion and allied forces were being steadily built up and concentrated in the United Kingdom as the three Fighting Services were expanded. As the Overlord period approached, the railways were necessarily called on to meet heavy operational demands from all the military forces in the country. These various demands combined to sustain railway merchandise traffic at a very high level throughout 1944.²

Mineral traffic shows a decline in the two six-monthly periods from April 1943, the actual volume of traffic moved bearing no very close relationship to the forecasts. The explanation of the falling off in mineral traffic in the later years of the war lies partly in the decline in Air Ministry and M.A.P. requirements for constructional materials—mainly gravel, sand, etc. This reflects the decline from the peak period of airfield construction in 1942.³ The slight falling off in home iron ore production after 1942 also contributed to the decline in mineral traffic.⁴

The statistics which have been examined are intended to show the trends of the main classes of railway traffic between the autumn of 1941 and the spring of 1944. They by no means tell the whole story of railway traffic during that period and need to be interpreted with care. For example, railway lines in some parts of the country had to carry traffic which increased disproportionately to that over the country as a whole. Certain lines experienced particular difficulties on account of continuing changes in the flows of war-time traffic. A

¹ *Works and Buildings, op. cit.*, Chapter XII, Section (iii); Chapter XIII, Section (iv).

² The detailed figures are to be found in the Statistical Appendix to this volume, Tables 1 and 2.

³ *Works and Buildings, op. cit.*, p. 282. The heaviest expenditure on Air Ministry works was in the year 1942.

⁴ *Statistical Digest of the War, op. cit.*, Table 90.

useful and comprehensive report prepared in September 1942¹ by the Ministry of War Transport and covering the whole inland transport situation, indicated four principal 'bottlenecks' on the railway system where traffic demands pressed heavily on line capacity. These were the L.M.S. line at Carlisle, the L.N.E.R. route between Northallerton and York, the routes between England and South Wales and the exchanges between the northern lines and the G.W.R. The general question of line capacity after 1941 will be taken up later,² but the significance of these particular areas from the point of view of traffic demands was well brought out in the 1942 report. For example, the heavy volume of United States forces traffic moving from Scotland over the L.M.S. main line at this time caused the L.N.E.R. Anglo-Scottish main line to be called on for relief. This, in turn, restricted the movement of coal out of Northumberland and Durham through Yorkshire. Again, the south-westerly flow of United States traffic affected the exchange junctions like Banbury. This, in turn, reacted on the cross-country movements of coal traffic moving from the North and on iron and steel traffic moving from the Scunthorpe area to South Wales.³ Such was the nature of the rising demands on the railways when translated from statistical forecasts into practical realities. One further example might usefully be cited to illustrate the caution with which these statistics need to be interpreted. It can be shown statistically that there was a general decline in mineral traffic from the spring of 1943 onwards. Yet in East Anglia, mineral traffic increased greatly at this time. Figures provided in July 1943 showed that, compared with 1942, merchandise traffic had increased by 22 per cent., and minerals and other low-classed traffic by no less than 73 per cent. in this area. The figures reflect the large quantities of roadstone moved in connection with the building of United States airfields in the area.

The rising demands on inland transport are also reflected in the statistics of railway passenger traffic during the period 1941-1944, particularly in statistics of estimated passenger-miles.⁴ Already, during the first half of 1942, passenger traffic had increased by about 30 per cent. over that of the same period of the previous year, though it was carried with an increase of only about 2.5 per cent. in passenger train miles. The number of workmen's trains had been greatly increased to cater for expanded and dispersed war production. This process was expected to continue as bus services were further reduced

¹ 'Transport Position—Winter 1942-1943', reproduced as Appendix XIV.

² See below, Chapter XI, Section (iv).

³ 'Transport Position—Winter 1942-1943', reproduced as Appendix XIV.

⁴ The detailed statistics are discussed in a later chapter (Chapter XIII). The information in this paragraph is largely based on the report: 'Transport Position—Winter 1942-1943', reproduced as Appendix XIV.

to save fuel and tyres. Large numbers of special trains for the Services had to be run as required for troop movements.¹ Arrivals and subsequent movements of United States forces added substantially to the number of Service specials. Service duty and leave travel as well as civilian travel were heavy and on the increase. This was the general picture in 1942. The growth of passenger travel persisted throughout 1943 and 1944, although train services remained well below the pre-war level. By 1944, the volume of passenger travel in relation to the number of trains being run was so large as to have become a matter of serious concern to the Government. The full story belongs to later chapters.

Unfortunately it is not possible to draw a similar statistical picture of the demands on road transport between 1941 and the end of 1943, firstly because no comprehensive traffic statistics exist, and secondly because demands on road transport continued to be artificially restrained by the Government's policy of conserving fuel and tyres. Generally, however, road goods transport continued to carry those traffics that could not easily be moved by rail. The general principle laid down to Government departments was that short hauls by rail and long hauls by road were uneconomic. In consequence, the demands made on road goods transport were normally well within the capacity of the road haulage fleet. The supply of fuel and tyres and not the capacity of the fleet regulated the volume of traffic carried.

There was no such ready way of regulating the demands made on road passenger transport.² While the services run were also limited in a general way by the fuel and tyre situation, the traffic being carried by regular bus services was continually growing. 'The heavy calls for the transport of workpeople, many of whom have to travel much longer distances than was usual in peace-time, have placed a heavy burden on the road passenger transport industry, and at the peak traffic hours it is at full stretch.'³ Many of the larger companies and municipal undertakings were carrying 30 to 50 per cent. more passengers in 1941 than in 1938 and some of the increases were as high as 80 or 100 per cent. These heavy demands on bus services between 1941 and 1944 were mainly essential demands from workpeople and did not lend themselves readily to restriction.

The size and nature of the demands on coastal shipping have already been discussed in a previous chapter and will be further treated in the following chapter on transport resources. The broad

¹ During the period October 1942 to March 1943, the number of 'special' trains run for the Services was over 38,000 compared with about 25,000 in the corresponding period of the previous year. R. Bell, *op. cit.*, Appendix 12.

² This is more fully discussed in Chapter XIII, Section (ii) below.

³ 'Transport Position—Winter 1942-1943.'

picture from 1941 to the end of 1943 is of coastal shipping continuing to fulfil its three primary war-time tasks: the movement of coal to London and the South in addition to the movement of other home-produced commodities; the distribution of imported commodities from West coast ports; and the maintenance of the short sea trade.

Such, in the broadest outline, were the tasks confronting the railways, road transport and coastal shipping in the years of the great development of British and allied power, from 1941 to the beginning of 1944.

APPENDIX XIII

Estimates of Railway Freight Traffic, 1941-1944

(1) <i>Period</i>	(2) <i>Estimates on basis of departmental information</i>		(3) <i>Estimates by R.E.C. on basis of existing trend</i>		(4) <i>Actual traffic</i>	
	000 tons	% increase or decrease com- pared with actual traffic correspond- ing period previous year	000 tons	% increase or decrease com- pared with actual traffic correspond- ing period previous year	000 tons	% increase or decrease com- pared with actual traffic correspond- ing period previous year
<i>Oct.-Mar. 1941-1942:</i>	<i>Aggregate for period</i>		<i>4-weekly averages</i>		<i>4-weekly averages</i>	
Merchandise (7-21) and livestock	—		4,749	+ 7·0	4,994	+ 11·8
Minerals and Merchan- dise (1-6)	—		4,891	+ 10·0	4,545	+ 2·4
Total Merchandise . .	58,998	+ 10·7	9,640	+ 8·5	9,539	+ 7·1
Coal class	78,468	+ 8·8	13,078	+ 8·8	12,514	+ 4·3
Total	137,466	+ 9·6	22,718	+ 8·7	22,053	+ 5·5
<i>April-Sept. 1942:</i>	<i>4-weekly averages</i>		<i>4-weekly averages</i>		<i>4-weekly averages</i>	
Merchandise (7-21) and livestock	5,300	+ 12·5	5,210	+ 10·6	5,320	+ 13·0
Minerals and Merchan- dise (1-6)	4,640	- 4·0	4,547	- 5·0	4,720	- 1·4
Total Merchandise . .	9,940	+ 4·6	9,757	+ 2·7	10,040	+ 5·7
Coal class	12,900	+ 4·0	12,924	+ 4·1	12,230	- 1·4
Total	22,840	+ 4·2	22,681	+ 3·5	22,270	+ 1·7
<i>Oct.-Mar. 1942-1943: (e)</i>	<i>4-weekly averages</i>		<i>4-weekly averages</i>		<i>4-weekly averages</i>	
Merchandise (7-21) and livestock	6,100	+ 22·2	6,165	+ 23·6	5,876	+ 18·9
Minerals and Merchan- dise (1-6)	4,600(a)	+ 1·21(d)	5,777	+ 26·1(d)	4,808	+ 5·8
Total Merchandise . .	10,700(b)	+ 6·93	11,942	+ 24·7	10,684	+ 12·0
Coal class	12,900	+ 3·09	12,693	+ 0·9	12,539	+ 0·2
Total	23,600(c)	+ 7·05(d)	24,635	+ 11·2(d)	23,223	+ 5·3
<i>April-Sept. 1943: (e)</i>	<i>4-weekly averages</i>		<i>4-weekly averages</i>		<i>4-weekly averages</i>	
Merchandise (7-21) and livestock	5,600	+ 5·3	(No detailed figures given)		6,284	+ 18·1
Minerals and Merchan- dise (1-6)	4,000	- 15·2			4,690	- 0·6
Total Merchandise . .	9,600	- 4·4			10,974	+ 9·2
Coal class	12,500	+ 2·2	‘Informal’ + 3·0(f) estimate		11,740	- 4·0
Total	22,100	- 0·8(f)			22,714	+ 2·0
<i>Oct.-Mar. 1943-1944: (e)</i>	<i>4-weekly averages</i>		<i>4-weekly averages</i>		<i>4-weekly averages</i>	
Merchandise (7-21) and livestock	6,000(g)	+ 2·0	(j)		6,472	+ 10·2
Minerals and Merchan- dise (1-6)	4,700	- 2·2			4,605	- 4·2
Total Merchandise . .	10,700(h)	+ 0·15			11,077	+ 10·5
Coal class	12,400	- 1·1			11,667	- 6·9
Total	23,100(i)	- 0·5			22,745	- 4·2

NOTES TO TABLE

- Column (1)—The October–March period covers 24 weeks. The April–September period, 28 weeks.
- Column (2)—These estimates were based on information provided by Government Departments concerned, namely Ministry of Supply (Raw Materials: Manufacturing Stores), Ministry of Works, Ministry of Food, Board of Trade, War Department, Air Ministry and M.A.P., together with the figures of planned coal movement.
- Column (3)—These figures were based on existing trends of railborne traffic on the assumption that the same trends would continue, with certain minor adjustments. Coal class traffic was estimated from the Mines Department programmes.
- Column (4)—These figures are taken from R.E.C. 4-weekly figures of Freight Train Traffic Originating.

OTHER NOTES

- (a) Later corrected to 4,700.
- (b) " " " 10,800.
- (c) " " " 23,600.
- (d) Discrepancy accounted for by R.E.C. and Air Ministry's different assumptions about conveyance of constructional materials. Central Transport Committee's final estimate of total increase, on basis of further information, was 8 per cent.
- (e) These figures include U.S. Army Traffic.
- (f) Central Transport Committee's final estimate on basis of both figures was 2 to 3 per cent.
- (g) Later corrected to 6,100.
- (h) " " " 10,800.
- (i) " " " 23,200.
- (j) No separate R.E.C. estimate was made available for this and later periods. The departmental figures being taken together with the R.E.C. estimates to give the estimates in Column (2).

APPENDIX XIV

Central Transport Committee *Transport Position—Winter 1942–1943*

PREFATORY NOTE

The following notes on the probable condition and capacity of transport in the United Kingdom during the coming winter (October 1942 to March 1943 inclusive) are intended to produce the general background against which movements should be planned. It should be understood that there is a considerable element of elasticity in transport dependent on the manner in which it is used, the conditions under which it is operated and the extent and nature of the demands made upon it. Capacity may be stretched by careful planning or frittered away in wasteful or extravagant use; it would certainly be affected by unfavourable conditions. All that can be shown at this stage is the general situation foreseen in the light of known facts or informed estimates. Certain important, but at present unpredictable factors, such as the extent and effects of enemy action against transport or of active operations from this country or of exceptionally bad weather conditions have been ignored.

A. RAILWAYS

1. The chief limiting factors in railway capacity are:

- (i) Locomotive Power.
- (ii) Rolling Stock.
- (iii) Staff.
- (iv) Line Capacity and Capacity of Exchange Junctions.

(i), (ii) and (iii) are general and apply throughout the entire railway system. (iv) mainly affects particular routes or particular streams of traffic.

2. *Locomotives.* This is likely to be the principal limiting factor since there will be an estimated shortage of over 500 engines for next winter's traffic and this without making any allowance for traffic of the U.S. Forces or for other increases over last winter's traffic. Last winter, lack of locomotive power necessitated the cancellation of many trains. The possibility of improving the position by increasing production of locomotives has received much attention and some locomotive shop capacity which had been diverted to munitions production is being turned back to locomotive construction. The effects of this will not, however, be felt to any substantial extent next winter. Moreover, retention of old locomotives and heavy working of the whole fleet has resulted in raising the number of engines out of service in shops and sheds by some 200 above normal. Endeavours are being made to obtain additional labour and machines to increase building and accelerate repairs and it is hoped to increase new production next year to 455, or about double the number built this year. It is also hoped to make more available by reducing the number under

and awaiting repair, but this, as well as new construction, is dependent on the provision of additional labour, machines and material. The traffic of U.S. Forces is estimated to require 400 locomotives which it is hoped to provide, at least in part, by importing engines from America.

3. *Rolling Stock.* The stock of railway owned and requisitioned wagons of all types at 11th July, 1942, was slightly higher than at this date in 1941, but owing to the retention of old wagons and the heavy working of the stock the number under and awaiting repairs is also higher.

The Inter Company Freight Rolling Stock Control, which was set up in March 1941, effected a great improvement in the distribution of wagons in the winter of 1941-1942 and with their further experience more improvement in this direction may be expected next winter. It is, however, essential that wagons should be turned round as quickly as possible and another 'Quick Turn Round' campaign will shortly be launched.

4. *Staff.* Last winter, mainly owing to abnormal sickness, there was a serious shortage of operating staff and many trains had to stand for considerable periods owing to insufficient trainmen being available. For the same reason there was congestion at goods terminals owing to shortage of handling staff. Owing to the strain under which the men are working in war conditions it is not to be expected that there will be any improvement in this respect next winter.

To meet existing shortages, natural wastage and expected increase in next winter's traffic, it is estimated that a recruitment of 11,000 staff will be required for the traffic, locomotive running and goods terminal working grades. This figure does not include the additional staff which would be necessary for the operation of the 400 American engines mentioned in paragraph 2.

5. *Line Capacity.* The following are the most important natural 'bottle-necks' on the railway system and traffic passing through them needs specially careful regulation:

- (1) L.M.S. line at Carlisle.
- (2) L.N.E.R. line between Northallerton and York.
- (3) The routes between England and South Wales.
- (4) The exchanges between the northern lines and the G.W.

Improvements designed to increase capacity at the points or sections and avoid congestion on the approaches thereto have already been brought into use or will be ready shortly, but notwithstanding these improvements limitations on the flow of traffic in certain directions must be anticipated, particularly between Scotland and the North East coast and the rest of England, between Wales and England and on routes from the North and Midlands to the South and South West.

In a recent appreciation of the winter prospects for coal transport it was indicated that in view of the estimates of U.S. Forces traffic the L.N.E.R. main line will have to relieve the L.M.S. to a much greater extent. More recent indications are that troop train movements on these routes may at times be substantially more intensive than was then contemplated. The capacity of the line to carry coal from Northumberland and Durham will, therefore, be substantially reduced. It is estimated that the maximum

capacity for coal transport will average 150 trains (75,000 tons) per week as against 170 trains (85,000 tons) in the period November–February. (In March and April the railways averaged only 152 and 138 trains per week respectively, but this was due to lack of coal and not shortage of rail capacity.)

Although the capacity of the G.W. line into and out of South Wales has been increased, it is estimated that the increased use of the South Wales ports for additional traffic should fill the increased capacity provided, and no increase in the target amount of coal—i.e. 150,000 tons per week—coming out of South Wales must be expected.

Movements of U.S. Forces will be mainly to the South and South West. The exchanges between the L.M.S.R. and the L.N.E.R. on the one hand and the G.W.R. and S.R. on the other are likely to be affected considerably. After allowing for avoidance of exchange difficulties by finding alternative routes, it is unlikely that Banbury, for instance, will be able to cope with all the coal traffic from the North as well as the iron and steel traffic from the Scunthorpe and Frodingham areas for South Wales. It may be necessary, therefore, to require that the iron and steel traffic shall either be sent coastwise direct or by rail to Manchester for shipment to South Wales, as was done last winter. Other similar diversions, partly or wholly from rail to shipping, may be necessary to avoid difficulties at this and other exchange junctions.

6. *General Freight Position.* In the six months ended March 1942 the railways conveyed an average 4-weekly tonnage of 22,052,000 tons (including 12,514,000 tons of coal class traffic), an increase of 5·5 per cent. compared with the corresponding period of the previous year. There was relatively little enemy interference in the winter of 1941–1942 and apart from the prolonged cold spell in the first 3 months of 1942 no abnormal interference from weather.

From the information so far available it seems that apart from U.S. Forces traffic, the demands on the railways next winter will be greater than they were last by about 5 per cent. With U.S. Forces traffic estimated at about 60 to 70 freight train loads a day, the increase in freight train traffic may be of the order of about 200 trains a day. Moreover, indications are that in spite of zoning and planning of movement the average length of haul is tending to increase.

7. *Passenger Traffic.* During the first half of 1942 passenger traffic increased by about 30 per cent. over that in the corresponding months of 1941, but was carried with only about 2½ per cent. increase in passenger train miles. There has been a very large increase in the number of workmen's trains run to cater for expanded and dispersed war production and this process may go further as it becomes necessary further to relieve road transport in order to save petrol and tyre consumption. Large numbers of Service specials must be run as required for troop movements, and arrivals and subsequent movements of U.S. Forces will add substantially to the number of Service specials. There is every indication that further cuts in ordinary long-distance passenger services will be necessary, particularly in view of the shortage of engine power and the increasing demands of freight traffic which may have to be met at the expense of passenger services.

Hitherto the reduction of services has been combined with measures to discourage the demand by urging the public voluntarily to refrain from unnecessary journeys and by withdrawing or curtailing various concessions or facilities which provide an inducement to travel. The latter process will be carried further shortly.

Free travel, or travel at specially reduced rates, offers a certain field for restriction and progress is being made in this direction. As from the end of September a number of cheap fares available to the general public will be withdrawn. In addition to these fares available to the general public, there are special concessions, the availability of which is governed by the use of warrants or vouchers, free railway warrants for leave travel by Service personnel, cheap visits by relatives to evacuees and free or assisted journeys home by various categories of people who have been posted to war work at places distant from their homes for example. All these concessions have been granted in pursuance of the policies of various Departments concerned, and the Departments have been asked to agree to reductions in the frequency of these journeys during the winter six months.

Certain restrictions on Service leave travel have already been agreed for the winter months. These measures are, however, unlikely, by themselves, to reduce the demand for passenger services to a volume which can be accommodated on the services which it may be possible to run in the winter.

Apart from the journeys at concession rates which are controllable at source by restricting the frequency of the issue of warrants or vouchers, there is the large volume of travel by undifferentiated civilian passengers, reduction of which presents much difficulty.

8. To sum up, railway capacity is unlikely, owing to shortage of locomotive power, to exceed materially that of last winter, whereas the demand upon it threatens to increase substantially. Any of the factors mentioned at the end of the prefatory note might result, at least temporarily, in a serious reduction of rail capacity.

B. COASTWISE SHIPPING

In November 1941, the figure of deadweight tonnage engaged on the coast was 1,500,000 tons and this remained practically constant until towards the middle of March 1942, when we commenced to transfer tonnage to the overseas trade amounting to 150,000 tons. During the winter months of 1941-1942 the cargo carried coastwise per month was as follows:

Coal	1,600,000 tons
Other commodities	425,000 „
General cargo	225,000 „

We now have 1,300,000 tons deadweight of shipping on the coast and we are advised that the Admiralty consider the 150,000 tons engaged in overseas trade may continue until the end of November, and it is possible that 50,000 tons deadweight may remain in the overseas trade throughout the winter. We must therefore base our estimates upon a figure of 1,400,000 tons deadweight (and the loss of approximately one month's carrying

capacity owing to the somewhat later return of the tonnage from the overseas trade).

There has been some improvement in the general performance of tonnage on the coast, which may be assessed as making good the deficiency of about 75,000 tons of shipping, if the improvement is maintained in the winter.

It would not be unreasonable to expect that the movement of cargo coastwise during the winter months of 1942–1943 will be approximately equal to the movement in the winter months of 1941–1942.

We have, of course, to face much heavier demands for tonnage for the carriage of potatoes, timber and trans-shipment cargo, and it is also anticipated that more coal will be consumed if production can be increased. Heavier Service requirements are anticipated but these cannot be measured.

C. CANALS

All the more important canals and the principal canal carriers have recently been brought under the control of the Minister of War Transport, and his powers in relation to them are now similar to those in relation to railways.

The purpose of the control is to ensure that canals are so maintained and canal craft so operated that the inland waterways make the fullest practicable contribution to the war transport system. It is expected that their effective capacity will be increased materially, but the shortage of canal boat labour, recently accentuated by the calling up of some hundreds of boatmen by the Admiralty, will preclude any spectacular increase of capacity.

Steps are being taken to improve the maintenance of canals and to cope more effectively with stoppages due to freezing up in winter; and under control the unwillingness of carriers to undertake less remunerative voyages or to carry less remunerative traffic will cease to be a factor. The monthly capacity of the principal canal systems next winter is estimated to be as follows:

<i>Canals serving</i>	<i>Coal, Coke, Patent Fuel and Peat</i>	<i>Liquids in bulk (Tar, Oil, etc.)</i>	<i>All other commodities</i>	<i>Total</i>
Thames	100,000	35,000	115,000	250,000
Severn	10,000	60,000	45,000	115,000
Mersey	75,000	10,000	140,000	225,000
Humber	120,000	15,000	70,000	205,000*
Birmingham	120,000	15,000	65,000	200,000
Miscellaneous	10,000	—	15,000	25,000
	435,000	135,000	450,000	1,020,000

* *Allowing for loss of boats due to Admiralty recruiting of boatmen.*

D. ROAD TRANSPORT

Under existing conditions, road transport differs from other forms of inland transport in that its use is limited not so much by its possible

capacity (except in the case of passenger vehicles) as by the need for keeping the consumption of rubber and motor fuel to a minimum.

It is therefore imperative to restrict the use of road transport to traffic which must be moved and which cannot be moved by other means even though this may mean that road transport is not fully employed. This makes it necessary to consider the position of road transport under two different sets of conditions: first, under what may be called normal war conditions as at present, and secondly, emergency conditions, when other forms of transport are affected by enemy action.

Again, unlike the railways, passenger traffic and goods traffic do not impinge on one another, and can be considered separately.

Passenger Traffic

(a) *Under present conditions*—The heavy calls for the transport of work-people, many of whom have to travel much longer distances than was usual in peace-time, have placed a heavy burden on the road passenger industry, and, at the peak traffic hours, it is at full stretch. Without any increase in resources, many of the larger companies and municipal undertakings, carried from 30 per cent. to 50 per cent. more passengers in 1941 than in 1938, and some of the increases run as high as 80 per cent. and even 100 per cent. It has been possible to meet this heavy demand by discouraging unnecessary travel, by eliminating unnecessary services and transferring the vehicles so released to essential work, by encouraging the staggering of working hours, by increasing the carrying capacity of single deck vehicles and by making greater use of railway facilities wherever they can be provided.

Any further calls on road passenger transport can only be met by a further and more stringent application of these measures.

The need for economy in the consumption of petrol is even greater than last year, and now there is the additional necessity for saving tyres. Generally speaking, however, it may be said that road passenger transport should be in as good a position as it was last year to meet the calls likely to be made upon it.

(b) *Emergency conditions*—Although road passenger transport is already at full stretch at the peak hours, arrangements have been made which will enable it to meet emergency calls due to the breakdown of other means of transport. In such circumstances, consumption of tyres and fuel may have to be increased so long as the emergency lasts.

Goods Traffic

(a) *Under present conditions*—At the moment the road haulage industry is not working to anything like capacity, and although the advent of longer nights with their adverse effect on railway traffic and possibly other events, may shortly increase the amount of traffic to be carried by road, the limiting factor is likely to remain the need for economy in tyres and fuel and not the carrying capacity of the industry. Indeed, since the beginning of the war, there has only been one short period when the actual capacity of the road goods fleet has been seriously taxed.

(b) *Emergency conditions*—Should other means of transport be interrupted,

a heavy burden may be thrown on road transport, but past experience would indicate its ability to meet the calls likely to be made upon it (unless they are quite unprecedented), provided the emergency is such as to justify the additional consumption of rubber and fuel that would be involved, and provided that lack of traffic in the meantime has not resulted in substantial dissipation of the vehicles and manpower of the industry.

September 1942

CHAPTER XI

THE SUPPLY OF TRANSPORT SERVICES, 1941-1943

(i)

Introductory

A GAINST THE PICTURE of rising demands on inland transport must be set the picture of the ability of the four branches of the inland transport system to carry their additional burdens. How well were they, especially the railways, equipped to meet the continued growth of war-time traffic? Since the capacity of the inland transport system—either as a whole or in part—cannot be measured statistically, the best way of answering this question is first of all to survey the principal limitations on the supply of transport services. What were the dominant scarcities from 1941 to the end of 1943? Since this is, first and foremost, a railway question, it is appropriate to begin with the railways.

Firstly, the scarcity of railway locomotives, already the most serious limitation to railway performance by the end of 1941, was to persist well into 1943 before being overcome. Secondly, as the scarcity of locomotives recedes into the background, the emphasis shifts in 1943 to the severe labour shortage which adversely affected all branches of inland transport, but especially the railways. In the railway workshops, the scarcity of manpower put the brake on the repair and construction of locomotives and rolling stock; in the locomotive sheds and on the lines, the scarcity of operating labour hampered efficient railway working.¹ Thirdly, insufficient line capacity, though still a cause of much trouble locally and on certain routes, diminished in importance as a limitation to railway performance after 1941. Turning to road transport, its operations after Pearl Harbour continued to be heavily restricted by the scarcity of motor fuel, which stimulated the use of alternatives to petrol, and by a new scarcity, that of rubber tyres.²

¹ The manpower shortage also seriously affected road passenger transport where shortage of crews made it difficult to maintain essential bus services. This aspect of the labour shortage can, however, be more satisfactorily discussed in relation to the demands on road passenger transport, treated in a later chapter. See below, Chapter XIII.

² The question of the scarcity of buses will be discussed in the wider context of road passenger transport problems in a later chapter. See below, Chapter XIII.

These were the principal scarcities among inland transport resources. To complete the picture of the supply of inland transport services from 1941 to the end of 1943, it is necessary to look also at those branches of the inland transport system which were able to offer some modest relief to the strain on scarce resources. It is therefore necessary to describe firstly, the attempts made to use the canals more fully and secondly, the use which was made of coastal shipping as a relief to the railways for the movement of bulk traffics. The main sequence of this chapter is, therefore, as follows: locomotives and rolling stock; railway labour; line capacity; motor fuel and tyres; canals; and coastal shipping. The final section sums up by examining inland transport performance between 1941 and 1943.

(ii)

Locomotives and Rolling Stock

LOCOMOTIVES

In the winter of 1940-1941 there had been two main physical limitations on railway performance: the scarcity of wagons, mainly specialised stock, and insufficient line capacity over the principal cross-country and some other main routes. By the autumn of 1941, however, there was good reason for thinking that neither of these difficulties would, in the immediate future, prove so great as in the previous autumn and winter. The wagon position had been much improved by the construction of specialised stock and by better control over the use of all railway wagons. Moreover, the railways could soon be expected to benefit from the new works begun in the spring of 1941 under the 'Wedgwood' programme, even though there were still many routes on which line capacity was expected to be insufficient for future needs. But line capacity was no longer the most serious limitation on railway performance. A new problem had come into the picture following the entry of Russia into the war in June 1941: a scarcity of railway locomotives. The main line railways were suddenly called on to part with 151 of their heavy freight locomotives to be sent to Persia to help establish an overland supply line to Britain's new ally. Coming at a time when locomotive stocks were already low in relation to the heavy volume of traffic being carried, this was a request the railways could ill afford to meet. It was, moreover, an ominous demand. For, from the latter part of 1941 until the end of 1943 at any rate, the scarcity of locomotives was to be the principal obstacle to increasing the volume of traffic

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moved over the railway system.¹ It is necessary to go back in time in order to explain how this problem arose.

Before the war, the railway companies normally acquired about 600 new locomotives a year to maintain their stock. Approximately two-thirds of these were built in the companies' own workshops and the rest bought from outside firms. From the beginning of the war, however, these outside contractors turned over to war production and the construction of standardised locomotives for War Office use overseas. At the same time, a steadily increasing proportion of railway workshop capacity was brought into use for munitions production. In peace-time, the railway workshops, which employed a staff of 69,000, were not allowed by law to undertake any form of manufacture other than railway work, though as early as 1937 it was planned to make use of them, as in the First World War, for the production of munitions.² Since the railway workshops had the skilled labour and were generally well-equipped for this type of work, they were a source which could be tapped by the Government for the manufacture of such things as tanks and aircraft parts.

At first, the employment of the railway workshops for munitions production had not been well organised. Government departments failed to make sufficient use of the spare capacity in the shops, partly because of the scarcity of raw materials. There had been, it was stated, 'too much chopping and changing of orders' by the Supply departments and their contractors, while the expansion of production had been hindered by delays in getting the agreement of the Trade Unions to the introduction of semi-skilled and female labour. The railways, for their part, complained because they were generally employed as sub-contractors for this kind of work. Matters were, however, put on a firmer footing at the end of 1940 by the appointment of an inter-departmental Workshops Capacity Committee under the chairmanship of an official of the Ministry of (War) Transport 'to agree on the type and quantity of manufacture to be undertaken in the railway shops and how much capacity could be allocated to the various Supply departments'. As a result the amount of munitions work in the railway shops grew substantially during 1941.³ In May of that year they were employing some 14,000 persons on Government work, while the number engaged on railway work

¹ The locomotive position had already become acute even before the end of 1941. Even in South Wales, always one of the worst 'bottlenecks' on the railway system because of its geographical location, an investigating committee found in the autumn of 1941 that 'difficulties of locomotive power are at the moment a greater limiting factor than line occupation'.

² One of the companies had been engaged on tank production since 1937.

³ In September 1940 the railways were doing Government work at a wages cost of £27,900 per week; by November 1941 the figure had increased fourfold.

was about 54,000.¹ Measured in terms of the total wages bill of the railway workshops, Government work accounted for one-fifth of their total output by the middle of 1941.

The output of Government work in the railway shops was, however, only achieved by sacrificing railway construction. This was part of a definite policy at the beginning of the war. The output of new locomotives was drastically reduced from the beginning of the war and to make up for this loss, the railways limited the rate of scrapping of old locomotives and concentrated on keeping the number of locomotives temporarily awaiting or under repair as low as possible.² As early as March 1939 the Ministry of Transport had pressed the railway companies to cease scrapping locomotives and to store those which would normally have been scrapped, although even after the war began the railway companies were still proposing to scrap over 400 locomotives during the year 1940.³ The Government had to intervene to prevent such large-scale withdrawals, pointing out to the railway companies that although retaining old locomotives and keeping them under repair might be expensive in money, materials could not be spared in war-time for their replacement by an equivalent number of new engines. Thus, in the first two years of war, many old locomotives that would normally have been scrapped were kept in service by heavy repairs and some locomotives already condemned at the outbreak of war were reconditioned and brought back into service. Since most of these were six-coupled locomotives and suitable for freight work the effort was justified, though the heavier repair work necessarily absorbed a greater amount of the capacity of the railway shops. The Railway Executive Committee also claimed to have made further economies in the first two years of the war by reducing the number of locomotives standing idle under and awaiting repair, but still wanted to do more in this direction.⁴

The locomotive position up to the end of 1941 was therefore

¹ Assuming a 56-hour week, the railways estimated that this was equivalent in output to 64,000 men working the pre-war week of 47 hours.

² See above, Chapter III, p. 107.

³ Peace-time figures were: 1936, 854; 1937, 652; 1938, 356. Between 1929 and 1938 inclusive, the total locomotive stock had been reduced by about 3,500 as part of a policy of freely scrapping obsolete types. The greater power and availability of the modern locomotive enabled traffic to be worked with a reduced total stock, while the elimination of uneconomic types yielded direct financial gain to the companies. (See R. Bell, *op. cit.*, Chapter 16). In the summer of 1939, the railway workshops had been busy with a building programme, which had been drawn up to meet peace-time requirements, but the coming of the war changed the nature of the requirements, placing the emphasis on mixed-traffic and heavy freight locomotives. The main line companies started the war with about 19,500 locomotives of all types. (Figures of the stock at the beginning of September 1939 are variously given as 19,444, 19,463, 19,512.)

⁴ Compared with the outbreak of war, the reduction in the number of locomotives under and awaiting repair was put by the R.E.C. in September 1941 at 370. It is not altogether clear on what basis this figure was computed.

broadly as follows. During two and a third years of war, some 378 freight locomotives—including a number of extremely useful diesel shunting engines—had been withdrawn from the railways for Government use elsewhere; 138 of these had been lost in France.¹ Scrapping accounted for the loss of a further 209 engines. Against these withdrawals—587 altogether—the railways were able to build in the same period only 359 new engines in their workshops for their own use. They also added to their stock by giving a further life to 141 ‘condemned’ engines, while temporary loans of War Department locomotives ultimately needed for service overseas provided a further modest addition to the stock. The net result of this policy of scrapping fewer locomotives, bringing condemned engines back into service and improving the rate of repair, coupled with a very modest amount of new building was that the operating stock of locomotives at the end of 1941 was very little lower than at the outbreak of war: 19,461 compared with 19,541 at the end of 1939 and 19,659 at the end of 1938.² The statistics relating to the number of *engines available for traffic*—i.e. the *operating stock* minus the number *under and awaiting repair*—need to be interpreted with caution, but such figures as are available show a decrease of one per cent. at the end of 1941 compared with the end of 1938.³

Whatever statistical measurement is used, the conclusion is sufficiently clear: there had been no very serious decline in locomotive stocks or locomotive availability up to the end of 1941, although the patching up of ‘old crocks’ and the comparative trickle of new locomotives did mean that this stock was getting older and less efficient. But this is only part of the story. The significant point is that at the end of 1941 the stock of locomotives, which was almost the same as before the war, was working considerably harder. In terms of *engine hours in traffic*, railway engines were doing 10 per cent more work in 1941 than in 1938. Although *coaching engine hours* were

¹ This is the figure given by the R.E.C.

² *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944*. It should be remembered that the 1938 figure would include some locomotives subsequently scrapped and replaced by a smaller number of more powerful engines. A reduction in the operating stock compared with 1938 would not *per se* indicate a corresponding decrease in engine power available to the railways. During the 1930's, railway locomotive stocks were declining, in part reflecting the peace-time practice of replacing non-standard engines with a smaller number of modern locomotives of greater power.

³ The only statistics of locomotive availability for the years 1939-1941 are those in the *Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944*. These need to be used with care since the method of computing the number of ‘locomotives under and awaiting repair’ took account only of major repair work and ignored the large number of locomotives temporarily not available for a variety of other reasons. Statistics of ‘locomotives available for traffic’ in Table 164 of *Statistical Digest of the War* take full account of these factors and are, therefore, the more reliable guide. Since however they provide no data for the years 1939-1941, recourse must be had to the *Summary Table*. Detailed 4-weekly statistics from 1942 onwards are reproduced in Table 5 of the Statistical Appendix to this volume.

now less than in peace-time, the proportionately greater strain on freight and mixed traffic locomotives is reflected in an increase of 29 per cent. in *freight engine hours in traffic* at the end of 1941 compared with 1938. Moreover, heavy freight locomotives were in greatest demand by the War Office and other Government departments for their own purposes. The relevant statistics are summarised in an Appendix to this chapter.¹

It is evident from statistics that the strain on locomotive stocks, as measured by comparing the index of locomotives available with that of *engine hours in traffic*, was already great by the end of 1940, although no serious breakdown of services through a deficiency of engines was threatened until a year later. During 1941, however, the screw was turned tighter and the time came when palliatives and short-term expedients for keeping old locomotives in service would no longer suffice. Rising transport demands could not be met indefinitely with a stock of locomotives older and no larger than before the war.

This position was reached in the autumn of 1941. The problem was brought into sharp relief by the War Cabinet's decision in September of that year that the railways must provide 151 of their own 2-8-0 heavy freight locomotives for immediate dispatch to Persia. They were to lose another 35 which they had on temporary loan from the War Office. It is hardly surprising that the R.E.C., faced with the expected 9 per cent. increase in freight traffic in the winter of 1941-1942, viewed the locomotive prospect with concern. The loss of some of their most useful engines and the expected rise in freight traffic would leave them with a serious deficiency of locomotive power for the work they were required to do. Besides, the reconditioning of the engines to be sent to Persia and their conversion to oil burning would absorb workshop capacity equal to 100 heavy engine repairs.

How were the requirements of the home railways for locomotives to be met? There was little scope for further economies in the use of existing locomotive stocks, so that attention was mainly centred on the possibility of increasing new building and further improving the rate of locomotive repair. The Minister of War Transport therefore approached the Production Executive with a request that locomotive construction and repair work should be put on an equal footing with first priority munitions production for the purpose of securing labour. For the present, however, there was to be no question of allowing locomotive production to interfere with munitions work in the railway shops. This proposal of the Minister of War Transport was agreed to. The Minister of Labour undertook to

¹ Appendix XV, p. 459.

provide the necessary labour and to introduce additional shifts to improve locomotive construction and repair. In the light of subsequent transport difficulties it may be judged that this policy did not go far enough. It is probably fair to say that munitions work in the railway shops had been pushed too far and that a start should now have been made in releasing capacity for locomotive construction and repair. Yet at the end of 1941 it was not easy to assess the relative claims of munitions and locomotives on workshop capacity. Lord Leathers summed up the problem: 'We can allow tanks preference for a time, but not beyond the point where essential traffics are threatened, and we must state our case in time and when we have taken serious steps to curtail passenger travel causing as much inconvenience as the Government is likely to sanction.' In short, chronic locomotive scarcity was as yet a possibility for the future rather than a fact, whereas the need for the munitions produced in the railway shops was judged rightly or wrongly to be more pressing.

The original programme of locomotive construction for railway use during 1942 was 220. To simplify production and interchangeability of locomotives, the Ministry of War Transport decided as a matter of policy in December 1941 that all heavy freight locomotives henceforward constructed in railway workshops should be of one standard design—of the same type as those manufactured for the Army. This type was based on the L.M.S. 2-8-0 heavy freight engine and could be used on all railway systems at home and abroad which used the British standard gauge. While there were, at first, certain objections from the railways to this policy, the balance of argument appears to have been in favour of standardisation in war-time.

Such were the steps taken to meet the expected locomotive shortage up to the end of 1941. They were scarcely drastic. They held out no great promise of long-term improvement in the supply of locomotives and certainly did little to meet the immediate scarcity. During the first half of 1942 the locomotive shortage continued to worsen. In February, the R.E.C. reported an acute shortage of locomotives of large size suitable for freight working over long distances. Although passenger train mileage had been and was being drastically reduced to release engines of this type, the railways had no margin of heavy engines to meet the further expected growth of freight traffic.

By June 1942 it was recognised that the scarcity of locomotives was becoming serious, and disquiet was being expressed about the winter prospects for 1942-1943. New construction was expected to contribute very little towards solving the problem and the repair position, far from improving, was getting worse. The diversion of labour to prepare locomotives for war service overseas had added to arrears of maintenance work in the railway shops. The R.E.C. was asking

for more labour for the locomotive running sheds. The Ministry of Labour was trying to help but with little success.

During the summer of 1942 the prospective locomotive situation was comprehensively reviewed. Plans were made for a long-term improvement by expanding new locomotive production during 1943. It had now been decided, in view of the locomotive scarcity, to cancel a certain amount of Government work in the railway shops to enable these plans to be carried out. Accelerated delivery of machine tools had been promised by the Ministry of Supply and additional demands for staff had been put to the Ministry of Labour. But there was little sign that the full labour requirements could be met. Between June and August 1942, additional labour had done no more than meet normal wastage and on one railway even this had not been made up.

As part of the general review of the locomotive situation, the capacity of the railway workshops was carefully investigated. The results of this investigation appeared, at first sight, to be promising. The 1942 programme of construction was now revised to 229 locomotives altogether, most of which were to be 2-8-0 type heavy freight engines. At the same time, the programme for 1943, originally fixed at 331, was now increased to 455 locomotives. The railways expected to have the capacity to build these in their own shops, without further relief from Government work, but subject to certain other conditions: namely that they should be supplied immediately with 787 additional staff and 90 additional machine tools.¹ Unfortunately these conditions deprived the programmes of realism from the outset. It was soon to become clear that labour rather than workshop capacity would set the limit to the rate of new production. Men were already being diverted from new construction to repair work because of the acute shortage of boilermakers. The R.E.C. had perforce to allow the L.M.S. Company to concentrate on repairs at the expense of new building even though it was expected that this policy would result in 36 fewer new locomotives in the 1942 programme and 26 in 1943. Labour shortage during the summer had in fact prevented the railways from overtaking the unusual burden of repairs caused by overstrain on locomotives during the previous winter. Thus, so far from increasing the number of new locomotives for their own use in the coming year, the railways were now doubtful about completing their existing programmes. While hopes of a long-term improvement in the locomotive situation dimmed, the more immediate prospects were indeed alarming. Taking account of the expected increase in

¹ The railways estimated that if they were relieved of all the remaining Government work which affected locomotive construction and repair, and if an additional staff of 2,225 and 232 machine tools and items of equipment were provided, they could produce in a full year between 642 and 785 locomotives, depending on the type selected.

traffic in the winter months, but making no allowance for American traffic, the railways expected to be short of about 900 locomotives in the winter of 1942-1943. Against this sombre background, there was, however, a hope that a number of American locomotives might become available on loan for British railways in the coming year. This loan had been agreed to in principle in June 1942, but it was expected to be some months before deliveries could begin.

During the autumn of 1942 it became increasingly plain to officials of the Ministry of War Transport and to the R.E.C. that the plans made in the summer had been too ambitious. The labour shortage was getting worse. While the Ministry of Labour continued to press its Regional Controllers to fill the vacancies in the railway shops and sheds as a matter of urgency, that Department made it clear that it rated the chances of meeting the railways' demands as poor. As a result, the plans for new locomotive construction made in the summer were drastically cut in October. The revised programmes were based on the assumption that there would be no further diversion of labour from construction to repair work and that the output of labour would continue at a rate not greater than in the past few months. Thus, instead of the programme of 229 locomotives to be completed by the end of 1942, it was now expected to build 185. Of the 1943 programme of 455 locomotives authorised in the summer, only 246 were now expected to be constructed. On the same assumption, the R.E.C. estimated that the locomotive repair position would continue to get worse.¹

It did. By November 1942 the locomotive situation was no longer just one of the many serious problems facing the Ministry of War Transport; it was dangerous. Of the 822 additional workshop grades which the railways had said they needed as far back as June, only 124 had been obtained by the end of November. During that month further special instructions went out from the Ministry of Labour to their regional controllers and local officers, who were told that 'to enable the railways to maintain vital services, it is important that vacancies for workshop grades in railway running sheds should be dealt with urgently'. A few days later, the Ministry of Production advised their Regional Controllers that the supply of labour for the locomotive workshops had become critical:

The number of engines under repair is unduly large, and a shortage has developed in fulfilment of agreed programmes of locomotives forming part of the war plan. In these circumstances

¹ The repair position was now worst on the L.N.E.R. On 5th September, 1942, no less than 19·87 per cent. of L.N.E.R. heavy freight engines were out of use for the whole of the 24 hours in running sheds. This, added to a further 8·59 per cent. out of use in shops, made a total of 28·46 per cent. of the stock of these engines out of use in shops and sheds, against a 'target' figure of 15 per cent.

it is necessary to consider measures for fully completing to schedule the labour requirements for building and repairs even if this should involve a temporary delay in fulfilling other demands, e.g. shipbuilding.

Of the various labour shortages in the railway shops, that of boiler-makers was the most serious. Many boiler-makers had left railway employment earlier in the war for the shipyards; others were on loan to the Ministry of Aircraft Production though they were not employed in their own trade. And even when the railways could obtain replacements, much of the labour was of poor quality.

The urgent calls for more help for the railway shops and sheds came none too soon. Already the combined effects of the requisitioning of locomotives, the use of workshops for Government work, the loss of skilled staff and overwork and inadequate war-time maintenance of locomotives were badly hampering the day-to-day working of the railways. Failures of engines in traffic were frequent and the numbers of engines under and awaiting repair were excessive.¹ During the period from the middle of November 1942 to the middle of March 1943, between 1,000 and 1,500 trains a week were being cancelled because of non-availability of locomotives. And between November and February, roughly 10,000 trains a week were being put back with average delays of up to one and a half hours because engines were late off shed.² It was hardly surprising that in January 1943 American officials telegraphed home that congestion on the British railways was acute and that prompt assistance was needed to ensure a free flow of domestic traffic and of war supplies.³

However, the combined efforts of Government departments and the railways on the locomotive problem in the autumn of 1942 appear to have borne some fruit by the end of the year. In November for the first time, a slight improvement was reported in the intake of labour for locomotive repair work. During the winter, the locomotive position remained extremely precarious, as was evident

¹ One important factor in the situation was the age of many of the locomotives now in use on the British railway system. In February 1943 the L.N.E.R. was reported to have 450 locomotives in service which, in normal conditions, would have been scrapped. By the end of 1943 the L.M.S. expected to have in service 491 locomotives which would normally have been scrapped. The cost, not only in money, but in materials and labour, of keeping 'old crocks' in service was much greater than that needed to keep modern locomotives fit for traffic. Indeed, in March 1943 it was decided to scrap 10 old L.M.S. locomotives on the ground that the employment of labour and materials in constructing new boilers of an obsolete type was not justifiable.

² An analysis of non-availability of locomotives is to be found in Appendix XVI on p. 460.

³ Mr. O. Jabelmann, Vice-President of the Union Pacific Railroad, came to England at the request of Mr. W. A. Harriman to investigate the railway problems and reached the conclusion that at the beginning of 1943 the British railways needed 1,200 more locomotives to meet their commitments. Mr. Jabelmann died before his report was completed.

from the unfavourable effects of the locomotive scarcity on railway performance. But the repair position did not get worse and by April appeared to have taken a turn for the better. By concentrating on repair work instead of new building, the L.M.S. had succeeded in reducing the number of locomotives out of service below the figure of the previous August. Moreover, the loss of new locomotives through this policy, originally expected to be 62, turned out to be only 41. The L.M.S. was now able to revert to its previous policy of building new locomotives. In all, the railways succeeded in building 219 locomotives in their workshops during 1942, of which 86 were completed in the last quarter of the year.¹ This was not an impressive figure by ordinary railway standards but it was a better result than had been expected.

Thus, the railways struggled through the winter of 1942-1943 without a major breakdown of services, though not without a serious deterioration in their performance caused by an insufficiency of locomotives. The spring of 1943 saw them slightly better equipped than they had been a few months earlier but with every prospect of heavier traffic. Clearly this was no time for complacency about locomotives. At best, it could be said that the rapidly worsening situation of the previous autumn had been held in check. But there were no real grounds for expecting long-term improvement in the supply of labour or, therefore, in the supply of locomotives.

Already in the early months of 1943, attention was being given to the locomotive requirements of the winter of 1943-1944. It was provisionally estimated in February 1943 that the needs of the home railways for the winter would amount to 1,200 additional locomotives—including those needed for Bolero traffic. Plainly there was no hope of meeting demands on this scale from new building. As early as April, it had become obvious that the 1943 programme of new locomotives would not be completed that year and that there would be a substantial carry over. The outlook would have been extremely unpromising had it not been for the possibility of drawing on the growing stock of locomotives now being built up in Britain for British and American military use. Most of the existing Ministry of Supply heavy freight locomotives were already overseas. Early in 1943, however, deliveries of a new type of Ministry of Supply 'Austerity' 2-8-0 locomotive, ultimately needed for use on the European continent, began to flow from the contractors' shops.² To help relieve the great locomotive scarcity on the British railways, the

¹ 86 appears to have been an unusually high quarterly output under the conditions of the period.

² The first became available in January 1943. Several more were expected in February; by March it was expected that the flow would increase to 10 a week, and by April, 15 a week.

Ministry of Supply arranged to lend these locomotives to the railways as they were completed, so that by 1944, 450 'Austerity' 2-8-0's were in use on British railways. This was one of the main sources of relief to the sorely-pressed British railways in 1943. Relief also came in the form of a loan of 400 United States 2-8-0 locomotives—which had originally been contemplated in June 1942. These too were intended for eventual operational use, but were lent to the British railways as quickly as they could be shipped to the United Kingdom. Delivery, which began early in 1943, was completed by September and the majority were in service in Britain in the autumn of that year. As the R.E.C. pointed out, however, these locomotives from America were not pure gain. Alterations needed on their arrival in Great Britain—such as the fitting of hand brakes needed when they ultimately went overseas—delayed repair work to British locomotives.

Nevertheless, these locomotives on loan from the Ministry of Supply and from the U.S. Army changed the whole locomotive position for the better during the summer of 1943. It is true that the engines were subject to recall at short notice, but they were expected to be available during the most difficult months of 1943-1944, when the Bolero movement would be reaching its climax and operational demands preceding the great attack on Europe would be heaviest. The resulting marked improvement in the locomotive situation during 1943 is well brought out in the following R.E.C. statistics of 'effective locomotive operating stock'.¹

	<i>Effective operating stock</i>	<i>Increase over 1st September, 1939</i>
28th November, 1942	19,668	1.05 per cent.
15th May, 1943	19,802	1.74 per cent.
4th September, 1943	20,087	3.20 per cent.

Thus, the railways were enabled to go far towards meeting their locomotive requirements by the end of 1943. Against the original estimated 1943 requirements of 1,200 engines, by the end of that

¹ The following figures show the numbers of U.S. and 'Austerity' locomotives in service during the autumn of 1943, as reported to the Central Transport Committee:

28th Sept. 1943	341 U.S. in service (33 in shops; 26 awaiting alterations— making 400 in all)	238 Austeries in use
26th Oct. 1943	371 U.S. in service	280 Austeries in use
23rd Nov. 1943	385 " " "	325 " " "
21st Dec. 1943	389 " " "	369 " " "
18th Jan. 1944	393 " " "	396 " " "
15th Feb. 1944	398 " " "	410 " " "
14th March 1944	398 " " "	450 " " "

year the loan of U.S. locomotives had provided 400, railway workshops had produced 215, while loans of Ministry of Supply 'Austerity' locomotives had provided another 385. This left a deficiency of 200 engines. As far as heavy freight locomotives were concerned, there was no longer any shortage, and the railway construction programmes for 1944 and 1945 put the emphasis instead on the building of mixed traffic types, which were now badly needed for working military and stores trains.

While, however, the general locomotive situation changed greatly for the better during 1943, the labour position in the railway workshops and running sheds failed to show any improvement. Despite the efforts of the Ministry of Labour to recruit staffs for the workshops,¹ there were, according to the R.E.C., about 50 more locomotives under and awaiting repair at the end of 1943 than there had been at the beginning of the year.² As for the output of new locomotives for railway use, the figure of 215 for the year 1943 was in fact slightly lower than the number completed in 1942. The primary obstacle to increased output in the workshops remained the shortage of boilermakers. Although, during the summer, there had been some net gain of boilermakers to the railways,³ the heavy manpower losses sustained by the workshops in the early years of the war could not now be easily regained. At Swindon, for example, while sufficient parts were being manufactured to complete three new locomotives a week, the shortage of boilers was keeping production down to one a week. Similar difficulties were being encountered in the running sheds, where failure to obtain relatively few unskilled men for locomotive maintenance was seriously interfering with traffic movement. Thus although, during 1943, the railways were able to meet the calls on their locomotive stocks by heavy borrowing, the prospects for new building and adequate maintenance remained poor because of the severe shortage of manpower.

RAILWAY WAGONS

Railway wagons, apart from specialised types, did not become seriously scarce until 1944 and 1945, though danger signals were first seen as early as the summer of 1943.⁴ It has already been

¹ In September 1943 it was reported that the Ministry of Production had decided that all vacancies in railway and private builders' shops now having 'Headquarters Preference' should be regarded as 'designated', that is, super-priority.

² It is not clear how the R.E.C. arrived at this figure.

³ It was reported to the Controller of Railways Conference in September 1943 that the net gain of boilermakers in the railway shops for the 20 weeks ended 4th September was 126 skilled and 177 unskilled staff, including 17 loaned men from shipyards and 4 from other industries.

⁴ At that time the number of *wagons under and awaiting repair* rose to a new high level; the number of *wagons available* fell to the lowest level so far recorded during the war, while figures of *loaded and empty wagon miles* reached a new high level. See Appendix XVII, p. 461, for a summary of the relevant statistics.

explained how, in the early part of the war, the main cause of railway wagon shortages was found to lie in the inefficient use of wagons rather than in inadequate stocks of wagons.¹ Thus, apart from the construction of additional specialised stock, a large-scale wagon building programme was not called for. The policy followed therefore had two objects: the one to concentrate on keeping the existing stock of railway wagons in a good state of repair and to confine new building to meet only the most essential needs; the other, to use the existing wagon stock more efficiently by improving the rate of turn-round, by better pooling arrangements and by the better regulation of traffic. It is necessary to review these two aims of railway wagon policy from 1941 up to 1943, when the question of wagon scarcity first caused concern.

The policy of making the fullest use of workshop capacity by maintaining wagons in a good state of repair and limiting new construction was influenced by similar considerations to those which guided war-time locomotive construction. The absence of any serious general deficiency in the *total availability* of wagons until 1943 suggests that the policy followed was adequate as a short-term measure. Different considerations of course guided policy towards the relatively small numbers of specialised stock, which had to be constructed according to changing war needs. In 1940 and 1941, as has been explained, the call was for bolster wagons for steel and timber; throughout the early years of the war there was a sustained demand for more hoppers for the increasing movement of ironstone from the home ore fields; in 1942 and 1943 there were calls for various types of rolling stock for special military needs, such as 'war-flats'—converted out of twin bolsters to carry military vehicles. Apart from this new building and conversion to meet special demands, the railway companies constructed only a small number of new wagons compared with pre-war. Complete detailed statistics are not available, but an approximate comparison between war-time and pre-war rates of wagon construction is possible. Up to the end of 1943, the average annual war-time rate of new wagon building by the railway companies was less than half the average pre-war building programme of 21,000 per annum in the companies' shops. The private owners of requisitioned stock built even fewer new wagons. Up to the end of 1943, they had built only 3,000 in all, compared with a pre-war average of just under 9,000 per annum.²

¹ See above, Chapter VI.

² It has not been thought necessary to analyse in detail war-time new wagon construction, since the statistics of new building provide no real guide to the availability of wagons on the railways at any given time. The following incomplete statistics are, however, worth recording. According to figures given in R. Bell, *op. cit.*, p. 100, by the end

In any event, the statistics of new building are of less significance than the figures of *wagon availability*; that is, the *operating stock* of wagons less the number *under and awaiting repair*. The annual statistics show that the number of railway owned wagons *available* remained above the 1939 level for each war-time year up to 1943, while the number of privately owned (requisitioned) wagons *available* fell below the 1940 level after that year. Altogether, the total number of wagons *available* was about 0.3 per cent. higher at the end of 1943 than at the end of 1940.¹ This was principally because large numbers of wagons were kept in service on the railways after they would normally have been broken up, though these wagons could only be retained in service by very heavy and, by normal standards, uneconomic repairs.² However, the stock of railway wagons was by no means wholly modern when war broke out and, with the volume of freight traffic getting steadily heavier, there was bound to come a time when the combined total of railway owned and requisitioned wagons could no longer meet all the calls made on it.

This situation was postponed until mid-1943 largely because of the various methods employed to use the wagon stock more efficiently, notably the pooling arrangements begun in 1941 and the variety of measures adopted to avoid congestion and to improve the rate of turn-round. One of the most useful of these measures for getting better use of railway wagons was the activity of an *ad hoc* wagon standage committee appointed by the Central Transport Committee early in 1942 to investigate complaints about the rate of turn-round

of 1943, 8,680 high-sided wagons had been added to the stock; 24,287 extra covered vans and over 1,000 more container flats were at the disposal of the Rolling Stock Control. There had also been a gain of over 5,000 bolster and plate wagons. Against this, the stock of mineral wagons had been reduced by fully 16,000 and 1,000 fewer cattle wagons were in traffic. Ministry of War Transport figures put the construction of new wagons in railway shops at 11,000 in 1942 and 14,000 in 1943. The annual programmes of construction drawn up by the R.E.C. for the later years of the war—which, it must be stressed, do not necessarily bear any close relationship to the numbers of wagons actually completed—are as follows: for 1943, 11,550 wagons, later supplemented by a further 5,000; for 1944, 13,830 wagons; for 1945, 20,022 wagons. In April 1942 private wagon owners were authorised to build and finance the construction of 9,000 standard mineral (requisitioned) wagons. By October 1943, only 5,900 had been ordered and 3,000 built. To make use of building capacity in private shops, it was decided at the end of 1943 to construct 10,000 end-door mineral wagons on Ministry of War Transport account.

The figure quoted in the text of 21,000 for the average pre-war rate of building in the railway shops was provided by the Ministry of War Transport in 1944. The exact numbers of merchandise and mineral rolling stock constructed and purchased by the railways before the war are as follows: 1936—80 vehicles charged to capital account, 27,039 renewals; 1937—7,731 vehicles charged to capital account, 28,732 renewals; 1938—4,773 vehicles charged to capital account, 22,196 renewals. Figures for construction of privately owned wagons before the war show that 6,133 were registered in 1938, 10,926 in 1937 and 9,592 in 1936. See Table C IV, *Railway Returns, 1938*.

¹ All these figures can be verified in Table 164 of the *Statistical Digest of the War*.

² At the end of 1943, the number of wagons kept in service, which would normally have been scrapped, was between 40,000 and 50,000, R. Bell, *op. cit.*, p. 100.

at Government depots. This followed complaints by the R.E.C. that in spite of the existence of an elaborate liaison organisation—over 900 railway liaison officers were attached to Government departments to regulate traffic—sufficient advance planning to eliminate congestion and wagon detention was not carried out. The R.E.C. was also emphatic in its belief that a determined effort should be made to enforce the demurrage regulations in the interests of more efficient use of wagons instead of allowing the payments to lapse. Special enquiries were therefore made by the standage committee at a number of places where the R.E.C. had reported excessive accumulations of wagons. At some, such as the Royal Ordnance Factory, Chorley, where the depots and factories covered large areas, delays of 3 to 4 days were found to be due to the time taken to sort out the large numbers of wagons received daily and to forward and collect those which had to be discharged at the more distant points in these depots. Delays also occurred at old works or depots such as Devonport dockyard and Woolwich arsenal, which were said to have antiquated siding layouts which could not be improved for lack of space. It was also found that, because of inadequate accommodation, explosives were frequently stored in out-of-the-way places. This made transport difficult since casual labour was not readily available for unloading. The committee recommended among other things that new depots and factories should be constructed, that military labour should be used for the construction of sidings serving them and should also be used as casual labour for discharging wagons. Among other enquiries undertaken were those into the method of clearing wagons at the army depot at Didcot and the Royal Naval dockyard at Chatham. In both cases useful suggestions were made for improving the rate of turn-round. At Didcot Ordnance Depot there was both an ignorance of how to unload on the part of apathetic men of the Pioneer Corps and a lack of experienced supervision. Under pressure from the wagon standage committee, much was done at the depots to arrange a better supply of labour for unloading, while Government departments, such as the Admiralty and War Office, undertook to examine the wagon position at their depots independently.

The extent to which the war-time demurrage regulations succeeded in speeding the turn-round of wagons must probably remain a matter for debate. It will be recalled that these regulations were introduced in December 1939, together with an assurance by the then Minister of Transport that they would be administered with regard to the genuine difficulties of traders. Although, in March 1940, some relaxation was allowed to meet their criticisms, strong opposition from traders continued in the form of a concerted refusal to pay accounts—the railways argued that the wagon users had

sheltered behind the Minister's statement in December 1939 as a reason for refusing to pay demurrage charges.

After lengthy negotiations between the R.E.C. and the principal trade associations, many compromise settlements were reached and generally what was known as an agreed 'list of circumstances' was taken into account in considering appeals against demurrage charges. Some large trade associations and industrial concerns, like the British Iron and Steel Federation, argued for relief from demurrage charges on the ground that, before the war, their privately owned wagons had formed part of the plant of their undertakings and had been used for storage. In peace-time there had naturally been no charges levied for detention of these wagons, whereas the compensation they received for having the wagons requisitioned in war-time was considerably less than the demurrage they were now called upon to pay. This difficulty was generally overcome by applying 'standage schemes', under which traders were charged according to a rather complicated 'averaging system' for the detention of wagons carrying raw materials for blast furnaces, coke ovens, steel works and chemical works.¹ This arrangement was first introduced in April 1941.² It was extended a year later to include both inward and outward traffic conveyed in railway owned and requisitioned wagons, and any private siding firm could apply to be included in these so-called 'embrasive standage schemes'.³ The effect of these arrangements was that traders paid very much less for the detention of wagons for storage purposes under an approved scheme than they paid for detaining wagons under the normal demurrage regulations.

Among the changes made in the demurrage regulations in 1942 were a revised scheme for Government traffic. Most war-time traffic was either purely for Government purposes or for firms working on Government account. When demurrage charges had been raised against Government departments they had been largely ineffectual because, under the system of accounting in force, they were inevitably in arrear and represented book debts not directly affecting those responsible for delays in discharging wagons. As the main Government departments were now making better arrangements for the quicker unloading of wagons, it was agreed to discontinue the existing system of raising demurrage on individual wagons. Outstanding accounts from November 1941 to March 1942 were to be settled on the basis of a payment of two-thirds of the accounts as

¹ See R. Bell, *op. cit.*, Chapter 15 and Appendix for a description of the system of payments under the standage schemes.

² The Railways (Demurrage Charges) (Amendment) Order, 1941, S.R. & O. 1941, No. 487.

³ The Railways (Demurrage Charges) (Amendment) Order, 1942, S.R. & O. 1942, No. 776.

rendered, and henceforward, a commuted annual charge representing two-thirds of the total demurrage accounts of the principal Government departments for the year ended March 1942 was to be paid in monthly instalments. The Ministry of War Transport told the Departments concerned that if experience showed that the detention of wagons by them increased as a result of the new arrangements the matter would have to be reviewed.

It is difficult to reach a firm conclusion about a matter which caused so much official controversy as the war-time demurrage scheme. A cardinal principle of efficient traffic regulation is that wagons should not be loaded and dispatched until there is a place to unload them, so avoiding their use for storage. The relevant question is whether or not the demurrage regulations helped to further this principle by penalising those responsible for the avoidable detention of wagons. The R.E.C. believed that they did help and favoured placing the onus on the wagon user to prove where delay was unavoidable. Yet it is clear that the responsibility for the detention of wagons was by no means always that of the consignee, on whom the demurrage charges usually fell. As was evident during the widespread congestion at the end of 1940, accumulations of wagons were generally a symptom of a more fundamental fault, namely, the uncontrolled forwarding of wagons. Because of this weakness of the demurrage regulations, and to meet cases of hardship, which were probably inevitable under the original war-time scheme, the Ministry of War Transport looked to other more effective ways of getting a quicker turn-round of wagons and favoured a more liberal interpretation of the regulations. Probably, however, by allowing concessions to a few traders on hardship grounds, the Ministry helped to undermine the effectiveness of the demurrage regulations themselves.¹ When all things are considered, it is apparent that the original war-time demurrage regulations did more to alienate the goodwill of traders than to enlist their

¹ The case of the Yorkshire Copper Company illustrates this point. This firm sent eight wagons of tubes to Hull for shipment to Egypt. The traffic could not be shipped and demurrage accrued on the wagons. The railways agreed, in the circumstances, to reduce the charges by two-thirds, but the firm refused to agree and referred the matter to the Ministry of War Transport. The Ministry told the Yorkshire Copper Company that their demurrage account would be withdrawn on the grounds that the firm could not have avoided the detention of the wagons. The Ministry also asked the R.E.C. to treat other similar cases of detention in the same way. The Ministry of War Transport decision in this case was plainly intended to avoid hardship to this and other firms when it was apparent that all reasonable steps had been taken to avoid detention. The railways argued that it was unreasonable to expect them to prove that particular traders were responsible for delay before collecting demurrage, since traders would now take the view that if they themselves had acted reasonably, demurrage charges could be waived. It was always possible, the railways argued, for a trader to show that some circumstances or person outside his control had caused the delay and so prevent the collection of demurrage and at the same time undermine the incentive which this provided to the rapid turn-round of wagons.

co-operation in improving the turn-round of railway wagons. In short, the regulations were so drastic as to defeat their own ends.

The replacement of the original system of demurrage charges by commuted payments was a departure from the earlier principle that the penalty should vary with the period of wagon detention. It is therefore doubtful whether demurrage helped very much in improving wagon turn-round in the later years of the war—at any rate as far as Government-controlled traffic was concerned. For the real causes of better wagon performance after 1941 it is necessary to look elsewhere. On the operational side, the Inter-Company Freight Rolling Stock Control was undoubtedly the greatest single benefit.¹ On the traffic side, improved methods of planning traffic in advance contributed to more efficient use of wagons: the central planning of large blocks of traffic through the Central Transport Committee and other inter-departmental machinery, the extension of the system of traffic allocation to the Regions in 1943,² closer co-operation between departmental movement officers and railway liaison officers—all contributed to the more efficient handling of freight traffic. Finally, useful results were achieved through the investigations into wasteful delays to wagons, Government departments helping to track down needless accumulations of wagons. The measure of the improvements with which the wagon stock was used is shown in the numbers of *wagons standing under load* for more than 48 hours:

	<i>March</i>	<i>June</i>	<i>September</i>	<i>December</i>
1941	59,666	56,728	51,359	77,926
1942	52,428	46,987	51,359	44,562 (Jan. 1943)
1943	38,697	40,055	39,795	35,215
1944	32,024	34,477	36,170	33,086

These various measures for making more effective use of both railway owned and requisitioned wagons helped to avoid a serious scarcity of wagons up to the summer of 1943. At that time, however, the R.E.C. became seriously concerned about the adequacy of the number of wagons available and the high number out of service for repairs. What were the facts about wagons in 1943? Since four-weekly returns are not available before 1941, it is necessary to turn first to the annual statistics in order to examine the long-term trend. These show that between 1938 and 1943, *total loaded wagon-miles* increased by approximately 33½ per cent. while the *total operating stock of trucks and wagons* remained within about 2 per cent. of the 1938 figure. Similarly, the *total availability* of wagons remained fairly

¹ To meet the shortage of mineral wagons, in 1943, temporary departures were made from the pooling arrangements. These took the form of restrictions on the movement of general merchandise in mineral wagons.

² This is discussed in Chapter XV below.

constant from 1940 to 1943, never varying by more than about 1 per cent. of the 1940 figure.¹ The annual statistics are therefore sufficient to account for the scarcity of wagons in the later years of the war, though they do not disclose why complaints of a wagon shortage should have first been so strong in the summer of 1943. For while both the *operating stock* and, as far as can be ascertained, the *availability* of wagons remained steady between pre-war and 1943, the really big rise in *loaded wagon-miles* occurred between 1938 and 1941—no less than 28 per cent. On the basis of the annual statistics, one might conclude that a serious scarcity of wagons had been a likely occurrence at any time from 1941 onwards. Indeed, the R.E.C. pointed out in 1943 that 'the present shortage of wagons is due to a number of circumstances which have been foreseen . . . and not to any sudden and unexpected change'.

The position in the summer of 1943 is more fully brought out in the four-weekly statistics.² These show clearly that the numbers of *wagons under and awaiting repair* are cyclical. This is because the demand for wagons is seasonal, the peak period for freight traffic being between September and March. The effect of the greater use of wagons during this period begins to show itself in January each year and the number of wagons stopped for repair is usually greatest in July or August, when conditions are most suitable for repairing in the open and wagons are not in such heavy demand. The four-weekly statistics show that the summer peak of 'cripples' tended to increase in each successive war-time year, reflecting increased wear and tear and damage from heavy war-time traffic and the difficulty of augmenting man hours on wagon repairs.

The wagon shortage in the summer and autumn of 1943 arose because the season of the year when the largest number of wagons was out of service for repairs happened to coincide with the peak period of war-time freight traffic. This is borne out by comparing the four-weekly statistics of *loaded wagon-miles* and the *total availability* of wagons during the summer and early autumn of 1943.³ Among a list of causes advanced by the R.E.C. to explain the scarcity of wagons at that time were the heavy freight traffic being moved, with a consequent very large number of wagons being forwarded each week,⁴ heavy increases in Bolero and other Government traffic,

¹ These conclusions are all based on the statistics in Tables 164 and 166 of the *Statistical Digest of the War*.

² See Tables 3 and 6 in the Statistical Appendix to this volume. A summary of the relevant data is to be found in Appendix XVII.

³ Cf. Tables 3 and 6 in the Statistical Appendix to this volume. See also the summary in Appendix XVII.

⁴ The average number of wagons loaded per week during the three weeks up to 20th October, 1943, was 924, 743, which exceeded the record number of wagons loaded in any week during 1942, namely 921, 093.

heavy merchandise traffic and the use of mineral wagons for other traffics and delays due to congestion on certain routes.¹ But the principal cause singled out was the shortage of labour for wagon repairs. Against this background, it is not difficult to understand the R.E.C.'s concern about wagons as the autumn and winter of 1943-1944 approached. Among the measures put in hand to ease matters were the granting of special priority for wagon repairs by the Ministry of Labour, the construction on Ministry of War Transport account of wagons to fill the gap caused by the failure of private owners to build new 'requisitioned' stock and further pressure on Government departments and traders to unload wagons promptly, supported by quicker turn-round propaganda. It is doubtful if these measures helped greatly at this stage of the war. However, with the seasonal decline in the numbers of wagons under and awaiting repair, the situation righted itself by the end of 1943. The *total availability* of wagons did improve, which removed cause for immediate anxiety. The future wagon position was much less promising. During 1944 and 1945, the summer 'peak' and winter 'trough' in the numbers of *wagons under and awaiting repair* both rose to new high levels. As will be described in a later chapter, during the last 12 months of the war, difficulties in wagon repair were to become extremely serious, as arrears of maintenance mounted and labour remained scarce.

This survey of locomotives and rolling stock has shown how, by 1943, scarcity of labour had become the main limitation to increasing the rate of output and repair of locomotives and wagons. In assessing the limitations to the supply of railway transport, by the end of 1943 the problem is more correctly regarded in terms of a general scarcity of manpower rather than in terms of individual problems of locomotives and wagons. The scarcity of labour was now spreading beyond the workshops and sheds to other branches of railway activity; lack of manpower was setting the limit to railway performance as effectively as it was setting limits to the further expansion of the whole war economy.²

(iii)

Railway Labour

In the early years of the war, the supply of railway labour was not a serious problem. By 1943, however, labour scarcity was probably the most intractable of all the difficulties facing the railways.

¹ For example, East Anglia and South Wales, from which congestion was reported in the summer and autumn of 1943.

² *British War Economy, op. cit.*, Chapter XV.

Although the total numbers employed by the railways increased from over 588,000 in March 1939 to 613,000 in March 1943 and 622,000 in March 1945, the railways were, of course, handling a much larger volume of traffic in the later war years than in peace.¹ In addition, in spite of reservation at an early age for most of their employees, the railways lost a high proportion of their labour force and had to learn to dilute their skilled workers with untrained newcomers and to employ women not only extensively in their offices, but as porters or as engine cleaners on the stations and in the goods yards and locomotive sheds. In 1939, there were no women or girls employed in the railway 'conciliation' grades.² By 1944, there were 36,000. The total number of women and girls employed by the railways increased from 25,000 to 93,000 in the same period.³

From the beginning of the war, nearly all railway workers were reserved at the age of 25, with the exception of a few categories, such as some porters, loaders, shunters, ticket collectors, level crossing keepers, etc., who were reserved at 30. Railway workers over these ages continued to be reserved from military service more or less unchanged throughout the war.⁴ In addition, a high proportion of railway operating and permanent way staff, whatever their age, could only be called up as Service tradesmen, that is for employment in transportation units; even in these cases in the summer of 1940 the Army temporarily released a large number of railway operatives, and when some of them were recalled during 1942, the railways were allowed to select those they could best spare. It was also open to the railway companies, as to any other employer, to seek individual deferments for any man in case of need and in fact the railway companies were able to get very favourable treatment from the Ministry of Labour. For example, in the autumn of 1941, the Ministry of Labour agreed that no applications for the deferment of individual railway clerks would be refused so long as the R.E.C. undertook to release as many clerks as they could—a concession

¹ See above, Chapter X; also Tables 1, 2 and 4 in the Statistical Appendix to this volume. The big increase in merchandise ton-mileage in the later years of the war was especially burdensome in terms of labour as it required much more handling at both ends than minerals and coal. In addition to freight traffic, the large numbers of passengers travelling employed a considerable number of railway staff.

² That is, the grades concerned with running the railway. They include permanent way staff as well as operating staff. The full explanation is given in a note to Table 7 in the Statistical Appendix.

³ Table 7 of the Statistical Appendix.

⁴ The main changes were: signal and telegraph linesmen, who were reserved at 25 in the Schedule of Reserved Occupations 1939 were reserved at 18 by December 1941; permanent way maintenance staff, reserved at 30 in 1939 were reserved at 25 by 1941; a few categories such as pointsmen, crossing keepers and working foremen and loading porters had their reservation ages increased by five years in 1941. See various Schedules of Reserved Occupations, e.g. September 1939, April and December 1941, etc. When the principle of individual deferment superseded the Schedule of Reserved Occupations after the end of 1941, railway workers over these ages continued to be deferred.

enjoyed at that time by no other employer. Similarly, although it was Ministry of Labour policy after September 1941 to refuse deferments for men under 25 in any 'black line'¹ occupations, the railways were allowed to retain large numbers of goods porters and other unskilled workers under the age of 25 at least until the summer of 1942. Again in the autumn of 1942 when the 'black line' system was somewhat extended, no new railway grades were added. When women became liable for National Service, those employed on railway work were reserved unless they were ancillary workers, and even in these cases skilled ancillary workers (for example, shorthand typists, or skilled packers) were only withdrawn on prior substitution.

The railways were rightly treated as a vital war industry and suffered as little as possible from call-up for military service. 'For many months past', said an official of the Ministry of War Transport in 1942, 'the railways have only lost by enlistment the men whom they themselves (have) felt they could spare.' The Ministry of Labour considered that it had treated them very generously. Nevertheless, by the end of the war over 100,000 railwaymen of the most active ages had joined the Fighting Services.² As this represents more than one-sixth of their total pre-war labour force, it was a significant contribution.

On the railways as a whole, there were no serious complaints of labour shortage during the early war years except for some grades, or in a few especially difficult areas. For there was as yet no general shortage of labour and up to early 1942 the railways were able to recruit substantial numbers of women to take the place of the men lost to the Forces or upgraded to more skilled or heavy work. By January 1942, for example, the railways were employing over 72,000 women; 25,000 in the operating grades, mostly as porters and checkers, 11,000 in railway workshops, 27,000 as shorthand typists, telephonists and clerks³ and nearly 10,000 in miscellaneous grades such as messengers and cleaners. By the summer of 1942, however, there was a growing shortage of unskilled labour and the supply of new labour for the railways was running short; in a report made to the Minister of War Transport about the prospects for the forthcoming winter, the railways began to sound a note of alarm, particularly about the shortage of railway operating staff. In many districts, they said, it was now impossible to recruit adult men or

¹ The 'black line' occupations, so far as the railways were concerned, were station-masters and other officials, foremen, engine shed workers, permanent way maintenance men, porters, train examiners, pointmen, crossing keepers, and so on (see, for example, Schedule of December 1941). A 'black line' occupation was one underlined in the Schedule of Reserved Occupations as warranting special treatment.

² Sir Cyril (now Lord) Hurcomb's address to the Royal Empire Society, 13th June, 1945.

³ For example, male clerical staff in the age group 20-34 had been 13,700 in April 1939. By January 1940 there were only 360.

juveniles, and difficult to get women in the 18–30 age groups. In the previous (1941–1942) winter, moreover, a high sickness rate had forced the cancellation of some trains for lack of crews and had added to congestion at the goods terminals. The railways pointed out that during the coming winter, traffic would increase and the weather might deteriorate while it would be unrealistic to expect the rate of sickness to be lower than in the previous year. The railway companies therefore asked for an additional 11,000 bodies to train for employment in traffic grades, locomotive running and goods terminal work. They stressed that they particularly needed youths of 16 and 17 years of age to train as locomotive firemen—a specific shortage which was to cause a great deal of difficulty at a later stage in the war.¹

The railway companies' difficulties could be tackled by other means besides new recruitment. The Ministry of Labour Headquarters confirmed in June 1942 that there would be no further call up of conciliation grade staff except by previous agreement with the railway companies.² Also, in order to make sure that skilled railwaymen were employed on the highest possible grade work, there had to be transfers of staff within the railways from one company to another and from one grade to another; or mobile labour had to be transferred from areas where immobile labour was available to more difficult labour areas. In July 1942, therefore, the Ministry of Labour issued a circular to its regions asking them to issue directions where necessary to railway workers for such transfers.

By March 1943, these efforts seem to have produced some results. Although compared with March of the previous year the total number of men and boys employed had fallen slightly, the numbers of males employed in the conciliation grades had risen by 2,000; at the same time the total number of women and girls employed had increased by 15,000, the increase in the conciliation grades alone being 8,000.³ This net increase of 10,000 in the conciliation grades generally must have gone a long way towards filling the 11,000 vacancies in the operating grades which the railways had asked for nine months previously. The railways helped themselves also, by modifying as far as possible their peace-time standards of eyesight and physical fitness, by keeping on men after retiring age, by organising the employment of part-time women especially in goods sheds, and initiating schemes for spare-time volunteers for loading, engine cleaning, and so on.⁴

By the late summer of 1943, however, the shortage of manpower

¹ This is discussed below.

² This arrangement seems to have been in operation regionally for some months previously.

³ See Statistical Appendix to this volume, Table 7.

⁴ See, for example, *Yorkshire Post* of 3rd December, 1943, asking for volunteers for day or night, week-end or Sunday work at local stations.

in the country as a whole was acute and the railways began to run into serious labour trouble again. In October they reported a new shortage of 13,000 operatives in the operating grades. The main difficulty in recruiting labour for railway work was that pay and conditions were proving very unattractive, especially compared to the new and growing munitions industries. As early as spring 1942 it had been reported that outstanding vacancies for men in some areas could never be filled because the rates offered were too low to attract available labour. Two months later the Railway Executive Committee agreed with the Ministry of Labour that the railways had little chance of attracting Irish labour, one of the most useful sources of male labour, because of the higher competing wages being offered. Not only were wages low, but railway work is often heavy, dirty and exposed to the weather; hours of work are long and night work essential for many grades. As women were employed in increasing numbers, the Ministry of Labour, which by then included the Factory Inspectorate, expressed itself as far from satisfied both by the long hours of work and by the lack of welfare facilities at many stations. Lavatory accommodation for women was inadequate and canteens were often non-existent or very poor. The railways endeavoured to improve welfare facilities and embarked on building schemes for lavatories and canteens. By November 1943, for example, 183 railway canteens were offering a full meal service, 38 were offering a limited service, 88 canteens were under construction, 35 had been approved to go ahead and a further 211 schemes were under consideration.¹ Railway workers could also use British Restaurants or Pie Centres when they were nearby and arrangements were eventually made so they could, if necessary, get extra rations under the Packed Meal Scheme.² Nevertheless, railway work remained unattractive and wastage was high. As late as July 1944 the Minister of Labour felt impelled to write to the Minister of War Transport about the 'unsatisfactory conditions under which many railwaymen work'.

By 1943 too, the railways were beginning to notice an alarming decline in the recruitment of juveniles. In competition with other industries for the diminishing numbers of school-leavers and other young workers³ the railways were failing to attract sufficient recruits.

¹ The railways and the Ministry of War Transport, however, complained with some justification that the Ministry of Production refused to allow vacancies for canteen staff to be accorded first preference during the D-day build-up at the same time as the Ministry of Labour was complaining that the inadequacy of canteen facilities was discouraging new recruitment.

² A shed could be set aside and extra rations drawn on the 'Canteen without Cooking Facilities' scale; or a local retailer could draw rations on their behalf and put up meals for them.

³ The diminishing numbers were the result of the declining birth rate of the inter-war years.

Their record as juvenile employers was not good, for even in peacetime they had not conformed to the best practice. For example, signal box lads, who were mostly under 16, normally worked shifts round the clock, and night work was expected of messenger boys, callers-up¹ and other juveniles. In addition, juvenile hours were long, and in some grades were up to 60 a week.² The most important shortage which had first been reported in the summer of 1942 was for young lads of 16 or 17 years of age to start as engine cleaners and to be trained and up-graded to firemen and eventually to drivers. This was the only source from which firemen and drivers could be recruited, and the shortage of train crews was by this stage of the war very serious. (One company alone lost 1,500 drivers and firemen during 1943.) But as trains run a 24-hour service, it was impossible, said the railways, to avoid a young 17-year-old fireman's duties from extending into the prohibited night hours, or from exceeding 48 a week. There is no doubt that the railways were in difficulties over the employment of juveniles; for railway work must go on all through the night, and the general shortage of labour meant that staff had to work exceptionally long hours.

It was true that boys could refuse to do night work, and were only employed if their parents had no objection to their hours, but such conditions kept boys out of the industry and in fact both local Education Authorities³ and Ministry of Labour local representatives did not encourage young people to take up railway work. 'There is a very strong body of opinion in this country,' said the Ministry of Labour, referring to this fact, 'which attaches great importance to juvenile conditions of work.' It recognised that the nature of railway work was such that some long hours and night work were unavoidable and, at a meeting with representatives of the railways held at the end of December 1943 to discuss juvenile recruitment, the Ministry of Labour suggested that it should help the railways to draw up a code of conditions which would ensure that only in the most essential cases would juveniles be employed on night work or for excessive hours. The recruitment of juveniles for railway work was never satisfactory, however, and, as persons under 18 were not liable to direction, juvenile vacancies persisted. The specific shortage of boy engine cleaners was dealt with temporarily and hurriedly during the last few days before the opening of the Second Front. But after the immediate urgency of providing railway labour for the Overlord

¹ For example, there was a strike of enginemen at Nottingham because of the shortage of boy callers-up during the night hours.

² The 1920 Women, Children and Young Persons Act prohibited night work for juveniles except in certain cases. The 1938 Young Persons Employment Act laid down a 48 hour maximum week for them.

³ These were responsible for placing juveniles in 104 areas in the country.

preparations was over, the Minister of Labour said that he did not consider conditions of employment sufficiently satisfactory for him to take any special steps to recruit juveniles for railway work.

The Ministry of Labour indeed both centrally and regionally frequently complained that the railway companies' attitude to labour shortages, especially in the earlier years of the war, was not adjusted to war-time conditions. The railways were perhaps too apt, if they lost a hundred able-bodied men, to expect the Ministry of Labour to produce another hundred able-bodied men to replace them. In engineering firms, the Ministry of Labour pointed out, dilution and the elimination of unnecessary processes had by 1942 gone far. But as late as July 1944 a senior official of the Ministry of War Transport could say that the railways, in spite of all the protection they enjoyed under the National Service Acts, had made no real attempt to economise on labour, or to join with the Unions in an investigation as to what operations could be eliminated.

Problems of railway labour recruitment during and after the Overlord period will be discussed in a later chapter.¹ It is, however, clear from what has already been said that the scarcity of railway labour had become a powerful brake on efficient railway working by the end of 1943.

(iv)

Line Capacity

It was shown in earlier chapters how the serious traffic congestion on the railways in the winter of 1940-1941 dictated the need for extensive schemes of new works.² Line capacity was never as grave a handicap to railway performance in the later years of the war. Yet while this factor was overshadowed by other problems like the shortages of locomotive power and labour, 'bottlenecks' continued to set very definite limits to the movement of traffic over certain parts of the railway system.

With the passing of the heavy air attacks, traffic movement, particularly in and around London, appear to have become much easier during 1941. In some parts of the country, however, the railway difficulties persisted and on some lines congestion was avoided only by deliberately restricting traffic. Indeed, during the autumn of 1941, ominous reports from the railways, reminiscent of the events of the previous winter, began to reach the Ministry of War Transport. In October, heavy accumulations of traffic were

¹ See below, Chapter XVI.

² See above, Chapters V and VI.

reported from South Wales—always a troublesome spot—and from other places on the Great Western system. In consequence, temporary restrictions had to be placed on the acceptance of all except priority traffics for South Wales destinations. Towards the end of the year, attention was directed northwards to the Yorkshire area, where frequent restrictions had to be placed on traffic over the L.N.E.R. main line.

The prolonged traffic difficulties in both these areas derived largely from similar causes, firstly the peculiar physical and geographical characteristics of each area, and secondly the heavy additional quantities of coal traffic moving inland from districts which normally disposed of their coal output by sea. In South Wales the River Severn formed a natural barrier to the movement of traffic into England, which new railway facilities and improved traffic organisation could not hope completely to overcome. Therefore the few rail outlets from this area were always heavily occupied with traffic. Similarly, in North Eastern England there were few rail outlets to the south between the Cleveland Hills and the Pennines and consequently traffic became heavily concentrated on the L.N.E.R. main line between Northallerton and York.

In the autumn of 1941 both of these areas of transport difficulty were made the subject of detailed enquiry. The reports of the investigations provide a very useful survey not only of the particular problems of these two areas in 1941, but of how the pattern of traffic on the railways changed in the years between Dunkirk and the end of the war.¹

The nature of the South Wales transport problem remained much as it had developed in the critical closing months of 1940. The net result of these developments was that the demands on the railways, which provided the bulk of the long-distance transport from the area, considerably exceeded the supply. At the same time, the volume of freight traffic out of South Wales exceeded the volume inwards. Thus, while the weekly average number of goods trains worked by the Great Western Railway on the Severn Tunnel, Gloucester, and Hereford routes had been 618 for the 24 weeks up to the end of March 1941, and had risen to 703 for the nine weeks up to the end of November, the demand was roughly estimated at 800 trains. Moreover, where before the war less than 90,000 tons of coal a week were moved by rail to inland destinations outside South Wales, 150,000 tons a week—300 trainloads—were being so moved in the autumn of 1941.² This very considerable increase in coal traffic, amounting to some 100 trains a week, together with the general

¹ The substance of these reports has been summarised in this narrative. The full reports are reproduced as Appendices XVIII and XIX, pp. 462–483.

² Coastal shipping moved 85,000 tons a week.

difficulty of working traffic under blackout conditions were largely responsible for the great strain on the railways in South Wales. In order to prevent serious internal transport congestion, the investigating committee went on to point out, the use of the South Wales ports had been deliberately restricted for many months. For the general state of affairs in South Wales there was no sovereign remedy, though benefits were continually being derived from improvements in the organisation of railway traffic, in the methods of railway operation and from the additional railway facilities now coming into use.

New works in and around South Wales did indeed bring a very marked improvement in the traffic position there at the beginning of 1942. Work on the important scheme for 'quadrupling' the line between Newport and Severn Tunnel Junction, agreed to in April 1941 under the 'Wedgwood' programme, was completed rapidly and all sections were brought into use in November of the same year; the cost being £257,000. Besides the 'quadrupling' scheme, the capacity of the tunnel itself was increased by the installation of intermediate block signals. In addition, a large number of running loops and sidings on the three routes out of South Wales were completed during the autumn and winter of 1941-1942. After the completion of these new works it was reckoned that, as a rough indication of railway capacity, a target of 750 trains a week out of South Wales might be aimed at under conditions of normal winter working.¹

Another big scheme of railway works designed to improve the movement of traffic out of the South Wales area as well as cross-country traffic generally was being carried out at this time. This was the 'quadrupling' of the line between Gloucester and Cheltenham, which had been heavily occupied even in peace-time. Work on this six-mile stretch of line was started in September 1941 and the first traffic was run over the widened lines in August 1942. The cost of this work, which called for 'civil engineering work of more than ordinary proportions' and included extensive signalling work, was half a million pounds.²

These much-needed improvements did relieve the South Wales difficulties materially during 1942. Even so, the potential demands for rail transport from this area remained greater than the available capacity. Although this increased capacity had been provided, it was expected that the increased use of the South Wales ports would fully absorb it.³ Even after the summer of 1942, it remained true that

¹ The estimated 750 trains a week would be divided very roughly into 310 by the Severn Tunnel, 210 by Gloucester and 230 by the Hereford route. These figures referred to normal winter working; they could be exceeded during the period of longer daylight.

² See R. Bell, *op. cit.*, Chapter 17.

³ 'Transport Position—Winter 1942-1943', reproduced as Appendix XIV.

every re-arrangement of traffic which resulted in the withdrawal of trains from the routes out of South Wales helped to relieve the strain on the railways and diminish the risk of congestion.

The traffic problem in North Eastern England differed from that in South Wales only in degree. Although the demand for transport was almost always in excess of supply, the margin here was probably somewhat narrower. There were two main categories of traffic in this area: first, that moving into and out of the highly industrialised region in the hinterlands of the Tyne, Wear and Tees; second, that passing through the area in transit between Scotland and the remaining parts of England. The larger part of this traffic converged southwards on to the L.N.E.R. main line between Northallerton and York, while a smaller amount passed through Harrogate and by-passed York.¹ South of York, the traffic fanned out by way of Doncaster, Pontefract, Normanton and Leeds.

The peace-time characteristic of the North Eastern area was short-distance haulage, particularly coal from Northumberland and Durham for outward shipment and raw materials to works on Tees-side and other industrial centres. Long-distance traffic in peace-time was comparatively small. It flowed in fairly regular quantities and was generally well within the capacity of the main line as well as of engine and manpower resources. The area remained in war, as in peace, predominantly a producing area, the flow of loaded traffic outward being much heavier than that in the reverse direction. But the war brought a transformation in the character and flow of traffic inland from the area. Short haul traffic diminished greatly, particularly coal for shipment and the import of general merchandise. Main line traffic, on the other hand, was reckoned to have increased by 70 per cent. Of the total volume of traffic passing southwards over the L.N.E.R., 72 per cent. passed through Northallerton and York and 28 per cent. over the Harrogate route. The largest item in this increased traffic was coal, which accounted for one-third of all the freight traffic on the York section.

In the pre-war years there had been practically no movement of coal by rail from Northumberland and Durham—it had gone by sea. In 1941, however, out of 315,000 tons a week which the inland transport system had to distribute from this region, two-thirds was to be moved coastwise and the rest, amounting to 223 trains a week, by rail. This 'target' figure was not, in fact, hit, as the number of trains forwarded had to be severely restricted because of the congested state of the line through Yorkshire. The actual figure varied between 150 and 200 trains a week—in spite of the practice of working full trainloads—and the balance had to be made up by increased

¹ This route was, however, steeply-graded and expensive in engine-power.

coastwise shipments whenever this was possible, and by the use of Government dumps. Roughly 40 per cent. of railborne coal from Northumberland and Durham went to Lancashire and the rest to stations south of York.

The growth of other war-time traffics had also added to the heavy occupation of the L.N.E.R. main line. Probably the most important was the northward movement of iron ore from Northamptonshire to Tees-side. This was a war-time development resulting from the substitution of home-produced for imported ore. There was a corresponding movement of iron and steel traffic by rail out of Tees-side. In addition there was a substantial volume of through traffic in both directions between Scotland and the South, such as Government stores, imports from the Clyde—diverted over this route to relieve the pressure on the L.M.S. route through Carlisle¹—and the heavy seasonal traffic in seed potatoes from Scotland. All these factors brought a heavy concentration of slow-moving freight traffic in the 'bottleneck' on the L.N.E.R. main line between Northallerton and York.

In consequence, during the closing months of 1941 acute traffic congestion developed on this line. Traffic moving over the route had to be severely restricted. The section of line between Northallerton and York was 30 miles long. There were four tracks for 19 miles and three for five miles. On the remaining six miles from Pilmoor to Thirsk, however, there were only two, although approval had been given in the summer of 1941 for the construction of an additional down line, as well as for improvements at Skelton Bridge, north of York, to carry an additional line across the Ouse. In January 1942 the Ministry of War Transport agreed to a further programme of works to cater for the greatly increased traffic in the up direction. This included the provision of a fourth line between Pilmoor and Thirsk, reception and departure sidings north of York and loops on the Harrogate—Church Fenton line. The cost of these combined schemes, which included extensive signalling alterations, exceeded half a million pounds. Most of these works were brought into use at various dates between August and December 1942, giving much-needed relief on the York—Newcastle main line.²

While the construction schemes in South Wales and in North Eastern England were some of the most extensive carried out during the war on Ministry of War Transport account, they were, of course, by no means the only railway works being undertaken at this time on the railway system. Following the 1941 'Wedgwood' programme

¹ With the movement of U.S. troops to Britain from 1942 onwards, much of the Anglo-Scottish traffic had to be diverted over the East coast route to free the West coast route for the movement of U.S. troops disembarking in the Clyde.

² See R. Bell, *op. cit.*

—which was by no means exhaustive and had no particular magic about it since it merely bulked together a number of works which would have been individually submitted by the R.E.C. in any case—the railway schemes approved by the Ministry of War Transport and carried out were many and varied. Each scheme proposed was considered by the Ministry on its merits; some schemes were mainly of an ‘insurance’ nature undertaken to provide emergency routes, others, like those in South Wales and Yorkshire, were designed to facilitate the everyday movement of war-time traffic. It is not possible to discuss each individual scheme in this narrative; instead a full list of the important railway works on Ministry of War Transport account is given in Appendix X.¹

Among the more important works carried out during 1942 was the construction of a new viaduct over the River Eden and the extension of goods lines at Carlisle, an important focal point for Anglo-Scottish traffic. This work was needed to provide a second means of crossing the river in the event of damage to the existing viaduct and, in addition, to give better facilities for freight train working. Improvements at Kingmoor motive-power depot were also carried out to facilitate engine movements to and from Carlisle. Another important scheme was the completion in 1942 of a new marshalling yard and running facilities at Hinksey, south of Oxford. The purpose of this was to enable shunting to be concentrated in one yard instead of two, which hitherto occupied the main running line extensively. A similar scheme brought into use about the same time was the marshalling yard at Connington, south of Peterborough, designed to free the main lines of freight trains and to relieve the strain on existing marshalling accommodation.² The bulk of the war-time schemes for new track and signalling facilities on Ministry of War Transport account came into use in 1942 and the early part of 1943.³ The relief thus given to routes over which traffic saturation point had been reached was shown by their capacity to absorb further traffic despite an overall increase of over 30 per cent. in the number of loaded wagon-miles for 1942 compared with 1938.⁴

In the later years of the war, a number of works were carried out to deal with the influx of American troops into Great Britain as well

¹ p. 257.

² R. Bell, *op. cit.*

³ In reviewing the works carried out in 1942, the R.E.C. gave the figure for works in hand in that year as £7,464,481, of which works to the value of £5,734,428 were completed and brought into use during the year. During 1942, 140 running loops were provided and others extended; 1,299 miles of line were relayed in connection with the new works, 123 new signal boxes were constructed and 310 improved, requiring 16,415 miles of wire and 5,358 telegraph poles.

⁴ *Summary Table of Statistical Returns of Railways of Great Britain, 1938–1944.*

as to provide for the large planned increase in rail traffic in connection with the invasion of North West Europe. Among these schemes were the doubling of the single line between Didcot and Newbury at a cost of £248,000 and complementary works between Newbury and Winchester at a cost of a further £153,000. These schemes, completed in the early part of 1943, were among a number of works undertaken on the lines leading to Southampton and in the South and West of England during 1943 in readiness for D-day. After 1943, relatively fewer major railway schemes were carried out, since most of what could be done to widen 'bottlenecks' on the railways had been done.

(v)

Motor Fuel and Tyres

THE FUEL SITUATION

The winter of 1941-1942 brought fresh anxieties for Britain about the motor fuel position.¹ As 1942 opened, therefore, the overriding necessity in the field of road transport was to conserve motor fuel—and also rubber—supplies. This was well summed up in the Ministry of War Transport's survey of the general transport position in 1942:²

Under existing conditions road transport differs from other forms of inland transport in that its use is limited not so much by its possible capacity . . . as by the need for keeping the consumption of rubber and motor fuel to a minimum. It is therefore imperative to restrict the use of road transport to traffic which must be moved and which cannot be moved by other means even though this may mean that road transport is not fully employed.

This struck the keynote for goods transport—and to some extent for passenger transport also—from early 1942 to the end of the war. Economy of fuel and tyres took precedence over other considerations. There had been nearly 417,000 goods vehicles rationed in December 1941. By December 1942, the numbers had fallen to 406,000—a little less than in 1940—and, by December 1943, the numbers had fallen to 396,000. They still remained below 400,000 in December 1944.³

As the winter of 1941-1942 drew to its close, the most obvious economy still to be made was to cancel the basic ration for goods

¹ These matters will be fully discussed in *Oil* in this series.

² Appendix XIV, p. 391.

³ These trends are also borne out by the numbers of commercial vehicles with licences current. See *Statistical Digest of the War*, Table 168.

vehicles. The basic ration for public service vehicles had been withdrawn in September 1941. The Ministry of War Transport considered that not only would fuel be saved by the abolition of the basic ration for goods vehicles—mostly by exerting further pressure on retailers to pool deliveries—but that the cancellation of the automatic issue would give a much firmer control over the road haulage industry. Therefore, although private cars were allowed to continue with a reduced basic ration until July 1942, the basic ration for goods vehicles was abolished by the publication of the Motor Fuel Rationing Order in May 1942.¹

At the same time the opportunity was taken to tighten up the regulations concerning the issue of petrol coupons. Previously applications for supplementary allowances had been granted for specific purposes, but a sample check of vehicle records only enabled a rough-and-ready check to be kept of the actual purpose for which fuel was used. Various attempts had been made to make records more detailed and accurate,² but the 'black market' in goods coupons was fairly widespread. The abolition of the basic ration in itself substantially reduced any available 'surplus' of coupons, but now it was made illegal to use petrol for any purpose other than the one stated on the application form.³ In addition, the issuing officer was to inform applicants in writing of any 'disallowed' purposes when fuel was issued to them, and an operator using fuel for a 'disallowed' purpose was liable to prosecution. A 'disallowance' could be for any specific purpose on the application form, or it could be couched in more general terms. For example, a goods vehicle operator could be told that his application for fuel for a certain journey was 'disallowed', or that the carriage of goods generally between X and Y, which the authorities considered was adequately served by rail, was 'disallowed'; or a bus operator could be told for instance that the running of duplicate bus services on race days was 'disallowed'.

The abolition of the basic ration also changed the system of 'discretionary' issue of fuel for each sub-district, district or region.⁴

¹ S.R. & O. 1942, No. 902, revoked by No. 2400.

² For example, in October 1941 Group Organisers were asked to keep a record of coupons issued in such a way that re-issues could be traced.

³ If fuel was needed for any unforeseen purpose, prior permission—by telephone if necessary—had to be obtained from the Sub-district Manager and the additional coupons had to be applied for. An operator was no longer permitted to use fuel coupons which he might have available, but which had been issued for some other purpose. After January 1943 this prior permission had to be obtained even if no additional fuel was required.

⁴ See above, p. 146. Each Sub-district Manager had been able to issue supplementary rations at his own discretion up to one-sixth of the basic ration for his sub-district. Similarly District Transport Officers and Regional Transport Commissioners also had been able to control a discretionary ration of one-sixth of the basic for their district or region. Issues over these amounts could only be made on application to a superior official, or to Headquarters in the case of the R.T.C.

Now headquarters notified each Regional Transport Commissioner of the amount of fuel he was allotted for each fortnightly period, and fuel issues had to be kept within this amount. If a Commissioner foresaw any additional demands for fuel in his region, he had to ask for an increased allotment and say how long the increased consumption would last. This enabled the Ministry of War Transport to budget its total fuel consumption much more closely. This Regional allotment system continued until October 1943 when it was abandoned as it was found that fuel consumption varied very little from period to period. R.T.C.s were given authority to issue fuel 'for the essential needs of their region, subject to current instructions on policy'. The district and sub-district allotments were however retained.

The practice of 'rationing in arrear'—a system of covering fuel used in a previous period by the issue of additional coupons in the current period—ceased with the publication of the Motor Fuel Rationing Order of March 1942. In April 1942 a more comprehensive and accurate system of record-keeping was inaugurated.¹

In December 1942 all R.T.C.s were reminded that fuel was not to be issued to operators merely to maintain an adequate haulage fleet on the road. All fuel was to be issued only because a particular road journey for a particular traffic was necessary.

The effect of these changes was to stop up most of the holes through which fuel had been leaking into unauthorised channels, and there is some evidence that substantial economies were made after March 1942. The first reduction in the basic ration in May 1941 had not led to an appreciable saving in fuel. In fact, a month by month comparison with 1940 shows that fuel consumption increased. Consumption during the last six months of 1942 however, compared with 1941, shows a substantial saving—especially in motor spirit consumption, which showed a saving of about 20,000 tons compared with the last six months of 1941.² As the original estimate of requirements for 1942 had expected an increase in commercial vehicle consumption,³ this saving was all the more welcome. It is impossible to say of course how much this sharp decline in consumption was due to the abolition of the basic ration, how much to the closing of the black market in fuel coupons, how much to the curtailment of

¹ For the old application forms new ones were substituted which insisted on more accurate descriptions of journeys, with routes, mileage and description of load to be carried, and expressions like 'general haulage work' were no longer permitted. These forms had to be signed by a responsible member of the firm.

² See Statistical Appendix, Table 10.

³ In a submission to the Lord President's Committee in April 1942 the Secretary for Petroleum had hoped the abolition of the goods vehicle basic, together with the rationalisation of retail deliveries, would account for a 40,000 ton saving over the original estimate for the last 9 months of 1942.

retail deliveries, and how much to economies in bus services. That some of these economies were due to the last two causes is suggested by the fact that fuel consumption continued to fall in 1943. Consumption of motor spirit for goods and public service vehicles fell by 65,000 tons during the year compared with 1942, which in itself was some 120,000 tons lower than in 1941. Total DERV oil consumption also fell by 30,000 tons in 1943 compared with 1942.¹ But the figures seem to indicate that before the abolition of the goods basic ration there was some wastage of fuel. This is confirmed by the views of the Regional Transport Commissioners themselves, when fuel supplies became more plentiful at the end of the war. The Commissioners were then very strongly opposed to the restoration of the basic ration for goods vehicles, which they considered would mean the virtual end of retail delivery rationalisation schemes and also of the control they could exercise over the use of transport. Therefore although the basic ration for private cars was restored on the 1st June, 1945, the Ministry of War Transport's increased fuel allocation was used by permitting extra bus services² and not in restoring the basic ration for goods vehicles.

On the passenger side, further restrictions continued to be imposed during 1942. At the beginning of the summer R.T.C.s were issued with guidance from headquarters. They were again reminded that fuel rations must not be issued for long-distance services unless their absence would cause 'not merely inconvenience but real hardship to inhabitants of outlying villages . . . or troops in isolated camps' and where no other methods of transport (for example, the extension of existing bus services to connect with the nearest railway station) could be used. The normal summer expansion of regular services was to be avoided if at all possible and must be cut below the amount which had been permitted during the previous two war-time summers. This was not only to save fuel and tyres but to conserve the energy and health of the bus crews. R.T.C.s were told not to cater for additional traffic demands by putting on more buses at peak periods, except in the last resort. The problem should be dealt with by staggering factory and office hours, by increasing parking accommodation for bicycles or encouraging travel by rail instead. Off-peak services were to be cut, but a few special services in off-peak periods could be provided to encourage holidays at home and for some other recreational services³ if the length of the journey was reasonable, the vehicles and drivers were not needed for other purposes and other transport facilities were not available. Towards the end of 1942 the

¹ Figures based on coupon issue, see Statistical Appendix, Table 11.

² This is discussed below.

³ For example, to take poor children to the seaside, concert parties to isolated camps, etc., but not for horse or dog racing or football matches.

summer Green Line buses were withdrawn, and the service remained suspended until the end of the war. In order to secure uniformity in all regions, certain restrictions were made universal on headquarters instructions at the end of 1942. For example, Sunday bus services were restricted between 1 p.m. and 9 p.m.,¹ and last buses could not leave later than 10 p.m. in large towns (or 10.30 p.m. in certain circumstances) and 9 p.m. elsewhere.

These restrictions, which imposed considerable inconvenience and even hardship on the travelling public, remained in force almost unchanged during 1943 and 1944.² Fuel, tyre and labour shortage made them inevitable. Not until June 1945 could the restrictions be partly eased. Then private party trips were given extra fuel where the total mileage was not over 70 and excursions and tours where it was not over 50. Stage bus services were increased in off-peak periods on Sunday mornings and later last buses were also permitted.

From the end of 1942 there were no major changes in the fuel rationing scheme, although a few minor modifications were made. For instance, the Ministry of War Transport through an oversight had never been given formal authority to issue petrol coupons, with consequent difficulty over prosecutions. The setting up of the Ministry of Fuel and Power in December 1942 enabled this omission to be rectified. Nine months later the Regional Enforcement Officers of the Ministry of Fuel and Power became responsible for investigating alleged offences by road goods and passenger operators, thus relieving the Ministry of War Transport Officers of much detailed work, although the R.T.C. had to consider the Regional Enforcement Officer's report before a prosecution could start.

There were other minor administrative changes. From April 1943, Sub-district Offices had to be visited at irregular intervals at least once a quarter by the District Transport Officer and a detailed report made by him on the stock of coupons, the check made on vehicle records, the kinds of 'disallowances' made, and so on. This visit was also intended for 'guiding junior staff and interpreting Headquarters directions'. In May 1943 the fuel rationing period was extended from two to four weeks. Peak issue days were avoided by staggering. Groups in each area were divided into four sections, each of which received its coupons on a different Wednesday. This overcame the issuing staff's main objection to extending the rationing period when it had originally been considered in 1941.³ The four-weekly rationing period operated also for public service vehicles at the R.T.C.'s discretion.

¹ Some alteration of these Sunday restrictions was permitted after October 1943.

² For the difficulties of transporting war workers, see below Chapter XIII, Section (ii).

³ In February 1941 five Regions had favoured increasing the period, and eight had voted against it.

PRODUCER GAS AND ALTERNATIVE LIQUID FUELS

In the lean years for imported motor fuel, between 1942 and 1944, the Government operated a scheme for the conversion of a number of commercial road vehicles to run on home-produced fuel. As early as May 1937 the Government had considered the conversion of road vehicles to the use of producer gas, and had appointed a committee with Sir Harold Hartley as chairman. Its report—published in December 1940—set out a fairly comprehensive scheme concerning the production of producer gas units and the conversion of up to 10,000 road vehicles to use them.¹ Meanwhile, on the outbreak of war the Mines Department had set up another committee,² under the chairmanship of Lord Ridley to consider the use of all alternative fuels in road vehicles. Various substitutes, such as butane, methane (activated sludge), alcohol, etc., were considered, but they were either not readily available in appreciable quantities, or they were required for other war purposes. The only home-produced fuels suitable for use in internal combustion engines which the Ridley Committee considered were likely to be available in sufficient quantities were coal gas, coal tar oil (creosote, etc.) and producer gas.³ Electricity was also considered a suitable alternative motive power for road vehicles.

The most important of these fuels was producer gas, which could be manufactured from either low temperature coke or anthracite.⁴ Early in 1941, the Mines Department was authorised to go ahead with trials of different kinds of producers and filters. Research carried out at the Fuel Research Station of the Department of Scientific and Industrial Research resulted in the development of the Government Emergency Type Producer—a unit designed to economise in labour and scarce materials which could either be incorporated in a vehicle, or mounted on a two-wheel trailer. Between 400 and 600 vehicles operated on producer gas during 1941–1942. By early 1942

¹ *Report on the Emergency Conversion of Motor Vehicles to Producer Gas* (H.M.S.O. 1940).

² One of five committees appointed in November 1939 to consider substitutes for imported liquid fuel in all its aspects; for example, one committee on high temperature carbonisation, another on colloidal fuel, and so on. A report by the Secretary for Mines summarising their reports was presented to the Lord President's Committee in January 1941 by the President of the Board of Trade.

³ Various other alternatives were put forward during the course of the war, e.g. the British Coal Utilisation Research Association and Imperial Chemical Industries put forward a scheme for the conversion of 50,000 vehicles to the use of a new type of producer using special gas coke activated with alkali. On the advice of the Shearman Committee the Lord President's Committee decided the experiment was not sufficiently advanced to justify its adoption, and decided to press on with the manufacture of the Government Emergency Producer Unit using producer gas.

⁴ The passing of the Gas and Steam Vehicle (Excise Duties) Act of 1940, and various other amendments of regulations removed certain economic and legislative handicaps which had been discouraging the conversion of vehicles to producer gas (or indeed to coal gas).

it was thought, in view of the growing seriousness of the tanker position and the loss of the Netherlands East Indies and Rangoon, that there was now sufficient technical experience of the use of producer gas to enable a much larger scheme to be undertaken. In April of that year the Lord President's Committee¹ authorised the Ministry of War Transport² to arrange for the production of 10,000 standard producer gas units, half to be of the trailer type. 3,000 public service vehicles and 7,000 goods vehicles³ were to be converted to use them. (1,000 of the goods vehicles to be converted were owned by Government departments; the rest by commercial operators.)

The Ministry of War Transport established a special department to deal with the producer gas scheme. All public service vehicle operators owning more than 10 vehicles (77 operators in all) were asked to convert 10 per cent. of their vehicles and all goods vehicle operators with more than 5 vehicles⁴ were asked to convert 10 per cent. of their fleet (or one vehicle). The task was not easy. For example, owing to the reduced operational efficiency of the gas-using vehicle, bus operators who converted vehicles found it difficult to maintain time-tables; increased maintenance was required for the unit's upkeep and mechanical troubles were experienced by many operators. Producer gas gives best results when employed on non-stop runs of between 60 and 120 miles, although more frequent stops could be made if there was a run of not less than 5 miles between each stop. Not all bus routes were therefore suitable for producer gas-using buses, especially as the buses could not be used on steep hills. In fact, both passenger and goods operators showed considerable reluctance to take part in the experiment. They received no financial compensation either for the loss of the vehicle while it was being converted or for its decreased efficiency. Goods vehicle units indeed did not become available in any quantity until June 1943, and in the following October it was decided to reduce the programme

¹ The Lord President's Committee had previously expressed doubts as to whether the saving in imported fuel (10,000 vehicles converted to producer gas would save the equivalent of about five tanker journeys in a year) would be sufficiently large to justify the expenditure of labour, materials and Government money, as well as to offset other disadvantages (a vehicle using producer gas might lose up to 40 per cent. of its efficiency and 10,000 vehicles using producer gas would use 150,000-200,000 tons of solid fuel a year).

² Which now was to take over this work from the Mines Department because the vehicles concerned were commercial vehicles.

³ The design evolved by the Fuel Research Station was adapted by the firm of Tilling for use on buses, but this could only operate on anthracite. Producer gas units for goods vehicles were manufactured by five commercial vehicle manufacturers—Austin, Commer, Vauxhall, Ford and Morris Commercial—from the Fuel Research Station design, and could operate on coke or anthracite.

⁴ R.T.C.s were able to grant exemptions, e.g. when an operator had not sufficient suitable vehicles; for only five makes were suitable for conversion and vehicles had to be no older than 1937 models.

from 6,000 vehicles to 2,750. In the following January the target for public service vehicle operators was reduced to 5 per cent. Nearly all the 2,886 units of the Tilling type suitable for buses were delivered to operators and, in May 1944, 1,024 public service vehicles had been converted. So far as goods vehicles were concerned, however, only 326 appear to have been converted. The Government lost over £500,000 in manufacturing the goods vehicle units and preparing them for use, although a modest profit was earned on the public service vehicle units. By early 1944 a survey of goods vehicles in each region disclosed that firm orders had been placed for only about 25 per cent. of the original target figure, except in the Northern Region, where the figure was over 40 per cent. The highest figure of commercial goods vehicles actually on the road using producer gas appears to have been 725 in June 1944.

By early 1944 road transport was expecting additional burdens as a result of the D-day preparations, and it was not the moment to press forward with schemes that would take vehicles off the road and impair their efficiency. Oil supplies had improved, and the saving in imported liquid fuel was in any case very small.¹ By September 1944 it was decided to close the whole conversion scheme and to hand responsibility for research back to the Ministry of Fuel and Power. Conversion could, however, continue on a voluntary basis—for instance, the unused public service vehicle units were left in the hands of the operators. On the whole, the experiment was not a great success. Much further experiment and wider experience in the use of producer gas were needed before any significant saving in imported fuel could be expected from its adoption.

Other alternative fuels for use in internal combustion engines were of less importance than the producer gas scheme. The Ridley Committee had estimated that up to 20,000 road vehicles would be suitable for conversion to low pressure coal gas² consumption alone, and worked out a scheme on this basis. Without any Government scheme, 1,200 vehicles—mostly private cars—had been fitted with 'gas bags' to use low pressure coal gas up to the end of 1942. The difficulty was, however, that their use was limited to vehicles operating entirely in a town area, because the range of a 'gas bag' was only 30 miles,³ and it was not practicable to set up chains of gas-filling

¹ Producer gas units in any case used petrol to start up. At first, goods vehicles had been issued with a basic ration of one-sixth the normal goods basic ration, and they continued to draw 1 unit of petrol per $\frac{1}{4}$ ton unladen weight per fortnight after the basic ration was withdrawn.

² Ex Town Gas Works. High pressure coal gas requires special compressors, storage cylinders, etc., and would have been a longer term proposition to produce on a large enough scale.

³ A very small basic petrol allowance was in fact given to these coal gas propelled vehicles so that they should not be stranded away from a gas-filling station. With the abolition of the basic ration, a small discretionary issue was made to them.

stations to cover the main road network. The highest figure of commercial vehicles converted to coal gas consumption was in September 1942, when 433 vehicles were in operation using this alternative fuel. By that date coal could no longer be spared to increase coal gas consumption in this way and the scheme therefore never got going as a useful alternative to imported fuel.

The use of other home-produced fuels were encouraged by issuing a generous allowance for them, if the use of imported fuel was thereby saved. From December 1940 coupons stamped 'Not available for petrol or diesel oil' were issued for the consumption of benzole, xylene, and various forms of naphtha and creosote, etc., either alone or in mixture with imported fuel. Vehicles could not, however, use hydrocarbon oils with a flashpoint in the 73° F.-150° F. range¹ (turpentine, kerosene, white spirit, etc.) except under licence. Electrically propelled vehicles were also useful as light delivery vans operating on a 30-40 miles a day radius where hills were not too steep; but their use was not much increased during the war and indeed, by October 1943, Regional Transport Commissioners were reporting that the supply exceeded the demand.

TYRE RATIONING

Fuel shortage was only one of the factors that limited road transport. The other was tyres. A shortage of tyres for commercial use had existed since at least the summer of 1941,² but the loss of Malaya and the Dutch East Indies early in 1942 made it far more serious. Adequate supplies of synthetic rubber could not be expected until the beginning of 1944 at the earliest,³ and even when raw materials difficulties were overcome, labour shortages restricted production.⁴ The greatest economies in rubber therefore became necessary from 1942 onwards. The importance of tyres in this economy is shown by the fact that in 1942 they accounted for more than 50 per cent. of the total annual rubber consumption.⁵ Fuel economy in itself of course

¹ Flushing oil (which comes within this range) was used illegally by some operators to mix with DERV oil.

² Because tyres needed for the army, etc., consumed more rubber and labour than those in commercial use. A small commercial giant tyre contains 20 lbs. of rubber. The size most commonly used by the War Office (13.50-20) contained 100 lbs. of rubber. A man can build 25 small commercial giant tyres per shift, but only one 13.50-20. (Aero tyres represented even more rubber and man hours.)

³ U.S. production of synthetic rubber in fact fell below target and in the event it was necessary to rely on our own crude rubber resources for longer than had been expected. There were other production difficulties; e.g. rayon strong yarn was needed for tyre casings because it stood up to the higher temperatures generated by synthetic rubber better than cotton. The rayon strong yarn production programme did not get well under way until the end of 1942 and was hampered by labour shortages.

⁴ 'After the natural rubber scare caused by the loss of Malaya and the Dutch East Indies had died down, the limiting factor in the output of tyres soon became manpower.'

⁵ Out of 168,000 long tons of crude rubber requirements, 93,000 long tons were needed for tyres. Out of the later reduced requirement of 88,000 long tons, 43,000 were needed for tyres.

had done much to restrict the unnecessary use of tyres and the number of commercial vehicles in use had declined.¹ The restrictions of fuel issues in both 1941 and 1942,² materially assisted in the saving of tyres just at the time when the rubber shortage was becoming acute.

Immediately after Pearl Harbour the Ministry of Supply issued a standstill Order stopping the production of all 'car size' tyres for two months except for Government orders and, in April 1942, it set up a 'Tyre Control'³ with Regional Tyre Officers, Travelling Inspectors and local advisory panels to ensure that there was no wastage of available resources. It was arranged that with the exception of motor cycle and bicycle tyres, which remained available through normal sources of supply, tyres should only be sold by authorized depots. The staff of these authorized depots were responsible for inspecting vehicles brought to them to be equipped with new tyres, assuring themselves that the old tyres were, in fact, worn out, and drawing the attention of the driver to any maladjustment of his vehicle that was causing excessive wear on tyres. Broadly it was assumed in authorising the allocation of new tyres to commercial goods vehicles that if the vehicle was receiving fuel it must be engaged upon essential work and permits were issued for replacement tyres on this basis. Public service vehicle operators had to obtain their tyres direct from the manufacturers (many of them already received their tyres on a mileage contract basis) and their vehicles were subject to inspection by Regional Tyre Officers. Private cars were only allowed tyres if they were in receipt of petrol coupons showing that they were engaged in essential work. Such was the machinery of tyre control which was based on the fuel rationing system.

These economies in issuing new tyres and inaugurating schemes for re-treading and re-claiming old tyres, were not sufficient in themselves. Although the annual rate of consumption of rubber in civilian tyres had, by 1942, fallen to nearly 50 per cent. of the pre-war figure,⁴

¹ The number of goods vehicles rationed had decreased by 18,000 between 1939 and 1942.

² See above, pp. 430 *et seq.*

³ Strictly speaking, the Tyre Directorate of the Rubber Control.

⁴ ANNUAL RATE OF CONSUMPTION OF CRUDE RUBBER BY CIVILIAN VEHICLES

	1938		1942	
	Tons	Per cent. of total	Tons	Per cent. of total
Goods vehicles	21,960	56.5	15,000	75
Public service vehicles	2,650	7	1,800	9
Rest (i.e. private cars, taxis, bicycles, motor bicycles, etc.)	14,160	36.5	3,200	16
TOTAL	38,770	100%	20,000	100%

In comparing the above figures it should be noted that in 1942 the number of tyres produced from one ton of rubber was approximately 30 per cent. greater than in 1938. Source: 'Plant' Report, submitted to Lord Leathers and Lord Portal, 10th November, 1942.

in February 1942 the Minister of Supply, Lord Portal (Chairman of the Materials Committee), and the Minister of War Transport decided that the rubber position was so serious that current estimates of rubber consumption must again be cut, probably by a half. A cut of this size applied to civilian vehicles would mean that only 12,000 tons of rubber would be available for them. The Minister of War Transport urged that minimum civilian requirements were 21,000 tons a year and that it seemed difficult to reduce them much below this figure.¹ The bulk of the cuts therefore fell on War Office requirements, whose maintenance and replacement estimates for tyres were drastically pruned during the spring of 1942. Nevertheless, it was considered necessary² to conduct a special investigation into rubber economies for tyres, and in September 1942 a small committee, the 'Plant Committee', was set up³ to consider the twofold problem of trying to reduce the number of tyres in use on civilian vehicles, and of finding ways to lengthen their lives. Its recommendations were naturally largely concerned with commercial vehicles, for goods vehicles alone consumed 75 per cent. of the allocation for civilian tyres as a whole.

The Committee found that the lives of tyres had fallen by 16 per cent. since the beginning of the war,⁴ because of overloading, deterioration of road surfaces and declining standards of vehicle maintenance and of driving. Its findings included a recommendation that the mileage being run should be reduced by closer control over long and medium-distance goods traffic; that tyres should be inspected regularly; that road surfaces should be improved; that publicity should be given to the need for careful driving; and that the Ministry of War Transport should press on with schemes for the rationalisation of retail deliveries and with the Road Haulage Scheme, both of which would eliminate the unnecessary use of tyres.

¹ In fact, the average allocation to the Ministry of War Transport during the remainder of the war was at a rate of just about 20,000 tons and consumption was slightly lower. See Appendix XXI, p. 485.

² 'The Ministry of Supply have either not been very active or not very successful' (in bringing about tyre economies). It was considered the Secretary of State for War would be critical if all possible economies had not been made on the civilian side.

³ Consisting of Professor Arnold Plant (Ministry of Production and adviser to Lord Portal), Lord Rothes (Tyre Control, Ministry of Supply) and an official from the Ministry of War Transport. A similar committee under Lord Moyne had been set up in the previous June to consider economies in both service and civilian requirements.

⁴ This figure applied to tyres before the introduction of the new 'debased' war-time tyre. The Committee estimated that the life of the 'debased' tyres would be 40 per cent. less than pre-war. Against this, however, must be offset the fact that the number of 'debased' tyres produced from 1 ton of crude rubber was approximately 30 per cent. higher than the number of tyres produced out of 1 ton of crude rubber before the war.

Some of the Committee's recommendations could not be put into force for they would have resulted in the wastage of other scarce resources such as labour, fuel, steel and so on. For example, it was suggested by the Committee that vehicles should not receive replacement tyres unless it could be shown that they were covering a minimum mileage on essential work. But this policy would have led to the laying up of useful vehicles when their tyres were worn out, thus reducing the fleet available for emergencies.¹ Furthermore, vehicles with a low mileage might well be more economical on existing tyres than a heavy duty lorry. Again, the Ministry of War Transport was advised that it should substitute handcarts, bicycles and horse-drawn vehicles for door-to-door delivery work. But this suggestion left out of account the fact that men on retail deliveries were being called up and their substitutes—women and boys—could not push heavily loaded carts and bicycles; the use of horses could not be increased because fodder was short and extra harness non-existent.

Again the Committee suggested that the conversion of vehicles to use producer gas trailers should be stopped since these trailers needed two tyres each, but producer gas units could not be built into buses without loss of seating capacity and a built-in conversion took a vehicle off the road for a much longer period and needed more skilled labour than the producer gas trailer unit. The Ministry of War Transport therefore did not propose to amend its producer gas conversion scheme at this time (autumn 1942) and vehicles continued to be converted to use producer gas trailers.

Other projects for saving rubber were found less simple than they had seemed at first. For example, one of the chief causes of shorter tyre life during the war was the consistent overloading of buses. But a technical investigation by the Ministry of War Transport showed that, although overloading undoubtedly reduced the lives of tyres, putting extra buses on the road would result in the consumption of still more rubber—even supposing that extra drivers and conductresses or extra buses were available, which they were not. Some economies were made, however, by fitting larger tyres with a longer life to buses where possible. Again, it had been suggested that it would be appropriate for Tyre Officers to consider whether each vehicle itself (as opposed to the journeys it made) was essential when they were asked for tyre replacements. This would have been to consider from another angle a question which had already been decided when the vehicle was issued with fuel rations by the Ministry

¹ For example, after bombing, lorries were needed in large numbers for the removal of furniture and debris from bombed houses. Vehicles laid up could not be available quickly especially as they were likely to be without drivers. It was therefore better to keep these vehicles on the road, especially as they were doing essential work.

of War Transport's regional organisation, and the proposal was dropped. The Ministry of War Transport similarly considered that it was administratively impossible to 'designate' the essential character of each journey of each of 400,000 goods vehicles as the Plant Committee suggested; it was considered that the Road Haulage Scheme, then in its infancy,¹ would have to be relied on to eliminate any unnecessary long and medium-distance road haulage.

It was possible, however, to introduce a number of tyre-saving measures as a result of the Plant Committee's investigations. The number of bus stops was reduced to an average of one every quarter mile to save the wear and tear caused on tyres by excessive braking and acceleration. Some road surfaces, especially in London, were improved² and a general speed limit of 40 m.p.h. outside built-up areas was urged on the driving public generally, and made compulsory for Government owned (including Service) vehicles. In addition a publicity campaign was inaugurated and especially directed to bus and lorry drivers calling their attention to the harmful effect on tyres of fierce braking and acceleration, excessive speed, overloading, under inflation, misalignment, inadequate maintenance and so on. Tyre Officers and Regional officials of the Ministry of War Transport addressed meetings of operators and drivers to impress upon them the necessity for tyre economy and Tyre Economy Exhibitions were organised by the Ministry of Supply in London and other large centres. Arrangements were made for bus operators of fleets of more than 30 vehicles who bought their tyres outright to have their tyres inspected regularly by the tyre manufacturers. Those whose fleets were too small for this had their tyres inspected by the Tyre Control.

The Plant Committee had recommended that the existing consumption rate of rubber tyres should be reduced by one-sixth—that is the consumption of natural rubber (or its equivalent) by civilian tyres should be reduced from 21,000 tons a year to 17,500 tons. This reduction was achieved in the period from the second quarter of 1942 until mid-1943; thereafter, however, consumption rose again.³

¹ See below, Chapter XVI.

² For example, lighting in Blackwall Tunnel was improved to prevent excessive 'kerbing'. Also some of the L.P.T.B.'s complaints had been about road surfaces in the East End of London, especially where granite setts and abandoned tramlines had been temporarily surfaced. Many London boroughs were permitted to take up their disused tramlines and re-surface the roads during 1942 and 1943. It is doubtful whether the money and labour for these projects was expended merely on a tyre-economy basis. The main reason for these schemes was to reclaim the steel from the tramlines.

³ See Appendix XXI, p. 485.

(vi)

Canal Policy and Control

Unlike road transport and the railways from which, in the later years of the war, the Government was constrained to remove unnecessary traffic in order to relieve pressure on scarce resources, the canal problem was primarily a question of how to retain traffic and keep under-employed resources in working order.

It was shown earlier that in May 1940 it was decided not to bring the canals or canal carriers under control but to grant the carriers a subsidy of 50 per cent. of the tolls paid by them. The introduction of the subsidy, although it appears to have affected only about half the tonnage carried on the canals,¹ probably helped to check the decline in canal traffic during 1941. At any rate it kept the canals in being and enabled them to deal with such traffics as came their way.² The carriers claimed that the subsidy scarcely met their rising costs and complained because they were prevented from further increasing their rates. On the other hand, the carriers' rates were often higher than those charged by the railways and by road transport, which hampered the Ministry of War Transport's efforts to get more traffic on to the canals.

The canal undertakings themselves were, with a few exceptions, in a poor condition. The standard of maintenance was generally perfunctory, equipment was obsolete, there was a lack of properly designed cranes and handling facilities and warehouses were often dilapidated. It is difficult to judge how far this state of affairs was due to the war, but obviously in large measure it was not. While some labour employed in maintenance and dredging was lost to the canals because it was attracted to better-paid work in war-time, the fact remained that for some years before the war the canals had been living a hand-to-mouth existence.

Yet the canals were by no means incapable of doing useful work in war-time. About 50 per cent. of their traffic was coal, 10 per cent. liquids and 40 per cent. general goods. When the railways were

¹ Not all the carriers applied to be registered for the purpose of the subsidy and some were excluded from its scope.

² The following are figures of traffic originating on all canals from 1938 to 1942:

Year	Tons (000's)	
1938	12,952	
1939	6,307	(6 months Jan.-June only)
1940	11,005	
1941	11,241	
1942	11,043	

Source: *Statistical Digest of the War*, Table 170.

being severely strained and road transport was hard-pressed in the winter of 1940-1941, it was plainly unwise to allow any important traffic—such as any part of the five million tons of coal class traffic moved by canal in 1940—to drift from the canals to other forms of transport simply because of differences in rates or because minimum standards of efficiency could not be maintained.

In May 1941, at the request of the Government, Mr. Frank Pick produced a comprehensive report on canals and inland waterways in which he discussed the contribution which canals might make to the solution of the war-time inland transport problem. Mr. Pick recommended in the first place that the organisation of the industry for war purposes should be altered. Instead of the Canal (Defence) Advisory Committee, consisting chiefly of representatives of the canal undertakings and the carriers, and the six Regional Canal Committees, consisting entirely of members of the trade, he advocated the appointment of regional committees on the lines of the Port Emergency Committees. That is to say, these bodies would represent the transport-using departments and other forms of transport as well as the trade, and report regularly to a strong central canal committee containing the chairmen of the regional committees and a more powerful official element presided over by an independent chairman. The second proposal was that protection should be given to the labour employed in the industry. This was no easy problem because of the low wage rates and conditions in the industry. To meet the financial needs of the canal carriers Mr. Pick proposed that the subsidy on tolls should be continued and extended to all carriers, whether carrying for themselves or for others, while carriers should also be allowed in all cases to raise their rates and charges by at least 16 $\frac{2}{3}$ per cent. over the pre-war level to bring them into line with railway rates. As for the canal undertakings, he proposed that they should be given a financial guarantee of their pre-war earnings similar to that given to the railway companies—which of course covered the railway owned canals. Mr. Pick went on to recommend that in 'approved cases' the Ministry of War Transport should make grants for improving canal facilities, by, for example, providing up-to-date warehouses, and should try to get all suitable Government traffic for the carriers even where their rates were higher than those charged by rail or road. To discover which traffics were suitable, he proposed that a survey should be carried out in each of the canal regions. Mr. Pick also suggested that a Canal Division should be set up in the Ministry to help canals and canal carriers with their war-time problems. Finally, he urged that the canal undertakings should be consolidated into seven groups, to include the railway owned canals. If such consolidation could not be achieved during the war, he argued, then at least steps should be taken to obtain a unification

of commercial work and a pooling of maintenance and engineering work. By such means Mr. Pick believed, somewhat optimistically, that the traffic originating on the canals could be raised to at least fifteen million tons a year and possibly to a maximum of twenty million tons.

Such were the main recommendations of this long and comprehensive report, many of which were carried out by the Government either immediately or ultimately. The Government's main concern, however, was not with the long-term policies embodied in the report, designed to organise the canals on a paying basis for peace-time purposes, but with a scheme related to the practical short-term needs of the war. What the Government wanted to do was the minimum necessary to keep the canal system serviceable in war-time. Far-reaching schemes for unifying and re-organising the canal system in the middle of a war would have meant a minor economic revolution calling for an administrative effort out of proportion to the results expected. Thus, in its canal policy, the Government continued to move slowly and with caution.

In the first place a Central Canal Committee under the chairmanship of the Parliamentary Secretary to the Ministry of War Transport was established and the regional committees were re-organised along the lines proposed in the Pick Report. Next it was agreed to extend the canal toll subsidy at the end of the trial period of one year for which it was originally introduced and to apply it to all carriers, including such firms as I.C.I. which provided their own transport. Light tolls and dock dues were also included within the scope of the subsidy. Then an effort was made to get Treasury approval for Government traffic to be carried by canal, where possible, even if the rates charged were higher than on road and rail. The Treasury decided in June 1941 that if contractors had difficulty in securing transport for their consignments, they could, in the case of Ministry of Supply and Ministry of Works contracts, apply to their Area Transportation Officers for advice about which form of transport to use, and any fair and reasonable cost, extra to that of the contract, could be met by Departments.¹

The Treasury also agreed that the cost of constructing new warehouses, boat repair depots and transit sheds, where these were needed on the canals, could be met out of Ministry of War Transport funds and the facilities then rented to the canal undertakings for the duration of the war; a number of warehouses and sheds, for example at Worcester and Stourport, were built under this arrangement. Finally, the Government decided to make grants for the necessary maintenance of canals, provided that the undertakings could prove

¹ See below, Chapter XII.

that they had not the resources to pay for it themselves. These grants were only made if the canals were really needed for the movement of war-time traffic; they were not given merely because a particular undertaking had been hit financially by the war.

In December 1941 Sir Osborne Mance was appointed Director of Canals at the Ministry of War Transport with a small staff, thus fulfilling another of the recommendations of the Pick Report.¹ Under the impulse of the Director reconsideration was given to the advisability of the Government taking control of certain inland waterways and carrying firms as the only satisfactory means of preserving the usefulness of this form of transport in war-time. Although the heavy expense of canal control in the First World War had not been forgotten, the Ministry of War Transport at last began to look favourably on control as a solution to its canal problems. By 1942, increased pressure on the railways and new restrictions on the use of road transport underlined the need to keep the canal system intact. 'The growing congestion of all forms of transport,' the Lord President's Committee was informed, 'has emphasised the necessity for using the capacity of the inland waterways to the utmost.'

There were, moreover, clear signs that the canal policy so far followed had failed to do what was expected of it. Both the canal undertakings and the canal carriers continued to complain, even after the toll subsidy had been introduced, that the continued rise in their costs and the stabilisation of charges made further Government help necessary. The application of the Essential Work Order to both sides of the industry—which required a guaranteed minimum wage—raised the costs of labour, while increased costs of fuel and civil defence measures added further to total costs. The Ministry of War Transport also admitted that the policy of granting help only to undertakings which had exhausted their financial resources had led to the starvation of maintenance services. In these circumstances the canal undertakings continued to press for a subsidy towards maintenance and the carriers for freedom to alter their rates.

The Government was less concerned about the finances of the companies than about keeping the canals in reasonable order. In theory a subsidy towards maintenance costs might have worked provided that a proper system of inspection had been instituted. But in practice, there was much to be said for basing canal policy, like railway policy, not on the financial results of the undertakings, but on war-time needs. In any case, a subsidy towards maintenance costs would not have solved the problem of the carriers. The independent carriers, not being 'common carriers', were not compelled to take all the traffic offered to them and were reluctant to do so where the rate

¹ Mr. Pick had died in November.

they were allowed to charge would not show a profit. The carriers were hesitant about increasing the capacity of their fleets in the absence of assured traffic; moreover, carriers operating on the East coast were expected to keep their craft in commission in order to handle occasional rushes of expensively worked traffic when the convoys came in, though the absence of traffic in the intervals involved them in serious losses. In these circumstances the Ministry of War Transport proposed to the Lord President's Committee that all canals capable of making an appreciable contribution to the war effort should be brought under Government control. This was agreed to on 12th June, 1942.

It was expected that by taking control of the more important undertakings and carriers, the decline in the standard of maintenance could be arrested both by ensuring the dredging of the waterways and keeping the towpaths clear, while the difficulties experienced during the winter months through freezing of waterways might be averted by planning in advance for clearing the ice rather than by improvisation. Plant was in fact acquired by the Government and hired to companies whose waterways were known to be subject to freezing. As for the carriers, any traffic offered, even if it were uneconomic or meant empty back-mileage, would now be moved by canal since the Treasury would bear the loss. At the same time arrangements for pooling traffic between carriers were facilitated.

It was originally proposed that eighteen canal undertakings and nine canal carrier companies should be brought under control and the cost was estimated at £320,000 a year. Later a further fourteen carrier companies were also taken under control. The small carriers excluded from control continued to benefit from the toll subsidy. Canal control cost the Treasury up to the end of 1945 about £1,330,000 net so that adding the costs of the toll subsidy, about £1,282,000, the total cost of the canals to the Government during the war was over £2,600,000, in contrast with the handsome profit made out of the railways.

The terms of the agreement between the Government and the canals broadly followed that of the second financial agreement made with the railway companies. The undertakings and the carriers were paid an annual fixed sum equivalent to their average net revenues in the three years ending 1st September, 1939. The carriers taken under control ceased to be eligible for the toll subsidy. Normal expenditure on maintenance did not have to be approved by officials of the Ministry of War Transport, while work done primarily for war purposes at the direction of the Minister could in effect be charged to the Government. Standard allowances for maintenance were worked out on the basis of a pre-war charge in a base period adjusted to current prices. If the amount spent on maintenance in

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any year was less than the standard allowance, the balance was placed in a trust fund to be used for deferred maintenance after the war. Allowances were also made in reaching the final financial terms for any increases in deadweight tonnage of the craft owned by carriers between the base period and the beginning of the period of control. To this extent, the terms were slightly more favourable than those granted to the railways. Control began on 1st July, 1942, and was to continue for at least one year after the end of hostilities.

To help in administering the control two Deputy Directors were appointed to assist the Director of Canals at the Ministry of War Transport: one was concerned primarily with the North Western, North Eastern and Midland regions; the other with the London, West Midland and South Western regions. The Central Canal Committee and the Regional Canal Committees continued to function in an advisory capacity much as before the control. Certain other advisory committees were, however, also appointed to deal with specific questions such as ice, coal traffic and dredging.

What were the results of canal control? The canal traffic statistics are by no means conclusive.¹ Probably the main result of control was that canal traffic was maintained at about the same total level in each war-time year from 1941 to 1944. Without control, it is probable that the canal system would have deteriorated further and more rapidly and that traffic on it would have declined sharply. The cost of keeping on the canals the one or two million tons of traffic a year which might otherwise have been lost was certainly high in terms of money paid out by the Treasury. The justification may, however, be found in the relief given by the canals to other forms of inland transport when it was almost impossible to add further to the burdens on the railways and road transport. The pity about war-time canal control was that it came so late. It is doubtful if the Government gained anything financially in the end by waiting until 1942 before taking control; and in the meantime the inland transport system as a whole was suffering some loss of its resources as long as the canals were allowed to decline. Looking at inland transport as a whole, however, canals were largely an obsolete form of transport in Great Britain, and were, for most traffics, more expensive in resources and time per ton-mile than their modern competitors. It was understandable, if at the same time unfortunate, that the Government hesitated for so long before grasping this nettle.

¹ Traffic originating on the canals from 1942 to 1945 was as follows:

<i>Year</i>	<i>Tons (000's)</i>
1942	11,043
1943	11,315
1944	11,047
1945	10,060

Source: Statistical Digest of the War, Table 170.

(vii)

Coastal Shipping, 1942-1943

The only other branch of inland transport able to relieve the hard-pressed railways during 1942 and 1943 was coastal shipping. This was not because coastal shipping was generally plentiful: it continued to work under conditions of difficulty, even though the dangers from enemy attack slowly diminished towards the end of 1942. Coastal tonnage, like railway resources, remained scarce. But it was sometimes considered more economical of scarce transport resources to move large blocks of traffic over long distances by sea instead of by rail. The help given to the railways by coastal shipping cannot therefore be measured simply in terms of so many tons or ton-miles of additional traffic carried. In the main, such relief took the form of carrying traffics which would have been especially difficult for the railways to deal with.

During 1942, the conditions under which coastal shipping had to work improved. There was a decline in losses due to enemy action during the second half of that year and a still further decline in sinkings during 1943.¹ The reduction of enemy attacks and improved defences for the coastal ships meant that coastal tonnage could be made to work more efficiently. In the seven winter months, September 1942 to March 1943, about two million more tons of cargo were moved coastwise than in the same period of the previous year, although the average deadweight tonnage of shipping employed during those months declined from 1,170,000 in 1941-1942 to 1,148,000 in 1942-1943.² The slackening of German attacks on the coastal fleet resulted not only in fewer losses, but in the freer use of the coastal seaways. The English Channel, for example, was now not much more dangerous than any other part of the coastal waters. Up to April 1942 about 130 vessels a month had travelled through the Straits of Dover. In May and June, the average number was over 270 and the stocks of coal held by public utility companies on the South coast had risen by the end of July to three months' supply—a considerably larger stock than in the previous winter.

Coal continued to be the largest and most important cargo carried coastwise. As much coastal tonnage as possible was allocated to this

¹ There was no decrease, however, until about July 1942. As late as mid-1942 a small convoy of ten ships sailing from Barry with coal for Southampton was attacked by E-boats. Seven of the ships were sunk and another failed to keep station. Only two ships, loaded with survivors, completed the journey. For statistics of coastal shipping losses, see Statistical Appendix, Table 9.

² These figures are based on the Employment Returns, see Statistical Appendix, Table 8.

task (between 700,000 and 800,000 deadweight tons on average during the period 1941-1943). The coasters moved more cargo per deadweight ton when moving coal than when carrying other commodities. Of the nine million tons of other commodities moved annually by coasters in 1942 and 1943, there are no complete details. It is, however, possible to say how much coasting tonnage was employed in moving each of the principal non-coal bulk traffics for each month from 1941 onwards. It will suffice to consider two selected months: December 1942 and June 1943.¹ The December 1942 returns show that 349,000 deadweight tons of coastal shipping were employed in moving cargoes other than coal (155,700 deadweight tons in the liner trades and 193,300 in the tramp trades). 166,600 deadweight tons were employed in moving mixed general cargoes or cargoes which cannot be classified. Of the cargoes which can be classified, the most important were iron, steel, iron ore, and scrap (35,600 deadweight tons); cement (35,200 deadweight tons); potatoes (30,400 deadweight tons); timber and lumber (23,500 deadweight tons); sugar (18,100 deadweight tons). In June 1943, the employment of tonnage was fairly similar: 352,900 deadweight tons were employed in carrying cargoes other than coal, of which 171,000 deadweight tons were carrying mixed general cargoes or cargoes which cannot be classified. The other main cargoes were iron, steel, iron ore and scrap (38,300 deadweight tons); cement (29,200 deadweight tons); timber and lumber (26,900 deadweight tons); fertilisers (14,800 deadweight tons); grain and flour (14,300 deadweight tons). The main difference between the June and December cargoes is the large seasonal movement of seed potatoes reflected in the December figures. Only 4,800 deadweight tons was employed in carrying potatoes in June 1943.

Seed potatoes were one of the principal cargoes of the coasting liners during the late autumn and winter months each year. It was shown earlier² that 215,000 tons of seed potatoes were carried from Scotland to England in the 1942-1943 season, compared with 119,000 tons in the previous season. Not only was a long railway haul saved, but it was saved during the late autumn and winter, a time of year when railway working tends to be most difficult. Similarly in the autumn of 1942 barley was moved by coaster. An embargo forbade its carriage from English ports to Scottish ports except by sea. A successful experiment was also made in carrying apples by coaster in 1942. In order that the apple crop should be distributed as fairly as possible to all the population, a large proportion of the crop from the apple-growing areas of Kent and East Anglia had to

¹ The figures quoted relate to the months ended 15th December, 1942, and 15th June, 1943. The full statistics are quoted in Appendix XXII, p. 486.

² See above, p. 354.

be carried to North East England and to Scotland. (Irish apples were also carried to Scotland.) Some coastal liners had been accustomed to handling fruit in peace-time. This, however, was an attempt to move almost the entire crop. As apples were a suitable return load for coasters going back from the Thames to the Tyne and Forth and Tay it was decided that from October 1942 to April 1943 no apples were to be accepted for rail conveyance, except with a Ministry of Food licence, and that all movement of apples from London to the Tyne and Forth had to be by coaster during that period.¹ Rates of freight were laid down, quay to quay, or grower to ship, and the road haulage branch of the Ministry of War Transport arranged if necessary to carry the apples from orchard to dock, or from dock to seller at the other end. The tonnage of apples moved was estimated to be 33,000.² Growers did not at first favour the scheme, mainly because they feared damage to the apples and that the conditions of carriage of the coasting liner companies would prove less favourable to them in the event of loss or damage or theft than rail conditions of carriage. They agreed to join the scheme when the Ministry of War Transport gave an assurance to their representatives that their claims would not be decided by a rigid interpretation of published conditions, but would be judged on their merits and that the grower or merchant would have a right of appeal to the Ministry for arbitration if necessary. Apples were, in fact, carried successfully by coaster in spite of the growers' original apprehensions.³

Coasters continued to be used as a mobile reserve. One instance of a particularly awkward and difficult job performed by a coaster may be quoted here as an example of the way in which coastal shipping could be organised to help in an emergency. A Newcastle firm had manufactured a 30,000 kilowatt turbo-alternator for an Australian power station, and the last piece of it was an extremely large and heavy piece of machinery, 18 feet × 12 feet × 12 feet. It had originally been intended to move it to Birkenhead by road, but when the Newcastle firm was notified of the sailing date of the deep sea ship from Liverpool, the roads on the route were blocked with snow, and the heavy lorry intended for the job was itself snowed up somewhere in Wales. There was only one deep sea ship available with

¹ The returned empty apple barrels came back on the decks of the loaded coasters if possible. Large numbers, however, had to be sent back by rail.

² 11,000	to be discharged in the Tyne	
16,000	" " " " " Forth	} less any from Belfast.
3,000	" " " " " Tay	
3,000	" " " " " Aberdeen	
33,000		

³ There were in fact a great many claims to be settled, and numerous complaints of careless stowing and pilfering on the docks, but probably no more than the usual amount of teething troubles to be expected in starting such a scheme.

the necessary lifting gear to discharge such a heavy single load in Australia, so that if the piece of machinery failed to get to the Mersey in time it could not be sent to Australia at all for several months. The Newcastle firm asked the local Coastal Shipping Area Committee if they could help. A former Norwegian coaster carrying potatoes from Dundee to Boston was directed on to Newcastle as soon as she had discharged. The machinery was loaded, and the rest of the ship's space filled with general cargo. The coaster made a northabout passage under normal convoy and routeing arrangements in about six days, and delivered the machinery to the deep sea ships three days ahead of the deadline date, although the roads to Liverpool still remained blocked with snow.

Apart from occasional special jobs of this kind, coastal shipping's main contribution to inland transport during 1942 and 1943 was to carry out its ordinary tasks. Overside discharge from deep sea ships into coasters continued at the Clyde Anchorages. 405,000 tons in 1942 and 326,000 tons in 1943 were trans-shipped in this way in the Clyde, compared with 264,600 tons in the last nine months of 1941. Coasters also continued to assist the clearance of West coast ports generally. The amount of cargo loaded into coasters at ports in the West was 4.292 million tons in 1942 and 4.161 million tons in 1943 (compared with 2.75 million tons in the last nine months of 1941). It is not known what proportion of these cargoes were trans-shipped cargoes.¹

Trade with Ireland also continued, although from June 1942 onwards the traffic was more strictly controlled for security reasons. These restrictions interfered little with the regular liner traffic, although they slightly curtailed the carriage of bulk cargoes.²

Coastal shipping continued to be an indispensable part of the British inland transport system, being particularly valuable in the winter months when railway working was difficult. The public utility undertakings, and to some extent the domestic hearth, depended on coastal shipping for coal; agriculture depended on it for seed potatoes and fertilisers. It must, however, be remembered that, while certain general merchandise traffics were allocated to the coasters in order to relieve the railways of long hauls, coastal shipping was still carrying less coal than in peace-time. There were, moreover, some types of traffic that could not be allocated to coasters. They could not carry perishables owing to their comparatively long voyage

¹ See above, Chapter IX, p. 361. The figures quoted here are taken from the employment returns.

² Exports to Ireland during 1942 were 4,617,000 tons; during 1943 they were 4,709,000 tons, compared with 3,654,000 tons for the last nine months of 1941. Imports from Ireland increased from 680,000 tons in the last nine months of 1941 to 1,146,000 tons in 1942 and 942,000 tons in 1943. These figures include both Northern Ireland and Eire and are taken from the employment returns.

time and traffic was not allocated to them if the final destination of the goods was far from the port of discharge or would cause the railways a long haul. For example, if coal was intended for consumption north of the Thames, it was not sent by sea because it would have to travel over the lines to the north of London and through marshalling yards which were normally very heavily occupied. If coal was sent direct by rail, these busy sections of the railway system could be avoided. Indeed, it was the concern of the Ministry of War Transport's policy of consciously allocating traffic between the four branches of inland transport to see that the coasters carried those goods for which they were best suited and which gave the greatest relief to the other forms of transport, especially the railways.

(viii)

Conclusion—Transport Performance, 1941-1943

From 1941 to 1943, inland transport had to contend with steadily rising war-time demands for its services in the face of increasingly stringent limitations in the supply of the resources it needed to meet them. How adequately did inland transport meet the growing demands of war between the summer of 1941 and the autumn of 1943?

On the whole, inland transport was able to bear the steadily growing burden of freight traffic; it may have groaned under the ever-increasing strain but it did not collapse. There were times when localised railway congestion occurred, especially in the difficult winter months when operating problems, locomotive shortages and staff difficulties were generally at their worst. There were times when restrictions had to be placed on the acceptance of railway traffic and its movement over particular routes. The restriction on the use of the South Wales ports and on the movement of passenger and freight traffic to and from that area in the autumn and winter of 1941-1942 and the similar restrictions on traffic through the Northallerton-York 'bottleneck' were symptomatic of the inability of the railway system to meet all potential demands. But these were not symptoms of widespread congestion or of inefficiency. On the contrary, it was precisely because these weak parts of the railway network were well known to the experts that careful regulation of traffic by the Ministry of War Transport and the railway experts prevented them from becoming seats of widespread congestion. While the railways encountered increasing difficulties as the war progressed, road transport continued to function on a restricted scale, concentrating mainly on short-distance work and on carrying traffics which could not easily

be moved by other forms of transport. Coastal shipping continued to move coal at a steady rate down the East coast and generally to relieve the railways with particularly difficult hauls. Although railway 'bottlenecks' appear to have caused some concern about the southward movement of coal in the early part of the winter of 1941-1942, new railway works and declining coal production combined to push these coal transport problems into the background after the summer of 1942 until the period immediately before D-day.¹ Between the autumn of 1941 and the closing months of 1943, the availability of locomotives was the primary limitation to railway performance, while fuel and tyres set the limit to what road transport could do.

Surveying the period chronologically, it is found that, apart from the two problems of line capacity already mentioned, the winter of 1941-1942 passed without any exceptional railway difficulties. The comparative absence of heavy air raids was undoubtedly a primary cause of relief to the railways, while the earlier introduction of double summer time, largely at the behest of the Ministry of War Transport, helped to mitigate the effect of the blackout. Spells of bad weather, with snow, ice and fog in the first three months of 1942 did hamper transport performance, at times dislocating road transport, bringing canal movements to a standstill, retarding railway operation and causing extensive sickness among railway staff. These difficulties were obviously not peculiar to war-time, though they demonstrate how sensitive transport performance is at all times to external factors such as the weather. The results of severe weather were all the more serious for transport in this third winter of the war when operating difficulties were already great, resources scarce, and traffic unusually heavy. For example, because of a shortage of railway enginemen, the help of the armed forces had to be obtained for labouring work thus freeing trained men for firing work. Similarly, because of the scarcity of skilled labour to clear snow and break ice in the canals, military aid had to be called in. Yet in spite of these handicaps, the railways carried 5.5 per cent. more traffic in the winter of 1941-1942 than in the previous winter and the official records disclose few reports of serious delays to urgent war traffic.

The spring and summer of 1942 saw a further tightening of the fuel rationing system and new restrictions on the use of tyres for road transport. During 1942 there was a decline in the number of goods vehicles rationed and a drop in their fuel consumption.² It may therefore be assumed that road transport was carrying less traffic.

¹ In March and April 1942, the railways were moving less than their planned number of trains from Northumberland and Durham. This was said to be due to lack of coal and not shortage of rail capacity.

² See Statistical Appendix, Table 8.

Canal traffic showed little change and certainly no tendency to rise in spite of efforts to divert traffic from elsewhere. Coastal shipping appears to have improved its performance by carrying a greater tonnage of cargo with a smaller deadweight tonnage of shipping employed. Statistics also show that in almost every month of 1942, coastal shipping was carrying more than in the previous year—this was especially true of coal cargoes in the second half of 1942.¹ Generally, however, the railways continued to bear the brunt of the burden on inland transport throughout 1942. Passenger traffic was especially heavy during the summer months; passenger receipts for August 1942, had increased by 23 per cent. compared with the corresponding period of 1941. There were also increases in the numbers of special passenger and freight trains run for the Services and increasing movements of the American forces and their equipment which were now disembarking at United Kingdom ports. In meeting these increasing demands, the railways were badly handicapped by the deteriorating locomotive situation and by a shortage of staff in the operating grades. Nevertheless, largely because of good summer weather and the long hours of daylight, the railways continued to meet the calls made on them and their working remained fluid through the summer of 1942.

Railway performance showed some deterioration in the autumn of 1942. The numbers of special trains being run for the Services were particularly heavy at this time, not only for the movement of men and weapons to the ports to embark for North Africa, where they were to take part in the campaign that ended in the capture of Tripoli and Tunis, but also for the conveyance from the ports of American troops to South West England.² This heavy traffic, together with widespread fog at the end of October and the now chronic shortage of locomotive power, combined to disorganise railway freight working with the result that temporary embargoes had to be placed on the movement of traffic through certain exchange junctions such as Leamington, Bordesley, Banbury and Carlisle. These temporary obstructions to the free movement of traffic reacted on the supply of railway wagons so that, in some cases, urgent Government demands could only be met at the expense of ordinary demands for transport. Specialised wagon stock was in particularly heavy demand for military movements and scarcities were reported of 'warflats' for carrying military vehicles and 'hoppers' for ironstone traffic. The railways themselves continued to complain that one

¹ *Statistical Digest of the War*, Table 171.

² Altogether 440 troop specials carried troops on the first stage of their expedition to North Africa, the most intensive traffic being between 7th and 12th, and 21st and 26th November, 1942. The movement of stores required 680 special freight trains and 15,000 wagons worked to the ports by ordinary services. R. Bell, *op. cit.*, p. 76.

cause of their wagon difficulties was that Government departments did not release wagons promptly, though most instances of this were now being promptly followed up by the *ad hoc* wagon standage committee.

The most difficult period for the railways was from November to January. The dislocating effects which the scarcity of locomotives was having on efficient railway operation at the close of 1942 and beginning of 1943 have already been described. Indeed, the Railway Executive Committee had warned the Central Transport Committee in September 1942 that the railways' winter difficulties would stem largely from a shortage of engines and staff. There was certainly every reason for apprehension about the locomotive situation, but, surprisingly, the railways' winter operating and traffic problems were largely over by the end of January 1943. That the railways came through the fourth war-time winter without widespread congestion must be attributed partly to good management, but also to their good fortune for the later part of the winter turned out to be exceptionally mild. In consequence, traffic movement was carried out under better conditions and with better results than had been expected. The measure of the railways' performance is that they were able to carry 5.3 per cent. more freight traffic than in the previous winter,¹ while main line passenger traffic was between 15 and 25 per cent. higher than in the previous year for each winter month of 1942-1943.²

In the spring and summer of 1943, special Service traffic continued to be heavy, while freight traffic, except coal, continued to increase. This traffic was, on the whole, handled smoothly and without congestion. Passenger traffic continued its upward trend, and was especially heavy at bank holidays, though very few additional trains were run to meet the rising demand. While there was no improvement in the rate of construction of locomotives for railway use, loans of Ministry of Supply and United States locomotives were without doubt the greatest single help to efficient railway working during the summer of 1943. These loans enabled the heavily strained British railway system to keep generally free from congestion as freight traffic approached its war-time peak in the autumn of 1943.³ By that time, the railways had probably reached the limit of their capacity to absorb further increases in traffic and their efficiency in the months before D-day was to be increasingly threatened by shortages of wagons and labour.

Meanwhile, during the first half of 1943, the number of road goods

¹ See Appendix XIII, p. 389.

² See Statistical Appendix, Table 4.

³ During the summer of 1943 there was some congestion in East Anglia, largely because of the big programme of airfield construction in that area. This was not connected with the more general railway situation. See below, Chapter XVI.

vehicles rationed and the amount of fuel consumed continued to fall, which suggests that the amount of traffic moved by road further declined. Statistics of motor fuel consumption, the number of vehicles licensed and the number of vehicles rationed suggest that road haulage reached its maximum contraction about the summer of 1943.¹ Canal traffic increased slightly though not significantly. There was a slight fall in coasting cargoes delivered in 1943—mainly on account of a smaller movement of coal, though coastwise cargoes other than coal increased. The deadweight tonnage of shipping employed showed a small increase.

During the years 1942 and 1943 the railways moved between 295 and 300 million tons of freight traffic annually, of which slightly more than one-half was coal class traffic and just over one-quarter was general merchandise traffic, compared with about one-sixth of the smaller pre-war total. About 30 million tons of cargo was moved coastwise, two-thirds of which was coal. Some 11 million tons of traffic was carried by canals, about half of which was coal. Comparative ton-mileage figures are not available for all the forms of transport, though it may be assumed that they would emphasise the much greater average length of haul of coastwise cargoes compared with traffic moving by other forms of inland transport. It is unfortunate that there are no statistics to indicate the relative contribution of road haulage at this or any other period of the war. It must be assumed that, since restrictions on the use of fuel and tyres were probably more severe in 1943 than at any other time during the war, the road haulage fleet was working very much below its potential capacity. The fact which stands out in all the available statistics is the essential role which continued to be played by the railways in moving the nation's war traffic after 1941.² The efficiency of the railways was still, as in the early years of the war, fundamental to the efficiency of inland transport as a whole. While the railways laboured under increasing strains and could hold out no claim to meet all comers, they did meet their essential commitments between the summer of 1941 and the autumn of 1943.

It was, of course, no mere chance that they were able to do so. It was the result of deliberate Government policy and careful planning. In the first place, the railways themselves were now better organised to carry war-time traffic than hitherto: Government control of the railways was more effective; the working of traffic on the railways was better supervised; railway operating methods had been improved; and additional line capacity was available. Secondly, through

¹ *Statistical Digest of the War*, Tables 88, 168, and Statistical Appendix to this volume, Tables 10 and 11.

² All the statistics quoted are based on Tables 165, 170 and 171 of *Statistical Digest of the War*.

the Central Transport Committee and other inter-departmental machinery, an increasing proportion of traffic was being planned in advance. The main war-time flows of traffics such as coal, ironstone, fertilisers and some agricultural commodities were known and their movement was now being planned in some detail to make the best use of available transport, whether rail, road, coastwise or canal. As has already been described, the railways were relieved where possible by the allocation of blocks of traffic to coastal shipping and other forms of transport and, in later chapters,¹ more will be said of the central and local machinery which was now being developed and improved for this purpose. Finally, from 1941 onwards, a determined effort was made by the Government to eliminate all possible non-essential demands for transport, which not only relieved the railways of many difficult and long hauls, but enabled road transport to achieve substantial fuel and tyre economies without causing serious interference to urgent war traffics. The Government's policy of rationalisation of the distribution of goods is discussed in the following chapter. The problem of restricting non-essential passenger services will be examined in Chapter XIII.

¹ See especially Chapter XV.

APPENDIX XV

Summary of Locomotive Statistics

LOCOMOTIVES	1938	1939	1940	1941	1942	1943	1944
Operating stock	19,659	19,541	19,503	19,461	19,677	20,593	20,172
Under and awaiting repair	1,190	1,297	1,107	1,177	1,350	1,290	1,257
Available							
(number)	18,469	18,244	18,396	18,284	18,327	19,303	18,915
(Index: 1938=100)	100	98·78	99·61	99·00	99·23	104·52	102·42

ENGINE HOURS IN TRAFFIC (hours, 000's)	1938	1939	1940	1941	1942	1943	1944
Coaching							
(Total)	24,211	22,262	19,778	19,954	19,847	19,835	19,858
(Index: 1938=100)	100	91·95	81·69	82·42	81·98	81·93	82·02
Freight							
(Total)	36,137	38,695	46,771	46,646	47,590	47,911	48,476
(Index: 1938=100)	100	107·08	129·43	129·08	131·70	132·58	134·15
Grand Total							
(Excluding Service and Departmental)	62,874	63,340	69,128	69,256	70,126	70,415	71,059
(Index: 1938=100)	100	100·74	109·95	110·15	111·53	112·00	113·02

Source: Ministry of War Transport, Summary Table of Statistical Returns of Railways of Great Britain, 1938-1944.

APPENDIX XVI

Trains delayed on account of non-availability of locomotives, 1942-1943

<i>During week ended</i>	<i>Trains cancelled</i>	<i>Trains put back late off shed</i>	<i>Average delay</i>
13.9.42	734	7,553	1 hr. 21 min.
3.10.42	692	8,512	1 " 23 "
10.10.42	667	9,434	1 " 28 "
31.10.42	733	9,912	1 " 32 "
7.11.42	852	10,394	1 " 33 "
14.11.42 (Dense fog)	950	10,830	1 " 31 "
21.11.42	1,043	11,478	1 " 24 "
28.11.42	1,390	10,406	1 " 36 "
5.12.42	1,370	11,814	1 " 35 "
12.12.42	1,475	10,872	1 " 30 "
19.12.42	1,488	10,711	1 " 23 "
26.12.42	1,028	8,002	1 " 20 "
2.1.43	1,142	9,393	1 " 17 "
9.1.43	1,574	10,504	1 " 24 "
16.1.43	1,589	11,084	1 " 20 "
23.1.43	1,756	10,183	1 " 18 "
30.1.43	1,506	9,954	1 " 12 "
6.2.43	1,471	10,421	1 " 15 "
13.2.43	1,476	10,309	1 " 14 "
20.2.43	1,400	9,364	1 " 13 "
27.2.43	1,113	9,582	1 " 09 "
6.3.43	1,235	9,160	1 " 15 "
13.3.43	1,178	8,925	1 " 11 "
20.3.43	888	8,766	1 " 08 "
27.3.43	758	7,708	1 " 02 "
3.4.43	763	7,707	1 " 00 "
10.4.43	634	7,523	1 " 04 "
20.4.43	247	6,749	57 "
24.4.43	153	5,998	54 "
1.5.43	77	4,666	50 "
8.5.43	151	6,251	57 "
15.5.43	140	6,041	1 " 01 "
22.5.43	197	5,890	55 "

Source: Minutes of Railway Executive Committee, 1942-1943.

APPENDIX XVII

Summary of Railway Wagon Statistics

Year	Month	Loaded wagon miles (millions)	Total loaded and empty wagon miles (millions)	Wagons Under and awaiting repair (000's)			Total wagon availability (000's)
				Railway owned	Requisitioned	Total	
1941	March	—	—	—	—	—	1,199
	June	299	414	28·2	29·9	58·1	1,182
	September	295	408	32·0	36·8	68·8	1,174
	December	287	389	21·3	27·4	48·7	1,190
1942	March	305	411	24·3	28·1	52·4	1,187
	June	303	411	32·3	34·6	66·9	1,174
	September	311	422	34·8	34·7	69·5	1,171
	December	298	401	27·1	25·7	52·8	1,191
1943	March	319	433	31·3	31·0	62·3	1,185
	June	325	441	46·0	32·9	78·9	1,174
	September	321	428	45·9	33·9	79·8	1,174
	December	282	369	32·9	29·9	62·8	1,197
1944	March	310	412	31·9	30·7	62·6	1,200
	June	321	445	42·7	37·9	80·6	1,184
	September	321	432	56·9	43·3	100·2	1,165
	December	301	400	53·0	39·5	92·5	1,175

Source: 4-weekly Statistics of Railway Wagon Stock and Wagon Miles. See Statistical Appendix to this Volume, Tables 3 and 6.

APPENDIX XVIII

Central Transport Committee First Report of Allocation of Traffic Sub-Committee South Wales Traffic

APPOINTMENT AND REMIT

The Sub-Committee was appointed 11th November, 1941, with following remit:

To consider areas where acute and prolonged traffic difficulties exist and, by allocation or otherwise, to relate traffic demands to available transport capacity.

We met on 12th November and subsequent dates to consider the position in South Wales.

PROBLEM

2. We have assumed that the general object in view is to secure that the transport facilities for traffic from South Wales are used in the best way to further the efficient prosecution of the war and the maintenance of supplies and services essential to the life of the community.

The form of transport mainly concerned is the railway. Briefly, demands on available rail transport materially exceed supply. As the volume of traffic from South Wales to places outside that area largely exceeds the volume of inwards traffic, we have concentrated our attention mainly on the outwards traffic.

3. To bring the subject into some kind of perspective we mention that the *weekly average* number of goods trains worked by the G.W.R. out of South Wales by the Tunnel, Gloucester and Hereford routes¹ during the 24 weeks to 30th March, 1941, was 618; this number increased to an average of 703 for the nine weeks ended 30th November. We have tried to estimate the equivalent figure of demand—we put it somewhere in the nature of 800. So long as demand is in excess of capacity the result must be a general retardation in flow of traffic; a chronic state of semi-congestion; and periodic phases of acute congestion at various points.

4. We emphasise that these are *averages*, and that the last is an estimate; we give them merely as a guide in measuring the burden on the G.W.R. The actual weekly averages of goods trains worked outwards fluctuate considerably; the figure has been as high as 789 in August and as low as 536 in January.

5. The problem goes much deeper than the mere reduction to equilibrium of these (or any other) two figures of supply and demand.

6. For many months the use of South Wales ports by vessels from overseas has been deliberately restricted because of these internal transport

¹ *Note.* To avoid unnecessary complications, we have ignored the L.M.S. Llandilo-Builth Road-Craven Arms; within its limitations it is useful.

difficulties. There are five well-equipped and efficiently operated ports that have collectively over 140 berths capable of receiving ships over 21 ft. draught; two of these—Cardiff and Swansea—have over 70 such berths; both ports handle general cargo; the G.W.R. have provided special facilities at Swansea for handling meat—a new traffic for that port. During November—a typical month—the daily average number of such vessels discharging or loading at all five ports was between 14 and 15.

7. It is difficult to over-estimate the value of these ports if those in other areas are rendered less effective by enemy action. So far as port facilities are concerned, the potential traffic through these ports is enormous. The present lack of their use tends to create discontent and unrest among dock labour in South Wales and unnecessary concentration on other ports.

8. We conclude, therefore, that our present task is not confined to relating existing traffic demands to available transport facilities, but places on us a responsibility to suggest possible ways of increasing those facilities to meet even greater demands.

POSSIBLE SOLUTIONS

9. There is no sovereign remedy for this present state; but palliatives and aids may be found from a number of sources; the cumulative effect should result in a material improvement.

10. We have considered the two main complementary sources; (a) increased rail facilities; (b) reduction of demands on them.

INCREASE IN FACILITIES

New Works

11. The increase in the number of outward trains from South Wales is partly attributable to improved facilities, offset to some extent by an increased occupation of the Tunnel on Sundays for engineering work.

12. The more important new works brought into use during recent weeks were as follows:

<i>Works</i>	<i>Brought into use</i>
Quadrupling between Newport and Severn Tunnel Junction	First section 19/10/41 All sections 12/11/41
Running loops at Lwebotwood, Tram Inn, Craven Arms, Penpergwm, Llantarnam, Portskewett	Various dates from 10/10/41 to 23/11/41

13. In addition, with a view to increasing the capacity of the Severn Tunnel, Up and Down Intermediate Block signals between Severn Tunnel East and Severn Tunnel West Boxes were provided and brought into use on the 16th November.

14. Additional loops or sidings are in course of being provided at a further 16 places on the three routes out of Wales, all of which will, we understand, be completed early in the New Year.

15. When all the additional facilities which are being provided are available and in full operation we anticipate that an average of 750 trains per week might be regarded as a reasonable target at which to aim under

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normal winter conditions, i.e. except during periods of fog, falling snow, severe frosts, or when enemy action causes dislocation. With longer daylight hours and more favourable weather conditions a higher figure should be attained.

IMPROVED TRAFFIC WORKING ARRANGEMENTS

(a) Coal Class Traffic

16. The following statement shows in weekly averages the total tonnage of coal by rail from collieries in South Wales over the Great Western system during September, October and November 1941, compared with the corresponding period of 1938:

Weekly average	For shipment		Inland destinations inside South Wales		Inland destinations outside South Wales	
	1938 tons	1941 tons	1938 tons	1941 tons	1938 tons	1941 tons
Sept.	350,010	145,986	183,018	201,148	88,014	155,328
Oct.	392,112	154,665	189,036	207,579	91,146	131,919
Nov.	369,183	152,908	*	210,659	*	140,505

* Not available.

17. The lines in South Wales were laid out primarily to deal with a large *export* coal traffic and the facilities available for this traffic are far in excess of present requirements: they are not laid out to carry effectively a large increase in coal traffic to inland destinations outside Wales. It seems to us that the growth of this traffic (about 100 trains per week) together with the difficulties of working under blackout conditions, is largely responsible for the difficulties which have arisen.

18. We are informed that, to facilitate the working of this traffic, arrangements have been made for coal for public utility companies and large consumers to be despatched largely in block trains to destination. A Joint Committee of representatives of colliery owners and railways has been set up to regulate the tonnage of coal to be conveyed from the various collieries each week to three specified areas outside South Wales. The collieries are supplied with a list of stations and, as far as practicable, traffic is labelled in colliery sidings in directional order, in accordance with railway companies' lists; this has enabled shunting en route to be considerably reduced.

19. We understand that the number of pits supplying locomotive coal for the G.W.R. has been reduced from 587 to 232 and that arrangements made for this traffic to be worked as far as practicable in block trains to specified depots or groups of depots saves a considerable volume of shunting.

20. Recent figures indicate a reduction in the average load per wagon. We recommend that this matter should continue to receive special attention by Mines Department.

(b) Reduction of 'Empty Trains' out of South Wales

21. About 3,000 empty wagons (representing 60 trains weekly) are worked out of South Wales; approximately two-thirds of these are iron

ore hopper wagons. We think it would be of great assistance if the steel works in South Wales could utilise a greater proportion of imported iron ore and so reduce the present heavy occupation of the lines between Banbury, Yarnton and South Wales. We recommend that Supply and War Transport should examine this proposal, keeping in mind possible repercussions on rail transport in other parts of the country if diversion of home ore is required.

22. With a view to effecting a reduction in trains of empties despatched from South Wales, arrangements have been made to supply to collieries for loading surplus railway owned open goods wagons whenever suitable opportunity occurs. In this way, during the week ended 29th November, 230 wagons which normally would have been sent out in four 'Empty' trains from South Wales were placed in colliery sidings for loading. We recommend that G.W.R. should give special and continuous attention to back-loading.

(c) Through-Through Trains

23. The volume is fairly consistent but not great—about 12 per week each way. The G.W.R. have informed us that there is little chance of relief from this source. We make no recommendation.

REDUCTION IN PASSENGER TRAIN SERVICES FROM SOUTH WALES

24. There are a large number of local trains working over the three routes; they carry workmen and business people.

In addition, there are at present six through trains daily (including one relief) from South Wales to London; the average load is 571—this involves a large number of standing passengers. There are four North to West through trains daily over the Up line Newport—Severn Tunnel route; and four West to North trains over the Newport—Pontypool Road section. The trains also convey a considerable quantity of parcels and meat traffic.

25. We make no recommendation as to a further reduction in passenger trains since we understand the Minister has the matter in hand.

MANPOWER

26. We understand that serious difficulties have been caused by the abolition of 'lodging' turns of enginemen and guards.

The G.W.R. state that over 330 turns have been abolished under strong pressure from the Railway Trade Unions and that difficulties have been experienced in obtaining additional trainmen and providing food and lodging accommodation.

27. We are informed that the matter is now the subject of discussion with the Unions. We make no recommendation but hope that a satisfactory settlement will be reached before long.

LOCOMOTIVE POWER

28. The shortage of heavy locomotives and enginemen is undoubtedly a serious factor limiting the number of trains worked out of South Wales. This shortage (which is prevalent on all systems) is attributable to the loss of engines sent overseas; the postponement of repair work in order

to equip engines for overseas; the limitations on the capacity of the railway shops due to the manufacture of munitions; and the general shortage of labour for repair work.

29. We believe that difficulties of locomotive power (including manpower) are at the moment a greater limiting factor than line occupation. We have not pursued the matter as we are informed that, at the Minister's request, the whole question of engine power is under review by the Railway Executive Committee and that special steps are being taken to improve the position. We hope the R.E.C. will be able soon to report the extent to which relief can be provided under this head.

MINISTRY OF SUPPLY TRAFFICS

30. The problem of reducing these traffics both from and to South Wales is one of some complexity. The policy of reduction is proceeding steadily, but when it is realised that limitation in any given instance may easily result in bringing a munition factory (or a contractor supplying it) to a standstill, it is clear that the problem is of a different order from that involved in reducing the number of trains carrying single class traffics. Supply traffics may be considered under the following heads:

31. *Manufactured Stores.* As a result of consideration given to this matter for some time past, the siting of new factories and the placing of new contracts with contractors takes place after and not before the transport factor has been taken into account. As a factor it cannot override the others involved, e.g. availability of labour and location of contractors with specialised plants and facilities. Components and Filling Factories, e.g. shell, cartridge cases, containers, fuzes, explosives, etc. are now planned on a three months forward programme in which the possibilities of transport economy are closely watched. It should, however, be noted that the maximum flow of munitions remains the dominant consideration, and that this depends not merely on uninterrupted flows directly to and from R.O.F.s, but equally upon the flow of unfinished, semi-finished and finished products between contractors and a great number of vital sub-contractors such as the iron and steel plants.

32. Re-allocation of traffic in this sphere is constantly under consideration and since the South Wales position became acute it has been possible to make certain reductions; e.g. with the co-operation of the iron and steel industry it has been possible by varying sources of supply to reduce a weekly allocation of 28 trains from Lincolnshire and the North East coast to 14; although this is inward and not outward traffic, the reduction saves G.W.R. exchange points (e.g. Banbury) to that extent. If the necessary type of shipping can be obtained it may be possible to free the Banbury area from the remaining 14 trains.

33. *Raw Materials.* In so far as these are imported, routeing is not entirely in the Ministry's hands since the port desired may not be agreed by the Diversion Room; but within that limitation the movements are determined in advance to the best advantage. Another serious limitation is the increasing scarcity of storage accommodation; the finding of such accommodation has inevitably become more urgent than the routeing to it from the port or the site of the material.

34. Some success has been achieved in regard to re-allocation of basic slag, sulphate of ammonia and superphosphate; a recent case saved the G.W.R. six trains per week of superphosphate from Avonmouth to South Wales, a replacement being effected with imports. Two trains per week of basic slag from Ebbw Vale to South Western England have already been replaced by imported phosphates.

35. As regards pit props, a substantial proportion of the 200 tons produced weekly from the New Forest is being re-allocated to the Kent coalfield and Sittingbourne, and diversion from rail of about 1,800 tons per week from Devon, Somerset and Dorset is under active consideration.

MINISTRY OF WORKS AND BUILDINGS TRAFFICS

36. Heaviest traffics are cement and bricks. An efficient pooling system has recently been achieved for cement and success is being achieved in introducing a similar system to the brick industry, the limiting factors here being in the case of cement that 52 per cent. of the total production is located on the Thames and Medway and in the case of bricks that 36 per cent. of the total production comes from the Peterborough/Bedford area. The present weekly flow of 2,000 tons of bricks from this area to South Wales will, it is hoped, shortly be taken by coaster from a different source of supply.

37. Other traffics now under consideration from this point of view are asbestos cement tiles, plaster board, roofing felt and sectional huts.

MINISTRY OF FOOD TRAFFICS

38. This Ministry is a much smaller user of transport in the area than Supply. The brief essential features are: (i) South Wales is not self-supporting in food production; (ii) the average food cargo in an overseas vessel is more than can be absorbed or stored in the area; (iii) the balance swells the load to be carried out of South Wales.

39. We recommend that Food and War Transport continue to examine the practicability of arranging for the import into South Wales ports of foodstuffs in such quantities as will reduce to a minimum the amount passing through the area to destinations outside. The Regional Port Director has been invited to give somewhat greater latitude than he has previously been prepared to allow in the matter of storage of foodstuffs in the port areas.

40. Additionally, we recommend that special attention is given to find an alternative source of supply of potatoes which represents about 250 wagons weekly from East Anglia.

WAR DEPARTMENT TRAFFICS

41. War Department's traffic out of South Wales is mainly either for internal maintenance or for outward shipment. So far as we can judge, their weekly demands are in the order of 18 trains plus odd wagons to the equivalent of 5 trains. There is a fairly regular traffic—mainly northward—of tinned petrol from Llandarcy for shipment; at present this is carried by rail.

42. An experiment has been made in conjunction with War Transport

to send certain of this traffic direct by sea from South Wales. We recommend this to be followed up and extended if practicable.

43. We recommend also that particular attention should be paid to the traffic to and from the various War Department Depots in South Wales.

44. We have considered the desirability of reducing the use of South Wales ports for loading of War Department stores for overseas and thus giving relief to the railways; there is, of course, no suggestion that the ports themselves are not capable of handling the traffic.

45. The number of ships loading full and part cargoes of military stores was:

September	10 full	2 part
October	10 „	7 „
November	11 „	1 „

46. Alternative loading ports might be found in the Mersey or Clyde or on the East coast. These vessels are mostly large and important cargo ships and it would be clearly undesirable to take them specially to East coast. We do not think they could be loaded with advantage in the Mersey or Clyde—already extensively used for outward loading. On balance, therefore, we reject the proposal, but we recommend that when allocating shipping space or Sea Transport vessels to a port for loading, War Transport (Sea Transport Division) and War Department should have regard to the points of origin of the cargo to be loaded.

MINES DEPARTMENT TRAFFIC

47. The average weekly output from South Wales coalfields is now 558,100 tons, compared with 691,900 tons in November 1938.

48. After providing for consumption in South Wales, export and shipment to Northern Ireland, a minimum of 235,000 tons a week must, under the Government's present plan, be distributed to inland destinations outside South Wales during the winter months. Of this 150,000 tons (300 trains) is planned to go by rail; 85,000 tons coastwise.

49. In assessing requirements to be met from South Wales it is necessary to consider the requirements of the country as a whole.

50. Demands on coal for war production are increasing. For example, in 1941-1942 it is estimated that coal consumption for electricity will increase from 19,735,000 tons to 23,250,000 tons (an increase of 17·8 per cent.) and for engineering and allied industries from 4,702,000 tons to 6,005,000 tons (an increase of 26·1 per cent.) compared with 1940-1941.

51. Increased requirements in 1940-1941 were met partly by cessation of exports and partly by increased output in certain coalfields. Requirements in 1941-1942 must be met by increased production in all areas.

52. Distribution from South Wales by coastwise shipping has been arranged within the limits of shipping available and handling capacity at ports. Until recently the coastwise programme has been 85,000 tons a week. In recent weeks additional coastwise shipping has been made available and this has been utilised to increase coastwise shipments.

53. Tonnage recently programmed for transfer from rail to sea is summarised below:

<i>Port</i>	<i>Weekly Tonnage</i>	<i>Destination</i>
Southampton	8,000	London Power and Fulham
Newhaven	1,200	County of London Power
<hr/>		
Total		9,200

54. Surveys have recently been made of Mersey and South West coast ports with the view of ascertaining the possibilities of providing further outlets from South Wales by sea.

55. In so far as it may be practicable to maintain regular coastwise shipments in excess of 85,000 tons a week the winter rail allocation of 150,000 tons a week minimum could be reduced by the excess over 85,000 tons. This, however, assumes no increase in present average output. It must nevertheless be stressed that under the present circumstances a deficiency in the coastwise shipments in any week must be made good by rail transport if the programme is to be maintained.

56. We are informed that the principal operating difficulties experienced by the English railway companies are in and out of Wales and through York, and in both cases the difficulty arises through the movement of coal by rail from shipment areas.

57. We understand that the Midland (Amalgamated) District is 100,000 tons per week below its target figure. If this target could be reached and the tonnage which the railways are now required to carry from South Wales and Northumberland and Durham to inland destinations could be correspondingly reduced, rail transport difficulties could be eased considerably. Furthermore, the present day difficulties in respect to wagon supply would be greatly alleviated, in view of the shorter haul, and the fact that the empty wagons will not be required to pass through the bottlenecks to the extent at present necessary. A further saving would be effected in engine power and trainmen, both of which factors are causes of railway trouble, owing to the excessive demand on them.

GENERAL

58. At our request the Departments concerned have undertaken a special examination in relation to South Wales of a statement prepared by the Railway Executive Committee containing details of regular and substantial flows of foodstuffs and other traffics which, prima facie, incur unnecessarily long haulage. The object is to see if these rail hauls can be eliminated or reduced either by re-allocation or transference to other forms of transport.

59. In particular, we have in mind the possibility of making greater use of the Severn and inland navigations for distribution to the South Midlands.

60. We have not referred specifically to road transport because we agree that it should not normally be used for the long hauls involved from South Wales into England. It may be that our further enquiries will show some traffics that can profitably be transferred to road transport which, in any

case, remains a form that can be called on in emergency particularly to clear congested points. We recommend, however, that the fullest use be made of army road vehicles working in convoy; this system was used successfully last winter from Mersey ports.

CONCLUSION

61. This is an interim report. It is both an appreciation of the present transport situation in South Wales and a record of suggestions for improving it.

62. While thought has been and is being given in different quarters to particular aspects of the problem, our Report represents, so far as we know, the first review of the problem as a whole.

63. As an appreciation it is rough and ready. We would have preferred a more scientific and detailed approach. We would have liked, for example, to have obtained from the railways the estimated wagon capacity (both inward and outward) of all four lines—both now and when the improvements are completed. Similarly we would have liked to have had from Departments an analysis of their more important traffics showing estimated tonnage or wagon loads. All this would have occupied time and energy which, in our opinion, was better spent in the immediate objects of simultaneously preventing deterioration and securing improvement in a serious situation. Moreover, circumstances may have altered radically before the completion of a detailed enquiry and leave the result out of date and ineffective.

64. We do not claim that our suggestions are new, but we feel that they—and any others that may be made—should be kept under constant review by all Departments. The rejection today of a particular proposal does not necessarily involve rejection for all time.

65. A certain amount has been done since our appointment and other action has been initiated as a result of our meetings; we do not feel justified in delaying presentation of this Interim Report until this action has reached a more advanced stage. It is our intention to submit by the end of January a further report indicating progress.

66. We cannot yet say if our various suggestions, and the additional railway facilities which have been or are being provided, will result in equilibrium between actual supply and demand but, even if they do, there is still the problem of potential demand of new import traffics through the ports. Apart from this, internal traffic may be increased by increased production from South Wales factories. Sooner or later we may have to face the complete cessation of non-essential traffic and possibly a reduction in the movement of certain types of coal into England.

67. The war effort in South Wales cannot reach its maximum without the freest possible movement of traffic in and out of the area. Most of this must go by rail. It is futile to blame the motor for failing to move a gross overload. We recognise what the G.W.R. have done, are doing, and propose to do. But that does not mean that the machine cannot be still further tuned-up to give greater output. We make this observation, not because we have in mind any specific short-coming, but on the general principle that every machine and organisation is capable of improvement.

SUMMARY

- (i) Demands on available rail transport in South Wales materially exceed supply. (para. 2.)
- (ii) The use of ports in South Wales is deliberately restricted because of transport difficulties; the potential traffic through these ports is enormous. (para. 7.)
- (iii) Two main sources of help (a) increased rail facilities; (b) reduction of demands on them. (para. 10.)
- (iv) Considerable number of new works completed or in course of early completion. (paras. 11–15.)
- (v) Number of different arrangements made to improve traffic working. (paras. 16–23.)
- (vi) Coal traffic: (a) increase in movement out of South Wales largely responsible for present difficulties; (b) *Recommendation*—Mines Department to give special attention to full loading of wagons. (para. 20.)
- (vii) Empty trains: *Recommendations*—
 - (a) Supply and War Transport to examine proposal for utilising a greater proportion of imported iron ore in steel works in South Wales (para. 21);
 - (b) G.W.R. to give special and continuous attention to back-loading. (para. 22.)
- (viii) Through-through trains: little chance of reduction. (para. 23.)
- (ix) Passenger trains: Minister is considering question of reduction. (para. 25.)
- (x) Manpower: G.W.R. negotiating with Unions on points of difficulty. (para. 27.)
- (xi) Locomotive power: Shortage of locomotives probably a more serious limiting factor than line capacity. R.E.C. reviewing possibility of giving relief. (para. 28.)
- (xii) Ministry of Supply: Many steps have been taken to secure economic movement of certain traffics; other traffics under consideration. (para. 30.)
- (xiii) Ministry of Food: *Recommendations*—Food and War Transport to examine practicability of (a) arranging for import into South Wales ports of foodstuffs in such quantities as will reduce to minimum the amount passing through area to destinations outside; (b) finding alternative source of supply of potatoes now railed from East Anglia. (paras. 39–40.)
- (xiv) War Department: *Recommendations*—
 - (a) War to follow up possibility of transferring more traffic from rail to coastwise (para. 42);
 - (b) more regard to be paid to points of origin of cargo sent to ports for outward loading (para. 46);
 - (c) particular attention to be paid to traffic to and from Supply Depots in South Wales. (para. 43.)
- (xv) Mines Department: Government's present plan provides for minimum of 235,000 tons to be distributed weekly to inland destinations

outside South Wales. Of this, 150,000 tons (= 300 trains) planned to go by rail; 85,000 tons coastwise. (para. 48.)

During winter, coastwise shipments in excess of 85,000 tons would give corresponding relief to rail. (para. 55.)

Principal rail operating difficulties caused by working coal out of Wales and through York. If Midland (Amalgamated) District target figure of output could be reached and relief so obtained could be spread over South Wales and Northumberland and Durham, transport difficulties would be eased considerably. (para. 57.)

(xvi) General: Special examination is being given to certain substantial and regular flows of traffics which, prima facie, incur unnecessary long haulage. (para. 58.)

Road Transport: *Recommendation*—fullest use should be made of Army road vehicles working in convoy. (para. 60.)

11th December, 1941

APPENDIX XIX

Central Transport Committee Second Report of Allocation of Traffic Sub-Committee North East Area Traffic

The Sub-Committee was appointed 11th November, 1941 with the following remit:

To consider areas where acute and prolonged traffic difficulties exist and, by allocation or otherwise, to relate traffic demands to available transport facilities.

2. Having presented our Report (11th December, 1941) on traffic conditions in South Wales, we directed attention to the difficulties of the L.N.E.R. on the North East area where restrictions on the acceptance of traffics on rail are frequent in varying degrees of severity.

CHARACTERISTICS OF AREA

3. The traffic in this area falls into two categories:
 - (a) that into and out of the highly industrialised region lying roughly within lines joining Newbiggin, Morpeth, Hexham, Consett, Bishop Auckland, Darlington and Redcar;
 - (b) that passing through this region in transit between Scotland and the remaining parts of England.
4. The main rail routes feeding this industrial region are:
 - (a) Berwick
 - (b) Carlisle
 - (c) Stainmoor (Darlington–Tebay)
 - (d) Northallerton.

5. The *Berwick* route is part of the Anglo-Scottish traffic artery. That via *Carlisle* is a link with the West of Scotland (including Clyde) and with the industrial area and port in West Cumberland. The *Stainmoor* route is of secondary importance only because of limitations of gradients and weak bridges. The *Northallerton* route carries the heaviest volume of traffic and, with its various ramifications, formed the main subject of our enquiries.

6. We have, therefore, concentrated attention on freight train running over the main line Northallerton–York and the alternative route Northallerton–Harrogate which bypasses York.

7. Because of the Cleveland Hills and the Pennines there can be no other rail outlet to the South of a practicable nature and able to cope with the volume of traffic offering. Although some relief can be given by the Midland and West coast routes for traffic passing through the area, they are so fully taxed that no regular help can be expected from them.

8. We have assumed that if the Up traffic is working satisfactorily, the Down traffic will follow suit.

ROADS, CANALS, PORTS

9. Road access is good. The main artery—Great North Road—passes

through the heart of the area from Doncaster to Berwick; there are many excellent subsidiary roads.

10. Canals and inland waterways North of York do not come into the picture.

11. The only other source of relief to the railway is to be found in the ports from Blyth to Hull. Their potential relief is twofold: (a) the shortening of rail haul by landing imports in the industrial area which consumes them; and (b) the use of coastwise shipping.

12. A clear distinction must be drawn between the hinterlands of Hull and those of the Tees, Wear and Tyne.

13. Cargo discharged at Hull but destined for the Tees (or vice versa) must pass over the York–Northallerton route. Hull should be regarded as the port for the East and West Ridings and any other areas to the South or in the Midlands that can be reached conveniently from it. The Tees, Wear and Tyne ports should be regarded as serving primarily the great, and largely self-contained, industrial area behind them.

CHARACTER AND FLOW OF TRAFFIC

14. There have been marked changes since outbreak of war. (In the following notes traffic from the port of Hull is excluded as it does not materially affect the York–Northallerton main line.)

15. The peace-time characteristic of the north-eastern area was short-distance haulage—particularly coal from Northumberland and Durham for outward shipment, and raw materials to works on Tees-side and other industrial centres.

16. Broadly speaking, the main line was not over-taxed. The chief long-distance traffic was semi-finished steel and iron from Tees-side, imported timber from West Hartlepool, and export traffic to Middlesbrough. There was also a small (but regular) traffic in ironstone from Northamptonshire to Tees-side, and through traffic between Scotland and the Midlands and South of England. A number (40 daily in 1939) of express goods trains were run for meat, perishables and urgent warehouse traffic.

17. This peace-time traffic flowed in fairly regular quantities on well-defined routes enabling freight trains to be worked to a regular pre-arranged schedule—additional trains being run as required. These operations were well within the resources of engine and manpower.

18. The area was—and still remains—predominantly a producing area; the flow of loaded traffic out is much heavier than in the reverse direction.

Since the outbreak of war, the short-haul traffic has diminished greatly—particularly coal for shipment and the import of general merchandise. On the other hand, the main line traffic has increased by 70 per cent.; most of this is worked via York but some is diverted via Harrogate.

19. The largest single item in this increase is coal for the South of England and Lancashire—which has varied roughly from 150–200 trains a week. Broadly, 40 per cent. of this goes to Lancashire and the balance to stations South of York. In pre-war days there was no movement of coal by rail from Northumberland and Durham to the South. The present difficulties of working this traffic are mentioned later (para. 52).

20. The substitution of home-produced for imported ore has resulted in a heavy traffic northwards over the main line; most of this comes from Northamptonshire and Oxfordshire. The number of trains for Tees-side, Consett and Scotland is said to be about 75 a week; they are heavy and frequently require two engines. In our First Report (para. 21) we recommended examination of practicability of using a greater proportion of imported ore in South Wales. If this is technically practicable and if our recommendation is developed, we draw attention to the need for considering possible repercussions on rail transport in the North East area and other parts.

21. There is a substantial volume of through traffic in both directions between Scotland and the South, e.g. Government stores, imports from Clyde, and the heavy seasonal traffic in seed potatoes from Scotland.

22. Not only has the volume of traffic hauled over the main line increased, but the change in the type of traffic has resulted in slower movement. We are informed that the bulk of the traffic now handled in the area is not such as can be carried in continuous braked stock and that the fast braked train service on the main line has practically disappeared; slow moving traffic tends to predominate.

TRAFFIC ROUTES

23. As mentioned (para. 6), we decided to regard the Northallerton–York main line section (with the associated Harrogate route) as the yardstick for measuring the railway difficulties.

24. The diagram at the end of this Report shows that the Up traffic consists of two main streams (*a*) from the North, and (*b*) from Tees-side which converge at Northallerton.

25. All this traffic (except that which can be diverted at Northallerton to the Harrogate route) has to pass over the Northallerton–York main line and through the York bottleneck.

26. South of York, the traffic spreads over four different routes via Doncaster, Pontefract, Normanton and Leeds.

27. The L.N.E.R. informed us that, as a result of their efforts to make through loads, 63 per cent. of the freight trains passing through York are through trains only stopping at York to change crews and engines and for examination of wagons and load.

28. As much traffic as possible is sent via the Harrogate route by which it can be taken to the Great Central Line, and to the Normanton and Leeds routes—thus bypassing York. But the Harrogate route is expensive in engine power; because of gradients the maximum load is 32 per cent. less than on the York route.

VOLUME OF TRAFFIC

29. Of the total southbound traffic, 28 per cent. is now passing via Harrogate route, and 72 per cent. by the Northallerton–York line.

30. The L.N.E.R. produced figures showing the number of trains (passenger and freight) passing weekly over these two routes during four

weeks (ended 28th June, 1941) in summer, and four weeks (ended 15th December, 1941) in winter. The totals by both routes are:

	<i>Passenger</i>	<i>Freight</i>	<i>Total</i>
Summer . . .	294	722	1,016
Winter . . .	282	796	1,078

31. We were struck by the fact that the number of trains in the summer period is substantially lower than during the winter period.

The explanation given us—and we do not doubt its accuracy—is that during the winter period both routes were working to capacity but that in the summer, the relatively light traffic was due partly to the fact that convoy coal was not available in such large quantities as in later months, and partly to the absence of heavy seasonal traffics (e.g. sugar beet, fertilisers and seed potatoes) which move in the winter months.

TRAFFIC FROM SCOTLAND

32. The volume which can be worked over the L.N.E.R. main line to destinations South of York is governed by the capacity of the section Edinburgh–Newcastle via Berwick.

33. Although as many as 32 freight trains a day have been run on occasions, we were informed that it would be unwise to base any calculations on a higher figure than 26.

34. A very limited use can be made of the route via Riccarton, Hexham and Newcastle. This is a single line with severe gradients—capacity not more than two trains a day.

35. The L.N.E.R. place the total capacity of these two routes at about 200 trains a week; this number is now being run, about half the traffic conveyed is for South of York.

36. Traffic in the Up direction is of a general nature. There is a very fluctuating import traffic from the Clyde averaging rather over 3,000 tons a month (say 15 or 16 trains) but sometimes reaching as much as 1,500 tons a week.

37. The important seasonal traffic in seed potatoes is estimated this season to put 100,000 tons on the East coast rail route for York and stations south thereof; the bulk goes to East Anglia. Of this quantity about one-quarter has already passed leaving about 75,000 tons to be railed before the end of April over this route. This traffic is substantially less than normal owing to the fact that the Ministry of Food in consultation with the Ministry of War Transport have arranged for approximately 100,000 tons of the seed potato crop to be transported coastwise to destinations in England and Wales.

NOMINATED LOADING

38. Among measures taken to increase the amount of trainload working of specified commodities, so as to avoid intermediate shunting and so relieve yards such as York, special mention was made of fertiliser and Durham coke.

39. Between 5th February and 13th December, 1941, 175 full trainloads of fertiliser were forwarded from Haverton Hill to breaking up points

in all parts. This was done under a programme agreed with I.C.I. and the other railway companies.

40. About 15,500 tons of Durham coke, which used to be sent as odd consignments, are forwarded weekly to various parts of the country. By arrangement with the producers, about 64 per cent. of this is now worked in trainloads to distant yards. This is additional to the convoy arrangements.

41. We recommend the continued examination of the application of similar methods to bulk forwardings of other traffics, e.g. semi-finished iron and steel, pitwood.

COAL CLASS TRAFFIC

42. The normal weekly outputs of saleable coal in Northumberland and Durham and the approximate distribution required in the winter months are indicated below:

	<i>Output Tons</i>	<i>Consumed in Divisions Tons</i>	<i>Export and Foreign Bunkers Tons</i>	<i>Northern Ireland Tons</i>	<i>Coastwise Tons</i>	<i>Rail Tons</i>
Northumberland	222,000	337,500	77,200	5,000	210,300	105,000
Durham . . .	513,000					
Total . . .	<u>735,000</u>					

43. Rail distribution is arranged under a system of convoy trains the main principles of which are:

- (a) Trainloads are as far as possible run direct from one pit to one consumer, either daily or at other suitable intervals.
- (b) Where a full trainload for one consumer is not required trainloads are made up at one colliery for a group of consumers served by a common marshalling yard near the point of distribution. The marshalling yards near the point of production are thus short-circuited.

44. In September 1941, the agreed programme of convoy trains from the North East coast was fixed at 223 trains (111,500 tons) a week.

45. The trains are allocated approximately as shown below:

Gas Undertakings.	. . .	43 per cent.
Electricity . . .	. . .	25 per cent.
Industrial . . .	. . .	32 per cent.

46. In consequence of rail congestion the full programme of 223 trains was reduced on the 10th November to 200 trains (100,000 tons) a week and further reduced to 175 trains (87,500 tons) a week on the 17th November.

47. Since the 10th November the required distribution of approximately 315,000 tons a week to be effected by coastwise shipment and rail has been maintained only by increased coastwise shipments which during November averaged 210,300 tons a week, and by stocking in Government dumps in the coalfield areas. In more recent weeks the train programme has fallen well below 175 trains and here again the deficiency in rail

transport has been made good only by increased coastwise shipments and the use of Government dumps.

48. Distribution by coastwise shipping direct from Northumberland and Durham and via Cumberland ports has been arranged to the maximum extent possible, within the limits of shipping available.

49. In considering the tonnage to be distributed from Northumberland and Durham it is relevant to mention the general supply position. The total weekly output from all areas, which is now approximately 4,200,000 tons, is insufficient to meet all present demands.

50. In our report on the South Wales transport problem we mentioned (para. 50) that demands on coal for war production are increasing. The extent of this increased demand may be gauged by the fact that in 1942 it is estimated that coal consumption for electricity will increase from 19,735,000 tons to 23,250,000 tons (an increase of 17·8 per cent.) and for engineering and allied industries from 4,702,000 tons to 6,005,000 tons (an increase of 26·1 per cent.) compared with 1941.

51. To meet increased demands in 1942 the present level of production in Northumberland and Durham must at least be maintained. Provided that coastwise shipments are maintained at or about the present level, and there is certainly no indication of improving on present performance, a convoy train programme of not less than 200 trains a week will be required.

52. Coal traffic has an important bearing on our problem, as it represents about one-third of the total freight traffic on the York section.

53. The conveyance of coal from the Northumberland and Durham coalfields to large industrial consumers in the South of England commenced in January 1940 as a result of the restrictions on coastwise shipment. The number of trains grew steadily until the highest level was reached in the week ending 13th October of 217 trains. As mentioned above (para. 46), the programme had to be substantially cut during November as with the shorter period of daylight working difficulties occurred, resulting in serious congestion on the main line and interference with the flow of other essential traffics, such as steel traffic from Tees-side. The number of trains run in recent weeks varied from 150 to 173.

54. Supplies are drawn from Northumberland and Durham roughly in the proportion of one train to three. Destinations vary, but the main areas supplied are Lancashire, the Midlands and South and East of England. Broadly 40 per cent. of this coal goes to Lancashire.

55. Trains originating in Northumberland are worked over lines not used to capacity in Newcastle and Leamside, reaching the main line from Newcastle to York at Ferryhill. Trains originating in mid-Durham also reach the main line at Ferryhill, except three which are booked via Stockton and Northallerton.

56. Trains from the coastal area in Durham run via West Hartlepool through the heavily worked section on Tees-side and join the main stream of traffic at Northallerton. All the trains run over the main line to York except for a small diversion of two or three trains per day at Northallerton

to the Harrogate route. These ultimately reach Lancashire via Otley and Skipton or via Leeds.

57. After reaching York the stream divides and 32 per cent. pass via Doncaster, the remaining 68 per cent. passing via Pontefract, Normanton or Leeds.

58. This coal, after being loaded at the collieries in side-door requisitioned wagons, is made up into trains of 50 wagons except that for Lancashire where the load is 46 wagons. Whenever possible the trains are hauled by through engines direct from the colliery as far as York. Here they are halted for examination and change of engines and crews before proceeding to the next stage of their journey. Where through trainloads cannot be made up at the colliery, the traffic is hauled to a neighbouring concentration point from which a through load can be made up.

59. All convoy trains are worked in the north-eastern area on booked paths to a regular timing. The speed averages 20 miles per hour.

60. Each loaded train involves the running of a corresponding load of empty wagons in the reverse direction. The L.N.E.R. stated that the supply of these empties, involving a long haul from the unloading point, is a frequent source of anxiety and delay.

61. This coal traffic is a war development and at times impedes the movement of other essential traffics. For example, we were informed that there is at present about 20,000 tons of finished or semi-finished steel lying in stock on Tees-side owing largely to the L.N.E.R.'s inability to carry it over their line.

REDUCTION IN PASSENGER TRAINS

62. The L.N.E.R. informed us that since September 1939, the number of passenger trains running on the main line has been reduced by 47 per cent. in summer and 23 per cent. in winter. The larger reduction in summer is due to the curtailment of holiday traffic. We understand the reductions have resulted in appreciable advantage to freight working.

63. We make no recommendation as to further reductions as we understand the Minister is dealing with the matter.

LOCOMOTIVES

64. The L.N.E.R. stated that they suffer from a shortage of locomotives. This shortage is due to reasons that are well known and affect all companies.

65. We have not yet learned the result of the review of engine power undertaken by the Railway Executive Committee at the Minister's request (see para. 29 of our First Report).

NEW WORKS

66. To facilitate movement of traffic, certain improvements have been carried out; others have been authorised; and others of magnitude are being submitted for authorisation. They consist of additional loops, lines and reception facilities.

67. We have not examined these schemes in detail—nor do we feel

competent to do so. But we recommend that any proposal that will help to speed up traffic movements should be pressed on as quickly as possible in view of the situation generally and the probable reduction in coaster tonnage (para. 77). We recommend that the traffic aspects of such improvements be given the same consideration as that given to the supply of the necessary labour and material. Further, we recommend that War Transport should at an early date submit a progress report to the Central Transport Committee.

LINE CAPACITY FOR FREIGHT TRAFFIC

68. We asked the L.N.E.R. to give us information as to line capacity for freight traffic. They put in the note reproduced below:

'In the following calculation of the capacity of the line it has been assumed—

- (a) that the stock of locomotives remains roughly the same as now;
- (b) that the number of enginemen and guards and their willingness to work long hours and a seven day week does not vary substantially;
- (c) that the new works schemes help our position next summer and autumn;
- (d) that the number of passenger trains including troop specials remains at the same level;
- (e) that the abnormal interferences from weather, and derailment and enemy action will be the same.

A datum line has been found for each line giving the normal reasonable capacity. The number of trains worked this year less than the datum line represents the spare capacity.

On the line from Northallerton to York the datum line is taken as

(a) November to March . . .	570 trains a week
(b) April to October . . .	595 " " "

Applied to the actual figures of trains run in 1941 the datum lines give us:

1941	<i>Northallerton—York</i>		
	<i>Datum line</i>	<i>Actual (av. per week)</i>	<i>Below datum, i.e. reserve capacity</i>
Nov. } Dec. }	570	576	6 above 3 ¹
May	595	554	41
June } July } Aug. }	595	518	77
Sept. } Oct. }	595	594	1

¹ Excludes two weeks with long periods of fog.

On the Northallerton–Harrogate line the same calculations give:

1941	Average Number of Trains run a Week		
	Datum line	Actual (av. per week)	Below datum, i.e. reserve capacity
Nov. } Dec. }	220	220	— ¹
May	230	226	4
June } July } Aug. }	230	210	20
Sept. } Oct. }	230	229	1

¹ Excludes two weeks with long periods of fog.

Put together, the figures for both routes are:

1941	Average Number of Trains run a Week		
	Datum line	Actual (av. per week)	Below datum, i.e. reserve capacity
Nov. } Dec. }	790	796	6 above ¹
May	825	780	45
June } July } Aug. }	825	728	97
Sept. } Oct. }	825	823	2

¹ Excludes two weeks with long periods of fog.

The utilisation of the spare capacity of 45 trains per week in May and 97 trains per week in June, July and August will no doubt be a matter for consideration. If it is decided that the opportunity should be taken to increase the volume of convoy coal, it is suggested that to the extent to which current output is not maintained, coal might be drawn from the dumps now being established in the coalfields.⁹

69. An approximate balance sheet of supply and demand can be given conveniently in terms of wagons: the *capacity* of the two lines (York and Harrogate) is put at 5,000 wagons per day; the *demand* is estimated at 5,500 wagons per day.

70. A rough allocation of this demand is:

Supply	.	.	.	1,350
Mines	.	.	.	1,850
Food	.	.	.	400 (excluding Seed Potatoes)
W.O.	.	.	.	150
Miscellaneous	.	.	.	1,000
Empties	.	.	.	750
				<hr/>
Total	.	.	.	<u>5,500</u>

71. It will be seen that this figure is 500 above what has been stated to be the maximum capacity of the line; approximately 350 of this excess is due to the stated extra requirements of the Mines Department. It is clear from the foregoing that this requirement can only be met at the expense of and to the detriment of other highly important traffic and that even if this requirement is dropped, the capacity of the line is being strained to the utmost to meet the needs of other Departments and of the general public.

72. Of the 5,000 wagons which these lines can take, approximately 650 to 750 will be from the Scottish area. This figure is apt to fluctuate considerably at times as a result of heavy arrivals of imports in the Clyde, forwardings of seed potatoes and other seasonal traffics from Scottish stations and for a variety of other reasons, such as diversions from the L.M.S. line.

CONCLUSION

73. In the previous paragraphs, we have summarised much of the information given by the L.N.E.R. representatives who contributed so much help during our discussions.

74. The general conclusion we reach is that the main difference between the problem in South Wales and that in the North East area is one of degree. The traffic congestion in the area exists but not to the same extent as in South Wales. It seems to us that whilst in the North East the demand for transport is almost always in excess of the supply, the margin is usually narrow but rapidly becomes wider either as a result of seasonal or local additional demand or difficulties in supply, with the resultant slowing down of movement and the imposition of restrictions on acceptance of traffics.

75. There are two ways to increase line capacity (*a*) physical improvements; and (*b*) more effective use of available capacity. We have already mentioned (*a*). As to (*b*) we do not doubt it can be improved, but we think it right to add that the general impression left in our minds is that the standard of railway operation in the area is good.

76. There seems little scope in this area for re-allocation of traffic from rail to other forms of transport. The restricted use of the North East coast ports is not due to inland transport difficulties but to other factors that are well known. There is, therefore, little hope of shortening hauls by depositing imports on the doorstep of the works requiring them.

77. Coastwise shipping is fully occupied on the southbound route and can give no relief. Indeed, we have reason to believe that a substantial reduction may shortly be expected in available coaster tonnage.

78. The development of the longer hauls is due mainly to heavy bulk commodities for which road transport is not suited.

79. In the case of the North East coast, therefore, we are forced to conclude that demand on available transport facilities must be reduced to questions of rationing and priorities.

80. The chief trouble is coal. The normal weekly output from Northumberland and Durham available for disposal elsewhere is about 315,000 tons. Of this, coasters are carrying some 210,000; the balance of 105,000

tons is left for rail conveyance. As already mentioned (para. 51) this requires a convoy train programme of not less than 200 trains a week. The actual number of trains running has fallen below 175 a week.

SUMMARY: CONCLUSIONS AND RECOMMENDATIONS

- (i) From inland transport point of view, the peace-time characteristic of the area was the short-haul by rail; this has diminished greatly; main line traffic has increased by 70 per cent.; largest single item causing increase is coal. (paras. 15–20.)
- (ii) Change in type of traffic handled over main line has resulted in slower movement. (para. 22.)
- (iii) The yard stick for measuring rail traffic problems in area is the main line section Northallerton–York (with the alternative route via Harrogate). (paras. 6, 23.)
- (iv) Capacity of this section is about 5,000 wagons a day; demand on this capacity estimated at 5,500 wagons a day. (para. 69.)
- (v) Relief to railway cannot be found from coaster, road or inland waterway. (paras. 9–13, 77, 78.)
- (vi) Line capacity can be increased by (a) physical improvements, and (b) more effective use of existing capacity. (para. 75.)
- (vii) Physical improvements: *Recommendations*—
 - (a) any proposal that will help to speed up traffic movement should be pressed on as quickly as possible;
 - (b) traffic aspects should be given same consideration as that given to supply of necessary labour and material;
 - (c) War Transport should submit, at an early date, progress report to Central Transport Committee. (para. 67.)
- (viii) Use of available line capacity; can be improved but general impression gained is that present standard of operation is good. (para. 75.)
- (ix) Nominated loading: *Recommendation*—continued examination of this method of bulk forwarding should be given to commodities (e.g. semi-finished iron and steel, pitwood) to which the practice has not yet been applied. (para. 41.)
- (x) Passenger trains: substantial reductions already made with appreciable advantage to freight working. (paras. 62–63.)
- (xi) Locomotives: shortage reported; result of review by R.E.C. of engine power not yet known. (para. 65.)
- (xii) Coal (paras. 42–61): this constitutes the largest single item in the increase in main line traffic (para. 19); it represents about one-third of the total freight traffic on the York section (para. 52); it is a war development and at times impedes the movement of other essential traffics (paras. 61, 71); the tonnage of railborne coal is below the target aimed at (paras. 44–47, 51, 80).
- (xiii) General conclusion: the demand on available transport facilities must be reduced to questions of rationing and priorities.

9th January, 1942

APPENDIX XX

Arrivals of tankerborne petroleum products, 1939-1944

		<i>Weekly averages</i>			
		<i>Thousand tons</i>	<i>Thousand tons</i>		
1939	. . .	163·0	1942 . . . 201·1		
1940	. . .	215·2	1943 . . . 285·7		
1941	. . .	259·7	1944 . . . 393·0		
1942	January	220·4	1943	January	149·6
	February	252·9		February	236·6
	*March	147·3		*March	197·7
	April	217·3		April	278·4
	May	119·8		*May	262·6
	*June	167·6		June	372·9
	July	239·8		July	408·8
	*August	180·6		*August	325·8
	September	270·5		September	412·6
	October	173·9		October	297·9
	*November	197·5		*November	269·3
	December	253·0		December	238·1

* Average of five weeks.

APPENDIX XXI

Tyres (including repair materials)

Civilian Requirements, Materials Committee allocations from United Kingdom sources and actual usage from United Kingdom sources

(Long tons crude natural rubber equivalent)

	<i>Civilian requirements</i>	<i>Materials Committee¹ allocation (from United Kingdom sources only)</i>	<i>Actual usage¹ (United Kingdom sources only)</i>
1942			
1st quarter . .	8,863 ²		5,980 ³
2nd quarter . .	5,250 ⁴	5,000	
3rd quarter . .	5,075 ⁵	5,000	13,090
4th quarter . .	5,075 ⁵	5,000	
Total 1942 . .	24,263		19,070
1943			
1st quarter . .	5,075 ⁵	4,500	4,146
2nd quarter . .	5,075 ⁵	4,500	4,134
3rd quarter . .	5,075 ⁵	4,250	4,679
4th quarter . .	4,700	4,700	5,012
Total 1943 . .	19,925	17,950	17,971
1944			
1st quarter . .	7,625	6,773	5,341
2nd quarter . .	6,413	5,800	5,636
3rd quarter . .	5,918	4,763	5,316
4th quarter . .	6,222	5,400	6,045
Total 1944 . .	26,178	22,736	22,338
1945			
1st quarter . .	7,862	6,000	5,519
2nd quarter . .	8,464	6,100	6,076
3rd quarter . .	8,491	6,600	6,791

¹ This does not include rubber exported from North America for British use, which averaged about 15,000 tons a year for all requirements (Service, civilian and export) from 1942 onwards, and is in addition to the allocations and usage shown here.

² Indicates current usage before control.

³ Quarterly rate based on 4 weeks actual consumption in February.

⁴ Based on 21,000 tons per annum claimed by Minister of War Transport.

⁵ Moyne Committee figures.

APPENDIX XXII

Tonnage Employed in Coasting and Short Sea Trading (Cargoes other than coal)

Tramps and Liners

<i>Cargo</i>	<i>d.w.t. employed at 15th December, 1942 (000's)</i>	<i>d.w.t. employed at 15th June, 1943 (000's)</i>
(a) Grain and flour	10·4	14·3
(b) Wool	—	—
(c) Iron, steel, iron ore, scrap	35·6	38·3
(d) Pulp (wood and paper) and newsprint	—	0·5
(e) Timber and lumber	23·5	26·9
(f) Cement	35·2	29·2
(g) Fertilisers	11·2	14·8
(h) Potatoes	30·4	4·8
(i) Cotton	—	13·2
(j) Copper, lead, zinc, spelter	—	8·0
(k) Oil seeds and animal foodstuffs	6·9	11·3
(l) Sugar	18·1	5·8
(m) Clay	1·9	1·1
(n) Sand, chalk, stone	9·2	10·1
(o) Tea	—	2·9
(p) Other cargoes and mixed general cargoes	166·6	171·7
TOTAL	349·0	352·9

Source: Ministry of War Transport Coastal Shipping Employment Returns

CHAPTER XII

RATIONALISATION OF GOODS TRANSPORT

(i)

Early Developments

CONFRONTED on the one hand by steadily growing demands for inland transport and on the other by a succession of limitations on the amount of inland transport that could be supplied, the Government was impelled, from 1941 onwards, to explore every possible means of economising transport. The present chapter describes the main stages in the development of the Government's policy of rationalisation of goods transport.

Rationalisation of goods transport in war-time had first received serious consideration in connection with motor fuel economies. In a number of places early in the war, the organisation of road haulage into groups had produced some small-scale rationalisation schemes, mainly in the field of retail distribution. But only a few existed up to 1941. It will also be recalled that, as early as March 1940, the Civil Defence Committee of the War Cabinet had invited the Minister of Transport to investigate whether adjustments in railway charges might encourage traders to avoid unnecessarily long hauls, but that this was not found to be practicable. Instead, it had been hoped that transport economies might be achieved by the exercise of powers or pressure by Government departments which controlled the distribution of goods¹ and, by the summer of 1941, some Departments were able to report progress. The War Office was using locally-produced steel for railway construction; the Mines Department had made a start towards reducing the number of varieties of coal; something had been done towards rationalising the distribution of cement and bricks; the Ministry of Food had from the beginning of the war controlled the distribution of meat and was extending its control to other commodities.

Yet these small economies only touched the fringes of what was a large and complex problem. It emerged in the early discussions of the Central Transport Committee that the policy of leaving matters to individual Government departments would not produce the

¹ See above, p. 139.

drastic changes needed to achieve a worthwhile measure of transport economy. Moreover, progress had been hampered by the general policy of placing Government contracts on the basis of accepting the lowest tender. In this respect, the Government had been violating the precept it had given to the railway companies, that the most economical use of resources and not the saving of money should be the guiding principle to be followed in war-time. In May 1941, therefore, the Ministry of Transport, supported by the principal transport-using Departments, asked the Treasury to authorise Departments to place contracts with the nearest available source of supply, even if this cost more, and also, when arranging the movement of goods, to use the most suitable and not the cheapest form of transport; it was particularly hoped to transfer some traffic on to the under-used canals. After some discussion,¹ the Treasury agreed that future competitive tendering for materials for any particular known destination should be confined to firms on an 'approved list' within a reasonable distance from that district. Controllers of raw materials were also to be asked to allocate them with transport in mind. Area Transportation Officers of the Ministry of Supply were to advise contractors on the use of the most suitable form of transport for the movement of their goods and, if cost proved a difficulty, 'any fair and reasonable cost extra to a contract' would be met by Departments. It was left to the Ministry of War Transport to take the initiative with the user Departments in getting this policy carried out.

It would be difficult to assess how much transport was saved as a result of these elaborate instructions to Departments. A welcome sign, however, was the increase in 'transport-economy mindedness' displayed by the Departments represented on the Central Transport Committee. This presaged the emergence of transport rationalisation on a bigger scale than hitherto. Indeed, the easiest movements to rationalise were precisely those large-scale movements of commodities at the raw material and pre-manufacturing stage of the productive process, where Government departments were, by now, firmly in control. Control over commodity movements at the wholesale or retail stage of distribution, was generally much looser or non-existent.

The first transport rationalisation schemes, worked out during 1941, were therefore those for raw and semi-finished materials. These included cement, timber, fertilisers, bricks and seed potatoes. Demands for cement were, as far as possible, met from local sources of supply; the output of the Thames and Medway works—about one half of total production—was used to meet the needs of areas deficient in production. Movements of cement were made under a

¹ By the General Purposes Sub-Committee of the Contracts Co-ordinating Committee at the Treasury.

pre-arranged programme by rail, road, coaster and canal. Timber movements were planned so that the great increase, on account of the loss of imports, in the amount of home-grown timber and pit-wood conveyed from Scotland could make full use of the available coasting tonnage in order to reduce the strain on the railways. Similarly, seed potatoes moving from Scotland into England and Wales between September and April were planned in advance and as large a tonnage as possible allocated to coastal shipping to relieve the railways in the winter months. To avoid delays to shipping and sorting in the ports, movement by sea was confined to the three principal varieties. The schemes worked out for fertilisers (sulphate of ammonia, superphosphate, compound fertilisers and basic slag) had the object not only of eliminating unnecessary transport, but of equalising the flow of the traffic throughout the year, thereby avoiding big demands in the late winter and early spring, and of stocking in the summer months those areas likely to be the most difficult to supply in winter. In addition to these rationalisation schemes, it is necessary to record that inland transport was also helped by the fact that allocations of iron and steel were now being made with transport considerations in mind, consultations between the Iron and Steel Control and the Transportation Department of the Ministry of Supply were frequent. Iron ore movements were planned at monthly meetings of the Iron and Steel Control and the Railway Executive Committee.

The problem of rationalising the distribution of bricks may be selected for more detailed consideration. The brick industry consisted of one or two groups of large-scale producers—mainly localised in the East and South East Midlands—together with numerous small producers all over the country. The large-scale producers could compete successfully over a wide area with the local products of the smaller brickworks because of economies of scale and their consequent ability to bear a higher transportation cost. In peace-time, the brick companies preferred road transport on account of its cheapness and because it enabled bricks to be delivered direct to the site, thereby ensuring a more regular flow of delivery than by rail. After the outbreak of war, the Ministry of Transport took the view that bricks were generally suitable for movement by rail and petrol was refused for long hauls by road except in a few cases. In general, a radius of 30 to 35 miles was imposed.

Early in 1941, Departments were instructed to ensure that contractors exhausted supplies of bricks within a 50-mile radius before buying elsewhere, even if this cost more. This was not done primarily with the object of transport economy, but because certain brickworks were overloaded while others were on the point of closing down for lack of orders. In June 1941, when transport economy schemes were

being mooted, the Central Transport Committee agreed that bricks should not be consigned by rail for distances over 150 miles and, during the autumn of that year, the whole problem was further investigated. Some long hauls of bricks were regarded as inevitable, but the Ministry of War Transport believed that the transport burden could be eased by full trainload working and by organising the dispatch and reception of bricks in advance. The R.E.C. provided figures to support the argument for greater rationalisation. In the eight weeks ended 18th October, 1941, 5,891 truckloads (542 consignments) on the L.M.S. railway and 1,658 truckloads (72 consignments) on the L.N.E.R. were carried for distances of between 100 and 150 miles. 4,948 truckloads (1,786 consignments) on the L.M.S. railway and 1,228 truckloads (96 consignments) on the L.N.E.R. were carried for distances exceeding 150 miles. Of the total of 2,496 consignments and 13,715 truckloads of bricks concerned, 51 per cent. of the consignments were of one truckload only. The proper way to reduce this unnecessary haulage, the Parliamentary Secretary was advised, was not by *ad hoc* alterations, but by a proper allocation of the output of the various brickworks to the consuming areas. An elaborate rationalisation scheme was not, however, thought necessary. It was decided to make an Order¹ prohibiting, as from 1st December, 1941, the acceptance of bricks for rail transport for distances over 75 miles, unless a certificate was first obtained from a Government Transportation Officer to say that transport over a longer distance was essential. To avoid complications the Order was subsequently amended to apply only to common clay bricks. Parallel arrangements were made to see that bricks did not move by road, except for short distances. The new Order did not prevent bricks from continuing to move about in small consignments, but it did eliminate the worst cross hauls.

Valuable though these various economies were, the distribution of the heaviest single commodity carried on the railways—namely coal—could not be greatly rationalised. It has already been described how the loss of the coal export markets and the needs of some industrial areas for greater quantities of coal than they consumed in peace caused the railways to carry a greater quantity of coal to inland destinations than before the war. In 1942, the average length of haul for coal class traffic on the railways was 57·39 miles, compared with 45·21 in 1938.² Such long hauls were largely inevitable given the existing structure of the war economy. Furthermore, the scope for rationalisation was limited by the fact that particular industries required special varieties of coal.

¹ S.R. & O. 1941, No. 1959.

² *Statistical Digest of the War*, Table 166.

There were other difficulties. It was true that considerable savings in transport were being made by full trainload working and by building up stocks of coal in the summer months in those areas difficult to supply in winter.¹ But it was equally clear that any extensive rationalisation of the distribution of coal could only be properly undertaken if a more determined effort than hitherto were made to reduce the number of grades of coal supplied to domestic consumers and to re-organise the methods of working of the small coal merchants. This course of action the Mines Department was, for reasons which have been described elsewhere, reluctant to undertake. In fact, the rationalisation of the distribution of house coal from the collieries to the merchants was not pursued very far—except in certain districts—at any time during the war.² However, if all things are considered, it is clear that coal distribution was by no means easy to rationalise. One well-intentioned scheme put forward by the Mines Department in 1941 for rationalising the movement of coal out of Warwickshire had to be rejected by the R.E.C. on the ground that in eliminating one transport problem it had only created another.

It was, however, very necessary that every possible economy in the transport of commodities moving in considerable quantities should be thoroughly explored. In the autumn of 1941, investigations by Government departments and the R.E.C. produced a long list of commodities which regularly made extravagant use of inland transport. For example, wagon loads of bomb cases were being sent regularly over a difficult rail route from Ystrad Mynach in South Wales to Chorley in Lancashire,³ components for air raid shelters were moving from Glasgow, Barrow, Stafford and Brentford to Cardiff and Barry; consignments of paper were being carried from Cardiff to Glasgow and Leeds. Many of the traffics concerned came under the control of the Ministry of Supply, but it is fair to point out that the Transportation Department of that Ministry was now making considerable efforts to rationalise, as far as was consistent with production requirements, the movement of manufactured stores, such as ammunition components and containers for ammunition and explosives, and raw materials, such as waste paper, leather, wool and liquid chemicals.

¹ Coal distribution problems continued to be handled by the Executive Sub-Committee of the Lord President's Coal Committee, although the Lord President's Coal Committee ceased to hold meetings after the close of the winter of 1940-1941.

² For a discussion of all these questions see *Coal, op. cit.*, Chapter V, Section (iii) and Chapter XIX, Section (ii).

³ It was found that the bomb cases were being manufactured in South Wales because labour was available there whilst, in Lancashire, there was a labour shortage. This was essentially a problem of balancing transport against manpower needs. It was ultimately decided to move the bomb cases by coastal shipping.

Up to the autumn of 1941, the only big rationalisation schemes so far under way covered Government-controlled bulk traffics, which were the most straightforward type of traffic to deal with. Nothing had as yet been done about the movements of traffic in the three main stages of the distributive process: from manufacturer to wholesaler, from wholesaler to retailer and in the final stage of retail distribution, where long and cross hauls were still common. Most of the commodities falling into these categories were foodstuffs. For, as the Ministry of Food pointed out, cross haulage and uneconomic haulage was a characteristic of almost every branded product with a national sale and for which there was a competitive counterpart. For example, although biscuits and cakes were produced in various parts of the country, manufacturers tended to have country-wide markets, which caused considerable cross haulage, not only of the products themselves, but of returned empties. Cocoa and chocolate manufacturers at Birmingham, York, Bristol and London sold their products throughout Britain and their goods frequently passed each other in the course of distribution. There was said to be much uneconomic haulage of beer partly because the brewers in Scotland had tied houses in London. Coffee essence, potted meats, jams, jellies, breakfast cereals and custard powders were but a few of the many branded articles with national distribution entailing cross haulage. While such extravagant use of inland transport may have been justifiable in peace-time, its elimination was highly desirable in war. For, taken together, cross hauls of branded foods were thought to account for a substantial tonnage.

The wholesale grocery trade was an obvious case of extravagant use of transport, since retailers had not generally chosen their wholesalers on the ground of geographical proximity. To achieve transport savings in this field was thought to need radical re-organisation of the trade. Moreover, the whole complex field of retail distribution was known to be prodigal in its use of transport.

Thus, while the steps already taken by Government departments to rationalise their traffics were satisfactory, they left untouched the greater part of distribution. Over the field of distribution as a whole, considerable transport economies could only be expected if rationalisation were given wholehearted Government support. The Ministry of Food, in particular, wanted a joint effort by Departments to cut out waste of transport, arguing that this was not a matter for individual Departments but of Government policy. The view was generally shared by other Departments and, in October 1941, was put to the Lord President's Committee.

The proposals made to the Committee by Lord Leathers were that rationalisation of transport should be worked out on the broad principle that commodities should, where possible, be distributed in

the areas in which they were produced or into which they were imported. To do this, it would be necessary to allocate regions—or 'zones'—to each producer or importer and probably to pool distributive resources on a much larger scale than hitherto. It was not expected that such schemes could be carried through without some opposition from traders; indeed, it was largely for this reason that nothing short of concerted action with the full backing of the Government was needed. Rationalisation of distribution, Lord Leathers told the Committee, ought now to be considered not solely from the point of view of petrol economy, but with the object of making the most economical use of the inland transport system by rail no less than by road. On 9th October, 1941, the Lord President's Committee endorsed this proposal and authorised the Minister of War Transport to declare publicly on behalf of the Government as a whole that, in the national interest, all practicable steps should be taken to economise the use of all forms of inland transport. Departments were requested to review the types of traffic for which they were responsible and, while avoiding serious hardship to producers, distributors, or consumers, were to take all practicable steps to rationalise distribution. On 27th October, Lord Leathers made a public declaration of the Government's intention to free transport from all unnecessary movements by eliminating, wherever possible, cross hauls and the haulage of goods over long distances.¹

(ii)

Progress towards Transport Rationalisation, 1941-1944

Lord Leathers' announcement thus outlined the principles which the Government's new plans for transport rationalisation were to follow. But the translation of principles into practical realities was to be gradual, and not anything like complete until 1944. The gradualness of the approach to full rationalisation of distribution was partly inevitable, because effective action had to be preceded by a considerable knowledge of the facts as well as by agreement with the variety of trading and other interests concerned. It is, indeed, difficult to say precisely when many of the separate rationalisation schemes really started. In many trades, transport rationalisation schemes started in a small way and were modified, improved, or extended as experience was gained; sometimes a scheme was begun in one part of the country and extended only later to other parts. The following chronological outline of the main developments in the progress of transport rationalisation is not, therefore, a catalogue

¹ Speech by Lord Leathers at British Association of Refrigeration, 27th October, 1941.

describing in detail and setting a precise date on each and every war-time scheme.¹ By the nature of the case, transport rationalisation could not be accomplished overnight. Rather, as one official put it, like Topsy, 'it just grew'.

Yet its growth was not haphazard, but carefully induced. As soon as the Government's new policy had been announced, the Ministry of Food obtained wide powers, through the Food Transport Order of 28th October, 1941,² to control the movement of any foodstuff within the United Kingdom. The Railway Executive Committee continued its detailed investigation into cases of long unnecessary hauls and of wasteful use of transport and furnished lists for action by the Departments which controlled the traffics. Government departments redoubled their efforts to economise in transport and began work on positive rationalisation schemes. Even so, by the end of 1941, few results had been achieved. Research at the Board of Trade showed that that Department controlled few substantial traffics susceptible of rationalisation in the early stages of distribution, though there was considerable scope for economies at the retail end. Traffics controlled by the Ministry of Food offered much greater possibilities of economy and the Transport Division of that Ministry was already active in pursuing them. So far, however, mild obstruction from apprehensive trading interests, coupled with a certain initial lack of response from the Commodity Divisions, had prevented rapid progress towards rationalising food traffics. But, in any event, transport rationalisation could not be carried out quickly as was evident once Departments got down to the task of negotiating with the trading interests concerned and working out plans in detail.

Nor did the first half of 1942 provide much outward sign that rationalisation was being resolutely pressed forward. An exception was the combined campaign for the rationalisation of retail deliveries launched by the Ministries of War Transport, Food and the Board of Trade in January and given widespread publicity in the press under the slogan 'carry your shopping home'. This scheme was not intended to cover bread and milk deliveries, with which it was proposed to deal separately. In February 1942, an Order was made restricting bread deliveries to three a week,³ though nothing definite was done about milk deliveries, which were reported to be under consideration. Apart from steady progress with the rationalisation of retail deliveries during the first half of 1942, the only important schemes to become effective were those for the movement of biscuits

¹ A list of the 'zoning' schemes in force in October 1944 is provided in Appendix XXIII, p. 510.

² Food Transport Order, 1941, S.R. & O. 1941, No. 1694. See *Food*, Vol. I, *op. cit.*, p. 336.

³ S.R. & O. 1942, No. 340, 26th February, 1942.

and jam from manufacturer to wholesaler, both of which were zoning schemes introduced in February. Other minor transport economy measures introduced at this time were the simultaneous collection and delivery of laundry, restrictions on the conveyance of horses to and from race meetings, the reduction of tea deliveries from wholesalers to retailers to once a fortnight and the stopping of house to house deliveries of mineral waters.

Meanwhile the Ministry of Food had been working out a full-scale scheme for the rationalisation of wholesale groceries. It was able to announce the broad outlines in the early summer of 1942 and the measures known as the 'Sector Scheme' came into force on 24th August. The object of the scheme was to limit the distance over which deliveries of groceries might be made to retail shops and, for this purpose, the country was divided up into nine self-contained regions. Retailers and caterers were prohibited from obtaining any of the goods to which the scheme applied from outside their own sector. Since journeys of less than 40 miles, even over sector boundaries, and cross hauls within sectors were still permissible, the scheme left much wasteful transport untouched. As a saver of transport on wholesale movements, its full effectiveness depended on how quickly the Ministry of Food could push forward its plans for the rationalisation of primary distribution; that is, from producer and importer to wholesaler. It was, however, to take another year for many of these plans to mature.

The summer and autumn of 1942 brought a succession of zoning schemes and movement restrictions for agricultural and horticultural produce. These included soft fruits (fresh strawberries, raspberries, gooseberries and blackcurrants), plums, tomatoes, new potatoes, onions, apples and rhubarb. These were followed early in 1943 by similar restrictions on carrots, brocoli, cauliflower, spring cabbage and spring greens.¹ Other rationalisation schemes introduced at this time were the zoning scheme for waste paper movements² and a permit system for the movement of straw.³ The autumn of 1942 also saw the introduction of the Ministry of Food's elaborate zoning arrangements for white fish and the imposition of a ban on the movement of cut flowers from 1st November, 1942,⁴ which was to be lifted again in the following March. A voluntary scheme for eliminating cross hauls of tobacco traffic, worked out by the industry, the Board of Trade and the Ministry of War Transport during 1942,

¹ The principal Orders were: onions, S.R. & O. 1942, No. 1844; apples, S.R. & O. 1942, No. 2045; rhubarb, S.R. & O. 1942, No. 2560; carrots, S.R. & O. 1943, No. 24; brocoli, etc., S.R. & O. 1943, No. 120.

² S.R. & O. 1942, No. 2223.

³ S.R. & O. 1942, No. 2380.

⁴ S.R. & O. 1942, No. 1973.

was brought into operation at the end of that year. In spite of this significant progress, the results of fifteen months of the Government's policy of transport rationalisation still left much ground uncovered. The Ministry of Food's intensive work on zoning schemes for primary distribution had, for the most part, not yet borne fruit. The projected schemes for rationalising retail deliveries of bread and milk were reported to be making only slow progress.

During 1943, many of these schemes were completed. The early months of that year brought schemes for rationalising the movement of milk from farmer to 'first point' and at the retail end, where considerable obstacles had been encountered.¹ This period also saw further progress in rationalising laundry deliveries through the exchange of customers, restricting the frequency of deliveries and by partial zoning in some areas. Further restrictions were imposed on the movement of bricks by an Order of March 1943,² rail hauls being limited to 35 miles except under permit. The Regional Transport Commissioners kept in step by similarly restricting fuel rations for long hauls by road.

During the spring and summer of 1943, most of the Ministry of Food's schemes for the zoning of primary distribution were brought into operation. The scheme for cake and flour confectionery was introduced in April. In May followed the prohibition of direct deliveries of mineral waters from factories to houses. A new and comprehensive scheme for the zoning of biscuits and crispbreads was introduced by Order in June, under which the country was divided into 18 zones. In the same month, zoning schemes were introduced for chocolate and sugar confectionery and self-raising flour. During the summer and autumn, the scheme for rationalising beer deliveries, which had been under discussion for more than a year, was being actively pushed forward, while, in order to achieve further savings in movements of groceries, first hand distributors and wholesalers were asked to form war-time associations for the specific purpose of transport economy. Statutory zoning schemes for pickles and sauces and for cereal breakfast foods were introduced in the autumn of 1943.³ They were followed by voluntary schemes for the zoning of open packed meats and starch and dextrine. By the end of 1943, after vigorous work by the Ministry of Food and the trade, the beer rationalisation scheme was also fully working.

A few further developments followed early in 1944. A scheme for preserves was introduced by the Ministry of Food in April and later there were a number of relatively minor schemes, including cereal

¹ This is discussed below.

² The Transport of Bricks (Amendment) Direction, 1943, S.R. & O. 1943, No. 398.

³ Cereal Breakfast Foods: S.R. & O. 1943, No. 1450.

filler for sausages, cider, biscuit flour and empty biscuit tins.¹ With the approach of military operations on the continent of Europe, the Minister of War Transport was given powers in January 1944 to relieve the railways of their obligations as common carriers in respect of any particular merchandise.²

Thus, by 1944, the rationalisation of transport was an almost accomplished fact. Only a few commodities eligible for rationalisation seem to have escaped attention. Neither the distribution of tea to wholesalers nor retail deliveries of bread were seriously affected by rationalisation.³ Among several commodities controlled by the Board of Trade, such as textiles, clothing and boots and shoes, rationalisation schemes were explored, but proved unworkable. All things considered, however, the extent to which traffic movements had been rationalised by 1944 represented a considerable achievement, both administratively, and for the voluntary efforts from which they resulted.

The individual rationalisation schemes displayed no uniform pattern. They differed according to the character of the trade, according to whether it was in the hands of a few large firms or many small ones. In addition, the location of, and the degree of localisation in, the industry inevitably determined not only the precise geographical position of zones, but whether, indeed, zoning was possible at all. This was well illustrated in the primary distribution of products controlled by the Board of Trade—pottery, cotton and woollen goods, hosiery and boots and shoes. It was found that the industries producing these commodities were so highly localised that any measure of zoning based on area self-sufficiency was out of the question.

It would be difficult to frame a precise definition of the term 'rationalisation' in the context of the inland transport economies carried out during and after 1942. The term was applied to cover all of the wide variety of voluntary or compulsory schemes for saving transport, whether by planning or controlling bulk movements such as seed potatoes and fertilisers; by national or local schemes of zoning, as with cereal breakfast foods, wholesale groceries, or retail milk distribution; by the pooling of resources and exchanges of customers, as with many local retail delivery schemes; or by imposing mileage restrictions, restricting movement to specified days or the outright prohibition of the movement of commodities, as was applied to flowers and vegetables.

Rationalisation schemes were either voluntary arrangements or

¹ See *Food*, Vol. I, *op. cit.*, p. 339.

² The Railways (Acceptance of Merchandise) Order, 1944, 21st January, 1944, S.R. & O. 1944, No. 72.

³ The reasons for this are discussed in *Food*, Vol. I, *op. cit.*, pp. 339-340.

enforced by Order. An example of the former was the scheme for beer, worked out centrally by the Brewers Society in close touch with the Ministry of Food and the Ministry of War Transport, and locally by the trade, the Regional Transport Commissioners and the Divisional Officers of the Ministry of Food. The voluntary scheme for cigarettes was similarly planned by the Imperial Tobacco Company, representing the greater part of the trade, in collaboration with the Board of Trade Tobacco Control and the Ministry of War Transport. Retail deliveries were another important field for voluntary local co-operation. Other rationalisation measures had to be made effective by Order, though always, where possible, after trade associations or representative bodies had been consulted. This method was most suitable where the number of business interests was large, where individual consignors were very numerous, or where it was necessary to impose an absolute ban on specified movements.

It is impossible to provide illustrations of all the forms which transport rationalisation took and a detailed analysis of all the separate individual schemes would provide material for several volumes. Three cases only will be selected for further consideration: first, the retail distribution schemes; second, the rationalisation scheme for tobacco; third, the ban imposed on the transport of cut flowers.

The retail schemes themselves provide enough material for extensive study. Here it is only possible to examine their general content. The plan for the rationalisation of retail deliveries, initiated by the Government in January 1942, was first taken up centrally with the Trade Associations representing the interests of retailers. The detailed work was done on a Regional level through the Regional Transport Commissioners' organisation and with the help of Ministry of Food Divisional and Board of Trade Regional Officers. Officials of these organisations were asked to organise meetings and arrange publicity in support of the rationalisation of retail deliveries in their own localities. The Government, however, insisted that the initiative for rationalisation schemes themselves must come from the traders; compulsion was to be used only as a last resort. The following possible methods of rationalising retail deliveries were suggested by the Government:

1. Pooling vehicles to provide a common delivery fleet for a number of shops in the same locality. Where this cut across existing Emergency Road Transport Organisation groups, the vehicles should be re-grouped.
2. The zoning of areas, and the restriction of customers who wanted deliveries to suppliers within their zones. This might mean the exchange of customers and the breaking of registrations for rationing purposes. The Ministry of Food would arrange for this.

3. Preventing retailers from delivering outside areas of their own scheme.
4. Providing a radius from a shop within which deliveries might not be made (with appropriate exceptions for invalids etc.).
5. Restriction of the days on which deliveries might be made to nominated days. Thus groceries and provisions might be restricted to one day a week; greengroceries, fish and meat to two or three days. If this were done, care would be needed to avoid wasting drivers and vehicles on the other days of the week.

As a model scheme, the following was suggested:

Assume a shopping centre consisting of: a Co-operative Society (grocery, 1 van; butcher, 1 van); 2 greengrocers (2 vans); 2 grocers (2 vans); 1 butcher (1 van). The work performed by these vehicles might be carried out by a pool of 3 vans delivering different commodities on different days of the week.

During 1942, many rationalisation schemes for retail distribution were worked out along these general lines. As might be expected from the wide variety of districts and types of retailers over the whole country, individual methods varied considerably, but by the early summer of 1942, economies in fuel, manpower and vehicles were already being made. The retail schemes then in existence were of three main kinds: the cessation of deliveries within or outside a specific radius, the zoning of areas of delivery and the restriction of delivery to nominated days. So far, however, little headway had been made in pooling transport resources for retail deliveries, which was considered by the Ministry of War Transport to be the most effective method of getting real economies. Retailers were reluctant to pool their transport for fear of losing their individuality, while Co-operative Societies, though ready to economise in the use of their own transport, were unwilling to pool with other concerns.

Nevertheless, the progress of the retail schemes during 1942 was by no means discouraging. In London, for example, one uniform scheme was introduced in March providing for the cessation of deliveries outside a mile radius of any shop, except by pooled transport and many big stores were reported to be pooling their transport. Altogether, within six months of the first announcement of the Government's intention to rationalise retail deliveries, about 2,000 local schemes were reported to have been set up, with an estimated saving of about 6,500 vehicles, 3,700 drivers and about $3\frac{1}{2}$ million gallons of fuel a year.

As a beginning this was satisfactory. But the Ministry of War Transport, with the full support of the Regional Transport Commissioners, adhered firmly to its belief that zoning and restrictions

on the frequency of delivery, which comprised the majority of existing schemes, were only the minimum required of traders. The widespread pooling of local transport remained the aim of the Ministry's policy for rationalisation of retail deliveries, in spite of the difficulties in the way. Some of the difficulties were considerable. Particular care was needed in scattered rural communities, where tempting economies of transport could easily result in supplies being completely cut off for isolated residents. Again, while some traders opposed transport rationalisation on the alleged ground that it caused hardship to consumers, others seized on it as an excuse for stopping deliveries altogether. Most of these difficulties were ironed out in the end, though they inevitably delayed the progress of rationalisation. Nevertheless, continued pressure during 1942 and 1943 by the Ministry and the Regional Transport Commissioners stimulated many further voluntary retail schemes. Only in one town, St. Andrews, was rationalisation imposed by Order on a reluctant minority after agreement with the traders had been reached.¹ This exercise of compulsion seems to have had a salutary effect on the progress of rationalisation elsewhere.

An important development in 1943 was the introduction of the long-delayed scheme for the rationalisation of milk deliveries. The general policy of rationalisation of retail milk deliveries had been agreed early in 1942 and was outlined in a White Paper on Milk Policy in May of that year. It was originally hoped to have the schemes working in the autumn of 1942, but it was some six months to a year later before most of them started up. The causes of the delay were first, the difficulty of getting satisfactory local agreements between Co-operative and private dairymen, and second, the number and variety of individual milk rounds to be dealt with and the forms of transport used: hand prams, horse-drawn, petrol and electric vehicles. The scheme introduced in 1943 was reckoned to save some 850 vehicles—about 18 per cent. of those used for milk deliveries—and about 32 per cent. of the fuel consumed. Although the rationalisation of bread deliveries was much discussed, the difficulty of getting Co-operative bakeries to agree to a scheme of single delivery for each street and the absence of food registration for bread combined to prevent any scheme from being devised.

It is clear that most of the retail delivery schemes, like many other measures for transport economy, needed considerable time and careful thought to bring to fruition. It is also evident that many of the local schemes were not fully working until 1943, by which time the worst of the fuel and tyre shortages were over. Yet the schemes must be judged to have been successful on the whole. While many were

¹ S.R. & O. 1942, No. 901 S. 28. See *Food*, Vol. I, *op. cit.*, p. 340.

late in maturing and while there were inconsistencies (bread, for example, remained virtually untouched, while laundry deliveries were probably too tightly restricted, to judge from the early relaxation which proved necessary), altogether the retail distribution rationalisation schemes achieved substantial economies in motor fuel, vehicles and manpower, at a time when all of these things were scarce.¹

Of many successful voluntary zoning schemes, that prepared by the tobacco industry may be selected as an example.² Tobacco was one of the few commodities controlled by the Board of Trade that offered scope for economy in transport. There were three stages in the distribution process in which economies could be sought: first, in the movement of imported leaf tobacco to the manufacturers; second, in the movement of manufactured products to wholesalers; third, in movements from wholesalers to retailers. In the first stage, the American and Empire leaf tobaccos were normally cleared to depots nearest the port of import, the factories, in turn, drawing their main grades from the nearest depots. At this stage rationalisation was only possible for the special tobacco that travelled long distances for blending. The Ministry of War Transport wanted to stop these relatively small amounts on the ground that 'we [could] not afford to cater for every taste or fad in war-time'. The Board of Trade, however, was able to make out a case for these hauls, since blending was necessary not only to satisfy consumers' whims, but to produce smokable goods—cigarettes that burned at a reasonable speed or temperature.

Nor did the distribution from wholesalers to retailers provide a field for big economies in transport. This was mainly a road transport matter and was made the subject of a sample investigation by the Board of Trade. The conclusion reached was that the transport saving likely to result from limiting the number of wholesalers from which retailers might draw their supplies was small, while the manpower needed to work such a scheme would be great.

In the movement of manufactured tobacco, there was evidence of much cross haulage which, if eliminated, would save a considerable amount of transport. Two-thirds of the cigarette output of the United Kingdom was produced at Bristol and Nottingham; the remainder being carried on at such places as London, Liverpool, Manchester, Ipswich, Glasgow, Southampton and Northern Ireland. Because of this and the variety of brands, long hauls could not be entirely avoided, but interchange of manufacture between the principal producing centres could yield considerable economies. The

¹ The estimated savings are discussed later in this chapter.

² An example has been chosen from non-food traffics, since many of the food traffic zoning schemes are discussed in detail in Mr. Hammond's volume in this series.

Ministry of War Transport envisaged a scheme of zonal self-sufficiency, under which areas deficient in supplies would not export cigarettes to other areas and, in October 1942, the Imperial Tobacco Company undertook to work out a scheme with the approval of the trade. The Company showed remarkable promptitude in preparing the scheme and getting the approval of the leading manufacturers to it. While the scheme proposed did not observe the principle of zonal self-sufficiency to the letter, it was capable of immediate application and covered 89 per cent. of the trade. The Ministry of War Transport gave the scheme its approval in principle as a first step and it was brought into operation before the end of 1942.¹

The tobacco zoning scheme was not designed to be 100 per cent. perfect, but as a scheme capable of bringing immediate transport economies over the greater part of the trade. Two possibilities, the complete zoning of cigarette distribution and the complete interchange of manufacture, were rejected in favour of a scheme embodying both to a limited extent. The former possibility, which would have meant limiting the output of each factory to the smallest possible area around it consistent with supplying the whole country, might have led to the growth of a large parcel post traffic to keep people supplied with their favourite brands. Complete interchange of manufacture, on the other hand, which would have meant the manufacture of all the major brands by all the leading manufacturers, would have caused a disproportionate amount of dislocation within the industry.

The scheme adopted divided the country into eight zones and arranged for the interchange of manufacture and distribution between the three principal cigarette branches of the Imperial Tobacco Company and between the four other leading cigarette manufacturers. For example, Players would manufacture Wills' brands at Nottingham for much of Eastern and North Eastern England, whilst Wills would manufacture Players' brands at Bristol for most Western areas. As a result of interchanges of this sort, it was reckoned that there was a saving of 11½ million ton-miles per annum in the distribution of cigarettes. Pipe tobaccos, relatively small in quantity, were excluded from the scheme. This saving was equivalent to about 50 per cent. of the previous annual ton-mileage for major brands of cigarettes—that is, those covered by the scheme, or 44 per cent. of the previous ton-mileage of all cigarettes. Short of the introduction of a 'national' cigarette,² implying complete zoning, this scheme

¹ The saving likely to have been made if the Ministry of War Transport had held out for complete zonal self-sufficiency and a scheme covering 100 per cent. of the trade would have been relatively small. The loss arising from the delay which this would have necessitated would surely have outweighed the possible gain from perfection.

² Which, because of its implications for national morale, was not a matter for the Ministry of War Transport to decide, but a question of Government policy at the highest level.

went about as far as it was possible to go in the direction of transport economy. If the savings were not large absolutely, relatively the economies were very considerable. The speed with which the whole scheme was worked out and applied also represented a considerable achievement, in comparison with many other zoning schemes, which took from one to two years to bring to completion.

We turn finally to what was, perhaps, the most controversial of all the war-time transport economy measures. This was the ban imposed by the Ministry of War Transport on the movement of cut flowers in November 1942. Its consequences, unforeseen at the time, provide a useful insight not only into the working of a transport economy scheme enforced by Order under the Defence Regulations, but into the larger question of the administration and enforcement of those Regulations.

The ban on the movement of cut flowers lasted from 1st November, 1942, until the following March. The policy had its beginnings in the early part of 1942 when the Ministries of Food and Agriculture became concerned about the large quantity of traffic in flowers still passing by rail and road transport. Although the acreage of flowers was being drastically cut down, flowers could still be sent all over the country from the growing areas. Since vegetables had, in many cases, become subject to zoning restrictions and since flowers were extravagant in their use of transport facilities there appeared to be a strong case for eliminating the transport of flowers altogether.¹ In mid-1942, six special trains a day were being run for flowers for distances ranging from 20 to 30 miles in the Spalding district, and approximately 47 special vans a day were being provided for this traffic over the whole of the railway system. Officials of the Ministries of Food, Agriculture and War Transport therefore agreed to recommend that a direction should be given to the railway companies not to accept flowers for conveyance from 1st November, 1942. The Ministry of War Transport expected fairly substantial relief to the railways as a result. Flowers were a highly perishable traffic; they were difficult to handle, and caused difficulty at trans-shipment points by congesting platforms and using handling staff who could be more usefully employed on work necessary to the war. The ban was not expected to be difficult to enforce as flowers were thought to be easily identifiable. Accordingly the policy was approved by the Lord President's Committee on 5th August, 1942, and embodied in the Transport of Flowers Direction, 1942.² Instructions

¹ Many instances were given of better transport facilities being available for flowers than for vegetables. In another case it was stated that fish from Newlyn in Cornwall could not be accepted for conveyance to London as all available accommodation was taken up with flowers. Only after the Ministry of Agriculture and Fisheries had intervened was the fish given preference.

² Transport of Flowers Direction, 1942, S.R. & O. 1942, No. 1973.

were also given to Regional Transport Commissioners to refuse fuel rations for the movement of flowers by road except for short distances to local markets.

The ban duly came into force on 1st November. Before that date, the Ministry of War Transport, foreseeing a flood of increased dispatches by parcel post, had urged the G.P.O. to put a similar ban on postal movements. The G.P.O. had declined to do this, preferring an appeal to the public not to dispatch flowers by post as an alternative means of transport. It had not, however, foreseen that publicity of this kind was more likely to encourage than to deter, and it was not long before events confirmed the fears of the Ministry of War Transport. From Cornwall in November came reports of big increases in the parcel post traffic and the G.P.O. was quickly constrained to alter its views. The Inland Post Amendment (No. 4) Warrant of 16th December, 1942, put a stop to the movement of flowers by parcel post.¹

It was not long, however, before ingenious but unprincipled traders found other ways of evading the ban. Encouraged by the high prices for flowers in the London market as a result of the restriction, traders found that by using the letter post, the traffic could continue to move though in smaller packages. This traffic increased so much that special vans had to be put on to deal with it. Further reports from Cornwall showed that flowers were being packed in specially constructed suitcases and cabin trunks and carried in trains as passengers' luggage, the profits from the sale on the London market being far more than sufficient to cover the expenses of special return journeys from London to Cornwall and back. Another method of evasion was the sending of flowers in packages, the contents of which were misdeclared—as for example 'glass' or 'vegetables'.²

To stop these widespread evasions and to protect the law-abiding section of the flower trade, two further Orders were made in February 1943. The G.P.O. imposed a complete ban on the sending of flowers through the mail,³ while the Ministry of War Transport made a new Order completely forbidding the consigning or carrying of flowers on any trains whether as personal luggage or not. Genuine passengers only were allowed to carry small quantities with them, though not

¹ The Inland Post Amendment (No. 4) Warrant, 1942, 16th December, 1942, S.R. & O. 1942, No. 2548.

² It was difficult for the railways to take proceedings on the grounds of misdeclaration since to succeed in prosecution it was necessary to establish that the misdeclaration was made to avoid payment of the proper charges for the conveyance of the traffic. Where flowers were misdeclared as 'glass', for example, they were in fact paying three times the normal rate for flowers.

³ The Inland Post Amendment (No. 5) Warrant, 1943, 10th February, 1943, S.R. & O. 1943, No. 219.

for business purposes, provided the flowers were identifiable at sight.¹ This further regulation was followed by a number of incidents at Paddington Station involving the inspection of passengers' luggage by the police. A number of arrests were made and prosecutions followed for contravention of the Order. While this inspection was within the law, it evoked much disapproval from Members of Parliament² and the public. At the same time, a strong body of opinion looked on flowers as beneficial to national morale in war-time, regarding the drastic restrictions now imposed as 'austerity for austerity's sake'. What had been a justifiable policy on transport grounds was rapidly losing public respect through the drastic measures needed to enforce it.³ The Prime Minister himself expressed the view that flowers were beneficial to morale in war-time and that the existing regulations were too harsh, and the question was therefore again discussed by the Lord President's Committee. On 18th March, 1943, it was announced in the House of Commons that the ban on the transport of flowers would be removed in favour of looser restrictions. Flowers could be carried by rail, but no additional trains would be run for them; they would be carried subject to the prior claims of more essential traffics and in no case where a reduction in passenger accommodation was involved.⁴ These broad restrictions were later supplemented by quota schemes worked out locally by the growers in co-operation with the railways.

There can be no doubt that the flower traffic was extravagant in its use of transport and that the savings resulting from its stoppage were considerable—not perhaps in ton-miles saved but in such things as special trains, vans, and clerical and handling labour. On the other hand, the public disappointment and the possible lowering of morale, coupled with the harshness of the measures needed to enforce the ban, appeared to many to be disproportionate to the saving of transport involved. If beer, cigarettes and racehorses could continue to move by rail in war-time, why not flowers? On questions of this sort there is always room for differences of opinion.

If there is any lesson to be drawn from the history of the Government's attempt to ban flower movements it is surely in the disclosure of how slender was the basis on which so many war-time administrative measures must have rested. It is at least arguable that other

¹ The Transport of Flowers Order, 1943, S.R. & O. 1943, No. 232.

² H. of C. Deb., Vol. 387, 10th March, 1943.

³ The strictness with which the regulation was now being applied is well illustrated by the arrangements which had to be made to supply shamrock for the Irish Guards on St. Patrick's day. In order to avoid movement by rail which was illegal, the R.A.F. agreed to fly a small quantity of shamrock from Ireland in one of their regular transport aircraft.

⁴ H. of C. Deb., Vol. 387, Cols. 1330-1333, 18th March 1943.

administrative measures, had they failed to gain popular support, would have proved equally ineffective and impossible to enforce. That the many other transport rationalisation schemes, whether enforced by Order or not, worked so well was a tribute not primarily to administrative skill, nor even to traditional British respect for law and order. In the last resort, the schemes worked because of the public conviction that they were both reasonable and necessary.

(iii)

The Economies Achieved

What were the fruits of the policy of transport rationalisation in terms of the amount of inland transport saved? It must at once be acknowledged that there is no answer to this question. Existing records do not provide the basis for an answer; nor can a simple statistical estimate provide more than a very approximate indication of the relief which inland transport derived from rationalisation during the war.

A correct measure of the saving in transport would, presumably, need to be made in terms of the transport services needed in the absence of rationalisation compared with those actually provided. The relevant data would be the saving in the number of trains, the number of ton-miles of traffic, the number of gallons of motor fuel, the number of vans and lorries and the amount of manpower. But if data of this kind were available, it would not provide a complete answer to the question which we have asked. Firstly, actual ton-mileages of traffic counted for less in the years 1942 to 1944 than the amount of pressure on particular routes on the scarcity of railway locomotives, labour, or rolling stock. The point needs to be stressed that on heavily-occupied lines in periods of acute traffic congestion, the relief given by the saving of a relatively few ton-miles was clearly much greater than statistics alone would suggest. Secondly, to attempt to measure the transport savings, without taking some account of the time and manpower needed to work the schemes, as well as of the inconvenience—and at times, hardship—imposed on the public by restricted transport deliveries, would be to falsify the result.

In the face of such obvious difficulties in estimating the transport savings, all that can be done is to consider such evidence as exists and to draw a few limited conclusions. For food traffics, fairly reliable

estimates do exist. Thus, the saving in ton-miles for the following food traffics worked out roughly at 300 million per annum:

	<i>Million ton-miles a year</i> (road and rail)
Cake and flour confectionery	3½
Biscuits	30
Sugar	10
Animal feedingstuffs	20
Chocolate and sweets	35
Soap	9
Margarine and cooking fats	10
Flour (bulk)	40
Self-raising flour	5
Biscuit flour	2
Preserves	5
Cereal breakfast foods, pickles and sauces, cider	2
Sausages and packed meats	1
Beer	40
Fish	35
Wholesale grocery and provisions	8½
Tea	20
Sausage rusks	2½

If it were possible to add the total transport saving of roughly 300 million ton-miles per annum for these food traffics to similar estimates, which unfortunately do not exist, for the savings made by rationalising non-food and bulk traffics, such as seed potatoes,¹ fertilisers, cement, bricks, etc., one may hazard a guess that the total transport saved (excluding the retail schemes) would not greatly exceed one thousand million ton-miles, divided in some unknown proportion between road and rail. In 1943 and 1944, the railways were moving freight traffic to the order of about 24 thousand million ton-miles per annum, of which about 9 thousand million ton-miles were merchandise (classes 7 to 21). A very rough guess might therefore be that the saving achieved by the railways as a result of rationalisation amounted to about two or three per cent. of the ton-mileage of all freight traffic. Such an estimate is, however, subject to a wide margin of error and can in no sense be taken as final.

As for the saving in motor fuel, it is known that fuel consumption by goods vehicles fell from 420·8 million gallons in 1941 to 388·0 million gallons in 1942 and 367·0 million gallons in 1943,² though it

¹ Estimated savings in seed potato traffic were 1,000 trains per annum, by better loading.

² Compare Statistical Appendix to this volume, Table 11.

is impossible to say that all of this decline was the result of rationalisation. Other estimates, made in 1943, put the estimated fuel savings from the rationalisation of retail deliveries at about 25 million gallons per annum:

On retail deliveries we appear to have saved about 900,000 gallons of fuel a fortnight, or a total of about 25 million gallons a year. This represents an economy of 36 per cent. compared with the target we had in our minds of 25 per cent. The fuel saving is equivalent to nearly 8 tanker loads of fuel. The saving in vehicles amounts to about 34,000 or some 20 per cent.

A later estimate reckoned the savings of motor fuel on the wholesale and retail schemes together at 45 million gallons per annum.¹ There is no evidence to show the basis on which these various estimates were calculated and, for this reason, they must be interpreted with caution. On the road transport side, however, the figures do suggest that the savings in motor fuel—and also in vehicles and tyres—were quite considerable and that rationalisation policy was a success. For the railways, precise estimates are lacking, and such estimates as it is possible to make are not, at first sight, very impressive. Indeed, one may be tempted to ask whether rationalisation schemes which saved one million ton-miles of sausages and packed meats or two and a half million ton-miles of sausage rusks were worth the time and trouble expended on them. Much the same line of argument might be advanced against any one of the commodity schemes considered separately. Yet taken together, the results of rationalisation, even if not impressive on paper, were decisive to inland transport performance in the later years of the war. They provided a much-needed margin of rail and road transport resources for the growing munition and military traffic. For the saving from rationalisation was mainly in the vital marginal region between the full employment of resources and their being over-burdened and choked. A relatively small ton-mileage saving in awkward merchandise traffics which relieved pressure on the Anglo-Scottish routes or on the routes out of South Wales, or which helped to reduce the demand for locomotives, wagons or handling labour could make all the difference between efficient railway working and congestion in the difficult months before D-day.

Against the gains to inland transport through rationalisation must be set the cost, in terms of manpower and inconvenience. The amount of manpower—much of it voluntary—needed to organise the schemes was probably small, though it was used at a time when manpower of all kinds was precious. As for inconvenience, there can

¹ One of the most effective of the rationalisation schemes was that for mineral waters, which was estimated to have saved 1 million gallons of fuel.

be little doubt that rationalisation, especially of retail deliveries, did cause some hardship to the public, more particularly in the isolated rural areas. The Government consistently advocated that rationalisation must stop short of imposing definite hardship on the public, but it is a matter of opinion where inconvenience ends and hardship starts. While most of the local retail schemes probably caused nothing more than inconvenience or minor irritation, a few—as in the case of laundry deliveries—were pursued with an excess of zeal. Moreover, undoubted hardship occurred where traders preferred to stop deliveries altogether rather than join rationalisation schemes.¹ Thus, while it was not the intention of Government policy to impose hardship on the public through transport rationalisation, it would be an exaggeration to say that none existed. 'Carry your shopping' called for much greater sacrifice for the tired housewife, perhaps doing a part or full-time war job, or for the elderly person who had to rely on much-reduced bus services, than for the fortunate few who still managed to collect their shopping by car.

To say this is not to question the wisdom of the Government's policy of transport rationalisation. As the savings in road transport show, and as the savings in rail transport would certainly show if they could be expressed statistically, rationalisation was a necessary part of inland transport policy at a period when all transport resources were overburdened.

¹ This occurred at a number of places. At Bridgend, Glamorgan, the Welfare Officer of the Royal Ordnance Factory reported that women were taking time off and using as an excuse the fact that local tradesmen had ceased deliveries.

APPENDIX XXIII

Principal Commodities or Services subject to some form of Zoning, October 1944

Retail deliveries:

General retail deliveries	Coal
Milk	Laundry

Wholesalers' or manufacturers' distribution:

Beer	Self-raising flour
Cider	Biscuit flour
Apple juice	Soya flour
Soft drinks	Margarine and cooking fats
Tea	Rice
Coffee	Sugar
Cocoa powder	Syrup and treacle
Cocoa butter	Dried fruits
Bread	Salt
Milk	Yeast
Condensed and dried milk	Cereal breakfast foods
Butter and cheese	Pickles and sauces
Eggs	Sausages and open-packed meats
Chocolates and sweets	Sausage rusks
Cigarettes	Synthetic cream
White fish	Soap
Meat and livestock	Starch
Bacon and ham	Utility furniture
Certain fresh fruit and vegetables	Animal feedingstuffs
Potatoes	Waste paper
General groceries and provisions	Lubricating oil
Biscuits and crispbreads	Plaster board
Tins for packing foodstuffs	Stoneware pipes
Cakes and flour confectionery	Hardware
Preserves	
Bulk flour	

In addition, restrictions of varying kinds on road or rail movements apply to the following:

Furniture removals	Newsprint
Certain fruit and vegetables	Bricks
Flowers	Stone, slag and lime
Home grown grain	Sand and gravel
Racehorses	
Funerals	

CHAPTER XIII

PASSENGER TRANSPORT PROBLEMS, 1941-1943

(i)

Restricting Passenger Travel by Train

ONE OF THE MOST intractable problems facing the Ministry of War Transport in the later years of the war was how to restrict the heavy and increasing volume of railway passenger travel. The large increase in the volume of travel coupled with severe cuts in the number of long-distance trains run caused serious overcrowding and inconvenience for passengers and added to the already considerable difficulties of depleted railway staffs. The table in Appendix XXIV summarises the situation in the later years of the war. The essential facts about passenger travel in 1942 and 1943 are as follows: while the numbers of *passengers originating* on the railways were only about 8 per cent. above pre-war, the estimated number of *passenger-miles* was nearly 70 per cent. greater than pre-war. That is, the burden of war-time passenger traffic arose principally from the big increase in the length of journeys rather than from any large increase in the total number of journeys taken. This is borne out by other statistics: in 1942 and 1943, the average distance per passenger journey was 50 to 60 per cent. greater than before the war and the average receipt per passenger journey over twice the pre-war figure. These statistics of passenger traffic must be considered together with statistics showing the passenger services provided. These show that coaching train mileage in 1942 and 1943 had been reduced to about 70 per cent. of the pre-war figure, while the average receipt per passenger train mile was about three times the pre-war figure.¹ The conclusion to which all these statistics point is that a greatly increased volume of passenger traffic was being moved by much reduced passenger services.

Looking first at the supply side of the problem, why was it necessary to impose cuts in long-distance passenger services in the war years? Briefly, long-distance passenger travel was generally thought

¹ In considering these figures, account must be taken of the increase of 16½ per cent. in railway fares made in 1940. See above, p. 128.

to be less essential to the war effort than the movement of freight, so the number of passenger trains was reduced to give precedence in the use of scarce railway resources to the movement of goods trains. As the Parliamentary Secretary to the Ministry of War Transport put it in the autumn of 1941:

The railways are working under heavy pressure owing mainly to two factors . . . One is the increasing production of munitions and of coal in this country, the other is that we have sent abroad a substantial number of our best locomotives in order to assist the Russian armies. Freight traffic is essential to the war effort and must have the transport it needs. It is, therefore, necessary to reduce passenger services not only during the Christmas period but throughout the winter months.

Passenger trains, of course, used up line capacity on the routes needed for the movement of freight traffic and it was sometimes necessary to withdraw two or three passenger trains to make a 'path' for one additional freight train. On the heavily-burdened routes, such as the G.W.R. line from London to South Wales and the L.N.E.R. main line, severe cuts in the number of passenger trains run had to be imposed to maintain planned movements of coal trains. A second reason for restricting passenger services was the serious scarcity of locomotives, which, together with a shortage of crews and some uncertainty about adequate supplies of locomotive coal, constantly limited the scope of railway operations. There was no serious shortage of coaching stock until the final year of the war, though by that time it had become a very real limitation to the introduction of better passenger services. At the end of 1944, it was said that over 1,000 coaches were in use for ambulance trains and other war purposes, while arrears of repairs to coaching stock amounted to 44 per cent. of the 1944 stock.

Turning now to the demand for long-distance passenger travel, why did this increase so markedly from 1941 onwards? The first important reason was travel by members of the Services on leave and on duty, which expanded progressively as the strength of the Armed Forces grew. As early as 1941, upwards of 50 per cent. of all long-distance travel was said to be by members of the Forces. Tests taken on particular routes in 1941 showed that the proportion of Service duty or leave travel to total travel was 60 per cent. between London and the West of England, 53 per cent. between London and South Wales and 45 per cent. between London and Birmingham. Members of the Forces, being widely dispersed throughout the country, took every opportunity they had to visit their homes, sweethearts and wives, and were prepared to undertake surprisingly long journeys on that account not only on their four free leave passes a year, but also

on short leave at concession rates paid by themselves. Moreover, from 1942 onwards, the influx of American troops into Britain added considerably to the growth of Service travel. Figures provided by the Railway Executive Committee showed the composition of Service travel in three test months of 1942:

Index—Number of journeys January = 100	Per cent. proportions.	
	At Government expense	Fares paid by personnel
100	39·5	60·5
119	38·5	61·5
129	37·1	62·9

Secondly, there was a considerable amount of long-distance travel by munition and land workers living away from home. This travel took place mainly at holiday times, many of the journeys being under the Ministry of Labour and National Service scheme of assisted travel, whereby the so-called 'transferees' were given financial help on a limited number of journeys home a year. Thirdly, there was travel by evacuated staffs of Government departments, who were allowed a limited number of journeys at concession rates. Fourthly, there was travel by relatives of evacuees at concession rates. Fifthly, there was a big increase in local travel in the areas of expanding war production and, in this case, additional services had to be provided to meet the needs of shift workers and others.¹

These various demands, superimposed on normal demands for passenger services, more than outweighed such reductions in demands for holiday travel as may have resulted from the Government's 'holidays at home' campaign. Indeed, as the war situation took a turn for the better after 1942, official opinion had to acknowledge that, after four years of hard work 'the public had made up its mind about holidays, and has decided, whatever the Government may say, that it needs them and is going to have them'. On grounds of morale, the Government had to concede this point, even if it could not openly declare support for the growth of the holiday habit in war-time. Inevitably, increased holiday travel in the later years of the war made the burden on railway passenger services yet heavier; all the more so since the public was no longer allowed to travel by long-distance coach or private car.

Faced with a steadily mounting volume of long-distance passenger travel and no prospect of increasing the already restricted passenger

¹ One factory at Chorley in Lancashire required 426 trains weekly to provide 222,500 journeys for the employees. Train services for munition workers at Tremains, Glamorgan, Swynnerton and Radway Green in Staffordshire were nearly as intense. In the Leeds and Selby districts of Yorkshire, ordinary passenger services had to be cut down to make 'paths' for the running of workmen's specials to the large factory at Thorp Arch. See R. Bell, *op. cit.*, pp. 65-66.

train mileage, the Ministry of War Transport became concerned during 1941 with devising an effective method of limiting long-distance railway travel to the most essential needs. The R.E.C. believed strongly that it was useless to try and reduce passenger travel simply by cutting down the number of trains. Demand, it was argued, needed to be regulated according to the capacity of the trains being run and the R.E.C. put forward for the consideration of the Ministry of War Transport a number of possible methods by which this might be done.

The first was the 'limited train' system. Under this method, all passengers intending to travel by long-distance train were to be required to obtain special 'control tickets' from the booking office; these would be issued only up to the limit of the train capacity, and only passengers possessing the necessary tickets would be allowed to pass the ticket barrier. Apart from the strain such a system was expected to place on booking office staffs, this system was recognised as being little better than a crude application of the 'first come, first served' principle. The selection of successful travellers would have been completely arbitrary, taking no account of relative need from the point of view of the war effort.

As an improvement on this scheme, a second method was proposed. This was known as the 'permit' system. The aim of this was to bring about a selective reduction in passenger travel, conserving journeys necessary to the war effort and for which a need could be shown. Journeys of less than 50 miles were to be excluded; the main scope for reduction would be long-distance journeys for pleasure. Under this method, nobody was to be allowed to book an ordinary or monthly return ticket for a long-distance journey without producing a permit. Applications for such permits were to be made to district officials specially appointed for the purpose and given some such designation as 'travel referees'. There was to be a right of appeal by aggrieved applicants to a higher authority. A variant on this method was later suggested for a limited number of main line routes only. This was the 'limited train permit scheme', whereby each railway company was to set up a Central Registration Office to which civilians would apply by post at least seven days before any proposed journey. The permit system was said to have the advantages of fairness and efficiency as a means of restricting passenger travel. Its great disadvantage lay in its administrative complexity and likely extravagance in the use of staff.¹

Both the 'limited train' and 'permit' schemes were exhaustively

¹ The practical difficulties of working such a scheme would have been very great. Not only would it have proved difficult to devise a scheme for allocating seats to travellers at intermediate stations, but there was also the danger that great hardship might result in urgent compassionate cases.

examined by the Ministry of War Transport with the advice of the Inland Transport War Council. Both proposals were, however, rejected as unworkable. As the Minister of War Transport told the R.E.C., the scope for saving transport by limiting civilian travel was so small as 'to make it not worth while establishing a permit system with all this would involve in machinery and staff'. Indeed, out of roughly 1,000 million passenger journeys originating on the railways each year, some 42 million journeys only, representing a total of 24 million people a year, fell in the category suitable for regulation by a permit system. The remainder consisted of Service travel, short-distance workmen's or season travel—or other travel of an essential nature. Since so much long-distance travel was by members of the Forces, no general restriction which did not drastically reduce Service travel seemed likely to enable sufficient passenger trains to be withdrawn to give appreciable relief to freight traffic. As the Minister pointed out, the first condition for any successful scheme of restriction must be the public conviction that the advantages gained outweighed the inconveniences imposed.¹

Having rejected as unworkable a general rationing scheme for long-distance railway travel, the Ministry of War Transport was obliged to rely on less drastic measures in the hope of achieving the same result. Broadly, three main lines of action were followed. Firstly, the R.E.C. was instructed to limit long-distance passenger services and facilities to a fixed minimum, sufficient to provide for no more than essential needs. Secondly, various attempts were made to restrict the demand for passenger train services, particularly those demands which were subject to some form of Government control. Thirdly, propaganda was used to discourage non-essential travel.

Many restrictions on passenger services and facilities had been in force from the earliest days of the war. The booking of seats on trains by members of the public had, for example, been stopped early in the war. Now, in 1941, the Minister of War Transport announced his intention of making more drastic cuts in facilities. From January 1942, a strict system of rationing sleeping-car accommodation was introduced, and the Railways Division of the Ministry was made responsible for allocating accommodation to meet the needs of urgent travel sponsored by Government departments. Henceforth, the general public was allowed only a small proportion of third class and no first class sleeping accommodation. The year 1942 also saw large-scale reductions in the provision of restaurant cars on trains. Whereas before the war there had been altogether about 910

¹ Permit systems, introduced in Australia and New Zealand during the war, were said to have caused much waste of seating space and of sleeping berths. In the United States, where passenger traffic on the railways rose to four times the pre-war level, a permit scheme was ruled out as impracticable. See R. Bell, *op. cit.*, p. 64.

trains with restaurant cars on each weekday, by the summer of 1942, there were only 61, and these were confined to a few essential business trains and trains in the North of Scotland. This helped to increase the capacity of the trains. A further measure to this end was the decision, in 1941, to screw back the arm rests in third class corridor compartments.

In addition, from 1941 onwards, the number of trains run during holiday periods and in the summer months was strictly limited on the instruction of the Ministry of War Transport. Firstly, the railways were directed not to run on any day during Bank holiday periods more long-distance trains—i.e. trains running for a distance of more than 60 miles—than they had run on an ordinary weekday or Sunday in the corresponding month of the previous year. Secondly, during the summer months, the railways were not permitted to run passenger train mileage in excess of the total mileage run in the previous summer (excluding workmen's trains and military specials). Nor were they allowed to run any trains additional to normal services, where this interfered with the movement of essential freight traffic. Where relief trains were run to meet heavy traffic, no advance announcements were permitted to be made.¹

It was not sufficient, however, to direct that passenger services should be limited to what was considered to be an essential minimum. The Ministry of War Transport also tried where it could to cut down demands for services, particularly where these were sponsored by Government departments. By agreement with the Service departments, not more than two out of the four leave periods with free travel were permitted to be taken in winter. The concession rate for 48-hour leave was limited, in the winter months, to journeys not exceeding 50 miles by rail and members of the Forces were encouraged to add one period of their 48-hour leave to the normal seven days, thus getting nine days altogether with only one return journey. Arrangements were also made with the Service authorities to restrict Service travel at Bank holidays. Measures were also introduced to restrict the amount of Government-sponsored civilian travel. Cheap fares for relatives visiting evacuees were limited to three visits in the winter months; of the two free and three assisted journeys to which evacuated Government staff were entitled each year, not

¹ The limitation on the number of trains at Bank holidays also applied to each route considered separately. This limitation on the number of trains on each route was abandoned, after a decision by the Lord President's Committee in December 1943, to allow the railways greater latitude in meeting their demands. The total limitation still applied. A case arose in 1942 whereby a number of short-distance trains, outside the scope of the restriction, were run in connection with local Wakes weeks in Lancashire, announcements having been chalked up in advance. No essential freight had been interfered with, and it was said that if the trains had not been run, essential passenger traffic would have suffered. The view was taken that such advance announcements should not be made. It was important to maintain the general impression that unnecessary travel must be avoided.

more than two were allowed in the winter months. The assisted travel scheme for transferred workers was suspended, except for Irish and land workers, during the winter months, while restrictions were imposed on the use of the assisted travel scheme for transferred members of the Civil Nursing Reserve and concession journeys for transferred members of the Civil Defence Service.

Besides these measures, all cheap day tickets and tickets of a similar type were cancelled from October 1942 with the object of discouraging passenger travel by rail; monthly return tickets were made available for all distances. The Lord President's Committee was informed that the cheap day ticket was used almost entirely for non-essential purposes. It was a special inducement to travel, which in existing circumstances had become anomalous.

Finally, propaganda played a big part in the attempt to discourage long-distance travel by rail, and took as its watchword the slogan, 'Is your journey really necessary?' One cannot possibly estimate how far the public conscience was stirred by this and other exhortations not to travel, though the combined effects of overcrowding and propaganda probably acted as a considerable deterrent. Associated with the propaganda campaign was the 'holidays at home' scheme, introduced in 1942, under which local authorities undertook to provide entertainments and amusements during local holiday periods to discourage people from travelling. Prospective holiday makers were advised by the Ministry of War Transport to avoid travelling by train wherever possible and especially on long-distance journeys, to support local amusements, to confine travel to easily-accessible places, or better still, to cycle or walk. At Bank holidays press and radio appeals were made to the public not to travel.

While the public had responded well to this propaganda in the first three or four years of the war, by 1943, it had become difficult to prevent people taking their holidays away from home. The tendency to travel was to some extent fostered by the restraint shown in the earlier war years. Many civilian workers felt the need to travel just as much as the Forces on leave and the Government recognised that holidays at home provided no relief for housewives. When the question was considered by the Lord President's Committee in August 1943, it was agreed that 'holidays at home' propaganda should not be such as to suggest that these were a real substitute for holidays away from home, but the Government refused to agree to discontinue the campaign, mainly on transport grounds. The Ministry of War Transport always stood firmly against any suggestion that increased facilities might be provided for holiday traffic, though the results of this policy were never altogether satisfactory. Thus, while the Ministry took the view that any official suggestion that increased passenger facilities could be provided would only

provoke a big increase in travel, the railways frequently complained that their inability to announce in advance special trains put on at holiday times caused severe congestion at stations.

At all events, by 1943, long-distance passenger traffic had become extremely heavy: trains were crowded to capacity and, at Bank holiday periods in particular, many passengers were finding themselves stranded. The results of the Ministry of War Transport's policy of discouraging passenger travel were, at best, only a limited success. That policy undoubtedly prevented the volume of travel from being considerably greater than it was; it did not succeed in keeping down the volume to manageable proportions. Short, however, of a thoroughgoing rationing system, it was almost impossible to control the immense volume of passenger traffic at this period of the war. It might have been possible to curtail Service travel—probably the most powerful cause of overcrowding—by drastic reductions in Service leave, but on grounds of morale this was not a course that the Government cared to take. Again, the ending of monthly return facilities, or a large increase in railway fares might have been a big deterrent to would-be long-distance travellers. This, however, would have gone against the Government's price-stabilisation policy and imposed hardship on many people. Moreover, in a period of high money incomes and universal scarcity of goods and services, the deterrent effect of an increase in railway fares was by no means certain. Another suggestion which was considered several times was the abolition of first class travel for the duration of the war. This was turned down on the ground that it would diminish the general convenience of railway travel without adequate corresponding relief in other directions.¹

Short of harsh and indiscriminate restrictions, therefore, there were obvious limits to what the Ministry could do to curtail passenger travel. Nevertheless, Government policy was not without weaknesses and inconsistencies. For example, a number of annual gatherings, some of considerable size, continued to be held under the aegis of trade unions and political or social organisations. While a few of these may have been necessary on grounds of morale and otherwise, they clearly added to the pressure on railway passenger services. The Lord President's Committee was not ready to commit itself on this matter, advising the Minister of War Transport that, while no special travelling facilities should be provided, it was recognised that some conferences must continue. Another source of

¹ The Minister told the Inland Transport War Council that, in spite of the decreased first class accommodation in long-distance trains, first class travel had substantially increased. It was no longer true to say that third class passengers were crowded while the first class compartments were nearly empty. In 1941, however, first class facilities had been withdrawn from suburban trains starting and terminating their journeys in the London transport area.

anomalies was the imposition by the Ministry of a 'ceiling' on the number of trains run. For example, while the Government agreed, during the war years, to a limited programme of horse racing, the railways were instructed to provide no extra facilities for spectators. The result was that essential regular railway travellers found themselves crowded out by racegoers when the race meetings took place. One scheme about which the Government seems to have been lukewarm was the scheme for staggered holidays, which at least offered some prospect of relief for the railways at the peak of the summer holiday period. The Ministry of Production issued instructions to its Regional Controllers to initiate such schemes, but, except in one or two places, nothing very much was achieved.

(ii)

Bus Services after 1941

It has been described earlier how, in common with goods vehicles, bus and coach services were successively cut in the early years of the war to save fuel and, after Pearl Harbour, to save tyres.¹ From 1941, however, heavy and sustained demands were made for bus services for the transport of workpeople, which accounts for the apparent paradox that, in the summer of 1942, the Inland Transport War Council was trying, on the one hand, to find means of increasing the number of buses and, on the other, to cut down their fuel consumption. The various fuel and tyre economies made after 1941 have already been discussed in Chapter XI. It is now necessary to carry our earlier discussion of the problem of finding enough buses to meet the essential needs of workpeople and others beyond 1941.

The heavy demands for regular local bus services from 1942 onwards were of several kinds. First and most important was the continued growth of war industries and the dispersal of production away from industrial centres, which meant that the number of war workers travelling greater distances to get to work continued to increase.² The new Royal Ordnance Factories alone—all of them situated outside populous areas and some of them in remote rural areas—are one example of the kind of expansion, sponsored by the Ministries of Supply and Aircraft Production, that was taking place in light engineering generally, in the aircraft and motor industries, in radio manufacture and in many other industries.

Secondly, evacuation and the dispersal of industry continued to

¹ See especially Chapter VIII, Section (i) and Chapter XI, Section (v) of this volume.

² Though the total number in civil employment did not increase during the war. It fell from 18,000,000 in 1939 to 16,967,000 in 1944. See *Statistical Digest of the War*, Table 9.

alter the pattern of demands on road passenger transport. Thirdly, during 1942, the abolition of the basic petrol ration for private cars and the increased cuts in retail deliveries put more passengers on to the buses. Fourthly, the numbers in the British Armed Forces by mid-1942 were almost ten times the 1939 figure.¹ Most of these Service personnel were stationed in the United Kingdom, many on isolated camps and airfields, and they needed buses to take them to and from the nearest towns. These demands were increased by the large number of American troops who began to be based in the United Kingdom during 1942.

For all these reasons, from 1942 onwards more people were using local bus services for longer journeys. By the end of the war, many bus undertakings were carrying 30 to 50 per cent. (and in some cases 80 to 100 per cent.) more passengers than in 1938. Returns made by a number of the larger bus undertakings indicated that in 1944 the average increase over pre-war was about 25 per cent. in passengers and 50 per cent. in passenger-miles, although vehicle-miles had been reduced to about two-thirds of the pre-war figure because long-distance services had been practically eliminated.²

These tendencies, as was shown earlier, did not appear everywhere at the same time, although the acute local difficulties which had arisen in providing local transport for workpeople during 1941 became, by the winter of 1942-1943, fairly widespread. In 1942, for example, there was an insufficiency of bus services in the Potteries, similar to that which had existed a year previously in South Wales. Like the earlier problem, this was not so much a numerical shortage of vehicles, but arose because many of the buses in and around the 'Five Towns' were owned by small operators with inadequate service and maintenance facilities under their own control. There was also said to be a shortage of conductresses and the Ministry of Labour promised to take special steps to supply more.

Faced with the widespread general scarcity of buses and the resources needed to operate them, there were two main lines of action which the Ministry of War Transport could follow. First, it could try to increase road passenger transport resources. Second, it could insist that all road passenger transport resources were used to the best advantage by reducing the least essential demands to a minimum. It is necessary to examine these two lines of action—the one on the supply side, the other on the demand side—in turn.

On the supply side, road passenger transport resources could be increased in various ways: the size of the bus fleet could be increased;

¹ Total manpower in the Armed Forces from 1939 to 1945 was as follows: 1939, 480,000; 1940, 2,273,000; 1941, 3,383,000; 1942, 4,091,000; 1943, 4,761,000; 1944, 4,967,000; 1945, 5,090,000. All the figures are at June each year. See *Statistical Digest of the War*, Table 9.

² Sir Cyril Hurcomb's address to Royal Empire Society, 13th June, 1945.

existing buses could have their capacity increased; and the Ministry could take steps to prevent usable buses from standing idle for lack of spare parts or bus crews if these could be obtained.

By the end of 1941, it was clear that there existed, over the country as a whole, a shortage of vehicles and that the size of the bus fleet needed to be increased. The Minister of War Transport told the Lord President's Committee at the end of 1941 that road passenger transport could not be maintained without a 'reasonable measure of new production' of buses. He claimed that 'to meet wastage alone he would have liked to have 6,000 new passenger-carrying vehicles per annum'. This was probably an overstatement of the case, for the figure exceeded the peace-time production rate. Nevertheless the position was serious. Although war-time production figures of vehicles for civilian use do not appear to be available for the early part of the war, the numbers of buses being put on the road for the first time were dwindling and, by 1941, had been reduced to a mere trickle. In 1940, 2,154 buses, 1,340 of them double deckers had been registered for the first time, but in 1941 there were only 533, of which 361 were double deckers,¹ this compares with 5,750 buses, 2,250 of them double deckers, which had been produced during 1938. Although the Ministry of War Transport preferred the production of double decker buses in war-time, since these economised in fuel, tyres and crews, their manufacture competed directly with that of fighting vehicles and other military needs. In November 1941 the Ministry of Supply had to announce that the 1,000 double decker buses which it had expected to produce in 1942 would now have to be cut by half because the plant was required for the production of tanks. The number of buses of over 40 seats coming on to the road for the first time in 1942 was, in fact, 541. This number was very small and it was clear that the bus industry would have to rely much more upon the production of other kinds of buses which did not impinge so directly upon war production.

Experiments had already started by the end of 1941 with the production of single deck 'articulated' vehicles. These had a capacity for 40 seated and 12 standing passengers, (i.e. almost equivalent to a double decker). Their speed was limited to 20 m.p.h., however, and they were not popular with the industry. Experiments with these vehicles were still continuing in 1943 and trial use of them was made in Liverpool and Mansfield, but they do not appear to have been much used elsewhere.

The only other type of bus for which the Ministry of Supply could arrange production was the 'Bedford', an ordinary single decker with

¹ These figures are based on hackney vehicles with more than 8 seats registered for the first time during the year. Vehicles with more than 40 seats have been presumed to be double deckers. See Appendix XXV, p. 532, for detailed figures.

capacity for 32 seated and 12 standing passengers.¹ It was expected that 375 of these Bedfords could be produced in 1942 and by August 1943, 1,400 new Bedfords were in operation. Some other types of single deckers may also have been produced, however, as over 700 new single deckers appeared on the roads for the first time during 1942 and over 1,000 during 1943.²

The difficulty of obtaining new buses led the Ministry of War Transport to approach the Service departments for the return of some of the public service vehicles which had been requisitioned by them during the early part of the war. Exactly how many had been requisitioned is uncertain, but the figure was probably in the neighbourhood of 4,000 to 5,000.³ From mid-1941 onwards the Army was being supplied with troop-carrying lorries to replace the buses and the War Office hoped to be able to release about 750 by the end of 1941 to civilian use. In fact, it only released about 280, 47 of which were scrapped and their parts used for repairs, while the rest were supplied to Government departments. As this happened at the time when the Ministry of Supply was drastically cutting new double decker production, the War Office was again approached in early 1942 to release more buses, and it agreed to release not more than 200 a month—equivalent to the number of troop-carrying lorries being supplied—up to a total of 900. This was in addition to the loan made by the Army of seven military coach companies (420 coaches) for the months of January and February 1942 to help with the transport of war workers.

During 1942 the Ministry of War Transport developed a procedure for disposing of the ex-army buses to operators⁴ (or scrapping them), although by far the greater proportion continued to go to Government departments mainly for hostel and perimeter services at Royal Ordnance Factories and airfields. Buses used for such purposes helped incidentally by relieving the pressure on normal bus services and of course by easing the demands being made on Regional Transport Commissioners for additional services. Nevertheless, Regional Transport Commissioners said that 'It is unfortunately true that the

¹ In December 1941 the Ministry of Supply stated that they had shown a prototype to operators and had placed orders for the production of 1,200.

² See Appendix XXV, p. 532.

³ Estimates vary. The Lord President's Committee had been told in 1941 that the War Office had 2,290 buses, the R.A.F. 1,146 and the Admiralty 50—3,486 in all. In a note for a Regional Transport Commissioners Conference in 1941 the Ministry of War Transport had said 6,700 vehicles had been requisitioned, but this figure would appear to be too high. After the end of the war, a memorandum on Surplus Government Stores stated 'As far as our information goes, a total of 4,848 public service vehicles were requisitioned by all services during the war'.

⁴ Negotiations were protracted and difficult. By mid-1942 Regional Transport Commissioners were saying no final agreements had been reached. 198 buses were on offer and only 44 accepted.

harvest of ex-army buses has so far proved a lean one. A high proportion were only fit for scrapping and the balance had to be allocated to Government departments.¹ In January 1943 it was stated the total returned to operators was about 700, while another 500-600 were on offer, although operators were rejecting many of those offered. A further 500 had been disposed of as scrap. Although this addition of 700 buses during twelve months of acute shortage must have been of some use, it was not a very great number compared with the 4,000 or so which the industry had lost at the outbreak of war.

Since there was not much that could be done to increase the production of new buses in view of the more urgent demands on war production and the Army could not return more than a fraction of the buses it had requisitioned, other measures had to be adopted to fill the gap. One of the most successful was the conversion of ordinary single decker buses¹ by taking out and/or re-arranging some of the seating to make room for 30 standing passengers. It was explained earlier that this had been begun in the latter half of 1941; and by the end of February 1942, 925 had been converted with a further 288 planned to be converted, making a total of over 1,200.²

After the conversion of the first 1,200 buses by the spring of 1942, however, it was found that little further progress was likely to be made unless the Ministry of War Transport took strong action. In some parts of the country, such as the North West, the East and the Metropolitan area, conversion had been fairly extensive, but in other parts such as the North and the Midlands very little had been done. The operators' arguments against conversion included labour shortage, unsuitability of converted buses on certain routes, their alleged unpopularity and the need to strengthen the structure and springs of converted vehicles. But Mr. (later Sir) Frederick Heaton, one of the representatives of the bus industry on the Inland Transport War Council and himself the controller of a large group of bus companies, told the Council that he thought that the real reason for failure to convert was that the recalcitrant operators had an undisclosed surplus of buses, larger than that shown by a 'spot check' which had been taken.

If converted buses could be put on the road, a number of duplicate single deckers being run in peak traffic periods could be withdrawn, thus saving petrol, rubber and crews. It was therefore decided—with the agreement of the Transport and General Workers' Union—that the Ministry of War Transport should seek powers to compel companies to convert their vehicles if required to do so. As a result

¹ See above, p. 338.

² This conversion scheme did not apply to the new Bedford 32-seaters.

some of the bigger operators who had previously opposed conversion now fell into line with Government policy. By August 1943 the total number of single decker buses converted to accommodate extra standing passengers was 2,100.¹ Sir Frederick Heaton was still not satisfied that everything had been done. He said at the Inland Transport War Council meeting that 'it was significant that whereas only between 7 per cent. and 8 per cent. of the single decker buses in the United Kingdom had been converted, the figure for his own companies approached 20 per cent., although over-all conditions were fairly typical'. By the end of 1944, the number of buses converted reached a total of 4,200, yielding a total additional space for 84,000 passengers.

Finally, the most important way in which the gap left by the inadequate production of new buses could be filled was to make sure that all existing buses owned by operators were fully mobilised. It was difficult to discover how many unused buses were in existence, although it was suspected that the undisclosed surplus might prove to be quite large. At any rate it was decided to ask the R.T.C.s to conduct a further survey of bus resources,² if only to strengthen the Department's hand in its claims for additional buses from the Ministry of Supply. In addition, the Lord President's Committee had already asked the Ministry of War Transport to reduce the reserve of 300-400 buses held in readiness for emergencies such as heavy bombing. When the first returns of the survey were produced in March 1942, attention was drawn to the large numbers of buses converted to ambulances and standing by. Although the numbers had been reduced, the Ministry of War Transport agreed to reduce them further. The final figures produced by the survey in April 1942, revealed that there were in fact 1,043 vehicles³ standing idle for lack of spare parts or maintenance labour, or a little over 2 per cent. of the estimated number of buses in the country.

The Ministry of War Transport, therefore, set itself to tackle the problem of these idle buses. It has been described earlier how a Directorate of Vehicle Maintenance had been set up during 1941 with staff at Ministry headquarters and in each region to deal specifically with the problems of bus maintenance.⁴ By early 1942 with the help of this organisation, the shortage of spares had largely been overcome, and the shortage of mechanics now began to be

¹ The total number of single deckers on the roads at this time, excluding the 1,400 Bedfords, was 27,600.

² The first had been in July 1941.

³ About the same number as had been estimated by Sir Frederick Heaton, who said in 1941, that there were probably over 1,000 single decker buses in existence which could be put on the road.

⁴ See above, Chapter VIII.

tackled. The general shortage of this type of labour had been increased by a failure to reach agreement about conditions of employment in the bus industry and it was therefore proving difficult to attract additional labour. By July 1942, however, a minimum average wage had been agreed and the Ministry of Labour had agreed to transfer labour from garages not on essential work into bus and goods vehicle maintenance depots. In spite of these efforts the number of buses immobilised continued to increase for a time. By September, the figure was 1,616 (3.5 per cent. of the total number of buses said to be available), but it fell steadily after this date until one year later the number was only 683 or less than 1.5 per cent. of the whole fleet. Sir Frederick Heaton at the Inland Transport War Council said the Department was to be congratulated on figures shewing a percentage of 'immobilised' vehicles no higher than in normal times. A measure of the work achieved in the field of bus maintenance is to be found in the fact that in August 1943, despite the numbers requisitioned by the Services, the drastic cut in the proportion of new buses and the heavy wear and tear caused by war-time conditions, the number of buses on the roads was 49,000, which was not much smaller than the number in service before the war.¹ By the end of the war, there were rather more vehicles being operated than in 1938.²

From the middle of 1943, the supply of buses ceased to be a limiting factor on road passenger services. About 2,000 new buses came on to the road during 1943 and again in 1944 (compared to about 1,000 in 1942 and 500 in 1941).³ Double decker production in 1943 was about 900, and 1,260 in 1944, and the output of single deckers was sufficient—that is, it was about as much as operators were willing to take allowing for the facts that they were under pressure to convert their existing single deckers and that this had to take precedence over the acquisition of new buses.

The other big problem on the supply side from mid-1942 onwards was the considerable difficulty in keeping up the supply of bus crews. During 1943 and 1944 shortage and absenteeism of bus crews was the real limitation on the number of buses which could be run. The biggest problem was the supply of conductresses. Bus drivers were reserved after the age of 25 and generally a minimum number of drivers was maintained by training conductors and new entrants as drivers.⁴ In addition after mid-1942 the Ministry of Labour filled vacancies for bus drivers from those drivers who became available when the rationalisation of retail deliveries laid up light delivery

¹ 49,574 in 1937. (*Seventh Annual Report of the Area Traffic Commissioners, 1937-1938.*) The 1938 figure would be higher.

² Sir Cyril Hurcomb's address to the Royal Empire Society, 13th June, 1945.

³ See Appendix XXV.

⁴ Sir Cyril Hurcomb's address to the Royal Empire Society, 13th June, 1945.

vans. In spite of difficulties in some areas, the shortage of bus drivers did not reach serious proportions in the country as a whole.

Men conductors, however, were called up or were transferred to driving. They had to be replaced by women. The work was unpopular. The hours were long and irregular—necessarily more so than for shift-workers in factories. In some places conductresses had to leave home before 4.30 a.m. to get war workers to their factories by 7 a.m., and in country districts many women had long walks between home and the nearest pick-up point of the staff bus. The work was arduous and exposed to the weather and only the younger and more active women could be expected to do it. Even for them it was not difficult to get release on health grounds. In most cases work in the nearby factory was better paid and more congenial, with better welfare facilities than the work on the bus that took you there. At least in the early stages, many bus companies had very inadequate eating or lavatory accommodation for women workers, and rates of pay varied widely between the different companies. The Minister of Labour said in March 1943 that he had great difficulty in persuading or directing women to do this work, mainly owing to the exceptionally difficult hours of work, the awkward duty schedules often imposed on newcomers and the practice of paying subsistence allowances instead of wages to trainees. Not only was it difficult to recruit labour, but the conditions of work meant that wastage was high and absenteeism exceptionally high. Middlesbrough Corporation Transport Department for example reported a daily absent list of 14 per cent. of their conducting strength and pointed out that although there were some standby crews available, if a bus could not go out, between 60 and 70 workers were liable to be left behind or made late. According to Regional Transport Commissioners in January 1943, absenteeism among conductresses averaged about 20-25 per cent. and in general this was due to justifiable causes and not slackness. It was a vicious circle, for labour shortage and absenteeism materially increased the hours of work of the crews on duty, and excessive hours led to absenteeism and wastage. Regional Transport Commissioners thought that most wastage was due to the overworking of staff because they were short-handed; if operators' staffs were brought up to strength they considered a good deal of the wastage would disappear.

Throughout 1942 special efforts were made to build operating staffs up to strength. In the worst cases the Ministry of Labour agreed to 'bottleneck'¹ vacancies for conductresses, and in May the

¹ The local Ministry of Labour Employment Exchange could draw on labour outside its own area to meet a very small number of specific vacancies for workers the lack of whom could be shown to be holding up other workers on vital war production.

R.T.C.s reported the 'bottleneck' procedure was producing conductresses at a reasonable rate. Wastage continued, however, and by the autumn in the worst labour areas outstanding vacancies for conductresses had grown too numerous to be dealt with in this way. In November, therefore, the Headquarters Preference Committee granted first preference¹ for 380 conductresses, nearly all in the labour 'black spots' of the Midlands,² where it could be shewn that essential workers' services were in jeopardy for lack of bus crews. The Ministry of Labour pointed out at the time however that, as this system of preference was designed to meet sudden and urgent demands for blocks of labour caused by changes in the strategic position, it was not appropriate to the bus industry where the problem was to maintain a more or less stable labour force. The preference now granted, it added, was to meet immediate demands, but other means must be sought to tackle the main problem.³ The Ministry of Labour suggested that women who could only undertake part-time work—by this time the only large source of labour supply left in the country—were likely to be suited by the hours of conductresses. There was at first some reluctance among the operators—as indeed in most factories—to employ these women, but experiments in Portsmouth and Birmingham showed that part-timers were particularly useful during the morning and evening peak periods and as reliefs at week-ends, and their absentee record was no worse than among full-time workers. Objections were gradually overcome and some material help was given from this source. The shortage of conductresses was however a reflection of the general labour shortage in the country, and no easy solution could be found.

In March 1943, Regional Transport Commissioners reported that the position had hardly improved. Shortages persisted and wastage was hardly being made good. The Ministries of Labour and War Transport therefore consulted again at high level. The Parliamentary Secretary to the Ministry of War Transport said that he attached the greatest importance to the provision by the Ministry of Labour of an adequate supply of conductresses 'without whom the workers whom the Ministry of Labour were supplying to the munitions

¹ Also called 'designation' and H.Q. preference and (incorrectly) overriding preferences. If granted by the Headquarters Preference Committee (an inter-departmental sub-committee of the Labour Co-ordinating Committee under the chairmanship of the Ministry of Labour and on which the Supply Departments were represented) firms were given first preference for specific vacancies for a specific period and during that time the vacancies were filled in preference to all other labour demands in the area (except 'bottleneck' demands) if necessary by calling on the resources of other Regions.

² e.g. Coventry, 50 vacancies; Birmingham, 95 vacancies; Derby, 40 vacancies; Midland Red Bus Company (various towns), 118 vacancies.

³ For example, it was suggested that approved labour forces should be fixed by bus companies and preference should be accorded when their strength fell an agreed percentage below this figure, but nothing appears to have come of the suggestion.

factories would not be able to reach their work'. It was decided first that women liable for call-up and who opted for industry should now be allowed to fill vacancies for conductresses. Secondly, it was decided that 'mobile'¹ women conductresses in regions where other women were available as substitutes would have to be transferred as conductresses to those Regions where local labour was inadequate, for example, from the South and East coast to Coventry and Derby. The Ministry of Labour regional officials agreed on programmes of withdrawals with the R.T.C.s and bus operators in order to minimise inconvenience to the bus operators concerned, but neither the women to be transferred² nor the operators who had to train substitutes were enthusiastic. By January 1944, it had to be admitted that in view of the small results achieved and the friction created, the Ministry of Labour should not be pressed to continue with the transfer scheme.

Attempts were also made during 1943 to get women to transfer voluntarily from munition work to bus conducting, where local bus vacancies could be filled by no other means. In some regions, this helped in filling vacancies, but apprehension was still felt about the position during the 1943-1944 winter. The original complaints about welfare facilities and trainees wages had been remedied by mid-1943, and in October 1943 'conducting road passenger vehicles' was placed on the designated list by the Ministry of Production,³ and R.T.C.s were asked to report regularly on the increase in supply of conductresses and whether as a consequence service had been increased and the length of time spent in queues reduced. First preference did have some effect in enabling operators to build their crews up to strength, although in January 1944, the Parliamentary Secretary to the Ministry of War Transport was still reporting that labour was the limiting factor and that one-third of the increased services which R.T.C.s were now enabled to authorise were being held up for lack of labour. Not until the war in Europe ended were there any substantial additions to bus crews.

At the same time that the Ministry of War Transport was trying to increase bus services—by increasing the size of the fleet, converting

¹ A Ministry of Labour term for a woman who could be directed away from home because she had no family ties.

² At first 'mobile' conductresses were given an opportunity to join the Women's Auxiliary Forces, but this option was later withdrawn.

³ The Ministry of Production had now taken responsibility for keeping a 'designated' list of vital items of war production, almost all connected with D-day preparations. Only firms who were manufacturing these items could have their vacancies considered by the Headquarters Preference Committee. Otherwise the system of 'first preference' remained unchanged. During 1943-1944, however, certain items not of direct war production but of vital importance to the country's economy, e.g. railway operating staff, gas manufacture, flour milling and conducting road passenger vehicles were added to the designated list.

buses to hold more people, improving vehicle maintenance and seeking priority in the recruitment of bus crews—it was also trying to limit the calls made for road passenger transport to those that were essential. This could be done in four ways. First by eliminating non-essential services, or essential services for which alternative means of travel were available; second by cutting off-peak services; third by flattening the peak at rush hours, and fourth by discouraging unnecessary road travellers. It was not possible to achieve one hundred per cent. success in all these ways, since the very different circumstances in each area made it difficult to lay down hard and fast rules. Usually the Ministry of War Transport discussed the general transport and fuel position with Regional Transport Commissioners each autumn, and then issued instructions for guidance couched in general terms, leaving each Commissioner to interpret them according to the needs of his own area for the forthcoming winter. We have already¹ seen what most of these restrictions were. Non-essential journeys were severely cut during 1942 and long-distance services were reduced by 80 per cent. compared with pre-war. They had in fact ceased, except where their absence meant real hardship to outlying villages or isolated camps. In September 1942 the remaining Green Line coaches—for which there were rail alternatives—were withdrawn for the duration of the war. Other long bus journeys were cut out by arranging bus feeder services to the nearest rail-head, and the Ministry of War Transport encouraged workers to transfer from road to rail by arranging to equalise fares wherever possible. R.T.C.s were not permitted to run duplicate buses on race days, days of football matches and so on (although some recreational services were permitted if there were buses and crews available in off-peak periods).² Off-peak services were also drastically cut, especially during the middle of the day. Last buses could not leave after 9 p.m. except in very large towns where they could leave up to 10 p.m. In addition, bus services were abolished for the general public on Sunday mornings and were curtailed on Saturday and Sunday afternoons. In order to spread the peak hour load, Regional Transport Commissioners helped to arrange staggered hours in office and factory and shop, and the Ministry of Labour made efforts—especially in London—to transfer workers to similar factories near their homes in order to avoid cross-city travel. Bus queues were made compulsory and some of the worst rush hour scrambles were thus avoided.

It was more difficult to devise a system for keeping non-essential travellers off the buses, although priority certificates for war workers were issued on some congested routes, especially in Scotland; and

¹ Chapter XI, Section (v).

² e.g. to encourage holidays at home, transport or entertainers to isolated camps, to enable relatives to visit evacuated children, and so on. See above, Chapter XI.

shoppers were everywhere urged to get home before the rush hour started. It was not possible to introduce any widespread priority system on the buses; the discomforts of war-time bus travel no doubt did much to discourage all but those who had pressing need to use them.

All these restrictions were imposed for the 1942-1943 winter and continued unchanged during the 1943-1944 winter. Some additional services were allowed to run during each summer, as long as total petrol issues were not increased. By the summer of 1944, however, the petrol situation had improved sufficiently for R.T.C.s to be told they could allow some improvements in off-peak services up to a 5 per cent. increase in petrol consumption, but in many areas the shortage of conductresses prevented full use being made of this permission. In November 1944, the Minister of War Transport asked the Lord President's Committee for permission to restore nearly all the cuts except those for Sunday morning and long-distance services insofar as the labour position would allow; but it was naturally not until after the end of the war that bus services could be allowed to return to something approximating to peace-time standards.

APPENDIX XXIV

Railway Passenger Traffic Statistics

	1938	1939	1940	1941	1942	1943	1944	1945
Number of passengers originating (Grand Total)	1,237.2	1,225.5	966.6	1,023.3	1,218.2	1,334.6	1,345.3	1,371.8
Estimated passenger-miles (Total)	18,993*	—	—	—	—	32,273	32,052	35,248
Average receipt per passenger journey	11.38	12.55	16.37	21.05	22.99	24.65	25.83	27.63
Average receipt per train-mile	5.17	5.75	7.83	10.25	12.83	14.75	15.83	16.00
Average distance per journey	15.94*	—	—	—	—	25.40	25.12	—
Coaching train-miles	287,371	256,923	201,267	201,856	203,216	204,198	202,052	—

* September 1938 to August 1939 inclusive.

Source: Summary Table of Statistical Returns of Railways of Great Britain 1938-1944, and Statistical Digest of the War.

APPENDIX XXV

Mechanically Propelled Road Vehicles registered for the First Time, 1939-1945

HACKNEYS	Aug.- Dec. 1939	1941			1942			1943			1944			Jan.-Sept. 1945		
		Electric	Other than electric	Total	Electric	Other than electric	Total	Electric	Other than electric	Total	Electric	Other than electric	Total	Electric	Other than electric	Total
Over																
Not Over																
— 8 seats	338		63	29	29	7	7	7	34	34	—	22	22	22	22	
8	814		172	710	704	17	1,092	1,109	583	601	—	393	393	393	393	
40	1,340		361	541	483	40	908	948	1,302	1,368	95	1,094	1,094	1,189	1,189	
TOTAL HACKNEYS	2,492		596	1,280	1,216	57	2,007	2,064	1,919	2,003	95	1,509	1,509	1,604	1,604	
Total (over 8 seats)	2,154		533	1,251	1,187	57	2,000	2,057	1,885	1,969	95	1,487	1,487	1,582	1,582	

Source: Ministry of Transport.

CHAPTER XIV

THE ROAD HAULAGE ORGANISATION, 1943-1945

(i)

The Failure of the 1942 Scheme

THE SCHEME for a war-time co-partnership in road haulage between the Government and the industry, which had come into existence in February 1942,¹ was born at an unpropitious moment. For as we have seen, the shortage of tankers and the Japanese conquests of oil fields and rubber plantations in the Far East now required a compression of road haulage operations to save fuel and tyres; goods vehicles alone consumed 115 thousand tons of motor spirit less in 1942 than in 1941² and a substantial quantity of tyres was also saved.³ Many hauliers naturally attributed their resulting loss of business⁴ to the introduction of the co-partnership scheme. This was not justified, for the cuts in petrol and rubber would have occurred in any case, but these misunderstandings militated against the smooth functioning of the 1942 road haulage scheme from its inception.

At the same time, paradoxically, the volume of business done by the industry during the earlier war years, and especially during 1941, discouraged operators from coming forward willingly to offer their vehicles on charter to the Government. It will be recalled⁵ that an essential part of the 1942 scheme was that the Government should have at its disposal a 'hard core' of chartered vehicles which could be sent to any part of the country in an emergency. The aim had been to charter 2,500 long-distance vehicles in addition to the 1,600 already on charter to the Meat Transport Pool; but by August 1942,

¹ See above, p. 321.

² See Statistical Appendix, Table 11.

³ The figures of rubber consumption in tyres in 1941 are not available, but the saving between the annual rate of consumption during the early months of 1942 and the annual rate of consumption during the last three quarters of the year (after tyre control started) was in the neighbourhood of 50 per cent. (See above, pp. 439 *et seq.*)

⁴ e.g. one haulier who had carried 716, 710, 920, 616 and 889 tons during the first five months of 1941 respectively, carried 536, 503, 410, 331, 288 tons during the first five months of 1942.

⁵ See above, p. 320.

after the scheme had been in existence for six months, only 475 vehicles had been chartered by the Government. One reason may have been that the rates were too low, especially for larger vehicles¹ and hauliers felt it would be likely to be more profitable to continue earning ordinary commercial rates outside the scheme than to submit to direct Government control in return for a fixed net revenue. Another was that it was frequently difficult to 'match' the type of vehicle being offered with the type and quantity of traffic to be carried, and offers of vehicles for charter sometimes had to be refused on these grounds.²

The 'co-partnership' scheme required a large number of officials, clerks and accountants. The country was divided into six divisions to correspond with a grouping of the existing civil defence regions. Within these divisions there was a total of seventeen Area Offices. The duty of the Area Road Haulage Officer in charge of each area was to arrange for the movement of Government traffic. Thus if a Departmental Movement Officer wanted to send a consignment of goods by road he might apply to the nearest Area Road Haulage Officer; he was not, however, obliged to do so. This Area Road Haulage Officer would then accept the traffic—or not accept it, as the case might be—and if he accepted it, he would then consider whether he had a 'chartered' vehicle available to undertake the work. The chartered vehicles therefore obtained first priority for Government traffic offered to the Road Haulage Organisation. But if the Area Road Haulage Officer did not have a chartered vehicle available—and as so few vehicles were on charter this was frequently the case—he would pass the order in duplicate across to his opposite number, the manager of the local office of the Hauliers' National Traffic Pool.³ Generally the Area Road Haulage Officer and the Manager of the Hauliers' National Traffic Pool were in the same building; sometimes they were not.

The order would then be entered at the Hauliers' National Traffic Pool office and a suitable vehicle which was registered with the Pool allotted to the job. If all reasonable steps to secure suitable vehicles through the Hauliers' National Traffic Pool had failed, the Area Officer was empowered to hire non-chartered vehicles to carry the traffic. In the end, after the appropriate forms had been filled in

¹ The Chairman of the Road Haulage (Operations) Advisory Committee stated in June 1942 that 'there was a general feeling in many parts of the country that the rates for chartered vehicles above 8 tons carrying capacity were on the low side'.

² e.g. Resolution of Road Haulage (Operations) Advisory Committee, 18th June, 1942, 'that having regard to the difficulty, just at present being experienced, of balancing traffic . . . and of procuring just the right type of traffic, there should, for the present, be no immediate addition to the number of chartered vehicles'. 1,700 vehicles had been offered by April 1942, although less than 500 had been accepted by August.

³ Although this was the industry's own organisation, the office staff was, like the staff of the Area Road Haulage Officer, also paid for (indirectly) out of Government funds.

and the driver had a delivery note from the Ministry of War Transport or the Hauliers' National Traffic Pool, the vehicle obtained its petrol, collected its traffic and moved on its way.¹ Similarly, Meat Sub-section vehicles available for carrying general traffic were notified to the appropriate Area Office by the Meat Sub-section's Central or Area Controls. The Road Haulage Branch of the Ministry of War Transport was responsible for about 130,000 tons of general merchandise moved a week, as compared with 60,000 tons of meat. Of the general merchandise traffic about 100,000 tons was moved by vehicles registered with the Hauliers' National Traffic Pool, 15,000-17,000 tons in chartered vehicles and 10,000 tons in Meat Pool vehicles. Presumably the rest was carried in hired non-chartered vehicles.²

It is difficult to avoid the conclusion that the system of 'co-partnership' was a wasteful form of control. Between 500 and 1,000 officials of one kind and another were engaged in operating less than 500 vehicles. In addition, the division of responsibility between the Area Organisation and the Hauliers' National Traffic Pool was unworkable, even with goodwill on both sides.³ The Committee of Investigation which reported on the Staff and Organisation of Area Offices⁴ said, 'although it does not fall within their terms of reference the Committee could not fail to note evidence that the co-existence of the Ministry's organisation and the Hauliers' National Traffic Pool does not encourage efficient working and does lead to duplication of effort and waste of manpower'. Moreover, the work of the local

¹ Detailed records were kept by the Area Office of all jobs carried out; mileage and tonnage for each journey and each vehicle were recorded, job cards and drivers' statements checked, and so on. Returns of all financial details were also kept weekly and passed to Headquarters. In many Area Offices an Area Control Room Board was kept on which the movement of each vehicle proceeding to, away from or within the area could be plotted, whether they were chartered vehicles or Meat Pool vehicles. The volume of accepted but unplaced traffic was also shewn.

² Tons carried by Road Haulage Organisation, October 1942 (excluding meat)

<i>Week ended</i>	<i>Total tons of general traffic</i>	<i>Hauliers' National Traffic Pool</i>	<i>General traffic carried by meat section</i>	<i>Chartered vehicles</i>
2.10.42	139,223	107,528	8,577	17,258
9.10.42	131,431	99,390	10,758	16,907
16.10.42	124,877	96,349	10,100	13,105
23.10.42	134,221	105,265	11,030	14,359
30.10.42	119,432	91,385	8,669	13,427

³ Headquarters frequently had to issue instructions defining the spheres of influence of the two parallel organisations, e.g. 'the Hauliers' National Traffic Pool have a share in the Department's responsibility as to the acceptance of traffic, the rates paid to hauliers and usage of (chartered) vehicles . . . On the other hand the Department . . . has a share of the responsibility for the best use of vehicles employed through the Hauliers' National Traffic Pool.' This followed a paragraph which read 'the allocation of traffic (passed to it) shall be in the sole discretion of the Pool'. The position could hardly be described as clear.

⁴ Area Offices were visited during May-July 1942.

managers of the Hauliers' National Traffic Pool and that of the Area Road Haulage Officers not only overlapped, but to some extent conflicted. The Traffic Pool was anxious to do all the business it could, but the conscientious Area Officer was striving to reduce the total amount carried by road.¹ Road haulage traffic did decrease during 1942 because of the imperative need to economise fuel and tyres. As was remarked previously, this contraction led hauliers wrongly to suspect that the chartered vehicles and Meat Pool vehicles used for general traffic were taking the bread and butter out of their mouths. They argued that if their own vehicles had to stand idle while Government-controlled lorries carried an increasing amount of traffic, their vehicles would have to be laid up and the drivers discharged, which would certainly not be to the national advantage. One trade organisation, the Associated Road Operators, went so far as to argue that in view of the contraction of road traffic the chartered fleet should be disbanded until it was needed. It is true that in certain areas where, under the guidance of traffic allocation committees, more traffic than ever was being transferred to the railways and where chartered vehicles and Meat Pool vehicles were competing for the remaining traffic,² some hauliers may have lost business to the Government-controlled vehicles. Over the whole country, however, when one takes into account the small number of chartered vehicles and the relatively meagre tonnage that they carried in 1942, it is plain that this could not have meant a severe inroad into the business of the 20,000 long-distance vehicles which were not under charter.

These conflicts between the interests of the road haulage industry and those of the Government were perhaps inevitable under the 1942 conditions. Apart from these general difficulties, however, various criticisms were made of the working of the 1942 co-partnership scheme. The industry's complaints were in the first place that chartered vehicles were taken off their regular routes and the drivers kept away from home for long periods. This was unavoidable, however, since the main purpose of the 'hard core' was to have vehicles which could be sent anywhere. Secondly, it was said that the chartered vehicles were being managed less efficiently than they had been under private ownership. It is difficult to say whether this was true or not, for the insufficiency of road haulage statistics does not enable comparisons to be made. Some apparent decrease in tonnage moved per vehicle may have been accounted for by the fact that

¹ In one or two cases Regional Transport Commissioners accused the Road Haulage Branch of 'touting' for traffic for the chartered vehicles at a time when R.T.C.s were endeavouring to cut down fuel consumption and encourage the transfer of traffic to rail.

² For the Government naturally did not wish to see the vehicles for which it was disbursing taxpayers' money standing idle.

amongst smaller operators the statutory hours of work for drivers were by custom ignored, whereas Government operated vehicles enforced the required rest periods. On the other hand, in some areas the previous lack of an adequate clearing-house system enabled the Area Organisation to show considerable economies in bulk loading and full loading compared with the situation before control. Thirdly, the industry complained that Meat Pool box vehicles not required to move meat were being used to carry traffic—especially back-loads—for which they were not really suitable. In fact, however, they were carrying a smaller amount of general merchandise than they had carried before the war, and in any case the intention of rationalisation of transport was that such things should happen. Fourthly, it was also complained that there were undue delays in the payment of accounts and in general too much paper work. These complaints may have been more justified. Owners of chartered vehicles complained that mileage claims and claims for overtime were altered by the Ministry without reasons being given and hauliers generally complained that accounts took a very long time to be settled.¹ These were mainly teething troubles perhaps inevitable in a new scheme, and efforts were made to remedy the more serious paper delays. Procedure for checking chartered hauliers' claims was simplified in June 1942 and, in July, the Road Haulage (Operations) Advisory Committee temporarily lent clerks to help clear up arrears of work.

There were, however, complaints about the inefficiency of the road haulage scheme from sources other than the industry. It was difficult for Area Officers to have a view of the traffic position in other areas—for example, chartered vehicles could be waiting at Birmingham when London had work waiting for chartered vehicles² and various Chambers of Commerce complained that the scheme was working neither efficiently nor economically. Again it was considered necessary for the Ministry of War Transport to issue a circular in October saying 'serious complaints have arisen (from other Government departments) in regard to delays in the collection of traffic. Other Departments have the right to expect service from the Road Haulage Branch at least equal to that which they received when using hauliers direct. Even when the Hauliers' National Traffic Pool is used, the responsibility for obtaining satisfactory transport for Government traffic is the Area Officer's, and normally transport should be provided within 24 hours.'

¹ This appears to have been due in part to the fact that hauliers frequently sent their accounts mistakenly to the Hauliers' National Traffic Pool or the Meat Pool instead of to the Road Haulage Area Officers and, owing to staff shortage, they were not always forwarded promptly.

² In theory this should not have been able to happen, as chartered vehicles could obtain work on their own account if Area Officers could not provide it. Area Officers had to be reminded of this proviso, however.

At any rate, by the summer of 1942 it had become obvious to the Government that the scheme was both wasteful and untidy from the administrative point of view. The scheme had been a compromise between the Government's desire to control road transport and the industry's desire to run its own affairs, and like many such compromises it failed¹ and was abandoned without regret. The experience gained in its operation, however, helped to make more of a success the scheme which succeeded it.

Before turning to consider the 1943 scheme, mention should here be made of the 'defence lines' scheme for road vehicles. The Road Haulage (Operations) Advisory Committee had proposed in the autumn of 1941 that 'defence lines' should be set up consisting of operators (A, B and C licences) who would undertake to supply vehicles at short notice for an emergency—that is, heavy air attack or invasion.² This scheme was organised by the Regional Transport Commissioners, and during the following year about 40,000 vehicles were offered.³ Regional Transport Commissioners entered into contract with those operators who were willing to have their vehicles called up in an emergency, and rates of hire for them were fixed on a similar basis to that for chartered vehicles. When heavy air raids occurred the Regional Transport Commissioners could call on their own 'defence line' vehicles, and Headquarters could call on those of other unaffected regions to clear furniture and rubble from damaged houses. As road haulage generally came under closer control during 1942 and 1943, and as the expected invasion never came, this organisation was seldom used. It was not formally abandoned, for it enabled the Ministry to have some idea of road haulage capacity available, but after January 1944 the scheme was never used.

(ii)

The Origins of the 1943 Road Haulage Organisation

The petroleum stocks in the United Kingdom had been falling steadily throughout 1942 and it was obvious that their conservation was a matter of the first importance. Rubber was also very scarce. Thus the need to economise in the employment of road haulage still appeared to be paramount. On the other side, the turning point in

¹ None of the documents on the files is explicit about why the 1942 scheme failed, but there are scattered pieces of incomplete evidence available.

² See above, p. 321.

³ Although as these included vehicles immobilised through tyre and petrol restrictions, some of them had no drivers.

the war had been reached. American soldiers and materials were coming to the United Kingdom; the railways were complaining of the strain upon their locomotive power; and it was clear that sooner or later the invasion of the European Continent would take place and that Great Britain would be the base. Thus the inland transport system might be expected to be strained to the utmost and every form of transport would be called upon to play its part.

During the winter of 1942-1943 Government departments were attempting for the first time to allocate traffic over the whole field of transport,¹ while the new demands likely to be made on inland transport made it imperative that control over all forms of transport should be effective. For these reasons the unsuccessful co-partnership scheme had to be abandoned and a new plan for road haulage had to be drawn up. This plan had to provide not only for the efficient movement of Government traffic that had to go by road and for rigid economy in the handling of all other traffic by road, but for a substantial reserve of long-distance vehicles that could be called upon by the Government to carry goods if the railways reached the limit of their ability to carry more traffic, or if a larger part of the shipping tonnage engaged in the coastwise trade had to be diverted to military employment. A scheme in fact had to be devised which would look two ways: it had to be capable either of contracting or expanding the supply of road haulage. The vehicles and drivers had to be ready for urgent service at any time, but must not be employed in unnecessary work that was expensive in manpower and raw materials before that time came. Such was the problem that confronted the Ministry of War Transport in the autumn of 1942.

It was considered that there was no need for further control over the commercial goods vehicles engaged in local short-distance work. Now that the war had lasted so long and the Emergency Road Transport Organisation had become well established the operations of the three hundred thousand vehicles in this category were adequately checked through the existing method of fuel rationing. The District Transport Officers who supervised the allocations of fuel through the Sub-district Managers were able to maintain an adequate check on all issues of petrol. The Sub-district Managers knew the transport position intimately and the compression of retail distribution aided by the various zoning schemes had gone far. The weary housewife who carried or pushed her loaded basket back from the shops knew or felt that there was not much further scope for economies in retail distribution. Van drivers were aware that their every journey was subject to the most rigorous system of checking. Moreover, the bulk of the vehicles engaged in this trade were not

¹ See below, Chapter XV.

suitable for other work and the wear-and-tear upon them was not heavy.

The new scheme therefore concentrated on the 90,000 vehicles used mainly for journeys up to sixty miles and the 25,000 used for long-distance work. It was thought that the existing control through the Emergency Road Transport Organisation over the operations of these classes of vehicles was less effective. In the first place, their work was mostly inter-regional and much of it was carried out a long way from the district in which the vehicles were rationed. Secondly, a large part of their work was not of a regular character. Thirdly, there was no adequate control over their return journeys and back-loads. It was argued that the comparative lack of control over the movements of these vehicles was all the more important because they were heavy consumers of fuel and rubber. It was stated that the tyres of a heavy eight-wheeler required about twenty-five times as much rubber as those of a light van, and that on the average, owing to the greater distances run, they lasted only about half as long. It was therefore concluded that:

- (a) the traffic carried in such vehicles should be controlled and concentrated in the smallest possible number of vehicles;
- (b) that vehicles laid up in consequence should be maintained in a state of readiness for immediate use.¹

The first of these objectives required that road transport should only be used when difficulty or delay would result from the use of rail or water; the second implied that the hauliers in this category should be remunerated even if their vehicles were not employed. Logically therefore there was a case for taking this section of the industry under Government control.

It was decided as a first step to take operational control of all vehicles that were normally engaged wholly or mainly in the general haulage of goods for distances of sixty miles or more. Vehicles doing medium distance haulage work were not taken under control at the moment although it was expected that they might need to be. The problem was, however, as officials had realised from the beginning of the war, how to devise suitable machinery for the control and operation of so highly individualistic an industry. True, the difficulties had been reduced to manageable proportions by confining the system of direct control only to one section of the industry. Moreover, the setting up of the Area Road Haulage Offices under the 1942 scheme had provided a nucleus organisation with administrative experience and their staffs could be supplemented from the resources of the Hauliers' National Traffic Pool. But these offices had only had

¹ See Cmd. 6506, February 1944; and Sir Cyril Hurcomb, *op. cit.*

about 500 vehicles to look after. It was now necessary to provide for the management of some 25,000 vehicles.

To obtain the necessary operational experience and the maintenance and repair facilities required to run such a large fleet of vehicles it was decided to take over a certain number of well organised haulage businesses as a whole, even though some of their vehicles might normally be engaged on short-distance work. These businesses became known as 'controlled undertakings' and their vehicles as 'chartered vehicles'. The firms thus taken under control were to conduct their whole business on Government account and were remunerated on the basis of their annual average net profit earned during two selected years (at owner's option) between 1935 and 1938, adjusted according to the value of their physical assets: for example, if a firm had acquired new vehicles since the standard period this would be taken into account. In addition, vehicles not belonging to the controlled undertakings but normally employed on long-distance work were hired by the Government at weekly rates covering overhead charges and an element for profit while the actual cost of wages, fuel, insurance and tyres, plus a rate per mile to cover maintenance, etc., were paid for by the Ministry of War Transport. The owners of hired vehicles were known as 'hired operators'.

(iii)

The Administrative Framework

The first task of the 'controlled undertakings' was to provide 'control centres' or 'unit centres' as reporting points with office and accounting staff to which the hired operators could be attached. The controlled undertaking also provided a Unit Controller who was usually either an executive or a junior partner in the controlled undertaking. The ultimate intention was that the movement of all long-distance goods traffic with certain exceptions (such as bulky indivisible loads, liquids in bulk, furniture and parcels)¹ should henceforward be canalised through the Unit Controllers who, if they accepted the traffic, would arrange for its dispatch either on the vehicles of the controlled undertaking or on those belonging to hired operators attached to it.

This was the root of the scheme. There remained the problem which had to some extent vitiated the earlier scheme—how to induce

¹ Some of these 'excluded' traffics were of course dealt with by the Road Haulage Organisation for Government departments, and many controlled undertakings who normally dealt in these classes of traffic continued to do so under the Road Haulage Organisation.

road hauliers to come forward and offer their undertakings or their vehicles for Government service. This difficulty was met in two ways. In the first place, as a result of the drive to economise in fuel and rubber, and also owing to rationalisation and zoning schemes, and the transfer of large blocks of Government traffic to rail, road traffic had contracted during 1942.¹ The receipt of a fixed guaranteed revenue or even of weekly hire rates became more attractive to operators than it had been a year earlier. Secondly, the Government announced that it was its intention to decree that all long-distance traffic must be carried by the Road Haulage Organisation. It was prepared, if necessary, to lay up vehicles and stand off drivers, arranging with the Ministry of Labour that the drivers could be made available again in an emergency. If vehicles belonging to hired operators had to be laid up, however, they would be remunerated at a reduced rate. Therefore, although hired operators would be likely to earn less than they would have earned if they had been operating on their own account, as the White Paper pointed out, 'if, as at one time it seemed possible, it had been necessary to lay up large numbers of vehicles, the operators would have had an assured income sufficient to enable them to maintain their vehicles and staffs in readiness for immediate action'. In fact it did not prove necessary to lay off vehicles for long and the reduced rate of remuneration did not take effect. On the whole, the financial inducements appear to have been fair and attracted hauliers into the new scheme as they had not been attracted a year earlier.

The framework of the scheme consisted of the Road Haulage Branch of the Ministry of War Transport (expanded to meet its new responsibilities) and twelve Divisions, co-extensive with the civil defence regions, each in charge of a Divisional Road Haulage Officer. The Divisions were divided into 52 Areas each under an Area Road Haulage Officer, and there were 367 Unit Centres.

As has been indicated, the Unit Controller was the key man for all long-distance traffic. The Movement Officers of Government departments would get in touch with him by telephone and if he was satisfied that the traffic could not move in any way except by road he would arrange for its dispatch.² Traffic not under Government control, but requiring to be moved distances over sixty miles, also came to him from private traders for acceptance and dispatch.

There were three types of Unit Centres. General Units were responsible for the acceptance and dispatch of all long-distance traffic

¹ e.g. as the Regional Transport Commissioner, North Midland Area said, 'Quite frankly more traffic for long-distance men does not exist. We shall in fact now be able to make further cuts.'

² The Railways appointed a representative in each area to maintain liaison with the Unit Controller.

suitable for road movement. In large towns where there were several Units, the Units were Directional—that is, they accepted traffic from a territory common to several Units, but dispatched it to only one destination area (for example, one Directional Unit could be responsible for all long-distance traffic going from a town to London). In addition there were a few special Units, generally with territories larger than ordinary Units, which dealt with one particular traffic only. Units might also combine their functions. For instance, one Unit in the Midlands was concerned both with general traffic, that is all long-distance traffic that was being sent from one particular town, and with directional traffic, namely all traffic being sent to the Eastern counties. There was one minor defect in the scheme. It was not always clear whether all traders were familiar with this procedure. The Movement Officers of Government departments were provided with a book containing the names, addresses and functions of each of the 367 unit centres. Private traders were not always clear, especially towards the end of the war, to which Unit Centre they should go for advice.

When a Unit Controller accepted long-distance traffic, first preference had to be given to 'foreign based vehicles', that is vehicles that had unloaded in his area and now required a back-load. Except in the case of urgent war stores, journeys could only be initiated in home based vehicles after all foreign based vehicles had been worked back. By this means it was hoped to reduce empty back-loading to a minimum. Perfect balance was not of course always possible. Owing to the flow of traffic one Unit might always have a surplus of foreign based vehicles and another a surplus of traffic. This situation could also arise between Area and Area and between Division and Division. The problem of balancing traffic and vehicles ran up throughout the Road Haulage Organisation. Each day at four o'clock the Unit Controller would submit a balance sheet of his traffic to the Area Office. The Area Haulage Officer could then supply additional vehicles to the Unit if it needed them to clear its traffic. Thus the Unit Controller in allocating the traffic gave first preference to foreign vehicles; then he despatched his own vehicles; and finally if he needed vehicles he asked for them from the Area. The Area Road Haulage Officer could obtain vehicles for the purpose either from another Unit under his control or in turn apply to his Divisional headquarters.

This system enabled the Road Haulage Organisation to mobilise its resources rapidly to deal with a transport emergency—for example, in South Wales in the autumn of 1943—whenever vehicles were required in excess of those naturally flowing into an area. Close contact was also maintained with the Emergency Road Transport Organisation in order to draw on additional vehicles if necessary.

NN

In case of dispute the Regional Transport Commissioner¹ had the final word in deciding relative priorities.

Long-distance traffic, on Government or commercial account was thus handled by the Unit Controllers (who were, apart from a small fee, paid by their undertakings). The Area Road Haulage Officer on the other hand was a full-time employee of the Ministry of War Transport. His duty in addition to supervising and assisting the work of his Unit Controllers, was to deal with all short-distance Government traffic requiring movement by road. To move this traffic the Area Officer could either call upon the short-distance vehicles belonging to the controlled undertakings (the chartered vehicles) or he could give the work to firms that were not under control. He had to use his discretion to see that the traffic was fairly divided between the two classes of carriers. This clearing-house function was necessary to avoid competition for transport between the various Government departments, and economising in vehicles, petrol and rubber. The Area Road Haulage Officers at the major ports also had another very important function. It was their duty to arrange for the carriage of large blocks of traffic to be handled ex-ship whether it was long-distance or short-distance traffic.

In addition the 'Meat Section' continued to cover the bulk movement of meat from ship to cold store and from cold store to depot, as well as distribution in the London area. About 1,500 vehicles were chartered to the Ministry for this purpose. The Meat Section also employed on a casual basis about 9,500 vehicles for distributing meat from store and slaughter-house to retail butchers, and for moving livestock from collecting centres to slaughter-houses.

At the summit of the administrative pyramid came the Divisional Road Haulage Officers. They were not directly responsible to the Regional Transport Commissioner but to the Road Haulage Branch of the Ministry of War Transport for the operations and general administration of the Organisation in their division. The Divisional Officer was usually an experienced road haulier who supervised the work of the Areas and saw that headquarters instructions were carried out. If his Division was short of vehicles he could apply to headquarters for assistance from other Divisions. He was the opposite number of the railway, canal and coastwise shipping advisers of the Regional Transport Commissioner. He attended the Transport Allocation meetings in the region, while the Area Road Haulage Officers attended at a lower level allocation meetings with the

¹ There was a certain amount of friction (probably inevitable) between the Emergency Road Transport Organisation and the Road Haulage Organisation, especially in the early days of the scheme. This appears to have been overcome after the Road Haulage Organisation got going.

District Transport Officers.¹ In addition, monthly meetings of Unit Controllers were held under the chairmanship of the Area Road Haulage Officers and monthly meetings of the Area Road Haulage Officers under the chairmanship of the Divisional Road Haulage Officers.

(iv)

The Operation of the Scheme

This was the framework of the 1943 road haulage scheme. It was not, however, until April 1944 that the Ministry of War Transport published an Order under the Defence Regulations forbidding general traffic to be moved by road for a distance of sixty miles or over except on the authority of a consignment note issued by an Area Road Haulage Officer or Unit Controller. The Order, which took a considerable time to draft and required a new defence regulation, met with some opposition from hauliers and was criticised in the House of Commons. The real reason for the Order was that certain hauliers who owned long-distance vehicles had refused to come into the scheme,² while a number of firms that had been accustomed to carrying their own goods in their own vehicles (holders of 'C' licences before the war) felt that their freedom was jeopardised. Naturally to forbid a man to carry his own goods in his own vehicle, even when he had been allowed the fuel to do so, appeared an extraordinary interference with the liberty of the individual, but the Ministry of War Transport considered that no loopholes should be left whereby a few hauliers could break the tight system of control that was the basis of the whole scheme. The Order therefore came into effect on 22nd May, 1944.

By this time the road haulage scheme had been functioning for over a year. The first controlled undertaking was taken over in March 1943. Hirings began in July and by October the arrangements were virtually complete. The Organisation on the general traffic side comprised 388 controlled undertakings and about 2,700 hired operators. Over 14,000 long-distance vehicles were concerned in these arrangements, and in addition the Ministry controlled nearly 5,760 short-distance vehicles belonging to the controlled undertakings. The Meat Section also had long-term agreements with about 100 operators and regularly hired about 3,700 additional vehicles.

¹ See below, Chapter XV, for a description of the traffic allocation machinery.

² There was evidence of an attempt by a group of long-distance hauliers to organise an 'unofficial pool'. Operators were being asked to report to unofficial centres to arrange back-loads, etc., instead of to the Road Haulage Organisation Unit Centres, and there was evidence of empty running by these vehicles.

In all, by the spring of 1945 the total number of vehicles which were the subject of agreements with the Ministry was about 34,000.

It appears that, during the first months of operation, the Road Haulage Organisation achieved its primary object of reducing the number of vehicles in operation, thereby saving fuel. A sample inquiry, the results of which are recorded in the White Paper, shows that the saving in fuel between March and August 1943 ranged from 24 per cent. to 30 per cent. By the summer there were 1,600 surplus vehicles that could have been laid up, although in view of the expected intensification of the work of the inland transport system as a whole in preparation for the opening of the 'Second Front' it was considered inadvisable to put them out of commission. By the autumn of 1943 petroleum stocks in the country were higher than they had been even before the war, while the railways were being strained by heavy freight traffic, especially in South Wales. The Road Haulage Organisation was able to send 500 vehicles into this area during October and give decisive relief to the railways there. Thus although the scheme had partly been intended to constrict the use of road transport it did not in fact appear to do so after the autumn of 1943, owing to the changing circumstances of the war.

In 1944 the tonnage handled by the Road Haulage Organisation was as follows:¹

	<i>Tons</i>
Long-distance general traffic (including Government traffic)	11,000,000
Other Government traffic:	
General	16,200,000
Opencast coal	8,000,000
Meat	3,600,000
Other commercial traffic	15,000,000
	53,800,000

In addition, 4,685,489 head of livestock were carried.

The approximate net expenditure on the scheme was:

1944	£22,657,000
1945	£23,116,000

The estimated value of Government traffic carried under the scheme based on average commercial rates (the traffic was not actually paid for, as this was simply a bookkeeping transaction) was:

1944	£23,833,000
1945	£22,743,000

¹ These figures are not comparable with those shown in Appendix XXVI as they cover different items.

Thus the scheme about paid its way. Moreover, by the creation of official clearing-houses for traffic, which had been practically non-existent before the war, it greatly added to the efficiency of an industry that had always been criticised as insufficiently organised. The scheme continued until 12 months after the end of the Japanese war.

(v)

The Control of Road Haulage Rates

It is appropriate here to mention the control of road haulage rates. As we have seen, by the end of 1940 the rates charged by other forms of internal transport had come under the Government's control. Railway freight rates had been subjected to a limitation of 16½ per cent. above the pre-war level. Canal carriers' rates had (with a few exceptions) been similarly limited. Coastal liner rates were limited to a 33 per cent. surcharge (65 per cent. in the Irish cross-channel trade) and tramp shipping rates were fixed by schedules approved by the Ministry of Shipping.¹ In October 1940 the Minister of Transport had publicly drawn attention to his powers of control and invited all road operators to consult the Regional Transport Commissioners before making increases in their rates. The difficulty was that so many different scales of rates were in force in the industry. There were no agreed charges, most of them were kept secret, and there might even be two or more different rates charged by different firms for carrying the same goods between the same towns. After repeated attempts had been made to find a way of dealing with these differences, and road haulage rates had been examined and discussed, it was decided on the advice of the Road Haulage (Rates) Joint Consultative Committee that the only practicable method of control was to say that goods vehicles should not charge more than had been 'fair and reasonable' in October 1940 with the addition of a percentage 'reflecting increases in costs since that month, regard being had to any variation in the incidence of costs', and an Order to that effect was made under Defence Regulations in February 1942.² Actual charges made during October 1940 were to be used as a basis for calculation and, in the absence of proof to the contrary, the appropriate increase over such a charge was to be 7½ per cent. If the consignor of goods considered that a charge was excessive, he could appeal against it in writing to the appropriate Regional Transport Commissioner, who considered the charge

¹ See above, p. 349 and footnote 2.

² S.R. & O. 1942, No. 251. Compare S.R. & O. 1944, Nos. 184 and 497.

assisted by two assessors, one representing the road haulage industry, and one representing trade or agriculture. Government departments could invoke the Order also, for their traffic. It was generally agreed, however, that the Order was very difficult to operate because of the difficulty of determining what rates had previously been charged and what increases were appropriate. In fact commercial goods rates were never controlled as effectually as other inland transport freight rates during the war.

In a sense of course it might be argued that it was less important to control these rates than it was to control other freight rates. For the Government's policy was to reduce to a minimum the amount of traffic carried on the roads so as to save fuel. Therefore, if road haulage rates were raised to such an extent that traffic was voluntarily transferred on to the railways or inland waterways this was all to the good. But, on the other hand, high rates for traffic that *had* to be moved by road would have conflicted with the Government's policy of stabilisation. Moreover, there was a danger, when so much traffic began to be carried on Government account and when transport was scarce, that the Government might be charged an unduly high rate. And in fact it was stated that during 1941 road haulage rates were substantially raised.

Until March 1942, Government traffic moved by road had been charged at commercial rates. From that date under the first road haulage scheme, an increasing amount of Government traffic was carried by the Road Haulage Organisation, to some extent in chartered vehicles, but largely in vehicles hired at tonnage rates.¹ When the 1943 road haulage scheme came into being, Government traffic that had to be carried sixty miles or more was not charged for at all: it was just accepted and recorded under an appropriate code number. When giving their order for a movement, the other Government departments certified that the cost of moving the traffic would properly be a charge on their Vote, the cost in fact being borne on the Ministry of Transport Vote. This saved much manpower which would otherwise have had to be used to fix charges for Government traffic, especially in view of the wide variety of rates prevailing in the industry. This contrasted with the system that prevailed on the railways. For although from 1943 onwards both the railways and long-distance road transport came under Government control on a similar financial basis, Government traffic was charged for by the railway companies at agreed flat rates.²

Rates for short-distance Government traffic had to be fixed,

¹ It would appear that the practice arose in many regions of charging the Government 5 per cent. more than the commercial consignor was charged. Finance Division of the Ministry had to issue a circular to try to stop this practice.

² See above, pp. 294-296.

because only a limited number of short-distance vehicles came within the scope of control (these were the vehicles belonging to the controlled undertakings). The Area Road Haulage Officers were instructed to charge the rate which would have been charged by the controlled undertakings before the control came into effect; this was assumed to be the fair commercial rate. Similarly consignors of long-distance traffic not on Government account were charged at the rates previously charged by the controlled undertakings.¹ This might mean, and did mean in certain cases, that the consignor had to pay more than he had done before control, although he had a right of appeal against excessive rates to the Minister. Since the Minister was responsible for running the Road Haulage Organisation this meant, however, that he might be judge and defendant in his own case.

(vi)

Criticisms of the Road Haulage Organisation

Some of the criticisms levelled at the Road Haulage Organisation were identical with those that had been made against the 1942 scheme, such as that it involved too much paper work and that drivers were sent on unfamiliar routes. It is clear, however, that the abolition of the duplication of work between the Area Road Haulage Officers and the managers of the Hauliers' National Traffic Pool must in fact have reduced paper work. In general, of course, paper work is necessary to any system of control and to object to paper is to object to control. Some hauliers and drivers found paper work difficult, but they usually received help from the Unit Controllers. The criticism that drivers were sent on unfamiliar routes has already been discussed. That also was an inevitable result of war-time conditions.

Another criticism that was made was that the Organisation charged unduly high rates. This criticism did not of course apply to the bulk of the traffic that was on Government account, although some of the Departmental Movement Officers did make such complaints. It has been explained how difficulties arose out of the fact

¹ The question of applying railway rates to Road Haulage Organisation traffic was examined, but not found to be practicable. A comparison made between some 1,600 road rates charged during a given period by the Road Haulage Organisation and the corresponding railway rates showed that, on the average, the rail rates were 25 per cent. above the road rates (though the figure would have been somewhat lower if in all cases exceptional rail rates appropriate to the characteristics of the traffic had been in existence). There was, however, no consistency in the relationship of the road and rail rates. It varied over a wide range, from extreme cases in which the road rates were nearly 50 per cent. above the rail rates to cases in which the rail rates were over 200 per cent. above the road rates.

that road hauliers' rates had never been uniform and there was no satisfactory basis for fixing what was a fair cost plus profit basis. The method adopted, as has been stated, was to charge the rate formerly charged by the controlled undertaking to its customers. Since the controlled undertakings were usually the most efficient, or at least the most successful, firms in an area, this was not an unreasonable method. That it was not necessarily in peace-time the lowest rate was not a case for objection; before the war the lowest rate offered was often rejected by a customer because it might imply a less reliable service.¹ The control system did, however, leave it open to the Area Road Haulage Officer (who though a temporary Civil Servant was usually a haulier himself) to grant favourable rates to private consignors and a system of official checking of rates had to be instituted as a precaution.

Another criticism of the Road Haulage Organisation was that the services offered were not always those to which a consignor of goods was accustomed. It was said that the system of Unit Controllers meant that all established relationships between a haulier and his former customers were broken. Vehicles specially suited to carry a particular type of traffic were no longer always available to customers and the need for speed in fulfilling particular orders was (it was claimed) not appreciated. The scheme had to some extent attempted to provide against this by excluding certain 'difficult' traffics from the scope of the control, while it was always possible for Departmental Movement Officers to make representations on one of three levels about the urgency of traffic. But in a sense the breach in established relationship lay in the nature of the scheme and in the nature of the war. One of the Unit Controllers' functions was to see that vehicles were as fully loaded as possible and to ensure that foreign based vehicles calling at his Unit Centre obtained back-loads. This was logical in that the scheme was intended to economise in petrol and rubber, and many other persons besides the consignors of goods by road had to put up with an 'austerity' service in war-time. That is not to say that some grievances were unjustified.

Another criticism that was strongly pressed by the House of Commons Select Committee on National Expenditure in one of its reports was that the scheme gave rise to empty running. Drivers, it was asserted, were resigning their posts because they felt that (in two senses) they were not pulling their weight. Empty running of course is to be found in all forms of transport wherever traffic is unbalanced between two points. Empty railway wagons are perhaps an even more familiar sight than empty lorries. The question was whether the proportion of empty running by long-distance vehicles

¹ G. Walker, *op. cit.*

was higher after than before the Road Haulage Organisation came into effect. *A priori* it would be surprising that empty running should have increased after the establishment of the Organisation since one of its main purposes was to eliminate it. The best means of reducing empty running is to ensure that all vehicles have the fullest opportunity to obtain loads both ways. The Unit Centres were in fact clearing-houses for traffic such as had not existed before the war and Unit Controllers had no motive for refusing traffic to foreign based lorry drivers who reported to them, if it was available. A sample taken by the Ministry of War Transport showed that the average percentage of loading of vehicles throughout the country was 81 per cent., as compared with the 70 per cent. that was reckoned to be a good average before the war.¹ Admittedly in some cases lorries might have to be sent off on urgent work insufficiently loaded. In other cases it was considered unwise to break the standing rule that traffic should go by rail in preference to road if it was merely intended to provide lorries with back-loads, especially as in that case unnecessary wear-and-tear on the tyres of the heavy lorries would have resulted. It was only when the petrol and rubber situation eased and the pressure on the railways became exceptionally severe that some relaxation was allowed to this rule. Only a serious piece of statistical research could finally establish the truth about empty running, but if there had indeed been an increase in empty running it would have reflected not so much on the road haulage scheme but on the competence of the Area Road Haulage Officers and the Unit Controllers who ran it.

In the last resort the success or failure of the Road Haulage Organisation largely resolved itself into how far these men were competent. It was alleged by some that the Unit Controllers were overwhelmed with work and were not always suited to their tasks. But the fact remains that if the Unit Controllers chosen—men who were executives or partners in successful road haulage concerns—could not carry out their tasks of allocating traffic economically then nobody could. For only an experienced haulier could have dealt with the orders flowing in, the most economical loading of the vehicles available, and with the drivers periodically reporting for duty. Admittedly since their own firms had been taken under control and therefore were paid a fixed net revenue the Unit Controllers had nothing to gain personally from doing their work well except the consciousness that they were doing their duty, but that is a remark that applies to every war worker. At least it could not be said that 'inexperienced civil servants' had been placed in charge of road transport. As to the Area Road Haulage Officers the case was largely

¹ *Fifth Report from the Select Committee on National Expenditure*, 15th June, 1944, p. 16.

the same, except that possibly the rates of pay were not calculated to attract the most experienced men to the task. The Divisional Officers were distinguished citizens who carried out delicate functions with great credit. They were the vital link between the Ministry of War Transport and the Road Haulage Organisation.

One more fundamental criticism of the Road Haulage Organisation remains to be discussed. Was the Organisation necessary at all? Most of the Regional Transport Commissioners were inclined to argue that it was not necessary and that a parallel organisation to their own had been uselessly created. According to this view, the elaborate system of fuel rationing that had been set up at the beginning of the war ensured that unessential traffic could not move by road, and it was maintained that fuel rationing could be manipulated to expand or compress road transport to fit the needs of the moment. Furthermore, it was said that the knowledge of local road haulage conditions and resources acquired by the Commissioners and the District Transport Officers in the course of their work was such that they could always have provided a fleet of vehicles to go to any part of the country in an emergency. On the whole, it is fair to say that the history of events during the 1940-1941 winter does not support this claim. When road vehicles were required for an emergency they were not always available, and the Regional Transport Commissioners' control over fuel issues was not sufficient¹ to induce unwilling operators or drivers to leave their normal work and undertake more urgent but possibly less remunerative work elsewhere. Indeed, that was precisely why the Ministry of War Transport introduced the Road Haulage Organisation in the first place. It wanted to have a fleet with experienced drivers under its own control. The usefulness of having one was proved on several occasions in the months that preceded D-day.²

It would perhaps be fair to say that although the Regional Transport Commissioners exercised effective control through the manipulation of fuel rations over the short-distance vehicles, and perhaps over medium-distance vehicles (those which normally operated on journeys of 30-60 miles), long-distance vehicles whose work was inter-regional clearly needed a closer form of control if they were to be used economically and at the same time to be available for emergencies.

Whether the Organisation was as important as a means of saving fuel and rubber is another question. Fewer than 40,000 vehicles out of over 400,000 goods vehicles operating came into the scheme, and

¹ Although the abolition of the basic ration, which still existed in 1940-1941, would have strengthened the R.T.C.'s hand.

² For the work performed by the Road Haulage Organisation during D-day, see below, Chapter XVI, Section (iv).

it was recognised that if the medium-distance vehicles had been added it would have meant a very large and possibly unmanageable administrative task. It is certainly arguable that the manpower that was used on the Road Haulage Organisation was disproportionate to the saving of fuel and rubber effected. But in fact by the time the scheme came into full effect the supplies of these materials were far better than had been assumed. It was therefore unnecessary to pursue an economy so rigid that vehicles had to be laid up and their drivers dispersed. The Road Haulage Organisation had to look two ways—not only had it to economise in scarce materials and labour, but it had to be ready to deal with sudden influxes of traffic. These two aims were somewhat incompatible, and neither could be pursued with vigour without invalidating the other. To these opposing aims were added the natural complications of starting to control an industry of very numerous small and dispersed units carrying a diverse and variable traffic. Two attempts at control were made, and while the first was a failure, the second was a reasonable success.

APPENDIX XXVI

Total Tonnage Carried Monthly by Road Haulage Organisation, November 1943–October 1945

Note: Hiring of vehicles for long-distance road haulage work was not completed until 1st November, 1943, when some 2,600 contracts had been signed.

The figures given below include:

- (a) long-distance traffic, Government and commercial,
- (b) short-distance Government traffic,
- (c) short-distance commercial traffic carried by controlled undertakings,
- (d) Meat Pool traffic.

In addition, the Organisation carried some 300,000–400,000 heads of livestock each month.

TONNAGE ORIGINATING

(Million tons)

	<i>1943/4</i>	<i>1944/5</i>
November	2·2	4·5
December	2·5	4·9
January	2·4	3·9
February	2·5	4·1
March	2·6	6·0
April	3·4	4·5
May	4·4	4·0
June	5·4	5·8
July	4·4	4·4
August	4·2	4·8
September	5·5	4·3
October	4·5	4·2
	44·0	55·4

CHAPTER XV

THE MACHINERY OF INLAND TRANSPORT CONTROL, 1943—1945

THE ESTABLISHMENT of the Road Haulage Organisation in 1943 gave the Government, for the first time, full control over all four branches of the inland transport system. In the same year, by creating regional machinery for the allocation of traffic to the various means of transport—in addition to the existing central machinery in the form of the Central Transport Committee—the Ministry of War Transport also increased its control over the movement of Government traffic. By 1943, the war-time inland transport organisation was complete. From that time onwards, with the exception of the special planning needed for D-day,¹ no important changes were made. It is therefore appropriate to pause at this point and examine the broad administrative structure of war-time inland transport as it stood at the end of 1943.

At different places in this narrative, the development of each of the separate parts of the war-time inland transport organisation has been followed, from the embryonic stages of the mid-nineteen thirties, through the various stages of growth, to maturity. It will now be an advantage, at the small expense of some repetition, to examine each part of that organisation in relation to the completed whole. This may be conveniently done in three stages: first, by dealing with the divisional organisation of the Ministry of War Transport; second, by describing the form of control exercised over the main inland transport agencies; finally, by explaining the machinery for meeting departmental demands for inland transport and for allocating traffic between the different branches of the inland transport system, this will include some reference to the control of inland transport charges in war-time.

Starting at the apex of the administrative pyramid, advising the Minister of War Transport was the Director General.² Under him, administrative responsibility was assigned to two Deputy Directors General—one for shipping and one for inland transport—and three Assistant Directors General, each responsible for the work of a group

¹ Described below, Chapter XVI.

² Sir Cyril (later Lord) Hurcomb was Director General of the Ministry of War Transport between 1941 and the end of the war.

of Divisions. There were twenty-three Divisions of the Ministry of War Transport.¹ Eight were concerned directly with inland transport, namely Railways (Traffic), Railways (Maintenance), Road Transport (A), Road Transport (B), Highways (Administration), Highways (Engineering), Inland Waterways and Rates and Charges Divisions. Two further Divisions, Coasting and Short Sea Division and Port and Transit Control stood, as it were, on the bridge between the shipping and inland transport sides of the Ministry, though for administrative purposes their responsibility was to the Deputy Director General (Shipping).

The functions of the main inland transport Divisions may be briefly described. Railways (Traffic) Division was broadly responsible for all questions—other than finance and maintenance arising from Government control of the railways and relating to the transport of goods and passengers by rail. Railway legislation and Directions under the Defence Regulations concerning railways were the responsibility of this Division. Railways (Maintenance) Division was responsible for technical matters: for the inspection and safety of railways,² their war-time operation and efficiency including the adequacy of their staff equipment and power. The heavy administrative burden of road transport problems was carried by two Divisions, working in close touch. Road Transport Division 'A' was broadly responsible for matters of policy concerning road goods transport and shared with 'B' Division responsibility for fuel rationing for controlled undertakings. It supervised the goods side of the Emergency Road Transport Organisation and was responsible for the control and operational administration of the Road Haulage Organisation. Road Transport Division 'B' was responsible for the control and rationing of bus services under the Emergency Road Transport Organisation. It shared the work of administering the fuel rationing scheme for goods and passenger vehicles and was also responsible for a number of other semi-technical matters including those relating to the construction and use of motor vehicles, the provision of new vehicles—in conjunction with the Ministry of Supply—the acquisition of vehicles for Government departments, vehicle maintenance and repair facilities, the Government's producer gas scheme and the registration and licensing of motor vehicles. General matters of policy relating to highways, including questions of road safety, fell to the Highways (Administration) Division. Highways (Engineering) Division was mainly responsible for technical questions: the maintenance and improvement of trunk roads and bridges, including responsibility for the work of the Divisional Road Engineers, grants to local

¹ Not counting Finance, Establishment and General, Public Relations and Statistics.

² And also tramways and trolley vehicle services.

authorities for road works, labour allocation and priorities for road works and works carried out for other Government departments. Inland Waterways Division was responsible for matters of general policy relating to inland waterways, including control of canal undertakings and carriers. Rates and Charges Division was responsible for all questions relating to inland transport charges, road haulage rates and rates of payment for requisition or hire of road vehicles. Of the Divisions responsible to the Deputy Director General (Shipping), Coasting and Short Sea exercised control through Area Committees of voyages, class of cargo, and freight rates of tonnage in the coasting and short sea trades. Port and Transit Control was responsible for the operations of commercial shipping within the ports and had the special task of securing the quick turn-round of shipping in port.

We now turn from the spheres of responsibility of the Divisions to the machinery through which control was exercised over the four inland transport agencies. Among the objects of control of railways in war-time, the following were officially set down:

- (a) that the operations of the railways should be determined by national needs and not by financial results.
- (b) that the railways should be brought into the closest possible touch with the Government machine so as to ensure on the one hand that the Government's policy is carried out; and on the other, that the needs of the railways and their own problems should be made known to the Government, and such decisions of policy and such action taken as are necessary to meet them.

Responsibility to the Minister for advising on and carrying out railway policy lay with the Controller of Railways and Chairman of the Railway Executive Committee. The holder of this double office was at once responsible for communicating and interpreting the Minister's policy to the railways through the committee of which he was chairman and for putting before the Minister and his officers the views and advice of the committee, which he was able to do more effectively because of his official position in the Department.

Thus, Sir Alan Anderson had at his disposal both the staff and facilities of the R.E.C. and those of the Railways Divisions of the Ministry of War Transport. The R.E.C., which consisted of the four general managers of the main line companies and the Chairman of the L.P.T.B., had as its deputy-chairman, Sir James Milne, General Manager of the G.W.R. The R.E.C. was a body of railway experts whose job was to carry out the policy of the Minister of War Transport. It had an elaborate organisation of its own and a staff of experts drawn from all the principal railway companies. In 1943, for example, there were no fewer than twenty-one special consultative committees

of the R.E.C. advising the main committee on a variety of technical matters connected with railway working, ranging from police questions to mechanical and electrical engineering.¹ In addition to this organisation, the Controller of Railways had the Railways Divisions of the Ministry for consultation, advice, and information. The fact that the Minister controlled the railways did not therefore mean that he took an active part in their operation. It was for the Minister to decide policy—for example, whether passenger services should be reduced to enable the railways to handle freight traffic, or whether the companies should concentrate on building heavy freight locomotives or engines of some other type. But once the policy had been laid down, it was considered wise to leave to those who were experienced in the business the executive details necessary to give effect to it.

There now existed two types of control of goods transport by road. While the majority of goods vehicles continued to be controlled through the Emergency Road Transport Organisation, the Ministry of War Transport also exercised positive operational control of long-distance road haulage through its Road Haulage Organisation. The Emergency Road Transport Organisation, it will be recalled, combined the function of controlling road goods transport with that of issuing fuel rations. The organisation was on a territorial basis, consisting of twelve Regions² in charge of Regional Transport Commissioners, and two Sub-regions—Northern Scotland and North Wales. For the control and rationing of goods vehicles, the Regions were divided into 74 Districts, each under a District Transport Officer, and 407 Sub-districts,³ each with its Sub-district Manager nominated by the groups. Groups consisted of from 25 to 100 vehicles under group organisers, who were not civil servants but appointed by the operators from among their own numbers. Thus, all goods vehicles outside the Road Haulage Organisation were controlled and rationed through the Sub-district Offices. Control over the use of fuel was exercised with the objects of seeing that essential traffic which could only be carried by road was not held up, and that carrying capacity was not wasted on light running or non-essential work. The Emergency Road Transport Organisation was also responsible—in co-operation with the Road Haulage Organisation—for meeting Service demands for civilian vehicles on hire, for finding local haulage for essential work and for carrying out certain functions

¹ The full list of R.E.C. committees for 1943 was as follows: Accountants, A.R.P., Catering, Coal, Docks, Engineering, Goods, Home Guard, Mechanical and Electrical Engineers, Mineral, Operating, Passenger, Police, Publicity, Road, Signals, Solicitors, Staff, Statistical, Stores, Surveyors.

² The regional areas were the same as the Civil Defence Regions.

³ These are 1944 figures.

in connection with the issue of defence permits in place of the peace-time 'A', 'B', and 'C' licences. Finally the Emergency Road Transport Organisation, in co-operation with the local organisation of other Government departments, notably the Ministry of Food, had a major share in the task of achieving fuel economies through the rationalisation of distribution.

The Emergency Road Transport Organisation proved adequate as a general means of controlling road transport, while the closer and more positive direction needed for long-distance haulage was secured by the Road Haulage Organisation. It needs to be stressed that this was an organisation quite separate and distinct from the Emergency Road Transport Organisation. Its headquarters was the Road Haulage Branch of the Ministry of War Transport, while its regional organisation consisted of 12 Divisions,¹ each in charge of a Divisional Road Haulage Officer, 52 Areas, each under an Area Road Haulage Officer and 367 Unit Centres, each under a Unit Controller. With the exception of certain specialised traffics, no goods could be moved for 60 miles or more otherwise than by this organisation. The organisation also undertook the movement of all general traffic on Government account, whatever the distance, partly in its own vehicles and partly in the vehicles of outside hauliers paid for by the Ministry. The Organisation was based on agreements between the Ministry and operators engaged in long-distance road transport. By the spring of 1945, about 34,000 vehicles were subject to agreements with the Ministry. This Organisation was responsible, in 1944, for the movement of over 50 million tons of traffic plus more than 4½ million head of livestock. The Road Haulage Organisation did not come under the fuel rationing control of the Emergency Road Transport Organisation; instead the controlled undertakings were furnished with imprests of coupons at four-weekly intervals and were required to submit statements showing the mileage operated and fuel used on work performed, which was closely checked.

The war-time control and fuel rationing of public service vehicles continued to be carried out directly on a regional basis by the Regional Transport Commissioners, who were also responsible for issuing the appropriate permits for road services, vehicles and crews in place of the various peace-time licences. Control through the fuel ration had the object of maintaining only those road passenger services necessary to the war effort or to the health or morale of the people. Among the wide variety of problems about bus services which faced the Ministry of War Transport and devolved on the Regional Transport Commissioners were the provision of work-people's services to meet the needs of war production, the staggering

¹ These were co-extensive with the Civil Defence Regions.

of hours, alteration of the hours of closing of shops and entertainments, priority travel schemes and the control of queues, and the question of manpower for bus crews. There were certain changes in the functions of the Regional Transport Commissioners in the later years of the war. Their primary tasks still lay in their responsibility for both sides of the road transport industry, but their duties were broadened to fit in with other regional developments. They now acted as the Ministry's regional focal point for such matters as the allocation of traffic and manpower for various transport services. As regards the relationship of the Commissioners with the Road Haulage Organisation, broadly the Commissioners decided what types of traffic should be carried by the Organisation, while its officers arranged its actual movement. In practice the day-to-day acceptance of traffic was carried out by the Organisation subject to the general guidance and to the decision of the Commissioner in doubtful cases.

Among the other war-time duties of the Ministry of War Transport in relation to road transport matters were arranging—in co-operation with the Ministry of Supply—the production and allocation of sufficient new commercial vehicles and spare parts to meet essential civil war-time needs. This was the responsibility of the Vehicles and Maintenance Branch of the Ministry, while the applications of operators for licences to buy new vehicles were scrutinised locally by the Regional Transport Commissioners. In the case of buses, the sale and purchase of secondhand vehicles were also controlled by licence. Finally, on the road transport side, the Ministry of War Transport had a small organisation responsible for the Government's producer gas scheme until this was transferred back to the Ministry of Fuel and Power in September 1944.

Coasting shipping control was the responsibility of the Coasting and Short Sea Division under its Director at Ministry of War Transport headquarters, and consisted mainly of men drawn from the shipping industry with wide practical experience. At the nine principal ports in the country the Coasting Control Committees continued to function, each with a defined area and having representatives at some 90 ports in all. The Area Committees, which consisted in the main of shipowners with a lifetime of experience in the coasting and short sea trades, were guided from headquarters as to priority of commodities to be carried, the volume of tonnage to be allocated to particular trades and the terms and conditions of carriage. The Area Committees provided the machinery for carrying out headquarters policy through the voyage licensing system in the case of tramps¹ and through full requisitioning in the case of coasting liners.

¹ The system of issuing licences for approved voyages had certain superficial similarities to the Emergency Road Transport Organisation's control of road goods transport through issues of fuel coupons.

The Coasting Control Committees maintained close touch with the Transport Sub-Committees of the Port Emergency Committees, on which they were represented. These sub-committees, which included all the main local inland transport agencies concerned, were responsible for clearing imports promptly from the home ports by the most suitable form of inland transport available. The Port Emergency Committees continued to exercise their functions in relation to port operations and the co-ordination of the many interests concerned with port working, except at certain ports where the supreme authority was the Regional Port Director. At headquarters, the responsibility for the home ports was that of the Ministry of War Transport Port and Transit Control, of which organisation, the Ships Distribution (Diversion) Room was a vital part. Here were examined lists of incoming convoys and, from information about the existing occupation of the ports, probable enemy action, inland transport facilities, the ultimate destinations of the cargo, the number of heavy lifts to be discharged, etc., was determined a port for each ship, where it could be properly handled with the minimum of delay. The Diversion Room was in constant operation and its object was to reconcile the large number of possibly conflicting views and to avoid overloading a particular port and producing congestion both in the port and on the inland transport system.

The machinery of canal control was in charge of the Director of Canals at the Ministry of War Transport. He was assisted by two Deputy Directors, each responsible for a group of canal regions. Regional organisation consisted of Regional Canal Committees, which were executive in character, while a Central Canal Committee advised the Ministry at headquarters—in addition to a number of other advisory committees dealing with special questions.

We now turn to the organisation for meeting the big departmental demands for transport and for allocating traffic between the different branches of the inland transport system. By 1943, the Ministry of War Transport had added to the responsibilities which it had exercised from the beginning of the war the control of canals and the operational control of road haulage movements over 60 miles. With this expanded and improved organisation, it was able to move further towards planning traffic movements, and allocating traffic to the most suitable form of transport with the aim of using each branch of the inland transport system to the full and avoiding waste of resources.

The broad principles governing the war-time allocation of traffic to the different forms of transport were set down as:

- (a) the need in the case of road transport to conserve fuel and rubber;

- (b) the desirability of making the fullest use of canals and coast-wise shipping to lighten the burden both on the railways and the roads.

In normal circumstances, traffic finds its way to a particular form of transport according to such factors as comparative rates and charges and the relative convenience to traders of one form of transport over another. During the war, Government departments, which controlled the bulk of freight traffic movement, were instructed to disregard cost in deciding the form of transport to be used and to adopt as the criterion the best possible use of all facilities. They were also instructed to make the fullest use of the Government's Road Haulage Organisation in meeting their road transport requirements.

In building up the allocation machinery, the difficulty was to decide how far the allocation of traffic should be planned centrally and how far locally. The central piece in the machinery had been created in 1941 with the setting up of the Central Transport Committee.¹ Apart from its general usefulness as a means of consultation between the transport user Departments and the various Ministry of War Transport Divisions, and as a means of keeping the broad problems of traffic allocation before the user Departments, this body had at least three other main functions in relation to the planning and allocation of traffic. In the first place it was responsible for making the generalised statistical forecasts of railway freight traffic every six months on the basis of information provided by user Departments, and judging in general terms from these estimates the adequacy of inland transport resources. Secondly, from information provided by user Departments, it planned the movements of large blocks of traffic, like apples, seed potatoes and fertilisers, and allocated them to the most suitable form of transport.² Thirdly, through an *ad hoc* Allocation of Traffic Sub-Committee, it investigated specific transport problems like the movement of traffic out of South Wales, from the North East coast or into East Anglia.

Nevertheless, it was recognised that the Central Transport Committee was confined to planning in broad terms, while many transport allocation problems could only be dealt with locally. Local allocation machinery already existed at the West coast ports in the

¹ See above, Chapter VII, p. 271.

² It is necessary to record the fact that by no means all the large movements of traffic were planned by the Central Transport Committee. Coal transport, for example, was a matter for separate consultation between Ministry of Fuel and Power, Ministry of War Transport, and the transport agencies concerned. The user Departments represented on the Central Transport Committee moreover set down their opinion that 'too much should not be claimed for the achievements of the Central Transport Committee as most of the effective work was done through inter-departmental consultation'. Thus, in many cases, the Departments drew up the plans; the Central Transport Committee authorised their execution.

form of Transport Sub-Committees of the Port Emergency Committees, consisting of the Food and Supply Movement Officers and representatives of the railways, road transport and coastal shipping. These committees had full powers to allocate imported cargoes to the most suitable form of inland transport—for example they might decide that commodities should be moved by coaster to clear the ports and to turn deep sea ships round quickly.

Yet this machinery only functioned at certain ports. The Central Transport Committee considered whether similar committees ought to be set up at inland points, not so much to move traffic quickly as to see that it went by the means of transport most advantageous from the national point of view. The Ministry of War Transport was hesitant about the proposal because whereas at the ports the Transport Sub-Committees had a straightforward problem, namely to clear the port of the particular traffic in it by the best possible means and the Regional Port Directors had powers to see that traffic moved in accordance with their decisions, in inland towns there was a 'criss-cross' of traffic, no definite clear-cut policy existed, and there was no adequate machinery to control the means of transport.

Nevertheless, during 1943, Allocation of Traffic Committees were set up in each region under the chairmanship of the Regional Transport Commissioners. The committee members were the representatives of the railways, coastal shipping, canals—where there were canals, the Divisional Road Haulage Officer and the Regional Controller of the Ministry of Production. Other user Departments in the region—the Ministries of Food and Supply, the War Office, Air Ministry and so on—were also invited to attend if necessary.¹ These Regional Transport Committees were concerned with allocating regular streams of traffic and substantial flows of traffic to other forms of transport if this were more advantageous. Among their terms of reference were 'to consider cases . . . where it would be *prima facie* advantageous from the national point of view to divert regular streams or substantial blocks of traffic from one means of transport to another or to exchange traffics'. They were told that the capacity of coastal shipping and canals should be used to the full to afford a maximum relief to the railways and road transport and that road and rail traffic should be so adjusted that, while a minimum use was

¹ As a counterpart there were also Regional Transport User Committees under the Regional Controller of the Ministry of Production. The Ministry of Production represented the other user Departments on the Regional Transport Committee. The Transport User Committee's tasks were:

- (a) to advise which particular traffic or consignments were particularly urgent and on local priorities for traffic generally.
- (b) to advise Regional Boards to warn firms, adjust labour, consumption and output to mitigate the effects of transport embargoes.
- (c) to speed wagon turn-round, etc.

made of road transport, such use as was necessary should afford maximum relief to the railways. These committees were advisory—the responsibility remained with the Regional Transport Commissioner—and among other things they could make recommendations to the headquarters of the Ministry on matters of principle affecting the allocation of traffic.¹ The value of such committees was limited in the sense that it was difficult for them to see the problem from a national point of view. For example, it was argued locally that more traffic ought to be dispatched by sea from the Northern area to London area; it was not realised that this would in fact have added greatly to the difficulties of the railways at the receiving end. Again, the Ministries of Supply and Food were emphatic from the beginning that allocation problems were primarily central and not local; for example, the moving of sulphate of ammonia by coaster was a decision which could not have been made locally.

It was thought, nevertheless, that useful results were achieved by letting local officials view the inland transport problem as a whole rather than as individual railway or road transport problems. There was also liaison at lower levels, for example, between District Transport Officers, Area Road Haulage Officers and representatives of the railways, canals and coastal shipping. In some regions, this took the form of District Transport Committees or panels. This central and local machinery did not, of course, supersede the normal war-time arrangements whereby individual consignments on Government account were arranged through Departmental Movement Officers. In a sense, these officials formed a lower tier in the structure of the traffic planning machinery. Thus, while policy questions concerning traffic planning and allocation were decided at two levels: centrally by the Central Transport Committee and locally by the Regional and District Transport Committees (or in the ports by the Transport Sub-Committees of the Port Emergency Committees), the Departmental Movement Officers were responsible for carrying out, together with their opposite numbers representing the transport services such as the railway liaison officers, the movement of

¹ Some further details of the procedure of these committees may be recorded: 'The Regional Transport Committees, acting either directly or through the agency of District Committees, are concerned mainly with questions involving the allocation of regular streams and substantial flows of traffic, though they may from time to time advise on the allocation of individual consignments. Fortified by their advice, the Commissioner, who remains responsible to the Minister for decisions as to the allocation of traffic, may proceed beyond a simple determination to divert a named traffic from one form of transport to another and take general decisions (within the framework of the guidance given by Headquarters), e.g., by specifying a mileage limit for movements permitted by road transport: such limits can be either relaxed or tightened up in the light of existing transport conditions. The discussion of proposals to divert traffic from rail to road is frequently initiated by the railway representatives; but the question of ensuring the maximum relief to the railways in such cases is not a simple question of available capacity, either by road or rail, but concerns such points as speedy turn-round and the passing of wagons through marshalling yards.'

individual consignments in accordance with the policy decided at a higher level.

Nor did the allocation machinery disturb the existing priority arrangements. Freight on the railways declared by the Government to be 'essential' continued to be exempted, where possible, from any restrictions placed on the acceptance of traffic over particular routes, while extremely urgent consignments could be designated 'red label' traffic and given priority of movement.¹ There was no special priority system either for road goods transport or the canals, but Government control over them was (by 1943) sufficiently thoroughgoing to enable *ad hoc* arrangements to be made for consignments of special urgency. In the case of coastal shipping, not only were the movement of large blocks of traffic planned locally between the Coasting Area Committees and, for example, the Transport Sub-Committees of the Port Emergency Committees, but superimposed on these planned movements, a system of priority allocation of tonnage was adopted by which particular ships were earmarked for cargoes more important than others.

The purpose of this elaborate traffic allocation machinery was, as has been explained, to ensure that diversions of Government traffic from one form of inland transport to another were made with the object of using all available transport capacity to the best advantage and not because of differences in charges. This meant, as far as the distribution of Government traffics among the four branches of inland transport was concerned, that rates and charges were relegated to a minor role in war-time. It is, however, necessary to conclude by describing briefly the main controls exercised by the Ministry of War Transport over inland transport charges during the war.

Before the war, there were wide differences in the methods of regulating the charges of transport undertakings. The railways and the L.P.T.B. had their charges regulated by a judicial tribunal. Docks, canals and inland waterways had their charges governed by statutory maxima. Canal carriers were, generally, not subject to regulation. The fares of public service vehicle operators were regulated by conditions attached to the road service licences by the Area Traffic Commissioners. Road hauliers were not controlled at all. In general, inland transport charges were only to a limited extent regulated by the Ministry of Transport.

On and after the outbreak of war, the Ministry of War Transport was given wide powers, under the Defence Regulations, to control

¹ The detailed working of the railway priority system is described above in Chapter III, p. 115. The changes made in this system shortly before D-day in 1944 are discussed below in Chapter XVI.

inland transport charges. This proved to be necessary for a variety of reasons:

- (a) Increased transport charges in excess of statutory limitations had to be authorised in order to maintain the undertakings.
- (b) Control of charges already subject to statutory limitations and of those not so limited was necessary for carrying out the Government's policy of stabilisation of prices.
- (c) A charges policy had to be worked out for transport undertakings taken under control.
- (d) Extension and adjustment of workmen's fares was needed to meet war-time travelling requirements. The limitation or withdrawal of cheap fares was necessary to discourage unnecessary travel.
- (e) Charges for Government traffic had to be decided.
- (f) Rates had to be determined for the requisition and hire of road vehicles by Government departments.

War-time charges policy, based on these main considerations, affected the four branches of inland transport broadly as follows. In the case of the railways and the L.P.T.B., the jurisdiction of the Railway Rates Tribunal over the general level of charges was suspended¹ and the general level of charges was permitted to increase, under the original railway financial agreement, to meet variations in working costs. From 1941, however, the general level of charges was stabilised at 16½ per cent. above pre-war level (10 per cent. in the case of L.P.T.B. fares and all season ticket and workmen's fares). Government-controlled merchandise traffic on the railways was, from October 1941, paid for at a flat rate per ton, irrespective of the distance conveyed or the description of the traffic. Each Department had its own separate flat rate, based on the average charge per ton for merchandise which it paid in July 1941. This system saved considerably in manpower, though it was necessary to set up machinery to check undesirable transfers of traffic to and from the railways as a result of the flat rates.² Rail fares for Service personnel on duty were based on a system of 'flat fares', irrespective of distance. Concession fares were also introduced for individual members of the Services and the Merchant Navy and these were subsequently extended to members of the Dominion and Allied forces. Arrangements were also made with the railways to extend the scope of workmen's fares to meet the extension of shift working after Dunkirk. In a few cases, directions were issued to the railways to reduce workmen's fares to the level of the corresponding road fares in order to divert traffic from the buses to rail. To avoid unnecessary

¹ Under Defence Regulation 69.

² The system is described more fully above, Chapter VII, p. 294.

travel, cheap day and other special cheap railway facilities were withdrawn.

For road passenger transport, the Regional Transport Commissioners had power to regulate bus fares during the war. A few increases were authorised, but there was little general increase in bus fares. The contract charges of public service vehicle operators were not subject to control, though where difficulties arose, the Regional Transport Commissioners gave advice to Government departments and others who hired vehicles. The Commissioners also took special steps to provide workmen's services at cheap fares where this was necessary. There was, however, no uniform policy for the whole country, since arrangements had to be varied to suit local needs.

As has been described in Chapter XIV, since road haulage rates were not previously subject to statutory control, their regulation in war-time proved difficult. As was explained, an attempt to stabilise them was made under the *Road Haulage and Hire (Charges) Order, 1942*,¹ which laid down that no road haulage or hire charge should exceed the fair and reasonable charge in October 1940, plus a percentage to reflect increased costs since that month. Charges made by the Road Haulage Organisation for ordinary commercial traffic and Government traffic moving less than 60 miles were based on the charges which had previously been made by the undertakings now brought under control. Government traffic moving 60 miles or more was not paid for by Departments, though there was a notional debit against them.

The canal carriers registered under the Canal Subsidy Scheme were required to notify the Ministry of War Transport of all increases in charges and increases which appeared unnecessarily high were investigated. The regulation of canal carriers' charges became more effective, however, when the principal carriers were brought under control. The tolls of controlled canal undertakings were stabilised at the level which existed when control was taken, even where this was below the stabilisation limit of $33\frac{1}{3}$ per cent. over pre-war. The charges of the controlled canal carriers were related to a stabilisation limit of $16\frac{2}{3}$ per cent. over pre-war, with a certain latitude.

The level of freight rates for the requisitioned coastal liners was limited to $33\frac{1}{3}$ per cent. above pre-war (except for the Irish cross-channel trade where it was 65 per cent.). This was insufficient to meet operating costs, but in order to conform with the Government's price-stabilisation policy, the loss was borne by the Exchequer. For all the principal tramp trades, schedules of controlled freight rates were drawn up by the Ministry of War Transport.²

¹ S.R. & O. 1942, No. 251.

² This is described in detail above, Chapter IV, Appendix VIII, pp. 183 *et seq.*

These controls exercised over inland transport charges in war-time, coupled with the Treasury instruction to Departments to disregard cost in choosing the form of transport they used,¹ helped considerably in preventing undesirable transfers of traffic from one branch of traffic to another—at any rate in the later years of the war. The desirability of preventing such transfers, and the consequent need to control fares and charges, was, perhaps, most important at this stage of the war for traffics not under Government control. With Government traffics, the practice of conscious allocation of traffic, through inter-departmental consultation, had largely superseded the use of the normal economic criterion of cost in determining by what means a particular traffic should move.

By the end of 1943, therefore, the Government exercised powerful and extensive control over the four branches of inland transport. In addition, it possessed central and local machinery by which Government traffic could be planned and allocated between different forms of transport. If one may use the term 'planning' not to mean the detailed Government supervision and direction of every single consignment and passenger—which would clearly be an impossibility, but in a general and more realistic sense, it is a fair judgment that, by the end of 1943, for the first time a planned system of inland transport was fully functioning.

¹ See above, p. 488.

CHAPTER XVI
PREPARING FOR OVERLORD,
1943-1944

(i)

The Outlook for the Railways:
Winter 1943-1944 and beyond

IN 1943, inland transport depended on the railways more than in any other war-time year. The summer and autumn of that year were not only a time of maximum constriction of road goods transport, but were also the peak period for war-time freight traffic on the railways.¹ In the sixteen weeks from August to November 1943, the railways moved a greater total tonnage than in any comparable period of the war.² A few comparisons will show the size of the effort the railways were now making. The total ton-mileage of freight traffic was roughly half as much again compared with pre-war. While there had been marked increases in the ton-mileage of minerals and coal traffic, the 1943 ton-mileage of merchandise traffic was practically double the pre-war figure.³ The four-weekly statistics shown elsewhere in this volume provide a basis for more detailed comparisons, but the broad conclusion is clear: by the autumn of 1943 the British railway system was a very intensively worked—perhaps over-worked—machine. It was carrying an unprecedented volume of traffic; its manpower resources were inadequate and the maintenance and renewal of its equipment and rolling stock had fallen well below peace-time standards.

It was against this background that the earliest official thoughts about the inland transport implications of D-day were recorded. The essence of the problem that faced those responsible for the organisation of inland transport in the summer and autumn of 1943 was as follows: would war-time traffic continue to increase above its

¹ Tonnage originating rose to 300·8 millions for the year 1943 and fell to 292·6 millions in 1944. Ton-mileage did increase slightly from 24,358 millions in 1943 to 24,444 millions in 1944. *Statistical Digest of the War*, Table 165.

² Traffic did not fall off immediately afterwards, but was maintained only very slightly below that record level throughout 1944. The tonnage of *merchandise* traffic actually increased, reaching its peak in June and July 1944. See 4-weekly statistics in Statistical Appendix to this volume.

³ *Statistical Digest of the War*, Table 165.

already high level and could the railways support the burden of additional traffic—or even keep up the prodigious effort needed to carry traffic at its existing volume—without running the risk of serious breakdown? The question had to be considered not only in relation to the traffic problems expected in the winter months of 1943–1944, but in terms of the heavy operational demands for transport from the Services in the days and weeks before the great offensive on the continent of Europe planned for some time in 1944.

Before analysing the implications of the demands of the winter of 1943–1944 and beyond, we must first remind ourselves of the railway and general traffic situation in the summer and autumn of 1943. At the beginning of the year, both motor fuel and rubber had been particularly scarce. One of the main objects of the Road Haulage Organisation had been to make further economies in the use of fuel by avoiding the use of road transport for long hauls and transferring all possible traffic to rail and water. This policy promised no relief for the railways—faced with their own problems of scarce resources—although in fact it caused them no great difficulty in the first half of 1943. Fortunately, by the autumn, the motor fuel position had improved considerably and it was possible to modify the general policy of moving long-distance traffic by road only when absolutely necessary.¹ The tonnage of railway freight traffic moved between April and September 1943 increased by two per cent. over the corresponding period of the previous year. This was surprisingly close to the official forecast; less coal and considerably more general merchandise were carried than had been estimated, but the two cancelled each other out.² The increase in merchandise traffic was partly due to increased imports and food production;³ the decrease in coal traffic occurred because output fell short of expectations. At any rate, the railways handled the traffic smoothly and there was no serious congestion. One of the most serious of the problems facing the Railway Executive Committee at this time was the heavy and increasing volume of railway passenger traffic, the number of passenger journeys having risen from 114.7 million in August 1942 to 123.6 million in August 1943.⁴ This fact was partly accounted for by the continuing influx of American troops into the United Kingdom and the growth of the British Armed Forces, but partly by the larger number of persons taking holidays.

When the statisticians drew up their railway traffic forecast for the six winter months, September 1943 to April 1944, they concluded

¹ See above, Chapter XI, Section (v).

² See above, Chapter X and Appendix XIII.

³ *Statistical Digest of the War*, Table 161, for evidence of the high level of imports in the summer of 1943 and Table 65 for statistics of food production.

⁴ Statistical Appendix to this volume, Table 4.

that, even allowing for a continuance of the tendency to transfer road traffic to rail, the amount of freight traffic on the railways would be 0·5 per cent. less than in the corresponding period of the previous year. This figure was reached after taking account of the reduced estimates of output made by both the Ministry of Supply and the Ministry of Aircraft Production. The forecast excluded any allowance for heavy operational demands or for the withdrawal of coastal shipping for military purposes.¹ It was reckoned, however, that the winter estimate represented an increase of about 2·5 per cent. over the level of traffic in the summer of 1943. In the previous winter, the railways had been fortunate in enjoying mild weather and had managed, by a narrow margin, to avoid serious difficulties in handling traffic. It would clearly have been unwise to rely on good fortune to see the railways through another winter which promised so many uncertainties. Thus, in spite of the Central Transport Committee's conclusion, surprising perhaps in view of the great military operations planned for 1944, that freight traffic on the railways would be no higher than in the previous winter, there was no disposition in official quarters to under-estimate the difficulty of the task ahead.

Indeed, the Government now had to project its view of the transport situation beyond the immediate future and the winter months towards D-day. It was already being estimated that, when military operations began, the British inland transport system would have to move a million tons of additional freight traffic a month for military purposes as well as increased military passenger traffic. It was also known that about one-half of the shipping normally employed in the coasting trade would have to be withdrawn for military operations. While some reserve capacity could be provided by the Road Haulage Organisation, inland waterways could not be expected to carry much additional traffic. Thus—more especially since the date of D-day was not known—the primary concern of officials as the winter of 1943–1944 approached was not so much meeting current traffic demands as keeping the railway system fluid and efficient so as to provide for heavy demands and unexpected emergencies in the spring.

In reviewing the resources of the railways in the autumn of 1943, officials had to reckon in terms of four main factors, any or all of which might limit railway performance in the testing period ahead. These were the maintenance and construction of track capacity, the availability of locomotives, freight rolling stock and labour. On the whole, no serious concern was expressed about track capacity. As has been explained earlier in this narrative,² where constructional

¹ It also appears to have excluded the movement of certain kinds of bulk food traffics.

² Chapter XI, Section (iii).

and signalling schemes had been most urgently needed to meet war-time traffic demands, they had largely been provided by 1943 including a number of works specifically undertaken in connection with the Bolero movement. As for track maintenance, the permanent way had stood up to the increased traffic of war-time better than it had in 1914-1918, partly because advances in engineering and metallurgy and more scientific methods of dealing with curves had extended rail life, and partly because the supply of sleepers, ballast and rails had been maintained at a fairly adequate level. The following figures were provided by the R.E.C. in their report to the Minister of War Transport for October 1943:

Maintenance of Way and Works—Quantities

	<i>Average of 1935-36-37</i>	<i>1938</i>	<i>1939</i>	<i>1940</i>	<i>1941</i>	<i>1942</i>
Ballast, cu. yds.	1,793,659	1,752,326	1,546,903	1,167,397	1,131,204	959,142
Rails, tons	209,643	223,458	211,534	142,198	160,689	160,329
Sleepers, number	4,276,277	4,492,924	4,162,317	3,103,569	2,792,311	2,805,507
Track renewed, miles	1,366	1,498	1,383	951	955	977

It was admitted that the relaying of sidings was heavily in arrears because of shortage of staff and because of the need to concentrate on the maintenance of running lines. It was thought, however, that the permanent way itself—in spite of a 30 per cent. deficiency in the number of miles renewed each year as compared with pre-war—was likely to survive the war without any large increase in the rate of maintenance or any substantial reduction in the speed of traffic.

The locomotive position was also considered satisfactory, at any rate for the time being, though, in the view of the R.E.C., it held out dangerous possibilities for the future. It has been shown above¹ how, during 1943, the very serious scarcity of locomotives was materially relieved by loans of United States and Ministry of Supply locomotives, so that by January 1944 there were 393 United States and 396 Ministry of Supply 'Austerity' locomotives in use on British railways. It was expected, however, that many of these engines would be withdrawn for military use soon after large-scale operations had started. The railways were satisfied that, provided the locomotives on loan could be retained through the winter of 1943-1944 and at least during the early part of the military operations planned for 1944, the locomotive stock would suffice to see them through the most difficult period. It was clear, however, that unless the locomotives recalled from loan could be replaced by new building or

¹ Chapter XI, Section (ii).

improvements in the rate of repair, the situation might again become serious in the later part of 1944. As it was, the operating stock of locomotives at the end of 1943 was over 1,000 higher than it had been at the outbreak of war, and the immediate prospect was much better than it had been a year earlier. In order to offset to some extent the effect of the gradual withdrawal of locomotives on loan, it was proposed to build 386 locomotives in railway workshops in 1944.

As for railway wagons, it was explained in Chapter XI that a temporary scarcity arose in the summer of 1943. Although, during the autumn and winter of 1943-1944, there were many complaints about wagon shortages, these were due principally to railway working difficulties and not to any numerical insufficiency in the stock of wagons available on the railways. The *total availability* of wagons on the 1st January, 1944, was about 9,000 higher than it had been at the same time in the previous year, while *total loaded wagon-miles* were slightly lower.¹ Thus, in spite of the increasing age of the railway wagon stock and the scarcity of labour for repairs, which looked like causing considerable difficulties for the railways in the not far distant future, the existing wagon position and also the prospects for the period of military operations seemed relatively satisfactory. Although the numbers of *wagons under and awaiting repair* could be expected to rise again during the summer months, the availability of wagons during the operational period would probably be adequate, provided the stock was used efficiently.

Far more serious was the labour situation on the railways in the autumn of 1943. It was explained in Chapter XI how a labour scarcity on the railways developed as the war progressed. Now, against the background of low wages, long hours and unattractive conditions of work, the railway labour force had somehow to be substantially increased in time for the military operations planned for the following spring.

The railways themselves were getting alarmed at the manpower prospects for the 1943-1944 winter, quite apart from the burden of military traffic which they expected as the preparation of men and stores for Overlord got under way. The Railway Executive Committee was warned in October 1943 by its Staff Committee that 13,000 vacancies in the operating grades (traffic, operating, locomotive running and shed staff, goods yard and dock staff) would have to be filled before the winter brought its problems of bad weather, blackout and heavy traffic.² 8,000 of these were needed immediately and the rest during November and December. It was

¹ Statistical Appendix, Tables 3 and 6.

² See above, p. 422.

claimed that the potential carrying capacity of the railways was not being realised because of staff shortage. The maximum number of engine hours was not being achieved and marshalling yards and sidings were not being used to capacity. By 10th December, the R.E.C. Operating Committee was reporting that staff shortage, especially of train crews and shunters was leading to congestion, with consequent embargoes on the acceptance of traffic and the cancellation of passenger trains so that goods trains could be run. In the same month the seriousness of the railway labour situation was reported to the Minister of War Transport, for anxiety about normal winter traffic difficulties was augmented by the imminence of the Overlord preparations. If the railways were going to handle a large increase in military and other traffic during the rest of the winter and in the coming spring, a really determined effort would be needed to build up the labour force. During December, Headquarters Preference for railway operating staff was sought in the three worst labour areas and railway labour supply officers¹ were appointed to deal with all matters of labour supply for the railway operating grades in each Ministry of Labour region and to steer demands for second preference through the newly-formed Regional Labour Preference Committees.²

(ii)

The Inland Transport Situation: Winter 1943-1944

These actual and potential scarcities of line capacity, locomotives, wagons and railway labour—but especially the last—influenced the railway traffic situation during the autumn and winter of 1943-1944. Already during the late summer and autumn, the railways were experiencing a number of difficulties in handling traffic, though these were mainly local and confined to particular traffics. As the winter approached, however, the situation on the railways deteriorated sharply in the form of widespread and general traffic congestion.

Reviewing the autumn difficulties first, in September it was necessary to impose loading stops on traffic through the exchange junctions with the Great Western system. Coal traffic from the Midlands had to be restricted and, in order to decrease the volume of

¹ This was a reform which had been advocated at least as early as March 1942. Previously each railway company had dealt with its own labour problems at a regional level.

² Second preference was to be given regionally as from 1st January, 1944. It had previously been granted by the inter-departmental Headquarters Preference Committee (see Chapter XIII above, p. 527, footnote 1). Second preference vacancies in a region were filled after any first preference vacancies had been satisfied. But no vacancies could be given first preference until they had been unfilled after two weeks on the second preference list.

traffic passing over certain sections of the G.W.R., a loading stop had to be imposed on traffic from South Wales to England and Scotland. At the end of October, 10,000 wagons were standing under load in South Wales instead of a normal figure of 4,500 and a scarcity of wagons was also reported in the Midlands. It appears that the congestion in South Wales arose from a number of different causes, the chief of which were that there had been a large increase in imports, particularly iron and steel, through the South Wales ports and that there was some absenteeism at the ports and elsewhere, reflecting labour unrest that was natural after four years of war. Several expedients were at once brought into play: the Road Haulage Organisation sent five hundred additional long-distance lorries into South Wales; coastal shipping was called on to assist in clearing the ports, the Service departments undertook to provide some of the vehicles under their own control to clear traffic and the intake of imports into South Wales was reduced through the Diversion Room. Finally, in order to avert stoppages at collieries through lack of wagons not only in South Wales but throughout the country it was agreed by the Central Transport Committee that railway owned mineral end-door wagons and requisitioned privately owned wagons used for carrying minerals should not be provided by the railways for carrying general merchandise in classes 7 to 21.¹ This decision was opposed by the Ministry of Supply and the Ministry of Food on the grounds that it departed from the wagon-pooling arrangements and amounted to giving over-riding priority to coal traffic. In South Wales at any rate, these measures did result in clearing up the traffic congestion, though not before some loss of production at the collieries had been reported. It is, however, difficult to avoid the conclusion that coal movement was improved at the expense of delays to other traffics as was evident in the shortage of wagons for the now abnormally heavy general merchandise traffic.

Difficulties were also experienced in the autumn of 1943 in East Anglia, where a big programme of airfield construction was nearing completion, and required the transport of much constructional material, petrol and stores. In addition, increased agricultural production and industrial activity in the area had added to the burden thrown on the Great Eastern section of the L.N.E.R., which had now been called on to handle a traffic increase said to be without

¹ It was agreed by the Central Transport Committee on 28th September, 1943, that:

- (a) the railways should not, in response to indent, provide mineral wagons for general merchandise except at ports where necessary, at stations where traffic was consigned direct to a colliery, to move beet pulp from sugar beet factories, for cement traffic and for the conveyance of timber from stations in the Highland section of the L.M.S. railway.
- (b) User departments would issue instructions that, as far as practicable, only common user wagons should be loaded outwards.

parallel in its history. Congestion began to show itself at Whitemoor, the important marshalling yard in Cambridgeshire, where traffic from the Midlands and the North was moved across into the Eastern counties. The restriction on the use of mineral wagons—since mineral wagons represented over half the total number of wagons available—had the consequence of holding up the movement of potatoes out of the Eastern counties and even endangering the food supply of London. Here again the Road Haulage Organisation was called in to help and it was agreed that lorries carrying cement to East Anglia for the construction of airfields should be back-loaded with potatoes. Road transport and coastal shipping could, however, only take a small proportion of the crop and it was not until the following spring, when the longer hours of daylight eased railway working, that the programmed movements were fulfilled. Help was also obtained from the U.S. Army in unloading the wagons of tarmac arriving in East Anglia.

Further difficulties arose during the early winter of 1943–1944 in connection with the transport of seed potatoes from Scotland. The total movement planned by the Ministry of Food was 470,000 tons compared with 440,000 tons in the previous winter. Since, however, coastal shipping was unable to take such a large proportion of the crop as in previous years, a bigger share of the movement fell to the railways. Because of the essential nature of this traffic and the risk of danger from frost, the Ministry of Food was much concerned about the alleged failure to provide enough wagons and sheets to carry it. After discussion by the Central Transport Committee and the Regional Transport Committee for Scotland, it was decided to assist the railways by permitting the movement of potatoes by road within Scotland both for short and long distances.

Such were the main freight transport problems that occurred in the autumn of 1943. These autumn difficulties were to some extent seasonal and were confined in the main to particular traffics and localities. Their main cause was that railway traffic was now at a higher war-time level than ever before, while all railway resources were being used to the fullest extent. In the circumstances it was indeed fortunate that improvements in the motor fuel and rubber situation allowed a more generous use to be made of road haulage to relieve the railways.

Nevertheless, with the approach of winter, the great strain on the railways showed itself increasingly in the form of more serious and general traffic congestion. Widespread fog arrived unpleasantly early at the end of October and, throughout November, Bolero service and personnel movements as well as merchandise traffic generally continued to be very heavy. Although the new regulation about the use of mineral wagons enabled the collieries to be kept reasonably well

supplied, other wagon users sometimes went short. At one time a wagon shortage threatened to hold up output at steelworks on the North East coast. By December, the railway situation had taken a definite turn for the worse. To the difficulties caused by the sustained heavy traffic and fog was now added a widespread influenza epidemic among railway staff, which caused abnormally high absenteeism and aggravated railway operational problems. For example, on the L.N.E.R. at the end of November, 10 per cent. of enginemen and 8 per cent. of guards were reported absent, whilst absenteeism on the Southern Railway among operating grades was reported to be twice as high as it had been a year before. On one day in November 71 important passenger trains on the L.M.S. had to be cancelled to provide crews for freight trains. A summary of the Railway Executive Committee review of the traffic situation for the week ending 7th December, 1943, shows strikingly how arduous were the conditions under which the railways were now working:

Illness and widespread fog had aggravated the railway position and had prevented the railways from freely accepting traffic. Owing to fog, 34 'dead' freight trains had to be stabled in the vicinity of Crewe alone. Bolero imports and Services stores and personnel were heavy. Empty wagons were in short supply. In the Midland (Amalgamated) District, 5,500 loaded wagons had been left in collieries owing to the inability of the railways to move them. The Committee expressed great anxiety over the present position and once more emphasised the need for additional labour.

This serious situation persisted throughout December and indeed for much of the winter.¹ Abnormally heavy traffic, a severe manpower

¹ A review of the inland transport situation given by the Chairman of the Central Transport Committee on 21st December, 1943, provides an extremely useful survey of the winter position, 1943-1944. The following is a summary:

- (a) *Appreciation of Present Position.* Railways: traffic very heavy and movement handicapped by shortage of staff, sickness (10 per cent.) and fog. Many restrictions in force. Pressure on wagon supply likely to continue. Coastwise shipping fully occupied. Canals have small surplus capacity locally, e.g. Manchester to Liverpool and on Trent Navigation. Road Transport's emergency reserve greatly reduced. Ports very busy with imports and barges immobilised under load. General labour shortage, accentuated by sickness and fog, affects all transport operations.
- (b) *Short-term prospects.* Transport position likely to be difficult. General merchandise movements have been considerably in excess of estimates. Departments asked to review estimates of Supply, Works, Agriculture, Food, Air and M.A.P. traffics for first quarter of 1944 and to indicate any substantial variations likely for that period.
- (c) *Long-term prospects.* In certain contingencies that may be foreseen, traffic demanding transport by rail or road may exceed capacity by approximately one million tons a month at peak (exclusive of proposed additional production of opencast coal) and this may be taken as a measure of reduction in movement which may have to be effected. To consider position which may arise and steps to be taken to reduce movement in light of stocks, urgency, etc. and with a minimum of harm and hardship, Chairman of Central Transport Committee will arrange meetings with individual Departments mainly concerned—Supply/Works, Food, Fuel and Power, Air/M.A.P.

shortage aggravated by staff sickness and absenteeism, traffic accumulations and embargoes on forwarding, shortages of empty wagons at collieries and elsewhere—these difficulties were voiced with almost monotonous regularity in every R.E.C. weekly report of the traffic situation between December 1943 and the end of February 1944. In consequence, the railways' ability to handle traffic deteriorated, as was shown by the fact that whereas in the week ending 25th November, 1943, 917,000 wagons were forwarded loaded, a month later, in the week ending 24th December, 1943, the figure had dropped to 787,000.¹ The figures rose in January and February reflecting some improvement in railway performance, though throughout the winter congestion remained chronic, with many traffic embargoes in force.²

The winter congestion on the railways was particularly evident in the increasing difficulties of coal transport. It will be recalled that, since the early part of 1942, the railways, together with coastal shipping, had succeeded in meeting all demands for the movement of coal without great difficulty. In November 1943, however, a coal transport problem once again loomed large. This was particularly disquieting at a time when the Government was struggling, with a much reduced labour supply in the mines, not only to prevent coal production from falling to a dangerous level, but to build up stocks to meet the operational needs of 1944.

What were the reasons for this new coal transport problem? Firstly, opencast coal production, which had been growing steadily during 1943, was expected to expand considerably during 1944. Besides altering the flow of coal traffic on the railways, opencast working was, according to the R.E.C., expected to need about 80,000 additional wagons by the spring of 1944.³ This was an alarming prospect for the railways and matters were not helped by faulty planning. For it emerged at a Controller of Railways' meeting in December 1943 that, in planning the expansion of opencast production, the Ministry of Fuel and Power had overlooked the transport side of the question. Secondly, the railways now had to face the prospect of carrying a large additional tonnage of coal diverted from coastal shipping. During the winter of 1943-1944 a smaller dead-weight tonnage of coastal shipping was employed in the coal trade

¹ It fell as low as 615,000 for the week ending 31st December, 1943, but this figure covered the Christmas holiday period.

² The position on the L.M.S. was so difficult that at one time in February 1944 there were up to 100 trains each day standing 'dead' short of destination on account of the shortage of train crews. The L.M.S. had therefore applied a general embargo for two days on the forwarding of merchandise, excepting urgent Government traffic, from any of their stations.

³ The proposed opencast output of 1,684,000 tons a month on which this estimate was based, was not in fact realised.

and a smaller tonnage of coal carried than in the previous winter,¹ though it is by no means certain whether this increased greatly the tonnage of coal carried by the railways.² It was, however, known that as soon as military operations were set on foot, a very large tonnage of coal normally passing coastwise would have to be diverted to the railways.³ Faced with these big demands for the transport of opencast coal and deep-mined coal diverted from coastal shipping—even though the tonnages seem in both cases to have been greatly over-estimated—it was hardly surprising that the R.E.C. declared flatly that ‘under the most favourable conditions, the railways (would) not be in a position to cope with the enormous traffic increase and much coal must fail to obtain transport’. Thirdly, it must be stressed that, quite apart from these expected additional demands for coal transport, the railways were now so heavily overburdened with traffic of all kinds that some difficulties with the movement of coal in the winter of 1943–1944 would have almost certainly occurred in any case.

Threatened with further losses to coal production through transport difficulties, the Minister of Fuel and Power appealed for overriding priority for the movement of coal on the railways, such as had been instituted in 1939–1940.⁴ It was argued that 50,000 tons of coal had been lost in November and 400,000 tons in December owing to lack of transport, and that the previously approved distributed stock level would not now be achieved. The Minister contended that it was vital to stock up coal consumers immediately so that, when the second front opened, the coal trains could go straight to the cross-channel ports. The Minister of War Transport pointed out that this application for priority had been opposed by the Service and Supply

¹ For the six months October to March, the average deadweight tonnage of coastal shipping employed in the coal trade fell from 789,000 in 1942–1943 to 725,000 in 1943–1944, while the tonnage of coal cargoes delivered fell from a monthly average of 1,877,000 in 1942–1943 to 1,742,000 in 1943–1944. Coastal shipping problems are further discussed below.

² The railways carried less coal in the winter of 1943–1944 than a year previously, though they might have carried still less had the coasters carried more.

³ In January 1944, the R.E.C. estimated that they would have to move additional deep-mined coal at the rate of 1½ million tons a month, a substantial quantity of which was now being carried coastwise. This estimate seems to have been based on the Ministry of Fuel and Power programme for increased deep-mined coal production together with the Ministry of War Transport estimates of the tonnage of coastal shipping expected to be withdrawn for operations. In fact, the tonnage of coal moved coastwise during the period of operations fell by only a fraction of this figure of 1½ million tons a month, while the production of deep-mined coal tended to decline rather than increase. In the event, therefore, the transport problem was by no means as serious as these gloomy estimates suggested.

⁴ The precise form of the Ministry of Fuel and Power’s application to the Lord President’s Committee in January 1944 was:

- (i) that sufficiently high priority be given to wagon supply to the coal mines and opencast workings to ensure the movement of 4,090,000 tons a week until the end of April.
- (ii) That the movement of coal should be free of the embargoes on the acceptance of traffic imposed to prevent railway congestion.

Departments, who themselves were experiencing a shortage of wagons. To accord a priority to coal, which constituted over 50 per cent. of total freight traffic, would seriously affect production and Service traffics. If the railways could not carry all the traffic offering, a fair balance should be struck between the various claims on the transport available. The Minister of War Transport went on to argue that the greatest contribution to meeting rail transport requirements in the months ahead would be to grant some form of priority for the supply of railway recruits and operating grades, rather than for coal movement. Plainly it would have been no use giving priority to coal movement with the aim of avoiding damage to war production, while other railway traffics suffered so much that the factories could not get transport for their finished products. Moreover, it would have been a grave risk to have endangered the movement of Service traffics at this crucial stage of the war.

The Lord President's Committee, to which this question was referred, did not feel able to grant over-riding priority for coal movement, but instructed the Minister of War Transport to keep under review the movement of all other goods traffic with a view to its present and future restriction. The Ministers of Production, Labour and War Transport were also requested to work out the best possible arrangements for getting additional recruits for railway operating grades at a very early date, and the Minister of Fuel and Power was asked to look into the possibility of expanding coal stacking facilities at the collieries. Although mild weather in January eased the situation to some extent, in all, during the last quarter of 1943 and the first quarter of 1944, over 913,000 tons of coal were estimated to have been lost through rail transport difficulties and want of wagons.¹

The coal transport problem at the beginning of 1944 focussed attention on the inescapable fact which now confronted those responsible for inland transport operation. The railways were being worked almost beyond the limit of their capacity. It was no longer merely difficult, it was impossible for them to move all the essential freight traffic they were offered. Additional coal might only be carried at the expense of the heavy merchandise and Service traffic. Additional merchandise or Service traffic might, on the other hand, be carried only by making severe cuts elsewhere. There was little prospect of relief for the railways from making really drastic reductions in passenger services, which, reflecting in part the large number of Service personnel now massing in the country, had reached new heights. In January 1944, for example, the number of passenger

¹ See *Ministry of Fuel and Power, Statistical Digest 1943*, and *Statistical Digest 1944*. Cmd. 6538 and Cmd. 6639.

journeys originating on the main line railways was 114·6 millions, compared with 105·7 millions in January 1943, and 97·2 millions in the same month of 1942.¹ Between October 1943 and March 1944, over 34,000 special passenger trains were run for the Government—mostly to meet Service requirements—as compared with 19,000 in the corresponding period of 1942–1943, and 10,000 in 1941–1942.² Since administrative obstacles and manpower requirements were judged too great, a travel permit scheme was not thought practicable as a means of reducing passenger traffic and freeing the lines to carry more freight. Nor is it certain that such a policy would have helped the railways, faced as they were with a serious manpower shortage and a barely adequate stock of wagons. In short, apart from the benefits expected from the seasonal improvement in railway working in the spring and summer, the railways had no margin whatever for additional freight traffic—indeed the indications of the early months of 1944 were that they were already overloaded. The situation was summed up in the Railway Executive Committee's Report on the work of the railways in the winter of 1943–1944:

In the winter of 1943–1944, a combination of too much traffic, too few men, and influenza proved to be a serious handicap to the railways, though not so serious as the arctic weather of 1940 or the blitz of 1941. . . . Up to the autumn of 1943, the carrying power of the railways had expanded to meet the increased burden of internal war transport. There comes a time, however, if manpower is limited, when this latent capacity is absorbed. This position was reached in September 1943. . . .

The general effect [of the serious difficulties experienced towards the end of 1943] has been a slowing up of movement by rail, and the volume of traffic, particularly from the ports and Government depots, is beyond the capacity of the railways to move currently with the existing staff.

Some of the difficulties experienced by the railways in the winter of 1943–1944 were due, as has been pointed out, to the inability of coastal shipping to relieve other forms of inland transport as much as in previous war-time winters. Long before the coasting tonnage requirements for D-day had been worked out exactly, the United Kingdom coastal shipping authorities knew that a substantial proportion of their ships would be needed for the assault on North West Europe and, during the summer and autumn of 1943, preparations began. Over 1,000 coasters were surveyed so that ships suitable for military operations could be selected when they were needed. By December 1943, a list of the names of 396 ships with a deadweight

¹ Statistical Appendix, Table 4.

² R. Bell, *op. cit.*, Appendix 12.

tonnage of 623,000¹ had been circulated to Area Committees. Between December and the end of 1944, amendments to this list added another 64 coasters,² making a total of 460 ships³ of 723,000 deadweight tons available for the invasion. Although it was not expected that all these ships would be needed for D-day, they were all withdrawn from service while they were overhauled and refitted in readiness for military operations. They had to be de-gaussed or re-wiped afresh. They had to be fitted with increased armament (3 to 4 Oerlikons for the bigger ships and 2 for the smaller ones) and extra accommodation for the additional gun crews had to be contrived; masts had to be strengthened and smoke-making apparatus fitted. On the average, the re-fitting took about three months for each ship; it started in October and continued through the 1943–1944 winter. Thus, even before the considerable number of coasters earmarked for operations were actually withdrawn from mid-March 1944 onwards, first to take part in invasion rehearsals and later to go to their final assembly points, they spent part of the winter months being refitted.

What effect did this have on the United Kingdom coasting trade in the winter of 1943–1944? It is important not to exaggerate the consequences of this withdrawal of ships for re-fitting. Probably the most balanced assessment of the situation is to be found in the statistics in the coastal shipping employment returns.⁴ If we consider the seven months September to March for 1942–1943 and 1943–1944 and compare the figures, the following results are obtained: for 1943–1944, the average monthly tonnage of shipping *employed* in coasting and short sea trading⁵ was 1,148,000 deadweight tons

¹ Roughly 40 per cent. of these ships were under 1,000 deadweight tons in size, 25 per cent. were over 2,500 deadweight tons and the rest between 1,000 and 2,500 deadweight tons.

² Excluding 11 crane ships of 48,000 deadweight tons in all.

³ Out of these 460 ships, 33 (d.w. tonnage 91,700) are listed as British (American) and 10 are shown as British (Canadian) in the December 1943 list. It appears that these ships were *not* American and Canadian coaster assistance for D-day, but were Baltic type coasters built in the United States and Canada and operated in the United Kingdom coaster service under the British flag. In the first place, the date of the list (December 1943) precedes by several months the request to the Americans for additional coaster assistance. Secondly, all the 33 American ships were either 2,700 or 2,800 d.w. tons, which is the size of the Baltic coasters (it is known that 36 Baltics were built for the United Kingdom in the United States during 1942). Similarly, the 10 British (Canadian) ships vary from 2,700 to 3,400 tons in size. Thirdly, the joint agreed telegrams from the Combined Shipping Adjustment Board (London) to Combined Shipping Adjustment Board (Washington) during June to October 1944 specifically and repeatedly state that no U.S. coasters were employed during D-day or in the subsequent four months except for 4 U.S. coasters on loan. (For further discussion about how much coasting tonnage was received from the Americans, see below, Chapter XVII, Section (ii).)

⁴ The statistics quoted in these paragraphs have been obtained or calculated from Statistical Appendix, Table 8.

⁵ This figure *excludes* vessels engaged in estuarial and salvage work, vessels undergoing or awaiting minor repairs, vessels being de-gaussed or fitted with defensive equipment, vessels undergoing or awaiting major repairs, vessels laid up, vessels with employment unfixed or unknown.

compared with an average for 1942-1943 of 1,154,000; the average monthly tonnage of shipping in the coasting and short sea service¹ was 1,391,000 deadweight tons in 1943-1944 compared with 1,364,000 in 1942-1943. By subtraction, it can be shown that the average monthly tonnage of shipping in the coasting and short sea service *not employed* (this includes vessels undergoing major repairs, etc.) was 243,000 deadweight tons by 1943-1944 compared with 210,000 in 1942-1943. There was, therefore, some increase, though not a spectacular one, in the tonnage of coastal shipping *not employed* during the winter of 1943-1944. It must, however, be remembered that losses of coastal ships due to enemy action fell by about one-half during 1943-1944 compared with the previous winter and it is reasonable to suppose that the tonnage of ships damaged from the same cause also fell in roughly the same proportion. Other things being equal, therefore, one would have expected the tonnage of coastal shipping undergoing major repairs to have fallen. The fact that the tonnage *not employed* rose to 243,000 deadweight tons in 1943-1944 suggests that a high proportion of this tonnage was out of service re-fitting and preparing for D-day.

Nevertheless, the average monthly tonnage *employed* in the coasting trade appears to have fallen only very slightly in 1943-1944 compared with the previous autumn and winter—by only 6,000 deadweight tons.² It cannot therefore be concluded that the withdrawals of shipping to prepare for D-day seriously reduced coastal shipping capacity in the winter of 1943-1944 as compared with previous years, though the withdrawals may have caused some disorganisation in the trade. All that may safely be said is that much more coasting tonnage would have been available for the United Kingdom trade in the 1943-1944 winter compared with previous years, if it had not been necessary to withdraw ships for re-fitting in readiness for operations.

During the autumn and winter of 1943-1944, the authorities, expecting a serious scarcity of coastal shipping, took a number of steps to economise its use. As early as the summer of 1943, attention was given to building stocks in expectation of the withdrawal of coastal tonnage in the following year.³ Another step which released tonnage

¹ This figure *includes* the items listed in the previous footnote.

² This figure is an average for the seven months, September-March. The figures of tonnage employed in coasting and short sea trading include the average of 16,000 deadweight tons (net) of deep sea shipping allocated to the coasting trade in the winter of 1943-1944 (November 1943-January 1944 inclusive).

³ Coal stocks were of particular importance as the period of military operations approached and every possible coaster and all available railway capacity was used to help build them up. Even so, neither the coasters nor the railways carried as much coal in any month during the second half of 1943 as they had in the corresponding months of the previous year, though by September 1943, coal stocks had risen to over 20½ million tons—about 2 million tons higher than in the previous September and the highest war-time level so far recorded. Distributed coal stocks fell off again after October. The high

for more essential purposes was the curtailment of trade with Ireland. Coal exports to Eire, which had been about 409,000 tons in the six months October 1942 to March 1943, fell to 401,000 tons in the same period of 1943-1944 and were to be cut to a mere 85,300 tons in the following six months. General exports to Eire were reduced to 98,300 tons during the 1943-1944 winter, compared with 125,200 during the previous winter and were also to fall, during March-October 1944 to about 66,000 tons. Exports to Northern Ireland also suffered some reduction, but as they largely consisted of raw materials (especially coal) for munition industries, they could not be cut very severely.¹ In all the Irish trades, liner traffic remained at a more normal level than the tramp trade which, by D-day, had been almost eliminated.

There is some evidence that relief was afforded to coastal shipping through an improvement in voyage times owing to the diminution of enemy activity around the British coasts. Between September 1943 and April 1944, only 22,000 deadweight tons (10 ships) were lost through enemy activity. This compares with nearly twice the figure during the same months of the previous winter (42,700 deadweight tons) and four times that amount (88,200 deadweight tons) during the 1941-1942 winter. This comparative freedom from enemy attacks meant that coastal convoy arrangements could be improved with more frequent sailing opportunities for slower ships and that black-out regulations could be eased both at sea and in the ports. It is, however, difficult to reach a firm conclusion about how far, if at all, coastwise voyage times were improved during the winter before D-day. Statistics of coastal shipping performance show an improvement during 1943-1944 only in the case of coal tramps. In the case of liners and tramps (other than coal) there was some deterioration in performance, though these two categories both represented a smaller tonnage than the coal tramps.²

Some increase in the supply of coastal shipping was provided by allocating deep sea tonnage to the coasting trade. Between the months ending 15th October, 1943, and 15th March, 1944, an average of 16,000 deadweight tons (net) of deep sea shipping was being used each month to carry goods around the coasts of the United Kingdom.

level of coal stocks in September and October 1943 seems to have been due not so much to the special efforts made to transport coal in the summer of 1943 as to the high level of stocks at the end of the previous mild winter. (*Statistical Digest of the War*, Table 73.)

¹ Trade with Eire was restricted for security reasons also in the weeks immediately before D-day.

² For the six months October 1943 to March 1944, the *average monthly tonnage of cargo discharged per average deadweight ton* in the coasting and short sea service works out at 2.40 for coal tramps, compared with 2.38 for the corresponding period of the previous year; 2.15 for tramps (other than coal), compared with 2.21 for 1942-1943; and 1.50 for liners, compared with 1.73 for 1942-1943. These figures are taken from the Ministry of War Transport Employment Returns.

The usefulness of deep sea shipping for the coasting trade was, however, limited by the number of deep sea berths available which were not required for overseas arrivals.

While the tonnage of shipping employed in the coasting and short sea trade during 1943-1944 was only slightly less than in the previous year and while some economies were probably made in its use, the fact remains that a smaller tonnage of total cargoes and of coal was carried in that period than in the previous winter. In the seven months, September 1943 to March 1944, total cargoes carried coastwise amounted to 17.8 million tons compared with 18.4 million tons in 1942-1943. Coal cargoes amounted to 12.3 million tons compared with 13.3 million tons in 1942-1943. The employment returns also throw some light on the reduction in the tonnage of bulk commodities carried coastwise during the 1943-1944 winter. For the seven months, September 1943-March 1944, the average monthly deadweight tonnage of shipping employed in the following trades has been worked out and compared with the corresponding figure for 1942-1943. For potatoes the 1943-1944 figure of 13,000 compares with that for 1942-1943 of 14,200; the 1943-1944 figure for cement is 26,600 compared with 41,300 for 1942-1943; the 1943-1944 figure for timber and lumber is 14,300 compared with 18,000 for 1942-1943. Since coastal shipping performance deteriorated in both the liner and tramp trades (other than coal) over this period, it must be assumed that the tonnage of these commodities carried also declined. In the case of fertilisers, however, an important bulk commodity, the average monthly deadweight tonnage of shipping employed increased from 18,300 in 1942-1943 to 21,600 in 1943-1944.

The reductions in the coastwise movement of some of these bulk traffics meant that other branches of inland transport had to carry more. During the autumn and winter of 1943-1944, a certain amount of coal, mainly from Northumberland and Durham, seed potatoes and other bulk traffics were diverted from coasters to the railways. Later in the winter, arrangements were made to stack timber at the ports which helped to relieve the railways of traffic that could not be moved coastwise. Yet the amount of traffic diverted from coasters to the railways in 1943-1944 could not have been large, for the railways were already overloaded. In the case of coal, for example, neither the railways nor coastal shipping carried as great a tonnage during the winter of 1943-1944 as a year previously.¹ Thus, even if a small additional ton-mileage of Durham coal was diverted to the railways from coastal shipping, this was offset by a smaller ton-mileage moved from other districts.

¹ See Statistical Appendix to this volume, Tables 1 and 8.

The only branch of the inland transport system that could give substantial relief to the congested railways and the now hard-pressed coastal shipping fleet was road transport. During 1943-1944, this was called into service on an increasing scale as motor fuel supplies improved. It was decided in the early autumn that some of the restrictions on road transport could be lifted. Regional Transport Commissioners were asked, early in September 1943, to consider whether the capacity of the railways in their regions might not be increased if some short-distance traffic—up to 40 miles—hitherto carried by rail were now diverted to road, especially traffic which required road movement at both ends of the journey. In October, Regional Transport Commissioners were told that, in view of the shortage of railway wagons, the policy of diverting traffic from road to rail would have to be modified and that of 'foreign' vehicles should be back-loaded with traffic that would relieve the railways. Besides the allocation of short-distance traffic to the road, Commissioners were advised that 'in appropriate cases medium hauls, or exceptionally, even relatively long hauls might be permitted'.

Within the framework of these instructions, diversions of traffic were effected by *ad hoc* decisions on a regional or district basis. In some cases diversions were for specific traffic movements between named points. In some regions, different mileage limits were adopted for different commodities to suit local circumstances; while in other cases, regional decisions implied, but did not specify, mileage limits, for example, permission was given to send potatoes by road to London from any point in the Eastern Region, or to Birmingham from anywhere in the Midland Region. Generally an element of flexibility was allowed in increasing the use of road transport. At first, it was laid down that consultation should take place between road haulage officials and railway officers before traffic was transferred from rail to road. Later, in the spring of 1944, it was decided that, especially in the light of complaints of empty running by long-distance vehicles—for example, between London and Hull—the representatives of the Road Haulage Organisation might report directly to Departmental Movement Officers when there was regular return capacity available on trunk routes without waiting for the railway companies to indicate the traffic for which they needed relief.

The gradual expansion of the work of the Road Haulage Organisation in the winter of 1943-1944 is shown by the fact that the tonnage originating rose from 2.2 millions in November 1943 to 2.6 millions in March, 3.4 millions in April, and 4.4 millions in May 1944.¹ Statistics of fuel consumption by commercial vehicles show a slight, though by no means marked increase in the consumption of both

¹ See Appendix XXVI, p. 554.

motor spirit and diesel fuel towards the end of 1943 and during the early part of 1944.¹ These figures are insufficient evidence of any great increase in road transport activity outside the organisation, although it is known that before D-day, Regional Transport Commissioners were encouraged to bring laid-up serviceable 'C' licence vehicles back into operation. All that can safely be said is that road goods transport probably reached the limit of its war-time contraction at some time in 1943 and began to expand again towards the end of that year as the railways proved unable to carry further traffic.

(iii)

Preparing Inland Transport for D-day

Such was the traffic situation in which the detailed planning of inland transport for the Overlord operation had to be carried out: the railways working under the burden of heavier traffic than at any other time during the war; coastal shipping continuing to move a substantial but diminishing quantity of coal and other commodities each month and the reserve capacity of long-distance road haulage being pressed into service on a larger scale than in any other period of the war—with the possible exception of 1941. So heavy was the burden on the inland transport system and so small were its margins of surplus resources that, early in 1944, very serious concern began to be shown about the ability of inland transport to perform the exacting operational tasks which would fall to it in the coming months.

The Ministry of War Transport reported that the British transport system could not continue to move its existing load as well as the additional traffic expected to arise from the Overlord operation and suggested that plans for reducing heavy traffics should be examined closely at Ministerial level. At the same time, however, the Ministry of Fuel and Power pointed out that any further reduction in coal transport would have to be at the expense of either war production, domestic consumption, or the stocks being set aside for Overlord. The Ministry of Labour and National Service also showed concern about the possibility of miners becoming idle through transport difficulties so soon after the Government had decided to direct young men into the mines. In January 1944 the whole question came before the War Cabinet, which decided to ask the Minister of Production to consult the Ministers concerned in order to examine both the immediate problem of coal transport and, more generally, the steps

¹ *Statistical Digest of the War*, Tables 86 and 87.

that could be taken to relieve congestion on the inland transport system. Early in February 1944, a small Official Committee on Inland Transport was appointed to recommend to the Ministerial Committee set up by the War Cabinet the broad measures necessary either to vary traffic offerings or to increase carrying capacity and to keep both these elements in the transport situation constantly under review.¹ The Official Committee on Inland Transport was responsible for the greater part of the advance planning of inland transport before D-day and maintained a close watch over the whole inland transport position from February 1944 until after the military operations had been successfully launched. In its first report on 18th February, it was stated that the traffic situation on the railways was serious, the companies were reporting heavy traffic delays and arrears, with severe restrictions on the acceptance of traffic and difficulties in clearing traffic from the pits. The Railway Executive Committee attributed their difficulties primarily to the shortage of staff, especially in the operating grades.

The situation that confronted the Official Committee was broadly the following. Firstly, it was estimated that operational freight traffic would amount to between 38,000 and 40,000 tons a day. Secondly, it was expected that about 625,000 deadweight tons of shipping normally employed in the coastwise trade, capable of carrying about 1,400,000 tons of freight a month, would be withdrawn for military operations. Thirdly, in order to keep London and the Southern English ports clear to mount the military operations for the invasion of France, import traffic was to be diverted to Northern ports, which would result in longer hauls over heavily-occupied railway lines. Fourthly, there would be heavy movements of troop trains, particularly from the Clyde and Mersey southwards, which were likely to delay the movement of freight traffic.

The problem which this situation presented had to be resolved in two parts. First, it was necessary to assess in broad terms the capacity of the inland transport system as a whole and to investigate how far that capacity might be expanded. Secondly, given the maximum potential transport capacity, it was necessary to scale down traffic offerings to something less than this figure in order to allow an

¹ The terms of reference of the Official Committee on Inland Transport were to:

- (i) keep constantly under review traffic offerings and inland transport capacity;
- (ii) recommend to the Ministerial Sub-Committee set up by the War Cabinet the broad measures necessary either to vary traffic offerings or to increase carrying capacity;
- (iii) make the detailed decisions, the broad measures having been approved, which are needed in order to adjust traffic offerings to transport capacity.

The story told in this and the following paragraphs is based broadly on the minutes and papers of the Official Committee. The Ministerial Sub-Committee consisted of the Ministers of Labour and National Service, Fuel and Power, War Transport and Production. Membership of the Official Committee, under the chairmanship of an official of the Ministry of War Transport, varied.

ample margin for the heavy military movements that were to take place in preparation for D-day and for at least 90 days afterwards; at the same time due allowance must be made for sufficient non-operational traffic to keep the life and industry of the country going. The task of the Official Committee was to determine the precise size of these planned cuts and the types of traffic likely to be affected. For, as was aptly pointed out, 'these cuts will, of course, happen in any case; the choice lies between planning the cuts where they will do least harm and having them made piecemeal by the haphazard effects of traffic restrictions'.

As far as transport capacity was concerned, it has been shown that the railways were now carrying a volume of freight traffic practically 50 per cent. greater than the pre-war ton-mileage, while passenger traffic—measured in estimated passenger-miles—was roughly 100 per cent. greater than before the war. The Official Committee started out on the assumption that the railways could do something more than this: namely that they would be able to forward 940,000 loaded wagons a week, although the peak figure to date—in September 1943—had been under 930,000. After doubts had been voiced by the R.E.C. about whether this figure could be reached and after a re-appraisal of the manpower situation, the 'target' was lowered to 920,000 loaded wagons. The estimates were drawn up on the basis of the expected availability of locomotives, wagons and labour. Sufficient locomotives and wagons were expected to be available during the operational period, but labour continued to cause great anxiety. Labour promised to be the narrowest 'bottleneck' limiting the traffic that could be moved when operations started. Drastic action had therefore to be taken to improve the situation.

By January 1944, the railway companies reported that their outstanding labour requirements to deal with Overlord and normal traffic were about 24,000, 11,500 of whom were needed for operating grades. Nor was this the whole story, for wastage was high and a much higher gross rate of intake would be needed to supply this net increase.¹ Also, as the D-day build-up got under way, substantial additional labour requirements could be expected. The Ministries of War Transport, Labour and Production consulted at a high level. It was decided that although 'designation'² for railway operating staff would not be given, operating staff vacancies would be accorded first preference where necessary by Ministry of Labour Regional Officers, without the usual trial period of two weeks on second

¹ During the month of January, for instance, the railways recruited a total of over 2,800 persons but the net increase to their labour force was only 300, owing to wastage.

² This excludes, of course, vacancies for locomotive construction and repair and wagon repair, which had been 'designated' and had been enjoying first preference for a considerable period before this, and continued to enjoy it throughout the D-day period. Designation is explained above in Chapter XIII, p. 527, footnote 1.

preference and without waiting for the fortnightly meetings of the Headquarters Preference Committee, which would merely be notified of the vacancies given first preference. 'This is', said the Ministry of War Transport, 'as near a guarantee as can be given that the Minister of Production and the Minister of Labour will find the necessary manpower.' First preference for unspecified numbers of unskilled men and women for railway operating vacancies quickly appeared on the Preference Lists, first for the Midland Region which was soon followed by all the others. The prospects were not, however, very hopeful. By the end of February, there were first preference vacancies for 1,400 railway operating staff and the Ministry of War Transport was preparing to put forward requests for first preference for another 11,000.¹ The Ministry of Production was apprehensive about the size of this prospective demand. First preferences on this scale, it was said, were 'entirely beyond anything they had contemplated'. The whole field of industrial production, it was pointed out, had only 16,000 first preference vacancies. If the railway demands inflated the first preference list by a further 11,000, neither the railways nor industry generally would get their vital vacancies filled.²

Nevertheless, the disruption of industrial production through lack of labour seemed less likely to endanger military operations at this stage of the war than a breakdown of the transport system. It was also clear that shortage of operating labour, particularly train crews and engine shed staff, was the principal cause of the railways present difficulties. The comparatively poor pay and conditions offered by railway work were a big disincentive to recruitment and the Minister of Labour and the Chief Inspector of Factories met the railway companies to ensure that welfare arrangements, especially canteens and lavatory accommodation for women were reasonably satisfactory. It was obvious, however, that at this stage of the war vacancies on the scale needed to bring the railway labour force up to strength were unlikely to be filled by ordinary methods in competition with other first preference demands. Some other solution must be found. It was therefore decided on 3rd March, 1944, that railway operating vacancies, in areas where first preference seemed unlikely to get results, could be filled by withdrawing the necessary labour from less important industries. Action was to be initiated in the regions. In the difficult labour areas the representatives of the Ministries of Production, Labour, War Transport and the Supply Departments were to decide on the less urgent work which could be combed out to fill railway vacancies; but it was made quite clear that such withdrawals from firms possibly engaged on war production

¹ New requirements, 7,000; the rest wastage.

² There is some evidence of suspicion by Ministry of Labour and Ministry of War Transport officials that the railway demands were inflated beyond what was reasonable.

could only be countenanced if the vacancies to be filled would directly result in the more rapid movement of traffic. This meant that the special procedure only applied to operating and permanent way grades and to no other type of railway vacancy.¹

The special procedure for recruiting railway operating staff seems to have produced results straight away. Whereas in the week ending 4th March, the recruitment of operating staff had been 750 (or 150 less than the wastage plus new requirements notified during the week), during the next three weeks, gross recruitment was 1,100, 1,500 and 1,750 respectively, giving a net increase of 1,500 operatives over the four-week period, or nearly 3,000 net increase if new requirements notified are left out. This spurt could not be maintained, but gains now continued to exceed losses. By the end of April 1944, the Ministry of War Transport circulated its regions saying that the net increase in the operating grades, after allowing for wastage, had been nearly 7,000 since the beginning of the year. Unfortunately, new demands for labour also continued to increase over the same period. As the movement of Overlord material mounted and as coasting tonnage was withdrawn, the burden on the railways increased. At the end of April, their total outstanding vacancies were 15,600. 8,500 of these were for operating staff.² In addition, 900 or so troops in Railway Transportation Companies, who had been lent by the War Office, were due to be withdrawn in April.

By now, the Official Committee on Inland Transport was saying that there would not be time to recruit and train all the additional labour needed for the Overlord operation—it was for this reason that the estimate of 940,000 loaded wagons a week was reduced to 920,000, a loss of carrying capacity of some 430,000 tons a week. Even to keep to this reduced figure, however, the railways still needed more labour. New requirements for operating grades in the first week of May were 300.

The most urgent single requirement was now said to be for 4,000 youths³ as engine cleaners for training and up-grading to firemen so

¹ Some difficulty arose a month or two later, however, over vacancies for men repairing and maintaining locomotives, whose work was vital to railway operation, but who were classed as workshop staff because they worked on a 47 instead of a 48-hour week basis. The railways were anxious to get vacancies for these men filled by the special procedure, but the Minister of War Transport did not want to ask the Minister of Production for further concessions, considering that it was better to concentrate on building up operating grade strength. However, in view of the fact that some Ministry of Labour regions had been treating the running shed staff as operating staff and the fact that there were only about 500 vacancies for the whole country, Ministry of Labour headquarters, in agreement with the Ministry of War Transport, instructed its regions in April 1944 to apply the special procedure to running shed vacancies where necessary.

² See Appendix XXVII, p. 609, for figures of railway labour before D-day.

³ The Ministry of Labour dissented from this view, saying that the request for youths was 'designed merely to preserve peace with the Trade Unions' and would not be associated with the Official Committee's decision to make representations to the Minister of War Transport.

that existing firemen could be up-graded to engine drivers. This was the problem which had proved so difficult during the previous war-time winters and the high priority of railway operating vacancies provided no solution, since as youths under 18 were non-directable, these vacancies could not be filled by first preference or by the special procedure. Inter-departmental discussions at the end of May solved the problem temporarily, although final arrangements were not made until 7th June—the day after the first landings in Normandy. The Ministry of Labour finally agreed to supply 2,000 adults, at least one half of whom were to be physically capable of being up-graded to footplate work. The other 2,000 were lent by the Service Departments.¹

By the time of the Normandy landings, the railways had received a very substantial increase in their labour force in all grades. They were also using 4,500 Italian prisoners and about 1,500 British troops.² Appendix XXVII shows the railway labour situation from the first week of January until the Official Committee ceased to make its report at the end of May. Between January and 27th May, 1944, the total intake of railway labour was 28,337, of whom 19,040 were operating staff. Allowing for wastage, this represented a net increase of 13,092, including 9,389 operating staff. The results of the special procedure of combing out less essential industries to fill operating vacancies appear in the sharply increased intake during March and April. At the end of July, when the Ministry of War Transport reviewed the activities of the previous six months, it said that the railways had received roughly 35,000 recruits in all since the beginning of the year. This represented a net gain of 17,000 operatives. 'Against a background of a falling civilian population this represents a considerable achievement.'

The Ministry of Labour was helped in its task of transferring men from industry to the railways by the fact that, during the six months before D-day, some Government departments were cutting production and pockets of labour were therefore available. For example, some redundant Royal Ordnance Factory labour was very suitable for work in the locomotive running sheds; certain blast furnaces which were temporarily closed down lent nearly 700 men to the railways; the Ministry of Works agreed in January 1944 to surrender its recruiting ground in Eire to the railways, a concession which was

¹ A maximum of 1,600 from the War Office, the first 400 available immediately. The Admiralty invited volunteers from naval ratings to work on the railways as civilians. 700 naval ratings volunteered: the railways selected 400. The R.A.F. invited volunteers from air crews whose training had been interrupted, to work in uniform. 600 volunteered, and the railways selected 400. The Minister of War Transport obtained the agreement of the Unions for the employment of this labour.

² Units of the Royal Corps of Signals were employed quite extensively at this period in erecting line wires for the improvement of railway telephone control circuits. Signal units of the American Army were also employed for the same purpose.

estimated to supply about 500 Irishmen a month. The Government, in treating the railways' labour requirements so generously in the first six months of 1944—even at the expense of war production—was following the only sound policy. It would plainly have been foolish to have risked, by failing to provide adequate transport, the vital military operations towards which the British people's productive efforts had for four years been directed.

Besides making a broad assessment of railway capacity in terms of locomotives, wagons, line capacity and labour, it was necessary to keep a careful check on the capacity of certain parts of the railway system. For example, there are only two routes between England and Scotland, via Carlisle and Berwick, and the average daily number of wagons that could be worked over these routes, which was an important factor in connection with the arrival of shipping at the Scottish ports, was known to the railway operating experts. Similarly, the capacity of the principal routes between England and South Wales—Severn Tunnel, Gloucester, and Hereford—Shrewsbury—was also known. Again, the capacity of the main line between Northallerton and York (with its alternative Harrogate loop) was measurable, though difficulties were experienced south of this section owing to the impact of heavy traffic from the North Midlands. Although extensive war-time works had been carried out both on the South Wales and the Northallerton–York routes and lesser works on the Anglo-Scottish route at Carlisle, all these sections of the railway system had to be carefully watched, since they were still liable to congestion when traffic was heavy and operating conditions unfavourable. Throughout the country, there were also a number of exchange junctions—particularly those linking the two northern systems with the Great Western and Southern railways—where, in spite of new works, congestion was liable to occur in periods of heavy traffic. While, throughout the war, all possible steps had been taken to improve railway facilities at critical points, it was obviously impossible to eliminate every possible seat of congestion, more especially as the main traffic flows were constantly changing. Thus, the broad assessment of railway capacity had to be qualified by taking account of possible 'bottlenecks' on the railway system.

Apart from the railways, it was reckoned that road haulage had sufficient capacity to move an additional 400,000 tons a month during the period of operations, compared with the month of November 1943, which was taken as the yardstick for measuring the surplus or deficiency during operations. Statistics show that the traffic moved by the Road Haulage Organisation continued to increase in the spring of 1944.¹ A general shortage of road transport

¹ Appendix XXVI, p. 554.

was, however, reported, mainly because of a scarcity of drivers. Particular difficulties were encountered during March in handling the shorter-distance traffic from Liverpool, and vehicles had to be moved there from other areas. In order to provide more labour for road transport, the Minister of Labour and National Service was, once again, able to use his powers to allow the transfer of labour from non-designated products and services. A special appeal went out for drivers for both the Road Haulage Organisation and commercially-operated vehicles, and this appears to have met with some success.¹ Among the other means adopted to ensure that road transport should provide the planned contribution during operations were loans of heavy vehicles from the Service Departments—several thousand vehicles were provided from this source, and the promise of co-operation from Service Departments in providing the road transport industry with vehicles to meet particular emergencies as well as in moving their own traffic wherever possible to avoid overloading road haulage. A small number of vehicles was also made available by bringing into use laid-up 'C' licence commercial vehicles.

We turn finally to coastal shipping. The assault on France depended on an ample supply of small shallow-draught vessels. Not only had five divisions and their supplies to be landed in the first attacks, but it was realised that for several weeks after D-day the bulk of the supplies would have to be maintained over the Normandy beaches, aided by the two artificial Mulberry harbours. Large numbers of coasters would therefore be needed to deliver stores at the beaches, to unload inside the Mulberries and to be used in Cherbourg as soon as it had been captured and before its harbour could be opened for deep sea ships. After this first phase, coasters were expected to be useful in the smaller French ports as they were liberated, or to carry special express cargoes which had to be discharged at the point nearest to the troops waiting for them.²

After the Sextant Conference in November–December 1943,³ it was decided that 625,000 deadweight tons of coastal shipping would be needed for the D-day assault and for the 30 to 40 days immediately afterwards to cover both American and British requirements. When

¹ The number of drivers estimated to be required by road haulage in the four months up to April 1944 was 7,000 (including wastage). Of these the Road Haulage Organisation requirements amounted to 2,100. About 30,000 men responded to the Minister of Labour's appeal. On 15th May, it was reported that 1,000 had been placed in jobs, employer's consent had been obtained for a further 5,000 to 6,000, 12,000 had been written off because they were in jobs from which they could not be moved. The Ministry of Labour stated that the balance of 11,000 were probably available if required.

² For example, see *Report by the Supreme Commander to the Combined Chiefs of Staff on the Operations in Europe of the Allied Expeditionary Force, 6th June 1944–8th May 1945*, pub. H.M.S.O., p. 12 and pp. 16–17.

³ This was the Conference which took place in Cairo and Teheran between President Roosevelt and Mr. Churchill, and (at Teheran) Marshal Stalin.

this initial phase was over, after about D-day + 42, the coastal shipping requirement was expected to drop to about 100,000 deadweight tons.

As detailed planning progressed during the winter, however, and since, in particular, it was decided to accelerate the rate of build-up, it began to seem that this allocation of coasters might prove insufficient. The Principal Administrative Officers' Committee therefore reported to the Chiefs of Staff in March 1944 that it was expected that 250,000 tons of coastal shipping would have to be retained after D-day + 42 until at least D-day + 120; and a month later S.H.A.E.F. considered it improbable that requirements would, at any time, fall below the 250,000 ton figure.¹

This proposed retention of an additional 150,000 tons of coasters after D-day + 42 for an indefinite period caused those responsible for the operation of inland transport some alarm. For it had been agreed that all the coasters employed in the initial phases of Overlord should be British controlled and a high proportion would continue to be British controlled coasters after D-day + 42.² It looked, therefore, as if inland transport might have to face an additional loss of 375,000 tons of cargo a month—the estimated carrying capacity of the extra 150,000 tons of shipping it was now proposed to retain in addition to the 100,000 deadweight tons already budgetted for.

The Chiefs of Staff Committee, however, decided not to report the seriousness of the inland transport situation to the Prime Minister, unless the United States could not help to provide additional coaster tonnage. The United States were therefore asked for the maximum possible contribution of American coasting tonnage, and it appeared that considerable help from this source would be forthcoming. On 20th May, the Official Committee on Inland Transport reported that it had been promised about 140,000 deadweight tons of coastal shipping from the United States and Canadian coast and Atlantic services. 20,000 tons were to come immediately, 60,000 tons towards the end of June and 60,000 tons towards the end of July. The two latter allocations would help to replace the extra 150,000 tons needed by the revised military requirements. The British coasting services could therefore expect to have to supply 625,000 deadweight tons in the initial phase of the Overlord operation. After D-day + 42, the

¹ As military requirements fell off, relief requirements, etc., were expected to rise, especially for coal in coasters to France and the Low Countries after their liberation.

² Although it was planned that the United States and United Kingdom should each provide the shipping requirements for their own sectors, so far as coasters were concerned, the British were to provide all coasting tonnage at least in the early stages (and the Americans were to provide more M.T. ships as a *quid pro quo*). Between D-day + 30 and D-day + 60, the Americans planned to provide 35,000 deadweight tons and a further 70,000 deadweight tons some time before D-day + 90 (early September). These figures refer specifically to coasters in the Overlord programme, not to coasters being loaned for the United Kingdom coastal service, referred to in the following paragraph.

total requirement would drop to 250,000 deadweight tons, most of it to be supplied by the British. But the United Kingdom coasting services would be supplemented from American and other Atlantic services up to about 140,000 deadweight tons. If the military timetable went as expected, the loss to the British coasting fleet after the first six weeks would work out at not much more than the 100,000 tons mentioned in the original estimates.

This broad assessment of prospective transport capacity enabled the Official Committee to make up one side of its transport balance sheet. It appeared that, compared with November 1943, the railways would be able to move an additional million tons monthly—representing 920,000 wagon loadings each week, while road haulage, by employing the reserve capacity at the call of the Road Haulage Organisation, could carry an additional 400,000 tons a month. Coastal shipping, however, would suffer a reduction in capacity during the first phase of military operations equivalent to 1,400,000 tons monthly because of withdrawals to meet operational demands.

Taking these prospective figures as a basis, the second part of the problem was to adjust traffic offerings during the operational period. In determining the reductions of traffic needed to balance offerings and capacity, certain general principles were followed. Firstly, it was decided to interfere as little as possible with the programme of coal output. Secondly, there was to be no reduction in the standard of the national diet and essential movements of food were to be continued. Thirdly, it was agreed that sufficient quantities of essential finished goods, raw materials and fabricated materials must continue to move—it was the task of the Official Committee to draw up a list of carefully selected commodities ranking as 'essential' in this context. Finally, and this was the most important decision of all, it was decided that the reduction of all other traffic must be so drastic as to be absolutely certain that there would be ample capacity on the railways and roads to carry the men and supplies needed for the military operations in France.

Thus, the prospective traffic offerings for the operational period were set down on the balance sheet against prospective capacity in the following way. Military and munitions traffic was expected to increase by 1,260,000 tons a month compared with November 1943, and coal movement by 960,000 tons a month—including opencast production. Substantial reductions compared with November 1943 were contemplated for merchandise traffic, which was to be cut by 730,000 tons a month, building materials to be cut by 700,000 tons a month, and raw materials to be cut by 760,000 tons a month. Finally, an increase in traffic of half a million tons a month was allowed for contingencies. The gap representing the difference between traffic offerings and transport capacity provided a broad

indication of the size of further cuts needed. It is necessary to emphasise that these figures were all speculative. They were not precise calculations made down to the last ton of traffic but indications of broad magnitudes; for example, the figure adopted for contingencies was arbitrary. The figures were constantly being revised as fresh information came to hand with the closer approach of D-day.¹

As the figures indicate, the reductions in merchandise, building materials and raw materials were considerable. These represented deliberately planned cuts in traffic offerings. A start was made with raw materials, which included cuts in iron and steel traffic, 550,000 tons per month; fertilisers, 90,000 tons per month; timber, 70,000 tons per month; lime and chalk, 50,000 tons per month. The merchandise reduction included cuts of 330,000 tons per month in food traffic and 400,000 tons per month in raw material imports. The reduction in building materials covered cuts of 550,000 tons per month in constructional materials by the Air Ministry and Ministry of Aircraft Production and 150,000 tons per month by other Departments. There were further reductions—which did not appear in the transport balance sheet—in Air Ministry and Ministry of Aircraft Production short-distance road traffic, amounting to 570,000 a month. In addition, the figure for military and munitions traffic, which was to increase by 1,260,000 tons a month, was arrived at after allowing for a reduction in internal military movements and in Ministry of Supply munitions traffic, together amounting to 380,000 tons a month.

The Official Committee did not set any definite date by which these heavy reductions in traffic were to come into effect, but laid down that they should remain in operation for a minimum period of three months. Since stacking and storage capacity was limited, cuts in traffic frequently meant that output had to be reduced and necessitated complicated decisions, which were best left to the initiative of the Departments which had agreed to them. For example, the reductions in traffic in steel and steel-making materials, which were introduced on 6th March, involved progressively applied cuts in the movement of pig iron, limestone, scrap, finished steel, and iron castings, etc. Even a number of blast furnaces were allowed to die rather than that the railways should be overloaded with steel traffic during the critical operational period. Similarly, the cuts in traffic in building materials necessitated a 10 per cent. reduction in building work, the introduction of zoning schemes for the transport of materials and—after a decision by the War Cabinet—a temporary embargo on new building projects costing more than £5,000. It is

¹ All the figures quoted here are taken from the assessment of the prospective position during the operational period as it stood at 28th April, 1944. There were further adjustments between that date and D-day.

probable too that reductions in the transport of fertilisers caused inconvenience, if not some actual loss, to agricultural production. In every case of traffic reductions, sufficient notice was given to ensure that the cuts should take full effect before the period May-June, when operational traffic was expected to reach its peak.

Considerable reductions were also made in passenger services. Since Service travel by this time formed a large proportion of all passenger travel, the suspension by the Service authorities of all 'privilege leave' from the beginning of May gave the railways much-needed relief. This enabled the Lord President's Committee to authorise a big programme of reductions in passenger train timetables, particularly on long-distance routes, to be brought into operation during May. Beginning with the services to Scotland, progressive cuts were applied to passenger services throughout Great Britain. It was decided that there should be no increase in railway fares, neither was there to be any general system of rationing travel, although new restrictions were introduced to limit the number of journeys at concession fares, including those by wives and dependants of Servicemen. It was thought that an appeal to the general public not to travel would be the most effective way of cutting down passenger travel, and a warning was issued in general terms that many passenger trains were likely to be discontinued at short notice, though for security reasons no announcements of specific cancellations of trains or services were made.¹ Since many Service duty parties moved by ordinary passenger services, arrangements were made to keep the Service Departments informed in advance of withdrawals. In order to secure that essential official travel could still be done in comfort, one first class coach was reserved by the Ministry of War Transport on certain long-distance night trains—for example, to Scotland. In fact, these reservations, which were later extended to day trains, were not always taken up and the scheme was dropped by the autumn. An indication of the extent of the reductions in passenger travel is shown by the figures of total passenger journeys originating—including season ticket holders. These amounted to 96·5 millions in June 1944, compared with 109·1 millions in April 1944 and 106·2 millions in June 1943.² These monthly figures do not show the proportion of long-distance travel affected, nor do they show separately the figures for travel by individual Service personnel. It is probable, however, that the reduction in Service travel following

¹ Ministry of War Transport instructions to the R.E.C. about curtailing passenger services were: (i) the railways were permitted to display notices at stations indicating that trains withdrawn under 'stand to' programme would be 'cancelled until further notice'; (ii) railways could inform enquirers in advance of date of journey that such a train had been cancelled; (iii) no relief trains could be run even if passengers, whether Service personnel or civilians, were left behind.

² Statistical Appendix, Table 4.

the suspension of privilege leave in May was the principal factor influencing the decline in the number of passenger journeys in June 1944.

It would be tempting to argue that more severe restrictions should have been imposed on passenger travel at this crucial stage of the war. On the whole, however, this would be a difficult argument to substantiate. Because of the great obstacles in the way of closely regulating the tens of millions of individual journeys made every month, the Government's policy towards passenger travel had inevitably to stop short of being really drastic and it was bound, therefore, to give rise to some anomalies. In one aspect of Government policy affecting passenger transport, however, the zeal for austerity was remarkably absent. Less than a month before D-day, the R.E.C. was complaining of the need to provide extra trained operating staff for the purpose of regulating heavy passenger traffic to Ascot races; almost 10,000 tickets were collected there on one single day in May 1944. In the same month, the national press was finding cause to criticise the serious congestion in trains at Liverpool Street Station, which was caused by racegoers travelling to Newmarket. This traffic not only made more work for the railways but caused serious overcrowding on regular passenger services. In retrospect, it is difficult to find a convincing reason why horse racing was permitted to flourish on this scale and, in consequence, thrust additional work on to the railways at a time when such things as steel production was being cut and the public was being exhorted to avoid travelling so as to clear the lines for men and munitions destined for the Normandy beaches. Horse racing must have been among the few activities to escape through the now tightly-drawn net of transport austerity.

Turning back to the general transport balance sheet drawn up before D-day, we must stress again that its precise details are not, in the last analysis, significant. Indeed, as D-day drew nearer, attention became focussed rather on the local impact of the proposed reductions in traffic, and on balancing capacity against traffic offerings on particular routes. It was thought that the transport position during the operational period would be determined by the combined effect of the impact of operational traffic to the ports, the diversion of imports to the northern ports, and the removal of coasters. In consequence it was estimated that the most severe of the proposed restrictions would be necessary on the following routes:

- (a) traffic passing over interchange junctions through London,
- (b) traffic from South Wales to England,
- (c) southwards traffic on the L.N.E.R. and L.M.S. main lines from Scotland,
- (d) traffic to Southern and South Western regions.

A careful appreciation of the traffic position on these and other routes was made with the help of the R.E.C. Operating Committee. Heavy southward traffic through the ports in Scotland and North Eastern England, additional coal to be moved from Northumberland and Durham, together with military supplies, were expected to put very heavy pressure on the L.N.E.R. line north of York, so that cuts amounting to about 25 trains a day would be needed. The position was complicated because there was no longer spare capacity in the southern part of the L.N.E.R. system, since East Anglia was now being used as an American base and Grimsby was to be used as an Overlord port. On the L.M.S. West coast route from Scotland, imports through the Clyde and Mersey were expected to cause heavy concentrations of traffic around Warrington and Crewe, while the onward flow of traffic to the Midlands and South West was expected to put severe pressure on the inter-company exchange junctions linking the L.M.S. with the G.W.R. system. In consequence, it was found necessary to impose cuts on traffic north of Crewe to the extent of about 16 trains a day. Cuts of 19 trains a day were also envisaged for the South Wales to England route, on account of additional coal traffic that was to be transferred from coasters to the railways and the operational traffic that was moving into South Wales with the consequent increase in the movement of empty wagons in the reverse direction. Moreover, South Wales traffic had to be regulated with an eye to the more general expected commitments of the Great Western system in connection with Overlord. Traffic in Southern and South Western England was expected to be particularly heavy. There were to be no imports through the Southern ports, but traffic to Southampton and Portsmouth was likely to be subject to considerable interference from operational traffic concentrating on that region. This operational traffic was expected to require heavy restrictions on other movements through the interchanges between the Great Western and Southern systems, all traffic coming into Southern England from South Wales and the North would be classed as 'difficult'.

By far the most difficult area was expected to be the area around London and the Thames estuary. London and the Thames ports were to be used for operations, while, at the same time, other heavy operational traffic would have to pass through and around London en route for the South coast. The problem was complicated because much of the coal and a part of the other raw materials for this area were normally supplied by sea, and in many cases delivered locally by road and rail. During the operational period, however, practically no non-military traffic was to be carried by rail to or from the Port of London, Tilbury and Purfleet. Coastal shipping entering and leaving the Thames was to be substantially reduced and arrivals

limited primarily to coal. It was further expected that there would be very severe and prolonged restrictions on non-operational traffic moving across London, such as traffic from the L.M.S. and G.W.R. systems to East Anglia and traffic from East Anglia for the Southern system. Finally, while it was not expected that railway traffic handled through the London terminals would be interfered with, there were to be restrictions on some passenger traffic by rail within London, especially in the East End. To assess the full impact of these restrictions on industry and to minimise their effect on production called for planning of a high order, more especially because traffic in London and the Thames estuary was so varied and complex.

Without going into detail, it is necessary to say something of the machinery evolved for gauging how far the proposed traffic cuts would affect the different regions. Where the difficulties were especially acute, as in the London area, reports were called for from the Regional Transport Commissioners. The principal machinery was, however, the Regional Transport User Committees, which were now set up in each region to advise, in the coming conditions of transport stringency, on the comparative degrees of priority to be given to particular traffics, and to help to mitigate the results of transport embargoes.¹ These committees had different functions from those of the already existing Regional Transport Committees. Whereas the Regional Transport Committees met under the chairmanship of the Regional Transport Commissioners for the purpose of allocating substantial streams of regular traffic among the four transport agencies, the Regional Transport User Committees were set up as their counterpart under the chairmanship of the Ministry of Production Regional Controllers to make decisions on a regional level, in conditions of acute transport stringency, about the conflicting requirements of the transport user departments. Thus, where traffic embargoes and restrictions were considered necessary, it was for the Regional Transport User Committees to determine how best they might be applied in the light of their probable effects on production. With this object, the committees were composed of nominees from the

¹ The full terms of reference of the Regional Transport User Committees were:

- (a) To advise under conditions of transport stringency, or when restrictions are imposed on acceptance of traffic for carriage, as to the traffics or particular consignments for which, on grounds of urgency or otherwise, special steps are required to ensure transport, and on relative priorities which it is considered should be accorded locally to different classes of traffic.
- (b) To take appropriate steps with firms to mitigate the effects of transport embargoes on production by adjustments of labour, consumption of materials or output.
- (c) To assist the transport authorities by representing to firms the need for improving wagon turn-round, for week-end traffic clearance, adjustments of traffic forwardings to reception capacity, and the like.
- (d) To tender advice and information in relation to the above matters to the Regional Transport Commissioners through the Ministry of Production representative on the Regional Transport Committees.

three Service Departments, the Board of Trade, the Ministry of Fuel and Power and Ministry of Food, with the Ministry of Production Controllers as their neutral chairmen. While over-all cuts were imposed centrally on industry, it was the task of these regional committees to see that hard and fast rules did not create unnecessary delays to output, and, where necessary, to communicate to the firms concerned the likely effect of traffic reductions on them.

Finally, in order to leave no doubt that the railways would be kept clear in the period around D-day, a new list of priorities was drawn up to regulate the acceptance of traffic by the railways. This superseded the system which had been in operation, with comparatively few alterations, since the outbreak of war. Restriction 'A' laid down that no traffic should be accepted except by specific arrangements between the user department and the Ministry of War Transport. Restriction 'B' was an embargo on all traffic other than traffic which would have been accepted under restriction 'A', operational traffic, traffic passing under certain code names approved by the Ministry of War Transport, and 'Red Label' traffic. Restriction 'C', which was the least drastic restriction, allowed the acceptance of the remaining traffics appearing on the list of traffic priorities, such as coal in full trainloads, perishable foods etc. In fact, it was not necessary until D-day + 11 to impose any restrictions whatever on the acceptance of traffic and then the stop was of short duration. Only a few stops had to be imposed in subsequent weeks.

This measure completed what was a well-executed piece of official transport planning. All Departments knew that no risks must be taken in planning the great military operation now eagerly awaited; it was absolutely vital that no ship should be delayed in fulfilling its time-table because soldiers, weapons or supplies had not reached the ports on time. Herein lay the logic of allocating to the railways the lion's share of the limited labour supplies now available, of cancelling large numbers of regular passenger services at short notice and of making drastic cuts in production to avoid transporting raw materials and finished products. History provides many examples of battles lost through the breakdown of supplies. But in 1944, the lessons of history were well heeded. The Government was determined that, in the coming offensive, inland transport should be kept clear to move the military load at the cost, if need be, of the sternest sacrifices elsewhere.

(iv)

D-day

Thus, when D-day came, the lines had been cleared. The railway companies, on which the greater part of the burden fell, made tremendous exertions. The total freight traffic originating between May and September 1944 reached levels only slightly below the peak of the previous autumn, while merchandise traffic—usually the most difficult category of traffic to handle—actually reached a new high war-time level only slightly short of 7 million tons in the four weeks ending 8th July, 1944. In terms of estimated ton-miles, total traffic moved in the four weeks ending 8th July, 1944, set a war-time record, being greater than for any previous four-weekly period, including the autumn of 1943, and showing particularly heavy movements of merchandise and coal class traffic. The same four weeks in the summer of 1944 also show the highest recorded war-time figure for total loaded and empty wagon-miles.¹ A further measure of the great railway effort is the fact that, in the three months from April to June 1944, 45,538 special passenger and freight trains were worked by the railways on Government account, and for the period July to September, the figure was 55,787. In the corresponding periods of 1943, the numbers of these special trains had been less than one-half the 1944 totals, and in 1941, less than a quarter.² The height of this achievement came in the week ending 17th June, 1944, when the railways ran 4,919 special personnel and stores trains, or nearly 1,300 more than the previous record total of the week before.

The difficulties of the railways in the winter of 1943-1944 had been great—the average four-weekly tonnage of traffic originating was less by almost half a million tons than the estimate, primarily because the amount of coal moved was lower than had been forecast. Once the railways had freed themselves from their winter congestion, partly owing to the planned reductions in output, the stacking programme for raw materials, the recruitment of additional labour, and the cessation of Service leave and partly owing to the longer hours of daylight and more favourable weather, the railways found themselves by the end of May in a condition of fluidity which they had not enjoyed since the summer of the previous year. The railways were therefore well prepared to receive the impact of military traffic; the flow of troops and materials to the Southern ports as well as the continuing inflow of troops and supplies from the United States, mainly through Liverpool and the Clyde. It is also worthy of note

¹ The detailed comparisons may be examined in Statistical Appendix, Tables 1, 2 and 3.

² R. Bell, *op. cit.*, Appendix 12.

that the extensive military traffic did not interfere with coal movement. Collieries and outcrop workings were kept fully 'wagoned' and cleared without delay. Neither on D-day, nor during the fortnight before, had any restrictions of consequence to be imposed on the acceptance of traffic. One most noticeable factor was the psychological effect of the opening of the 'Second Front' on railwaymen who were greatly heartened by the news for which they had long been waiting. There exists, so far as the author knows, no evidence of serious complaints, either from the military authorities or from those responsible for managing shipping, of any failure of the railways in their vital role during the period of operations. Some difficult manipulation of traffic over tortuous and overloaded routes to the London docks had to be carried out, and there were a few accidents. At Grimsby, railway difficulties were aggravated because ships failed to arrive on time, causing heavy accumulations of wagons at the port. Generally, however, flows of traffic were smooth and temporary difficulties were soon overcome. The praise for the work of the railways, which the Official Committee saw fit to record in its review of the D-day period, was well-deserved.

The Road Haulage Organisation concentrated chiefly on the task of moving regular traffics and on clearing the ports, although an appreciable part of all the traffic carried was concerned directly with military operations: long-distance flows were reported to have shown a very definite swing towards the South coast in the weeks before 6th June, 1944. The volume of traffic moved by the Organisation rose from 3·4 million tons in April to 5·4 million tons in June, a particularly valuable contribution being the substantial volume of opencast coal carried by road, which amounted to between 500,000 and 600,000 tons a month. During the months preceding D-day, road transport had carried thousands of cases of glider parts, half-track vehicles and other awkward loads from ports to assembly points. On occasions, the Road Haulage Organisation provided transport for parts of the Mulberries that could not be moved by train. The Organisation was of special value in meeting urgent transport demands at very short notice, of which the following are recorded instances:

- (a) A Unit Controller was called from his bed at 1.0 a.m. in Plymouth with an urgent Admiralty demand for the movement of landing craft ramps at Southampton. He got hold of drivers from a transport café where they were accommodated and by 6.0 a.m. the whole consignment was on its way.
- (b) The R.A.S.C. called on the Plymouth Area Road Haulage Officer to move 80 tons of ammunition urgently from a point 60 miles distant and within three quarters of an hour the vehicles were at the railhead.

- (c) At 4.30 p.m. one day the Area Road Haulage Officer at Salisbury was notified that 80 tons of supplies were required at ship's side at Southampton by 7.0 a.m. the following day. The movement was carried out and a subsequent similar movement was also successfully completed.

The value of the Road Haulage Organisation in responding to appeals of this kind is striking if its promptness be compared with the delays encountered in mobilising road transport at the ports three and a half years before in the 1940-1941 crisis, when road transport had possessed no effective central direction.

Canal traffic was also adjusted to meet changes in the flow of traffic arising out of the D-day preparations. Although relatively little military traffic was conveyed by inland waterways, barges were worked to the full capacity of the labour available to help relieve other forms of inland transport.

Some of the most exacting tasks which fell to inland transport at D-day were those performed by coastal shipping. By 15th May, all the coasters required for Overlord had been withdrawn from service and handed over to the management of Sea Transport Division of the Ministry of War Transport. 420 coasters of 655,000 deadweight tons took part in the D-day operations. Their job was to deliver on the beaches at least 22,000 tons of stores and 2,500 motor vehicles a day. Invasion rehearsals had trained the crews to work with naval precision and, as D-day approached, coasters moved to loading ports to take on their cargoes. Most ships had to be tactically loaded—that is, the great variety of stores and equipment had to be stowed in such a way that the troops' first needs could be unloaded first and also so that the ship would be properly trimmed even if she had to be beached and then re-floated. Most coasters also carried soldier passengers accommodated in tents over the hatches.

After a twenty-four hour postponement which caused many problems for the shore organisation,¹ the coasters set sail in small convoys for their various rendezvous in the Channel and, by the evening of 6th June, most of them had arrived off the French coast and were ready to go in and discharge their cargoes when the beachmaster gave the signal.² The weather was bad. The coasters anchored as far inshore as possible and discharged overside into smaller craft.³

¹ As a coaster's storage space is small, she has not room for more than four or five days' supplies, whether it be bunkers, water, fresh meat or vegetables. 24 hours' delay meant that stores of all kinds had to be topped up. There were, at this time, about 120 coasters anchored in the Solent and 150 in the Thames. The shore organisation was able to do all that was necessary to meet the difficulties caused by the delay, including the delivery of newspapers.

² The coasters were not due to discharge until the assault troops had stormed the beaches.

³ This was a difficult job when awkward and heavy loads had to be unloaded quickly and when a heavy swell was exaggerating the unsynchronised movements of the two

The weather and the supply of receiving craft governed the rate of discharge during the first few days. From each coaster the rate of discharge probably averaged about 20–25 tons an hour, and motor transport, which is comparatively easy to handle, about 60–70 tons an hour. After the coaster had discharged her cargo, she returned to her English base to re-load and sail again. Management controls, manned for the most part by shipowners, had been set up all along the South coast. They were responsible for cargo loading, repairs, the supply of crews and equipment—in fact all the normal day-to-day problems of ship management plus the urgent need for extreme speed in turn-round and repairs.

The ships shuttled back and forth across the English Channel with surprisingly little interference from the Germans.¹ The worst enemy was the weather. From the first, the small ferries and landing craft were troubled by the 'nasty lop' running on most of the beaches, which prevented or delayed unloading or stranded them on the shore. On D-day + 1, for instance, the ferry services were only operating at 10 per cent. and the coasters had to be beached wherever possible and their cargoes discharged on to the sand when the tide had receded—a procedure which outrages every seamanly instinct and is both slow and dangerous.² The build-up of stores, of the artificial harbours and of the sheltering anchorages continued steadily, however, until on 19th June, without warning from the meteorologists, 'there broke on the open beaches and nascent harbours a violent northerly gale which in four days did more damage to Allied shipping than had hitherto been achieved by the enemy'. All unloading in the anchorages ceased and the shuttle service from England was suspended. The ships anchored off the beaches fared badly. Both Mulberry harbours were damaged, one so badly that it was decided to abandon it and concentrate on repairing and re-making the other at Arromanches. Within 48 hours after the wind had slackened, the shuttle service was working again at full strength. During the succeeding weeks, it was demonstrated that the needs of the armies could be met entirely over the open beaches and through

vessels. Masters and mates took charge at the hatches and the crews worked with the troops to unload. 'We are seamen and soldiers and dockers too.' The coaster crews were volunteers who formed part of a special pool organised under the Combined Office Merchant Navy Operations. The men signed special 'V articles' under which they agreed to transfer from ship to ship, to load and unload cargo when necessary, and so on. Overtime rates were waived and a flat rate of £1 a week paid in lieu.

¹ Very few were sunk and most damage to coasters occurred not from enemy attack or mines, but from anchoring too far in and being pounded in the swell.

² *Report by the Supreme Commander to the Combined Chiefs of Staff, op. cit.*, p. 66. 'We were compelled to resort to "drying out" Landing Ship Tanks and coasters on the beaches. Such a process had previously been thought too dangerous to attempt, but having been adopted as a desperate expedient on D + 1, it proved so successful as to be continued as a regular practice.' The coastal shipping authorities had always realised that the beaching of at least some coasters would be necessary.

one Mulberry harbour.¹ This, however, increased the military demands for coasters. Not only had the planned loading and discharge been delayed causing a heavy accumulation of stores to be cleared, but damage to ferry craft meant that more coasters had to be beached than had first been expected, with all the consequent delays and added risks of damage. Moreover, although Cherbourg fell into allied hands on 26th June, its harbour was made unusable by the Germans² and not until August was it handling an appreciable daily tonnage. Again 'Pluto' (pipe line under the ocean) was not working as early as had been hoped, partly because of technical troubles and partly owing to bad weather. Not until after mid-August was even one line in operation. All the petrol needed by the invasion armies had to be carried in merchant ships, including coasters; in tankers as far as possible, but otherwise cased in ordinary ships.

For these reasons, the demands on coastal shipping for military operations were higher than the original estimates. On D-day itself there were 655,000 deadweight tons of coasters employed instead of the 625,000 originally planned and, during the following weeks, demands increased instead of diminishing. During the autumn, some coasting tonnage was returned, but in December 1944 there were still about 500,000 deadweight tons employed on Overlord.³

While about one-half of the United Kingdom coastal fleet was engaged on military operations, the remainder managed remarkably well in keeping up the movement of the most urgent cargoes round the British coasts. Before the withdrawals for Overlord, the total deadweight tonnage of shipping available for the coasting service was 1,417,000 tons. To make up for the loss of 655,000 deadweight tons taken for D-day, some deep sea tonnage was allocated to the coastwise trade during this period, amounting to as much as 90,000 deadweight tons in the month ending 15th June.⁴ On 15th May, after the last of the withdrawals for D-day had been made, there were 956,800 deadweight tons of shipping available for the coasting service, 819,000 tons of which were actually in employment.

The most important task of the shipping left in the United Kingdom coasting trade was to maintain coal movement. In the two months ending 15th July, 1944, an average of 567,000 deadweight

¹ The Mulberry at Arromanches was practically completed by 20th July. 'Throughout the summer and autumn the achievements of the Mulberry exceeded our best hopes, for although the planned rate of supply discharge was 6,000 tons a day, the actual average, from 20th June to 1st September, was 6,750 tons.' *Report by the Supreme Commander to the Combined Chiefs of Staff, op. cit.*, p. 69.

² 75 per cent. of the cranes were destroyed, vessels were sunk to block the dock entrances, the harbour was thoroughly mined and the skilled labour evacuated.

³ See below, Chapter XVI.

⁴ 40,000 deadweight tons of deep sea shipping were allocated to the Bristol Channel-Liverpool coal trade.

tons of shipping was carrying coal at a rate of 1,590,000 tons a month. This compared with a rate of 1,716,000 tons of coal a month carried by an average of 702,000 deadweight tons of shipping in the first quarter of 1944. Figures of coasting shipping performance in the employment returns show that for coal tramps, the average tonnage of cargo discharged per average deadweight ton in the coasting service rose from 2.36 for the first quarter of 1944 to 2.85 for the two months ending 15th July, 1944. This remarkable improvement was said to be due, among other things, to the improved convoy opportunities on the East coast, the improved barge situation in London and the fact that coaster berths became more quickly available because of the smaller tonnage of shipping in the trade. Coastal liners also improved their performance during the summer of 1944, compared with the first quarter of the year.¹ Their working was re-organised to give greater lifting capacity on the North-South routes, since more deep sea shipping was now discharging at Scottish and North Eastern ports. In the Forth-London trade, the amount of cargo lifted was roughly trebled compared with the first quarter of the year and the Clyde-Bristol, Tyne-London and Hull-London services were strengthened to give greater lifting capacity. In addition coasting liners helped in clearing up congestion at Liverpool during June and July. Improved performance and re-organisation enabled the coasters to keep up the movement of the most vital cargoes round Britain's coasts while a large part of the fleet was being used for military operations. But the fact that a larger number of coasters than had been planned had to be kept for operations after the first phase was over, inevitably promised difficulties for inland transport as the final winter of war approached.

The arduous and exacting tasks fulfilled by all branches of inland transport in support of the great Allied military offensive in the summer of 1944 marked the climax of all the previous experience and effort of the war years. The traffic planning, undertaken by the Official Committee, was only possible because all branches of the inland transport system were now tightly controlled. These controls, together with central and local allocation machinery, enabled the Ministry of War Transport to meet the military demands with the minimum of disorganisation to other traffics. By the summer of 1944, the Government had succeeded in building up an organisation which withstood most successfully its greatest test as the military offensive was launched.

¹ Though compared with the summer of 1943, their performance had deteriorated. The average monthly tonnage of cargo discharged by coasting liners per average deadweight ton in service works out at 1.39 for the first three months of 1944, 1.47 for the months of June, July, and August 1944, and 1.72 for the months of June, July and August 1943.

APPENDIX XXVII

D-day Railway Labour Requirements

A. OPERATING, WAY AND WORKS AND SALARIED STAFF

Thousands

<i>Period</i>	<i>Total intake</i>	<i>Wastage</i>	<i>Net increase</i>	<i>Additional requirements</i>	<i>Demands outstanding at end of period</i>
4 weeks to 29th Jan. 1944 . . .	2·8	2·5	+0·3	1·1	—
„ 26th Feb.	4·1	3·0	+1·0	1·5	—
„ 25th Mar.	6·6	2·9	+3·8	2·0	18·1
5 weeks to 29th April	8·5	3·7	+4·8	2·3	15·6
Week ending 6th May	1·5	0·8	+0·7	0·2	15·0
„ 13th „	1·5	0·7	+0·8	—	14·3
„ 20th „	1·5	0·8	+0·7	0·3	13·8
„ 27th „	1·8	0·8	+1·0	0·3	13·1
Total	28·3	15·2	+13·1¹	7·7	—

Two part-time women count as one unit.

¹ Since 1st April there has been an increase of 2,975 in the number of Italians.

B. OPERATING STAFF

<i>Period</i>	<i>Total intake</i>	<i>Wastage</i>	<i>Net increase</i>	<i>Additional requirements</i>	<i>Demands outstanding at end of period</i>
4 weeks to 29th Jan. 1944 . . .	—	N.A.	—	—	—
„ 26th Feb.	3·3	2·3	+1·0	0·8	10·3
„ 25th Mar.	5·1	2·2	+2·9	1·4	8·7
5 weeks to 29th April	6·1	2·8	+3·3	1·8	8·5
Week ending 6th May	1·0	0·6	+0·4	0·3	8·1
„ 13th „	1·0	0·6	+0·5	—	8·0
„ 20th „	1·1	0·6	+0·5	0·3	8·0
„ 27th „	1·4	0·6	+0·8	0·3	7·4
Total	19·0	9·7	+9·4	4·9	—

CHAPTER XVII

THE FINAL YEAR OF THE WAR, 1944-1945

(i)

The Railway Traffic Situation after D-day

THE MILITARY OPERATIONS in France exceeded expectations: on 25th August, Paris was freed and by the first week of September, Allied forces had entered Brussels and Antwerp. Throughout the summer of 1944, British inland transport fulfilled the tasks assigned to it in support of the Allied campaign in the West. By considerable efforts and at the cost of reductions in less essential freight traffic and passenger services, the railways continued to form part of the supply lines to the armies in Western Europe. They were helped in this task by other branches of inland transport, while coastal shipping assisted in the movement of supplies from British ports to the armies on the Continent. Inland transport ran efficiently, and for this efficiency the most important fact was that railway movement remained fluid. While both the weekly numbers of loaded wagons forwarded and special trains run for the Government continued high, no great difficulties were experienced in handling this traffic. The estimated average figure of 38,000 tons a day of operational traffic moving to the ports was rarely reached and, by November 1944, the tonnage had dropped to 25,000 a day. It was therefore possible, as the autumn approached, for the Government to restore much of the traffic temporarily reduced before D-day. Indeed, by September, the chairman of the Central Transport Committee was able to announce that spare capacity was available on all branches of inland transport and on the large ships operating on coastwise routes. Departments were urged to set on foot large movements of traffic before the winter.

Several causes contributed to the fluidity of inland transport during the summer of 1944. Firstly, railway working benefited, as in every war-time summer, from long hours of daylight and good weather. Secondly, the railways remained free from congestion precisely because of the careful planning which was taken to avoid overloading the machine. Of particular importance was the great improvement in the labour supply of the railways during the period of operations. Finally, there was a tendency for operational traffic

to decline as continental ports became available to receive direct shipments and for the programme of United States Bolero stores to the United Kingdom to decrease.¹ Moreover, the cessation of enemy air raids and the relaxation of the blackout obviously contributed to smoother railway working. Against these considerations, however, a new factor had to be reckoned with: the flying bomb attacks, which were begun by the enemy on 13th June, and the attacks by rocket weapons, which started on 8th September, 1944.

The damage caused by these weapons, unlike that done by high explosive bombs and incendiaries dropped from piloted aircraft, was confined to certain parts of the country, chiefly London and the Home Counties; also the attacks were inaccurate and, on the whole, haphazard. For the railway system, their consequences were far less severe and lasting than those of the air raids of 1940-1941 had been. For example, whereas between July 1940 and June 1941 there had been 6,359 incidents on the railways, between July 1944 and 29th March, 1945, when flying bomb and rocket attacks ceased altogether, there were only 1,143 incidents: of these more than half occurred on the Southern Railway and in the L.P.T.B. area. During 1944-1945, only twenty-nine incidents resulted in a section of railway line being put out of action for a period of between one day and one week, and only eight for more than one week. (In 1940-1941, 561 incidents had affected the railways for one day to one week, and 214 for over one week.) The worst incidents occurred at Peckham Rye (Southern Railway), 12th July, 1944; New Cross (L.P.T.B.), 12th July, 1944; Sydenham Hill (Southern Railway), 6th August, 1944; London Bridge-Bricklayers Arms, 5th November, 1944; and Farringdon Street depot (L.N.E.R.), 8th March, 1945. It is worth noting that the shelling of the Dover area by long range guns during this period caused two incidents almost as severe for railway working as those achieved by the novel weapons.

While the direct effects of flying bombs and rockets were slight, it is more difficult to assess their indirect consequences for inland transport working. On the one hand, since the imposition of the blackout gave no protection against these weapons, it was no longer a cause of transport difficulty. It will be recalled that, in the winter of 1940-1941, it was the blackout, almost as much as the air attacks themselves, which hampered work in the marshalling yards and contributed to the general congestion. The new weapons, despite their

¹ It is necessary to stress, however, that the German strategy of denying to the Allied armies the use of a major port on the North West coast of Europe certainly made it much more difficult to ship supplies direct to Europe. This inevitably delayed the time when the British inland transport system could be relieved of operational traffic, and, perhaps more serious from the British transport point of view, prevented the early return of coasting tonnage to civil use. Small coasting ships continued in great demand until a European port capable of taking ocean-going ships was available. The first large port, Antwerp, was not brought into use until November 1944.

destructive effects, were therefore less productive of congestion since they interfered very little, on the whole, with inland transport working. On the other hand, the new attacks did affect the railways at a weak point. In concentrating on military movements, the railways had been constrained to reduce passenger services to an absolute minimum, so that any extra call on passenger services to carry out a new evacuation of London was a threat to the fluidity of the whole railway system. It was partly for this reason that the Government was reluctant to give more than the barest assistance to fresh evacuation movements and it decided that no special prominence should be given to the running of special trains needed for the purpose. At the beginning of July, the evacuation of 10,000 London schoolchildren began and this movement soon grew into a steady flow of both organised and 'assisted' individual evacuation of the capital. Thus, between 5th July and 6th August, it was necessary to run 1,400 special trains from London for the conveyance of evacuees.¹ The railways complained because they were required to obtain approval from the Minister of War Transport for every additional passenger train run for whatever civilian purpose, arguing that such arrangements were inadequate for solving the problem which the new exodus was creating. The Ministry therefore decided to relax these requirements, primarily to avoid the congregation of large crowds at the London stations while flying bomb alerts were frequent. The General Managers were given discretion to run such additional trains as they considered necessary to clear the London termini, while greater latitude was also allowed in the running of relief trains outside the London area, mainly to provide for Service leave travel, which was now being restored. To make the fullest use of facilities and to reduce crowds at stations, the ordinary public was allowed to take up any spare accommodation on special evacuation trains, while those trains run mainly to cater for Service leave were to be similarly available to all passengers wishing to use them. It was decided, however, to make no change in the policy of not publicising relief trains, though arrangements were made to keep the Service authorities informed. Special advance preparations were needed for the evacuation of schoolchildren and the thorough planning for evacuation movements carried out by the London County Council greatly helped the railways in a task that was especially troublesome at this stage of the war. Broadly, it was through the increased pressure

¹ See *Problems of Social Policy, op. cit.*, Chapter XXI, for an account of evacuation in 1944. In two months, from the beginning of July to the beginning of September, 307,600 mothers and children were evacuated in organised parties from London and South Eastern England, while about 552,000 persons made their own arrangements to leave without Government help. The movement was accomplished smoothly on the whole. Government evacuation was suspended on 7th September, 1944, and was followed by a gradual return to London.

on passenger services caused by evacuation, rather than through direct damage to the railway system, that the flying bombs and rockets interfered most with inland transport during 1944-1945.

While therefore the movement of freight traffic provided no insuperable obstacles for the railways in the summer of 1944, passenger travel did threaten to upset smooth railway working. A significant measure of the strain on the severely reduced passenger services in 1944 is the fact that *estimated passenger-miles* rose from 18,993 millions in 1938 to 32,052 millions in 1944, while *coaching train-miles* were reduced in the same period from 287,371 millions to 202,052 millions and total *engine hours in traffic (coaching train)* fell from 24,211 thousands in 1938 to 19,858 thousands in 1944.¹ In short, probably at no other period of the war did the railways carry so great a passenger load with such restricted passenger services. If complete monthly statistics were available they would almost certainly show that the greatest strain on passenger services—as measured by the ratio of passenger-miles to coaching train-miles—occurred in the summer of 1944. By July 1944, at any rate, passenger traffic was the Railway Executive Committee's greatest problem. Not only evacuation, but the restoration of travel by Service personnel and the desire of war workers for holidays and relaxation caused passenger travel in this year of big military operations to rise practically as high as in the previous summer. The concern shown by the R.E.C. is borne out in the following extracts from its minutes during July and August 1944, which not only illustrate the operating difficulties encountered but emphasise the acute discomforts of passenger travel at this period of the war:

11th July, 1944—Heavy delays reported to trains at provincial stations owing to entraining and detraining on crowded trains. One train was delayed 74 minutes in the previous week owing to such delays.

18th July, 1944—Not only were hundreds of people left behind at stations, but trains were so packed that it was physically impossible, in some cases, to collect tickets on the journey.

1st August, 1944—General passenger traffic congestion all over the railway system. On Friday night, ordinary passengers rushed first class sleeping cars and efforts to eject failed. Reports had been received of some carriages so weighted down by overcrowding that their springs were flattened to a degree which resulted in running boards fouling station platforms while the trains were in motion. At one place, police were required to remove 200 passengers from the corridors of two coaches because of working danger.

¹ *Summary Table of Statistical Returns of Railways of Great Britain, 1939-1944.*

These conditions are ample confirmation of the R.E.C.'s argument that the existing passenger services were totally inadequate to move the existing traffic. There is, moreover, some justification for their view that the unavoidable delays at large stations, which caused serious interference with operation and time keeping, had nullified the advantages expected when passenger services were restricted. Since merchandise traffic was now less than had been planned for, it was argued, the reason for restricting passenger services so drastically no longer existed. The Ministry, however, while sympathetic to this view, was aware that pressure on all forms of inland transport would be severe during the coming winter and could hold out little hope of far-reaching improvements in passenger services.

(ii)

Coastal Shipping, 1944-1945

It has been described in Chapter XVI how the greatly diminished coastal shipping fleet managed remarkably well to maintain the movement of vital cargoes, especially coal, round the British coasts during the summer of 1944. However, as autumn approached, the military demands for coasters for Overlord continued to be much higher than had originally been estimated. Not only was more coasting tonnage than had been planned—655,000 tons—supplied on D-day and in the period immediately after, when coastal shipping was entirely a British responsibility, but this tonnage was retained for far longer than had been expected. For example, by 15th August (D-day + 70, or 28 days after it had been planned to reduce total Allied coasting requirements to 250,000 deadweight tons), British coasting services had received back only 62,000 tons from the Fighting Services and had supplied a further 99,000 deadweight tons in the three months 15th June to 15th August.¹ During the autumn, military demands for coasting tonnage tended to increase rather than diminish and not until 15th December do the returns show any substantial releases by the Services without corresponding additional demands. The planned reduction to 250,000 tons never in fact took place. It seems that requirements for North West Europe were

¹ It is true that the employment returns make no distinction between coasters required for military service in Overlord and those required for military service in the Mediterranean and the Far East. New coaster requirements in the Mediterranean after mid-1944 were probably not large and coasters were not 'called up' in considerable numbers for the Far East until the closing months of the war in Europe. It may therefore be assumed that almost all the coasters required for military service during the last half of 1944 and probably later were needed for Overlord.

occupying about half a million deadweight tons of coastal shipping during the 1944-1945 winter.¹

What help was received from American and other Atlantic coaster services to replace this large amount of tonnage lost to the United Kingdom coasting trade for so many months? It is difficult to say precisely, because the coastal shipping employment returns do not show any additions to the United Kingdom coastal fleet from United States sources.² Some coasting assistance was certainly received from the Americans.³ It was not used on direct military operations; no American-controlled coasters were engaged in the Overlord operation from D-day until after the end of October 1944 at least, when the detailed joint records of coastal ships employed on Overlord appear to have ceased.⁴ Any assistance received from the United States must therefore have been used to supplement the United Kingdom coasting fleet, but it is difficult to determine exactly how much. The most informative statement of assistance received is a memorandum dated 19th October, 1944, in which Coastal Shipping Division of the Ministry of War Transport listed the extra tonnage promised to the United Kingdom from the United States

¹ Joint telegrams between London and Washington show that the coasting tonnage actively engaged in Overlord (which includes coal to liberated Europe as well as direct military requirements) was as follows:

End of July 1944	600,000 deadweight tons
End of August 1944	580,000 " "
End of September 1944	550,000 " "
End of October 1944	620,000 " "

After that date the information ceases to be the subject of joint telegrams between London and Washington, but in January 1945 a 'bid' for coasting tonnage for the following months was put forward, which shows that the position was not expected to change greatly:

U.S. Army requirements	155,000 deadweight tons
British requirements	170,000 " "
Coal to North West Europe	175,000 " "
	500,000 " "

² For example, no ships are shown as newly time chartered or newly transferred from other flags from October 1943 to the end of the war. Again, in the quarterly analyses by flag, no ships registered at American ports are shown in the United Kingdom fleet between May 1943 and the end of the war (although in November 1943, six French coasters appear for the first time, which might be thought to be a parallel case).

³ Officials consulted can throw no light on this question. They confirm that coaster assistance was received, that it was used in the United Kingdom coasting trade and not in Overlord. They supposed, however, that these facts would have appeared as additions to the fleet in the returns.

⁴ All telegrams sent from Combined Shipping Adjustment Board, London to Combined Shipping Adjustment Board, Washington, from June to October 1944 (and signed by both the Ministry of War Transport and the American Embassy) show that all coasting tonnage was supplied by the Ministry of War Transport and none by the War Shipping Administration. After the end of October these detailed records appear to have stopped when it was decided that British coasters for the U.S. Army Sector should be compensated by additional War Shipping Administration allocations of ships to military programmes other than Overlord.

and other Atlantic coast services as well as that said to be actually received:

	<i>Tonnage promised</i>		<i>Tonnage received</i>	
	<i>Ships</i>	<i>d.w.t.</i>	<i>Ships</i>	<i>d.w.t.</i>
U.S. contribution	15	51,200	14	34,000
Canadian	7	31,700	7	31,700
Ministry of War Transport,				
Montreal	4	14,500	3	10,700
Australasian	1	4,700	1	4,700
Dutch	1	2,700	—	—
Polish	4	17,410	2	6,580
British controlled	6	29,440	6	29,440
	—	—	—	—
	38	151,650	33	117,120
	—	—	—	—

In addition, by this date, the United Kingdom had received 5 American built Baltic type coasters¹ totalling about 14,000 deadweight tons for use in North West Europe. A statement was made by the Ministry of War Transport on 14th November that 'the Americans have given as certain direct and indirect assistance to the United Kingdom coast, some 70,000 tons as part of the original 150,000 tons arrangement'. This is presumably a round figure for the United States and Canadian ships shown in the table we have reproduced.

By mid-October 1944, therefore, it seems that about 120,000 deadweight tons had been received to supplement the United Kingdom coasting fleet. This fell short of the 150,000 deadweight tons originally asked for, but not by much. Since, however, Allied requirements for coasters were now far in excess of the 250,000 deadweight tons on which this request for assistance had been based, the British coasting trade approached the winter of 1944-1945 with a substantial part of its fleet still missing. By the middle of October, in fact, the 120,000 deadweight tons which was probably received was insufficient to replace the coasters needed to supply United States army needs alone, which at the time amounted to some 208,000 tons (excluding specialised crane ships, etc.). In addition, the British sector needed 296,000 deadweight tons and a further 91,000 tons of coastal colliers were required. Therefore, at the beginning of the winter, the Overlord requirement was for 595,000 deadweight tons of coasters from the British fleet, only about 120,000 tons of which were being replaced.

For these reasons, the size of the fleet available for normal coastal

¹ These had been allocated to the Polish flag whilst on time charter to the War Shipping Administration and then transferred to United Kingdom use.

trading continued to be considerably below normal during the 1944–1945 winter.¹ A small amount of help was obtained from the allocation of deep sea tonnage to the coasting trade—this averaged about 21,000 deadweight tons (net) for each month of the winter.² There are also indications that the coasting fleet was being used more economically. Coaster performance (measured by the average monthly cargo discharged per average deadweight ton in the coasting service) continued to improve in the vital coal tramp trade, though there was a deterioration in the other trades.³ The improvements in coal tramp performance were mainly due to the quicker handling of shipping in the ports, the diminished tonnage in the coasting trade caused berths and barges to be more readily available. Coasters also benefited from the fact that enemy activity round the coasts practically ceased during the autumn and winter of 1944–1945. Between April 1944 and January 1945, coasters suffered no losses from enemy action (excluding shipping engaged on military operations). Other economies were achieved by eliminating or drastically reducing the least essential trades. Trade with Ireland dropped. Coal exports to Eire almost ceased and those to Northern Ireland were slightly cut. Other exports to Eire and Northern Ireland were restricted and imports from those areas slightly reduced. Other demands on coasters fell off. Overside discharge at the Clyde anchorages ceased, whereas in the previous winter 62,400 tons of cargo had been discharged there. Trans-shipped cargoes also probably declined.⁴

In spite of these economies, the smaller deadweight tonnage employed in the coasting trade and available for the coasting service inevitably meant that the tonnage of cargoes carried declined. In the six months October 1944 to March 1945, 8·84 million tons of coal and 3·17 million tons of general cargo were moved. In the

¹ The tonnage of shipping in the Coasting and Short Sea service in February and November each year is shown in the following figures:

November 1941	1,500,100 d.w.t.	February 1942	1,462,700 d.w.t.
„ 1942	1,408,600 d.w.t.	„ 1943	1,388,200 d.w.t.
„ 1943	1,390,200 d.w.t.	„ 1944	1,413,700 d.w.t.
„ 1944	1,066,500 d.w.t.	„ 1945	1,203,400 d.w.t.

² These are included in the totals in the coasting employment returns. Some deep sea ships remained in coaster service for a few months at a time but the term ‘released to coaster service’ as used in the employment returns, also meant that some deep sea ships carried coasting cargoes from one United Kingdom port to another between their own foreign voyages.

³ For the six months October 1944–March 1945, the average monthly tonnage of cargo discharged per average deadweight ton in the coasting and short sea service was 2·45 for coal tramps, compared with 2·40 in the corresponding period of 1943–1944 and 2·38 in 1942–1943. For tramps other than coal, performance deteriorated from 2·21 in 1942–1943 to 2·15 in 1943–1944 and to 1·96 in 1944–1945. For liners, the figures are 1·73 for 1942–1943; 1·50 for 1943–1944; 1·44 for 1944–1945. Figures based on Ministry of War Transport Employment Returns.

⁴ Deliveries of non-coal cargoes from the West coast to other areas declined from 2,180 thousand tons in 1943–1944 winter to 1,458 thousand tons in 1944–1945 winter. This suggests a decline in trans-shipped cargoes.

previous winter, 10·46 million tons of coal and 4·73 million tons of general cargo had been carried. There would probably have been some decline in coal cargoes in any event because of falling production, but there is no doubt that more coal would have been carried by coaster in the winter of 1944-1945 had the shipping tonnage been available. Less coasting tonnage was also available for the seasonal movement of bulk commodities in the 1944-1945 winter. For example, between September 1944 and April 1945 the tonnage of coastal shipping allocated to the movement of potatoes averaged less than one-half the tonnage employed for this purpose in 1942-1943, while tonnage allocated to the movement of beet sugar averaged little more than a quarter of the 1942-1943 figure. There was some increase in the tonnage employed in the movement of fertilisers in 1944-1945 compared with previous winters, but on the whole coastal shipping authorities found it difficult to supply tonnage on the scale of previous war-time years for the movement of bulk commodities.

Thus, the coasting fleet was badly handicapped through most of the 1944-1945 winter by withdrawals of tonnage for military purposes. Not until the early months of 1945 were coasters released in substantial numbers for ordinary trading, as is reflected in the increased tonnage available to the coasting and short sea service from January 1945 onwards.¹ By the spring of 1945, the coastal shipping authorities once more had spare capacity available which Departments were invited to use. Even so, the tonnage available for the coasting service was still considerably below normal when the war in Europe ended.²

(iii)

Road Transport and Canals, 1944

Lack of statistical information makes it difficult to reach any firm conclusion about how far road haulage operations were expanded during 1944 to relieve the pressure on other forms of transport. That

¹ The coasting authorities complained that the coasters returned from military operations were badly damaged and, in any case, the D-day operations had meant that there had been no normal summer-time slack period for overhauls and general repairs. This meant, they said, that the effective coasting fleet was even smaller than it appeared. An examination of the employment returns does not however yield evidence to support the view that a larger number of coasters than normal was out of service for repairs in the 1944-1945 winter.

² The statistics and conclusions in these paragraphs are all based on the Ministry of War Transport Coastal Shipping Employment Returns. The more important figures are included in the Statistical Appendix to this volume.

the Government's Road Haulage Organisation expanded its operations is indicated by the fact that the tonnage it carried during July–September 1944 was about double that carried during January–March. In the whole year 1944, the Organisation carried over 48 million tons of goods (including both long and short-distance traffic, but not counting traffic carried by Service vehicles, heads of livestock moved—normally between 300,000 and 400,000 a month—and 'excluded' traffics, such as parcels, indivisible loads, etc., that might be moved by carriers outside the scheme). The expansion of the Road Haulage Organisation does not, of course, provide evidence that road haulage as a whole was expanding its operations at this time, since the growth of the Government organisation merely represents a transfer of vehicles from private firms to the Organisation.

Two things are, however, significant. First, 48 million tons of traffic a year was now being moved under direct Government control. Second, if an allowance is made for opencast coal carried by road in 1944—probably only a few million tons at most¹—it is clear that between 40 and 50 million tons of traffic in the 'merchandise and mineral' category was being conveyed by some 30,000 vehicles or so employed in the Road Haulage Organisation out of some 411,000 vehicles registered as engaged in general haulage—including the large number of 'C' licence vehicles—in 1944.² In 1944, the railways carried 141.9 million tons of merchandise and mineral traffic.³

These incomplete statistics are insufficient to show the real contribution of road haulage to British inland transport in 1944, but they do indicate that its contribution was large. Since road goods transport consumed about as much fuel in 1944 as in the immediately preceding war-time years, it must also have made a considerable contribution to the movement of traffic throughout the war, though since before 1943, its activities were not so closely controlled, vehicles were probably less adequately directed towards essential war tasks than at the end of the war. Plainly, however, if it had been necessary, for any reason, to transfer any substantial part of the goods traffic moved by road to the railways in 1943 or 1944, the railways would have faced breakdown.

Could road haulage have made a larger contribution to the movement of traffic during 1944? Any answer must necessarily be very

¹ Total opencast production in 1944 was 8.6 million tons, much of which was moved by rail. *Ministry of Fuel and Power, Statistical Digest 1944*, Cmd. 6639.

² 411,000 vehicles are listed as being licensed in general haulage and using petrol, heavy oil, etc., in 1944. *Statistical Digest of the War*, Table 168. About 34,000 vehicles suitable for long-distance hauls were said to be subject to agreements with the Ministry in the spring of 1945. This suggests that slightly less than this number of vehicles carried between 40 and 50 million tons of merchandise and minerals in the Road Haulage Organisation during 1944.

³ *Statistical Digest of the War*, Table 165.

tentative. It is known that the number of vehicles engaged in general haulage and using petrol and heavy oil declined from 473,000 in 1938 to 411,000 in 1944.¹ One can hardly conclude that, because the 1944 figure was the lowest recorded during the war, surplus vehicles existed at that period which could have been called into service to help in the movement of the unusually heavy traffic. It is safer to assume that many vehicles, roadworthy in 1938, had not been replaced as they wore out. While there may have been some 'C' licence vehicles either laid up² or under-used on account of rationalisation, there were very few vehicles, suitable for the long-distance conveyance of goods, laid up in 1944. Moreover, any large expansion of road haulage activities in 1944 could have been accomplished only by finding sufficient drivers, garage and repair facilities perhaps at the expense of other parts of the national war effort.

Broadly, during 1944, the Government continued the policy which it had followed before D-day of using road goods transport resources to the full when this was both necessary and possible. The policy was necessary to relieve the strain on the railways and to assist the depleted coastal shipping fleet. It was possible because of the improvement in the United Kingdom fuel position towards the end of the war.³ The only serious shortage affecting road transport which continued to be mentioned in the official records at this time was the scarcity of tyres.

During the months succeeding D-day, traffic carried on the inland waterways declined steadily, partly because of diversions of traffic resulting from the military operations and partly because of a shortage of water in the canals. Canals (as distinct from rivers) are especially susceptible to seasonal variations in capacity owing to weather—to lack of water when there are droughts and to ice in cold weather.⁴ Another factor limiting canal operations was labour scarcity. Although on 1st January, 1944, there were still 11,400 persons employed on the inland waterways as compared with 12,794 before the war, not enough boatmen, boat builders and boat repairers were available. At the beginning of 1944, the Ministry of War Transport sponsored a novel scheme to train boatwomen. This was put into effect on the Grand Union Canal (where over thirty women were trained and ten pairs employed during the year) and on the Leeds and Liverpool canal. However, despite the efforts of the Public

¹ *Statistical Digest of the War*, Table 168.

² Though most laid-up 'C' licence vehicles were probably called into use immediately before D-day.

³ Appendix XX, p. 484.

⁴ In 1942 and 1943, ice had been a severe obstacle to movement on the canals and the Ministry of War Transport had been called upon to take action to provide ice-breakers on certain routes.

Relations Division of the Ministry, few suitable recruits took to the boats and some fell, understandably, by the wayside.

The fact remained, as has been indicated in an earlier chapter, that the main reason for the reduction in canal traffic was changes in its flow. For example, in the autumn of 1944, spare capacity was reported on the Aire and Calder Navigation and on the Grand Union Canal. Before the war, both companies had depended to a large extent on imports or on coal traffic. With the decline in coal output and the reduced use of the East coast ports, traffic on these and other canals fell. The Government continued to encourage the fullest use of this transport. The Ministry of Fuel and Power, for example, agreed to alter its allocation from the West Yorkshire coalfield to provide more work for the Aire and Calder Navigation (whose undertaking ran from Leeds to Goole on the Ouse). This Ministry also appointed officers to see that good use was made of canals generally, while the Ministry of War Transport had an officer in the Warwickshire coalfield to deal with the allocation of barges for the movement of coal. But efforts to get more traffic for the canals, even where that traffic was under Government control, were not a conspicuous success. This is well illustrated by the fate of the canal clearing depots set up by the Royal Air Force in London, Manchester and Birmingham. It was found that collections from and deliveries to the depots had to be carried out by road, which necessitated a large expenditure of petrol. Thus, two of the Government's principles, the need to make the maximum use of canals and the need to conserve petrol, conflicted with each other. Moreover, in order to provide for economical loading of barges, goods had to be stored at R.A.F. depots, which meant double handling and delay in movement. Finally, it was agreed that the cost and labour expended on the scheme was greater than could be justified and the scheme was wound up in the autumn of 1944. The general impression gained from the reports of the discussions of the Central Canal Committee in the winter of 1944-1945 is that, so far from the big military operations thrusting additional work on to the canals, they tended to block the use of the canals by causing the diversion of traffic from normal routes and by disorganising the loading and unloading of barges at certain ports. By December 1944, the tonnage of traffic carried on inland waterways was over 16 per cent. lower than in the corresponding month of the previous year.

(iv)

Traffic Demands and Railway Resources, 1944-1945

With most branches of inland transport being used almost to their full capacity, it was especially necessary to maintain a constant watch on actual and expected railway traffic as yet another war-time winter approached. The technique of traffic forecasting continued to be employed throughout the winter of 1944-1945, and, over this period as a whole, the departmental estimates went to suggest that there would be a slight falling off in total railway traffic as compared with the 1943-1944 period. During the fourth quarter of 1944, for example, it was estimated that the average four-weekly total tonnage of freight traffic on the railways would be 0.7 per cent. less than for the corresponding period of 1943. Merchandise traffic was, however, expected to increase by 7.4 per cent. compared with 1943 owing to increased traffic in home produced foodstuffs, increases in War Department traffic and increased traffic needed to maintain iron and steel production. Mineral traffic, on the other hand, was expected to decline sharply on account of the decrease in Air Ministry requirements for constructional materials, such as sand, gravel, etc. The Ministry of Fuel and Power expected coal class traffic to increase by 2.3 per cent. over the 1943 level. This figure was accepted as the official estimate, although the Ministry of War Transport statisticians had argued that a more realistic estimate—on the basis of past experience—would be to budget for a decline in coal class traffic of 2.0 per cent. The Ministry of War Transport figure proved, in fact, to be very near the mark. The actual traffic results for the fourth quarter of 1944 showed that coal class traffic was 2.2 per cent. less than in the corresponding period of 1943, while merchandise was practically as estimated and minerals 12.2 per cent. less than in 1943. Actual total freight traffic was 3.6 per cent. less than in the fourth quarter of 1943.

For the first quarter of 1945, a decrease in total freight traffic of 0.8 per cent. was expected compared with the corresponding period of the previous year, with estimated decreases of 4.5 per cent. and 9.1 per cent. for merchandise and mineral classes respectively, due to falls in the requirements of the Ministry of Supply and the Air Ministry. Coal class traffic was expected to increase by 4.7 per cent.—on the somewhat optimistic assumption that the coal production programme of the Ministry of Fuel and Power would be fulfilled. In fact, total freight traffic in the first quarter of 1945 turned out to be 6.2 per cent. less than the estimated figure and 6.9 per cent. less than in the corresponding period of 1944. Merchandise was 5.6 per

cent. less and minerals 12·1 per cent. less than in 1944, while coal class traffic fell by 5·5 per cent. of the figure for the first quarter of 1944, instead of the expected increase of 4·7 per cent.¹ The explanation of the wide discrepancy between expected and actual traffics in the first quarter of 1945 is that abnormally severe weather disorganised railway working during January and February of that year.

This is the broad outline of railway traffic during the final winter of the war. Traffic demands remained very heavy—especially for merchandise, which in terms of ton-miles continued at almost twice the pre-war level—though demands were somewhat less than during the peak winter of 1943–1944. In the spring of 1945, as victory approached, the four-weekly figures of freight traffic showed a tendency to decline compared with previous war-time years.

While freight traffic demands did show signs of easing, the Railway Executive Committee continued to show much concern about the abnormally high volume of passenger travel. Although the main flood of evacuees from London and Southern England subsided by September, as long as the flying bomb and rocket attacks continued, the possibility of further mass movements from the capital could not be ruled out. The restoration of Service leave and the re-opening of coastal areas of Southern and Eastern England also inevitably added to passenger travel, while the general public, sensing the approaching Allied victory, was less constrained now than in the darker days of the war to journey only when really necessary. Officials did not fail to notice this change of outlook in the travelling public. The Central Transport Committee was told on 10th October, 1944, that the problem of easing the gross overcrowding of passenger services had become more prominent than previously, when passenger traffic had had to give way to essential freight. Ministers were now anxious to alleviate public hardships by removing restrictions wherever possible—indeed pressure of public opinion made it difficult for them to refuse. The winter time-tables introduced on 2nd October had, in fact, done something to improve the position by restoring trains which had been cut out in the previous May, while the Minister of War Transport now instructed the railways to put forward proposals to ameliorate the conditions of passenger travel as soon as possible. The railway companies themselves were eager to improve their services. With victory now in sight and in the absence of any Government statement about changes in the post-war organisation of the railways, competitive considerations were once more coming to the fore. The railways wanted particularly to do something to regain them the goodwill of the public, which five years of austerity had

¹ See Appendix XXVIII, p. 640, for a summary of these statistics.

largely destroyed. The Government did not wish to restrict passenger services for any longer than necessary, but it was plain that many desirable improvements in services were, for the time being, impossible because of the scarcity of railway resources. Such concessions as were allowed the travelling public were circumscribed. At the end of November 1944, the Minister of War Transport laid down:

- (a) that, in general, passenger services at Christmas should not be greater than those provided during the previous holidays.
- (b) that additional trains might, however, be provided beyond the authorised number so that workers engaged in repairing bomb damaged houses in London could get home for Christmas.
- (c) that the L.N.E.R. and the Southern Railway might prepare for submission to the Minister lists of additional trains needed to reduce overcrowding.
- (d) that no restaurant car facilities were to be introduced for the time being.

Early in 1945 the question was once again under consideration. It was expected that demands for holiday travel in the coming summer would be abnormally heavy—especially if the war had ended by then. The Minister of Labour, rightly anxious to afford relaxation to war workers, especially in large towns, pressed for the fullest possible facilities for passenger travel during the summer of 1945. The Parliamentary Secretary to the Ministry of War Transport accepted the argument that there should be no holiday travel restrictions not strictly dictated by the needs of the war situation, but could give no guarantee that it would be possible to provide special facilities for holiday travel without causing a breakdown of normal services.

The apparent reluctance of the Ministry of War Transport to agree to a large-scale improvement in railway passenger services did not arise from any ill-timed excess of zeal for austerity. On the contrary, the Ministry of War Transport was under no illusion about the obstacles confronting a gradual return to normal peace-time passenger services. In the first place, although it was true that railway freight traffic appeared to have passed its war-time peak, it still remained heavy, while many small coasting ships continued to be engaged on military services and were, in consequence, unable as yet to relieve the railways of some part of their goods traffic. Road goods transport was now almost fully occupied and not capable of much further immediate expansion to relieve the railways, because of the continued scarcity of rubber tyres and the limited supply of labour and vehicles. Secondly, even if the railways had not continued to be fully occupied with freight movement in the 1944–1945 period, improvements in passenger services would not have been possible because of the continued scarcity of railway labour, the fact

that one thousand coaches were in use for ambulance trains and other war purposes, and the heavy arrears of repairs to coaching stock—estimated by the R.E.C. at 44 per cent. of the 1944 stock—which had been aggravated by damage sustained from flying bombs and rockets. Thus, while Ministers and the public alike agreed about the desirability of better passenger services, the possibility of providing the services remained extremely remote. Actual monthly statistics of passenger journeys originating in the final 12 months of the war show that passenger traffic was maintained at—or slightly exceeded—the high level reached in 1943–1944; that is excluding comparison with the months immediately before D-day.¹ During 1945, 1,371·8 million passenger journeys were taken, which was more than in any immediate pre-war or war-time year. Estimated passenger-miles also rose to a new record level of 35,248 millions for the whole of 1945.²

In meeting the demands for the movement of freight and passenger traffic in the autumn and winter of 1944–1945, the railways were handicapped by renewed scarcities of labour and resources. When, at the beginning of 1944, it had become obvious that the military time-table might be badly disorganised unless railway movement could be kept fluid, the Government had spared no effort to provide the railways with the resources—especially the labour—they needed. But once the military operations had been launched and military traffic began to slacken, the special concessions given to the railways had to be withdrawn. The railways were warned, after D-day, that they must consider themselves adequately manned on an austerity basis, in spite of their outstanding unfilled vacancies. First preference could still be given to replace wastage in the operating and permanent way grades, but not for additional recruitment. The special comb-out procedure ceased on 7th July and some of the labour which had been taken for the railways at the expense of industrial production was withdrawn.³ In addition, railway non-operational staff were, in future, to be considered as available for transfer to vital war production if necessary. Vacancies continued to be eligible for first preference in order to maintain the railways' operating labour force until the end of the war in Europe, when it was decided that transport vacancies would in future only be eligible for second preference.

Another considerable handicap for the railways was the loss of locomotives on loan. Until the autumn of 1944, the railway locomotive stock had been augmented by the loan of some 950 American and 'Austerity' heavy freight engines. The American locomotives

¹ Statistical Appendix, Table 4.

² *Statistical Digest of the War*, Table 165.

³ For example, the re-opening of the blast furnaces meant the loss, in September 1944, of the 700 or so physically strong men the railways had previously borrowed.

were now taken away and the War Department 'Austerity' locomotives began to be withdrawn from 1st November, 1944, at the rate of 15 a week, which was stepped up to 100 a month during the first three months of 1945. The serious loss of motive power caused by the return of the 'Austerity' locomotives was aggravated because these engines had to be handed back in a repaired condition, which deferred work on the maintenance of the railways' own engines. The railways were already hampered by the continued shortage of staff for repair work,¹ and although efforts were made to improve the repair position—partly at the expense of new construction—the figure for non-availability of locomotives had risen to a high level of 4,070 by May 1945.² Thus, by the end of the war, the situation, as reflected in the figures of locomotive availability, was only a little better than it had been during the worst period of the locomotive shortage in 1942–1943.

While the locomotive situation in the final year of the war was growing decidedly more difficult, the scarcity of rolling stock of all kinds now became more severe than at any previous time during the war. At the end of 1944, 52,970 railway owned wagons (7·76 per cent. of the total stock) and 39,462 requisitioned wagons (6·74 per cent. of the total stock) stood under and awaiting repair. Six months later, the percentages had increased to 10·59 and 9·88 respectively. During the winter of 1944–1945 an average of slightly under 1,175,000 wagons were available for use on the railways compared with about 1,200,000 in the previous winter, and throughout 1945 until the end of the Japanese war there was a steady decline in the number of wagons available: on 20th October, 1945, only 1,104,000 wagons were available—a reduction of over 80,000 compared with October 1943. The increased age of the wagon stock, heavy wear-and-tear in the period of peak war-time traffic and lack of labour for repairs combined to take their heaviest toll of the operating stock as the war came to its end. Not until some time after the war had ended were the railways able to stop this dangerous decline in wagon availability.

The condition of the railways' passenger coaches in 1944–1945 was almost as bad. The number of passenger vehicles under and awaiting repair at the end of 1944 was 3,500, and the number available, 37,100 compared with 40,800 at the end of 1938. By the end of 1945, the number available had dropped to 35,500 and the number under and awaiting repair had risen to 4,900. The condition of much of the stock after five years of overcrowded passenger travel was poor, and many vehicles that continued to run were only fit for

¹ Estimated in a memorandum of 18th April, 1945, at 3,001 staff needed in the shops and 435 in the sheds.

² Statistical Appendix, Table 4.

scrapping. The R.E.C. estimated early in 1945 that in order to make good the withdrawal of vehicles unfit for further service or those in use as ambulance or casualty evacuation trains or for other Government purposes, together with the losses arising from enemy action, 1,200 new passenger coaching vehicles were needed, not to mention the arrears of repair work needing to be overtaken. It is hardly surprising to find that the General Manager of the Great Western Railway stated in July 1945 that, owing to the lack of rolling stock, no additional express trains could be run on that system. These rolling stock difficulties were aggravated by the calls made on the railways to lend assistance to the French and Belgian railways. Twelve trains were sent to the continent and the Ministry of War Transport asked the R.E.C. in the spring of 1945 to provide three thousand wagons for the continental railways. It is perhaps understandable that the R.E.C. proposed that privately owned requisitioned wagons then 'approaching the end of their useful life' should be offered.

(v)

Railway Performance and the Coal Transport Problem, 1944-1945

Apart from the difficulties experienced with passenger traffic, the railways remained remarkably free from serious congestion from the time of D-day until the end of November 1944. Indeed, the position on the railways in that month was reported to be better, from the standpoint of restrictions on forwardings and of wagon supply, than at the same period in each of the two previous years. Since, however, railway traffic continued at a high level and since renewed shortages of labour, locomotives and rolling stock were interfering with efficient railway operation, it could scarcely be expected that the railway system would survive a sixth war-time winter without some dislocation of traffic movement. The first sign of the seasonal railway congestion came early in December, when difficulties were reported at a number of exchange points and with food traffic from East Anglia. For a short period, the London potato stock fell as low as only two days' supply, though the railways responded well to the urgent appeals of the Ministry of Food to avert a breakdown of supplies in the capital. In the middle of December, the Chairman of the Central Transport Committee summed up the railway situation as follows:

There is a growing tightness on the railways, which is likely to continue and is now making itself evident in a shortage of

supply of wagons at certain points . . . (There is) no increase in total traffic compared with last winter but the loss of coasters and of locomotive capacity and the seasonal handicaps are likely to produce a situation of considerable strain.

In the second half of December and during January, conditions deteriorated sharply and many of the normal seasonal difficulties were accentuated. There was much sickness among railway staff, there were two prolonged spells of fog and considerable absenteeism over the Christmas holiday, while the volume of Christmas passenger travel was the highest since before the war. There was no relief from other forms of transport: ice held up traffic on the roads and canals, which could not, in consequence, help the railways. Although it was planned to release 100,000 deadweight tons of coastal shipping from operational service during January and February 1945, this tonnage was not available to relieve the railways during the most difficult part of the winter. Moreover, new commitments for civil relief work on the continent reduced the availability of coastal ships for tasks which might have helped to relieve road and rail. To help remedy the congestion on the railways, it was decided to impose once again the unpopular restrictions on the use of mineral wagons for the movement of general merchandise (classes 7-21) traffic, while restrictions on the acceptance of traffic were promptly and strictly applied where necessary. These embargoes were undoubtedly the direct cause of some loss of industrial production and of heavy accumulations of traffic awaiting movement.¹ Over the winter as a whole, however, they probably did more good than harm. They did allow the railways to recover rapidly from congestion in mid-winter, and thus minimised the extent of the delays to traffic, which in any event would have affected production indirectly. Although rail traffic continued to be hampered by staff sickness, absenteeism, bad weather, and various scarcities of resources throughout the winter of 1944-1945, traffic was once again moving freely by the beginning of April.

The winter congestion on the railways inevitably interfered with the transport of coal. Indeed, the whole question of coal movement became, during 1944-1945, a cause of probably greater official

¹ The Ministry of Supply reported on the effects of the restrictions on 13th March, 1945:

Steel—75,000 tons lying on ground awaiting movement.

Fertilisers—145,000 tons—largely loss of production.

Leather—restricted movement of tanning materials made it difficult to maintain production.

Timber—little movement to the London area and stocks seriously depleted.

Non-ferrous metals—reserve stocks built up in previous summer in consuming areas almost exhausted.

Agricultural machinery—serious difficulties arising through lack of movement.

In making this assessment of the position, the Ministry of Supply did, however, acknowledge that both the Ministry of War Transport and the Railway Executive Committee had co-operated to minimise the effects of embargoes.

anxiety than at any time since the heavy enemy bombing in 1940–1941. There were several reasons for this concern. In the first place, the output of deep-mined coal had continued to decline. During the summer of 1944, production from the mines fell below the level of the corresponding period of the previous year by 4.6 million tons. While opencast production increased, it did so less rapidly than the deep-mined output declined.¹ Secondly, coal production failed to show its expected upswing in the autumn of 1944 and, as a result, the Ministry of Fuel and Power found it necessary drastically to reshape its coal budget. Whereas it had been estimated in June 1944 that the output of deep-mined coal would amount to 190 million tons and opencast production probably to 12 million tons in the 1944–1945 coal year, by December it had become plain that these figures were no longer realistic. On the assumption that there would be no major transport or other difficulties deep-mined output was now expected to reach only 185 million tons, and opencast production, 10 million tons in the 1944–1945 coal year. Thirdly, the amount of coastal shipping available for the transport of coal was considerably less than in the previous winter. The deadweight tonnage employed in the coal tramp trade averaged 599,000 for the months September 1944 to March 1945, compared with 719,000 for the same period of the previous winter. Fourthly, the pattern of internal coal movement was complicated by the fact that, with the opening of the European continent, a certain amount of coal had to be supplied to meet the demands of S.H.A.E.F. This was estimated at a little under 2 million tons, to be moved between December 1944 and the end of the coal year. Thus, with coal production falling and distribution problems tending to increase, any losses in output due to lack of transport tended to assume a magnified importance.

According to Ministry of Fuel and Power statistics, the quantity of coal lost through rail transport difficulties amounted to 163,500 tons in the fourth quarter of 1944 and 603,000 tons in the first quarter of 1945.² The bulk of this loss occurred during the second half of December and in January and February, when railway working was dislocated by severe weather. Opencast production suffered a greater relative loss because the workings were generally less accessible for transport and because it had been agreed that collieries should be given preference over opencast sites in the supply of wagons. In 1944 and 1945 the scarcity of coal was such that any loss, however small, was regarded as a serious matter. Yet the amount of coal lost through transport difficulties in this last winter of the war was much smaller than the amounts lost from the

¹ *Coal, op. cit.*, Table VI, and Chapter XX, *passim* for this paragraph.

² *Ministry of Fuel and Power, Statistical Digest 1944*, Cmd. 6639, Table 28.

same cause in each of the first two war-time winters. In the year 1940, for example, 4,768,100 tons of coal were estimated by the Mines Department to have been lost through transport difficulties; whereas in the second, third and fourth quarters of 1944 together with the first quarter of 1945, losses from this cause amounted to 771,100 tons.¹ Moreover, although the tonnage of coal class traffic moved by rail in each four-weekly period in the first half of 1945 fell below that moved in the corresponding period of every other war-time year, it does not follow that the responsibility for this decline lay with the railways. The primary cause of the falling off in coal class traffic lay in declining coal production, the reasons for which have been explained elsewhere in this series of histories.² The loss of less than two-thirds of a million tons of coal through rail transport difficulties in the first quarter of 1945, though serious, is not large when viewed against the loss arising from the long-term decline in coal production from 224 million tons in 1940 to 182 million tons in 1945. This does not, of course, imply that the railways and the transport system generally could have moved in 1944-1945 conditions all the coal produced, supposing that the Ministry of Fuel and Power had managed to maintain coal output at its 1940 level. Plainly that would have been impossible.

What needs to be pointed out is that railway difficulties and a shortage of wagons were not the only reasons for loss of coal. Absenteeism, holidays, disputes, accidents and breakdowns in the coal mines were among a variety of other causes. Excluding absenteeism, the total quantity of coal lost from all causes in the last quarter of 1944 and the first quarter of 1945 amounted to 4,954,000 tons, of which 767,100 tons was attributed to railway difficulties.³ Since these difficulties on the railways were entirely the result of bad weather and since the railways were handicapped by the scarcity of labour, locomotives and rolling stock, the loss of coal output due to railway difficulties can hardly be regarded as exceptionally high.⁴ Indeed, coal traffic probably enjoyed freer movement on the railways in the 1944-1945 winter than most other types of freight traffic. Even the Ministry of Fuel and Power, which was struggling hard to balance its coal budget, readily admitted that, while in January and February 1945, embargoes were imposed on practically every other type of traffic, only a small number of these

¹ Cmd. 6639.

² *Coal, op. cit.*

³ Cmd. 6639.

⁴ One reason for the coal shortage of the winter of 1944-1945 was the fact that adequate coal stocks had not been built up in the previous summer because of falling production. Thus any delay in delivery through transport difficulties tended to assume a magnified importance. See *Statistical Digest of the War*, Table 75.

affected coal.¹ Taking all things into account, the railways maintained the movement of coal, in the last winter of the war, as well as could reasonably have been expected, although at the expense of some serious delays to merchandise traffics.

Opencast coal was one of the biggest troubles for transport in the final twelve months of the war. The Ministry of Fuel and Power was now intensifying the exploitation of a number of opencast workings in an attempt to make up for the decline in deep-mined production and it was from these sources that it was intended to meet the S.H.A.E.F. commitment. During the summer of 1944, the tonnage obtained from the opencast sites had reached the high level of 210,000 tons a week. But railway communications with these sites were inadequate, and although the Road Haulage Organisation was used as much as possible in moving coal from the workings, lack of transport facilities in the winter months was a primary cause of loss of opencast coal. In February 1945, for example, losses were estimated to amount to some 190,000 tons.

One particular centre of the difficulties that arose in connection with the transport of opencast coal was the Midland (Amalgamated) District, which consisted of the Derbyshire, Leicestershire, Nottinghamshire areas. Nine important opencast sites were being worked in this district in the winter of 1944-1945, and, even after the seasonal difficulties on the railways and roads at the beginning of 1945 had disappeared, there was still reckoned to be a loss of some 11,000 tons of opencast coal output a month owing to inadequate transport facilities. Some 63 per cent. of the disposals of opencast coal in this district were made by road, compared with an average of only 23 per cent. in the rest of the country. But road transport was working to full capacity so that the L.M.S. and L.N.E.R. had a substantial amount of coal to move from this district, which was an exporting area. The L.N.E.R. was unable to move more than 400 wagons a day through the exchange junction at Colwick in Nottinghamshire and there were other similar bottlenecks. Some improvements in Colwick sidings had been made in 1942, but a proposal by the railway company for further improvements had been turned down by the Ministry of War Transport in August 1944. The reason for the rejection was that the schemes proposed by the L.N.E.R. would have taken eleven months to complete, and since an early end of the war was expected, it was not thought necessary for the Government to incur an expenditure of about £45,000 to facilitate the transport of opencast coal. As events turned out, if these schemes had been approved when first put forward by the L.N.E.R. in March 1944,

¹ Of 76 embargoes, only 20 were reported to affect coal, and, even in these cases, coal in full train and block loads and for public utility undertakings was not affected.

the hold-up in the transport of opencast coal from the Midland (Amalgamated) District sites in the early part of 1945 might in large measure have been averted. On the other hand, it is possible to argue that the scarcities of locomotives and wagons were by this time so pronounced that no mere improvement in line facilities would have resolved the problem. Nevertheless, in retrospect the official attitude on this question appears to have been somewhat short-sighted. After long discussions it was finally decided in July 1945 to disperse some of the productive effort concentrated at sites served by Colwick and to increase shipment out of the district via Immingham. One of the main reasons for the difficulties in the district had been that it was largely an inland area so that the scope for moving coal by sea to lessen the pressure upon road and rail was small.¹

(vi)

The Closing Months of the War

During the last months of the war in Europe, railway traffic continued at a high level. Freight traffic showed only a slight decline from the high level of the previous year, total *tonnage originating* between March and May 1945 being only about 4 per cent. less and total *ton-mileage* about 5 per cent. less than in the same months of 1944. The number of special trains run for the Government was also almost as high in the spring of 1945 as in that season of 1944.² Passenger traffic on the railways continued to be heavy and was tending to increase. While traffic of all kinds remained at a high level, the strain on railway resources after six years of war inevitably mounted. Since the railways no longer enjoyed special labour concessions, they continued to complain of unfilled vacancies.³ The loss of United States and War Department locomotives on loan caused a serious decline in locomotive *availability* on the British railways, which, by May 1945, had fallen to 15,976, compared with 16,879

¹ The scheme for additional accommodation on the up side of Colwick yard was put forward by the L.N.E.R. on 15th March, 1944, and forwarded by the Railway Executive Committee to the Ministry of War Transport on 21st March. It was ruled out because schemes were not then being approved unless they could be completed at the latest by August–September 1944. On 14th July, the Ministry of War Transport asked the Ministry of Fuel and Power if the opencast sites were likely to continue in use long enough to justify an increase in railway facilities. The Ministry of Fuel and Power would not commit itself on this point, but stated that 'it was contemplated that opencast coal working would continue for some considerable time after hostilities had ceased'. On 30th August, 1944, the Ministry of War Transport notified the Railway Executive Committee that the proposed new facilities at Colwick (and also at Leen Valley and Belvoir in the same area) 'need not be undertaken'. The Ministry of War Transport also had certain technical objections to the Colwick scheme, which it is difficult for a layman to evaluate.

² R. Bell, *op. cit.*, Appendix 12.

³ They even agreed to take all the Italian Prisoner of War labour they were offered.

in May 1944.¹ The *availability* of wagons also continued to decline as numbers *under and awaiting repair* mounted, while the condition of railway coaches continued to deteriorate. The Government continued the policy, followed during 1944, of making the fullest use of other forms of inland transport, but the possibilities were limited. Although some spare capacity was reported in the ships engaged in the coasting trade as tonnage was released from operational use and after the seasonal potato movements had been completed, road transport had little capacity to spare and labour shortage persisted on the canals. Moreover, British inland transport was now called on to provide aid to the liberated countries of Western Europe. Apart from the 3,000 railway wagons that were sent to France, 7,000 open wagons were being built, in 1945, for the French Government. In addition, two selected units from the Road Haulage Organisation—one consisting of 45 vehicles (capacity 12–15 tons) and a staff of 60 men and the other of 75 vehicles (average capacity 7½ tons) and a staff of 99 men—were employed to carry civilian relief goods for the Dutch and displaced persons in Belgium and Holland. These units, each with a total lift of about 500 tons, were self-contained under the charge of a Controller and had their own maintenance men as well as drivers. Though responsible to the Ministry of War Transport, their movement instructions were given by 21st Army Group. Their chief work was done between April and September 1945.

The end of the war in Europe promised little immediate relief to the hard-pressed British railway system. The fall in military operational traffic was expected to be largely counterbalanced by movements of civil relief traffic and food to the ports for shipment to liberated countries as well as movements of materials and stores for the construction of temporary and permanent houses and for the conversion of factories from war to peace production. Moreover, the need to move all the coal that could be mined remained urgent and the movement of steel and bulk traffic in raw materials was not expected to decline. Passenger traffic, far from falling off after the war in Europe ended, continued to increase. It was now agreed that the overcrowding in passenger trains, for so long tolerated by the travelling public, should no longer be accepted. At the end of May 1945, the Minister of War Transport gave the railway companies permission to run such additional trains as their resources permitted and as the traffic required. The scarcity of railway resources, however, prevented any immediate return to anything approaching pre-war standards of passenger services. This was to take several years.

¹ For these and the other figures quoted in this paragraph, see the monthly and four-weekly statistics in the Statistical Appendix to this volume.

(vii)

Retrospect and Post-war Problems

When Japan was defeated in August 1945, British inland transport had been on a war footing for six years and the main impact of war-traffic had fallen upon the railways. During that time, freight traffic had increased from 16,266 million ton-miles in 1938 to 22,023 millions in 1945,¹ merchandise ton-miles having increased by 77 per cent., minerals by 35 per cent. and coal class traffic by 9 per cent. Passenger traffic, in terms of estimated passenger-miles, had increased from 18,993 millions before the war to 35,248 millions in 1945.² The railways had had to meet these heavy demands with a less than proportionate increase in their manpower and resources. The locomotive stock had increased by less than 4 per cent. from about 19,500 on the outbreak of war to 20,300 in 1945 and, in the summer of 1945, there were some 3,900 locomotives not available for traffic, under and awaiting repair. Total wagon stock (railway owned and requisitioned) had increased from 1,269,200 in 1939 to 1,289,000 in 1945, but of this stock, the number of wagons under and awaiting repair at the end of 1945 amounted to 124,300 compared with 44,600 at the end of 1940. The stock of railway coaches had fallen from 43,100 at the end of 1939 to 40,400 at the end of 1945, but the number *available* (excluding those under and awaiting repair) had dropped from 40,600 in 1939 to 35,500 in 1945. As for manpower, the railway labour force had increased from 588,500 in 1939 to 622,400 in 1945—by about 6 per cent.;³ the number of men and boys employed had however dropped by 32,000.

These figures speak for themselves. The railways had been overloaded during the war almost to the point of breakdown. Less statistical information is available about the other branches of inland transport. Road goods transport, to judge from statistics of fuel consumption, was covering a much smaller mileage in 1945 than in 1938, while canal traffic, as has been shown elsewhere, had declined. For coastal shipping, there is no reliable comparison with pre-war, though it was probably carrying a somewhat smaller total tonnage of commodities in 1945 than in pre-war years. Thus, in 1945, the railways were carrying very much more freight traffic than in peacetime, while other branches of inland transport were carrying less.

¹ This increase was mainly due to longer hauls in war-time. Statistics of tonnage originating show that total freight traffic amounted to 266·4 millions in 1945 compared with 265·7 millions in 1938.

² The number of passenger journeys rose from 1,237 millions in 1938 to 1,372 millions in 1945.

³ Statistics taken from *Statistical Digest of the War*, Tables 31, 164, 165.

The transfer of traffic to the railways had arisen, in the first place, as part of Government policy; and though this policy was modified and even reversed in the later years of the war, the railways continued to shoulder by far the heaviest war-time burden and therefore suffered the severest strain on their resources.

In attempting to solve the economic problem set, after 1940, by heavy demands on inland transport together with chronic scarcity of resources, the Government pursued the following broad aims in its inland transport policy:

- (i) To secure and exercise control over the chief forms of inland transport and over the provision of transport services.
- (ii) To try continuously to assess in advance the expected demands for inland transport and to relate them to the capacity of the system.
- (iii) To control or restrict demands for inland transport, keeping them within the capacity of the system and giving preference to the most essential.
- (iv) To preserve a proper balance of traffic among the four branches of the inland transport system (taking account of the relative scarcity of different transport resources) by the deliberate allocation of traffic and a consistent rates policy.
- (v) To increase inland transport capacity as much as possible within the limits set by war-time scarcity by providing additional resources and organising existing resources more efficiently.

The Government did not, as we have seen, approach the realisation of all of these aims until shortly before Overlord, when the zenith of war-time inland transport control was reached. By 1944, however, the Ministry of War Transport was exercising control over the inland transport system to an extent hitherto unparalleled and it was directing all inland transport resources towards meeting the needs of total war; it was performing both tasks successfully. The size and complexity of the task of controlling and co-ordinating the war-time activities of the numerous large and small units comprising the British inland transport system were immense and the high reputation which the Ministry of War Transport had acquired by the end of the war was a true reflection of its achievements.

The great achievements of inland transport organisation in 1944 contrast sharply with the Government's failure, in 1939 and 1940, to achieve an effective war-time inland transport policy. Broadly, the reasons for these early war-time weaknesses, which were fully discussed in earlier chapters, were three: firstly, the failure to achieve effective control over the means of inland transport; secondly, the failure to fit together the complicated jig-saw puzzle of war-time demands for inland transport into a picture of demand for transport as a whole and to compare this with transport capacity; thirdly, the allocation of too much traffic to the railways.

These weaknesses in the early war-time organisation of inland transport had stood out clearly in the port and transport crisis in the autumn and winter of 1940-1941, which was one of the two periods of the war when inland transport definitely set a limit to the war effort. As we have seen, many causes were responsible for the 1940-1941 crisis and, while delays to shipping in the ports at that time were serious, remedies for the crisis were undertaken before the situation became really dangerous. Nevertheless, congestion on the railways, to which air raid conditions and deficient organisation both contributed, together with the Government's inability to mobilise enough road transport at the ports because that industry had been restricted to save fuel, undoubtedly helped to delay the turn-round of shipping. For a time in 1940-1941 it became impossible to move import traffic away from the ports promptly, so that inland transport became a limiting factor in the rate of import into the United Kingdom.

The only other period when inland transport was a real limiting factor in the war effort was in 1944. Then, circumstances were quite exceptional. For Britain was the base for a military, seaborne invasion of a size unparalleled in history and inland transport proved able to handle military traffic only at the expense of other essential traffics. In 1944, however, inland transport was a limiting factor because it reflected another fundamental limitation in the war effort: manpower. Scarcity of manpower affected all branches of the inland transport system in the closing years of the war. In the shops and sheds and on the lines it restricted the supply and maintenance of locomotives, rolling stock and capital equipment generally. Continued shortages of labour in the operating grades caused trains to be cancelled and delayed. In 1944, it was manpower, not inland transport, that set the real limit to the size of the war effort.

While these were the only periods when inland transport constituted a real limit to the war effort, inland transport was a constant anxiety from 1941 onwards. Demands for transport continued to rise while the capital equipment of the transport industries was wearing out faster than it could be replaced. Indeed, inland transport was fortunate, between 1941 and 1944, in enjoying freedom both from heavy air raids and from winters as severe as the first winter of the war. Moreover, alterations in the nature and flow of traffic tended to be fewer and more gradual after 1941 than they had been immediately after Dunkirk. If inland transport had had to face such difficulties again between 1941 and 1944, very serious congestion might well have resulted. The precariousness of the inland transport situation from 1941 onwards did not spring from organisational weakness, for most of the necessary improvements in the organisation of Government traffics, the method of Government control over the

means of inland transport and so on had been completed during 1941. The potential danger in the later years of the war was the scarcity of railway capital equipment and manpower. For behind the scarcity of railway transport lay all the other shortages of war-time life—raw materials, manpower, skilled engineering experience and so on. In retrospect, it is fair to ask whether it was wise to starve the railways of capital equipment and manpower so severely in the war years. The scarcity of locomotives was, for example, so critical by the end of 1942 that one may seriously question the wisdom of the policy of transferring so large a part of the capacity of the locomotive shops and their labour force to munition production. Or again, should not more have been done to safeguard the railway labour force? For it was only with great difficulty that the railways were adequately manned for Overlord in the last few weeks before D-day. Similar questions might be asked of rolling stock policy. For during 1944 and 1945, the condition of much railway rolling stock was becoming so serious as to threaten both passenger and freight services. Indeed, the only extensive war-time addition to the railways' capital equipment was the Government's programme of new works, though it is necessary to set against this the fact that ordinary permanent way renewals were allowed to fall during war-time to about 70 per cent. of pre-war.¹

In questioning the policy of cutting the railways so close to the bone on capital equipment and manpower, it has to be remembered that other industries that did not directly produce munitions were also harshly treated—though some essential industries, such as agriculture, had some recompense for other losses in the big war-time additions to their capital equipment. Certainly the Government, in allocating scarce resources at the margin among the variety of essential claimants, needed more than human wisdom and foresight. Yet it must be recorded that the railways—the most important branch of the war-time inland transport system—suffered heavier wear-and-tear during the war than most essential industries, and were not allocated nearly enough resources to maintain their capital intact. As one senior official of the Ministry of War Transport wrote in 1944:

The lessons of the last five years are fairly obvious. Railways justify a predominant place in the war programme. A crisis in inland transport has been an invariable occurrence in major wars since railways came into being and [has] imposed a limitation on power to strike the enemy. Direct Service needs tend to

¹ It is worth mentioning in the present connection that the safety of railway operation remained at a high level throughout the war years, though the blackout was unavoidably responsible for a rise in the number of accidents to railway staff. The high safety record could not have been achieved if railway officers and men had not displayed a soldierly standard of morale and discipline under unprecedented difficulties and dangers.

overshadow the less direct transport needs; but, in Ludendorff's words, "there comes a time when locomotives are more important than guns". Railways are such vast undertakings that their resources are apt to be regarded as almost unlimited; there is thus great danger in the policy of progressive starvation, which . . . finds this essential service too debilitated to carry the load of which it is capable, given the men and material.

The immediate post-war years found the railways with heavy arrears of replacement and repair of permanent way, locomotives and rolling stock to be made good. Indeed, the ultimate consequences of overstraining the inland transport system during the war were only felt in 1946, 1947 and afterwards.¹ The state of the permanent way, which had stood up well on the whole to comparative neglect and heavy wear-and-tear during the war years, had nevertheless, by 1946 and 1947, fallen so far below normal standards as to cause serious concern.² The condition of railway rolling stock was also poor. The stock of coaching vehicles at the end of 1947 was still considerably less than the 1939 figure. There were 2,650 fewer passenger and 1,478 fewer non-passenger vehicles than in 1939, while the average age of the coaching stock had increased from 18 years in 1939 to 21 years in 1948.³ The number of railway wagons under and awaiting repair also continued to rise during 1945 and 1946, reflecting a high average age, the heavy strain of the war years and inadequate war-time maintenance. During 1947, it was necessary for the railways to organise additional repair capacity and engage additional labour in an effort to reduce the abnormally high percentage of railway wagons under and awaiting repair. A considerable number of former privately owned mineral wagons which were very old and no longer economic to maintain were scrapped.⁴ The locomotive situation in the early post-war years was somewhat easier than that of rolling stock generally, but here, as in all branches of railway activity, programmes of new construction and replacement were limited by continued raw material shortages. Other branches of inland transport were also suffering from the strain of the war years and the difficulty of renewing their equipment—many buses

¹ See *British Transport Commission, Report and Accounts, 1948*, para. 146. In the British Transport Commission's Sixth Report for 1953, it is stated that 'on the railways, even the arrears of maintenance due to the intensive use made of the railways during the war have hardly yet been made good', (para. 125, p. 23).

² *Reports to Ministry of Transport on Accidents which occurred on the Railways of Great Britain during 1945, 1946 and 1947*. Also *British Transport Commission, Report and Accounts, 1948*, para. 271.

³ About 12,000 coaching vehicles, or 21.5 per cent. of the book stock were over 35 years of age. See *British Transport Commission, Report and Accounts, 1948*, paras. 243-244. Coach renewals during 1940-1945 were reported to have averaged 405 a year, compared with 2,692 a year between 1935 and 1939. (*Report to Ministry of Transport on Accidents which occurred on Railways of Great Britain, 1947*.)

⁴ *British Transport Commission, Report and Accounts, 1948*, paras. 147, 246.

and goods vehicles for example were in need of replacement. But the railways had sustained the heaviest impact during the war and it was to take five years or more to restore them to good working order.

Besides reconstruction, the main inland transport problem to be solved when the war ended was that of its future organisation. The railways continued to be controlled by the Minister of Transport under the emergency legislation until the end of 1947, when they were nationalised. The L.P.T.B. and the inland waterways also continued to be controlled as in war-time until nationalisation. Control over coastal shipping and road transport was discontinued within a short period after the end of the war. The controlled road haulage undertakings were transferred back to their private owners in 1946, though many were subsequently nationalised under the Transport Act, 1947. Only coastal shipping remained unaffected by nationalisation after the war. The controversial issues of nationalisation versus private enterprise and of integration versus competition are outside the province of this narrative. Inevitably, however, these political issues were quickly revived once the war had ended and were resolved, temporarily at any rate, by the outcome of the 1945 General Election. Until the war-time Coalition Government was dissolved, however, neither the railway managers nor other transport undertakings could possibly have known what post-war organisational changes were intended and it reflects credit on them that they remained loyal to the principle of full Government control for as long as the war lasted. It is also fair to say that the issue of nationalisation versus private enterprise, on which the two main political parties were inevitably divided, was never allowed to obstruct the proper requirements of the Government's war-time inland transport policy. How far the Labour Government, in working out its programme of transport nationalisation, was able to draw on war-time experience of inland transport control must be left for other economic historians to consider. It may, however, be suggested that novel war-time developments such as the Road Haulage Organisation, the operation of the railways as a unified system, wagon pooling arrangements, etc., provided lessons which inevitably left their mark on post-war transport policy. One thing is fairly clear: the problems of restoration and organisation which faced British inland transport when the war ended were scarcely less formidable than the transport problems encountered in the most difficult war years.

APPENDIX XXVIII

Railway Freight Traffic, 1944-1945

4-weekly averages (000 tons)

	3rd quarter, 1944			4th quarter, 1944			1st quarter, 1945			
	Estimate	% of 1943	Actual	Estimate ¹	% of 1943	Actual	Estimate	% of 1944	Actual	% of 1944
Merchandise	6,600	+ 1.5	6,705	6,900	+ 7.4	6,420	6,300	- 4.5	6,226	- 5.6
Mineral	3,700	- 20.3	3,743	3,800	- 19.1	4,124	4,100	- 9.1	3,963	- 12.1
Coal	11,100	- 3.8	11,053	12,000	+ 2.3	11,478	12,100	+ 4.7	10,924	- 5.5
Total	21,400	- 5.7	21,501	22,700	- 0.7	22,022	22,500	- 0.8	21,113	- 6.9

¹ Original estimate, October 1944 on basis of Ministry of Fuel and Power estimate of coal production. Ministry of War Transport statisticians private estimate of coal traffic was - 2.0 per cent. of 1943, which made the estimate of total traffic - 2.9 per cent. of 1943. These figures were all subsequently subject to slight revision, making merchandise 6,500, minerals 4,200 and coal class 11,600 thousand tons with an estimated total for all traffic of 22,300 thousand tons.

Statistical Appendix

TABLE I

Railways: Freight Tonnage Originating

Million tons

4 weeks ended					4 weeks ended				
	Total (all classes)	Merchandise and livestock (classes 7-21)	Minerals, etc. (classes 1-7)	Coal class		Total (all classes)	Merchandise and livestock (classes 7-21)	Minerals, etc. (classes 1-7)	Coal class
Pre-War					1942				
28 January . .	20.6	3.2	2.9	14.5	24 January . .	20.7	4.6	4.4	11.7
25 February . .	21.9	3.6	3.4	14.9	21 February . .	21.8	5.0	4.2	12.6
25 March . . .	21.8	3.8	3.6	14.4	21 March . . .	22.4	5.4	4.3	12.7
22 April . . .	21.0	3.6	3.7	13.7	18 April . . .	21.8	5.3	4.7	11.8
20 May	22.9	4.1	4.1	14.7	16 May	23.1	5.4	4.9	12.8
17 June	21.0	3.8	4.1	13.1	13 June	21.6	5.2	4.6	11.8
15 July	21.8	4.0	4.1	13.7	11 July	22.5	5.2	4.7	12.6
12 August . . .	19.8	3.7	3.8	12.3	8 August	20.4	5.1	4.4	10.9
3 September . .	18.7	3.3	3.1	12.3	5 September . .	22.5	5.3	4.7	12.5
1 October . . .	19.8	3.6	3.1	13.1	3 October . . .	23.8	5.7	5.0	13.1
29 October . . .	21.4	3.7	3.4	14.3	31 October . . .	24.4	6.1	5.0	13.3
26 November . .	21.0	3.5	3.5	14.0	28 November . .	23.6	5.9	4.9	12.8
24 December . .	21.1	3.4	3.1	14.6	26 December . .	22.5	5.7	4.6	12.2
1939					1943				
9 September . .	21.4	3.9	4.0	13.4	23 January . . .	21.9	5.5	4.5	11.9
7 October . . .	23.3	4.5	4.2	14.7	20 February . . .	23.1	5.9	4.7	12.5
4 November . .	23.8	4.4	4.3	15.1	20 March	23.8	6.1	5.1	12.6
2 December . .	23.7	4.5	4.5	14.7	17 April	23.5	6.1	4.9	12.5
30 December . .	21.8	4.0	4.1	13.7	15 May	21.9	6.0	4.5	11.4
1940					1944				
27 January . . .	21.5	3.9	3.7	13.9	12 June	23.4	6.3	4.7	12.4
24 February . .	20.1	3.9	3.1	13.1	10 July	22.2	6.1	4.7	11.4
23 March	23.0	4.4	4.1	14.5	7 August	20.6	5.9	4.3	10.4
20 April	23.8	4.2	4.6	14.9	4 September . .	23.2	6.7	4.8	11.7
18 May	23.9	4.4	4.8	14.7	2 October	24.1	6.9	4.8	12.4
15 June	25.1	4.7	5.0	15.3	30 October . . .	24.4	6.9	4.9	12.6
13 July	23.8	4.7	4.9	14.2	27 November . .	23.2	6.6	4.8	11.8
10 August	22.1	4.5	4.7	12.8	25 December . .	21.8	6.1	4.6	11.1
7 September . .	22.3	4.5	4.6	13.2	1945				
5 October	21.1	4.3	4.3	12.5	22 January . . .	21.3	6.0	4.3	11.0
2 November . . .	21.3	4.5	4.7	12.2	19 February . . .	23.0	6.5	4.6	11.9
30 November . .	21.6	4.5	4.7	12.4	18 March	22.8	6.8	4.5	11.5
28 December . .	19.8	4.1	4.4	11.3	15 April	21.1	6.5	4.2	10.4
1941					1945				
25 January . . .	19.7	4.0	4.1	11.6	13 May	23.5	7.0	4.3	12.2
22 February . . .	20.9	4.5	4.3	12.1	10 June	22.1	6.6	4.1	11.4
22 March	21.8	4.8	4.6	12.4	8 July	23.1	7.0	4.1	12.0
19 April	21.6	4.8	4.9	11.9	5 August	21.4	6.7	3.7	11.0
17 May	22.5	4.8	5.0	12.7	2 September . . .	20.2	6.6	3.5	10.1
14 June	21.8	4.6	4.8	12.4	30 September . .	22.9	7.0	3.9	12.0
12 July	22.4	4.6	4.9	12.9	28 October	22.3	6.6	4.0	11.7
9 August	20.2	4.4	4.5	11.3	25 November . .	23.0	6.7	4.4	11.9
6 September . .	22.1	4.7	4.7	12.7	23 December . .	22.2	6.4	4.2	11.6
4 October	22.8	4.9	4.9	13.0	1945				
1 November . . .	22.8	4.9	4.9	13.0	27 January . . .	19.4	5.6	3.6	10.2
29 November . .	23.1	5.1	4.9	13.1	24 February . . .	20.9	6.1	3.7	11.1
27 December . .	21.4	4.8	4.6	12.0	24 March	22.9	7.0	4.4	11.5
					21 April	21.2	6.5	4.1	10.6
					19 May	20.6	6.0	3.9	10.7
					16 June	21.0	5.8	3.9	11.3
					14 July	20.6	5.5	3.8	11.3

Note. Figures do not necessarily add to totals because of rounding.
Source: Ministry of Transport.

TABLE 2

Railways: Estimated Net Ton-Miles

Million ton-miles

<i>4 weeks ended</i>	<i>Total (all classes)</i>	<i>Merchandise and livestock (classes 7-9)</i>	<i>Minerals, etc. (classes 1-7)</i>	<i>Coal class</i>	<i>4 weeks ended</i>	<i>Total (all classes)</i>	<i>Merchandise and livestock (classes 7-9)</i>	<i>Minerals, etc. (classes 1-7)</i>	<i>Coal class</i>
Pre-War					1943				
28 January . . .	1,258	355	205	698	23 January . . .	1,754	663	370	721
25 February . . .	1,361	394	243	724	20 February . . .	1,882	714	388	780
25 March . . .	1,367	421	262	684	20 March . . .	1,935	744	423	768
22 April . . .	1,294	402	257	635	17 April . . .	1,927	744	418	765
20 May . . .	1,389	446	292	651	15 May . . .	1,822	719	424	679
17 June . . .	1,276	416	279	581	12 June . . .	1,966	767	445	754
15 July . . .	1,324	438	278	608	10 July . . .	1,842	729	426	687
12 August . . .	1,216	393	252	571	7 August . . .	1,781	728	394	659
3 September . . .	1,156	365	212	579	4 September . . .	1,882	780	408	694
1 October . . .	1,208	393	219	596	2 October . . .	1,977	808	431	738
29 October . . .	1,306	403	236	667	30 October . . .	1,954	791	421	742
26 November . . .	1,255	389	237	629	27 November . . .	1,927	783	425	719
24 December . . .	1,259	377	210	672	25 December . . .	1,708	689	382	637
1941					1944				
17 May . . .	1,742	572	410	760	22 January . . .	1,738	704	381	653
14 June . . .	1,750	583	401	766	19 February . . .	1,873	766	405	702
12 July . . .	1,778	580	398	800	18 March . . .	1,879	791	392	696
9 August . . .	1,639	534	361	744	15 April . . .	1,824	793	378	653
6 September . . .	1,753	565	386	802	13 May . . .	1,981	823	400	758
4 October . . .	1,846	600	397	849	10 June . . .	1,948	808	392	748
1 November . . .	1,828	598	404	826	8 July . . .	2,021	835	407	779
29 November . . .	1,836	616	391	829	5 August . . .	1,896	791	380	725
27 December . . .	1,729	589	376	764	2 September . . .	1,727	771	326	630
1942					1945				
24 January . . .	1,622	566	348	708	27 January . . .	1,601	668	309	624
21 February . . .	1,700	595	341	764	24 February . . .	1,741	727	317	697
21 March . . .	1,826	662	383	781	24 March . . .	1,973	867	387	719
18 April . . .	1,811	684	412	715	21 April . . .	1,844	808	375	661
16 May . . .	1,900	689	426	785	19 May . . .	1,765	740	345	680
13 June . . .	1,798	655	416	727	16 June . . .	1,773	714	346	713
11 July . . .	1,875	658	419	798	14 July . . .	1,754	685	333	736
8 August . . .	1,721	625	397	699					
5 September . . .	1,833	657	426	750					
3 October . . .	1,969	692	452	825					
31 October . . .	2,019	725	465	829					
28 November . . .	1,912	702	403	807					
26 December . . .	1,838	686	389	763					

TABLE 3
Loaded and Empty Wagon-Miles

Millions

<i>4 weeks ended</i>	<i>Total loaded and empty</i>	<i>Merchandise and livestock (classes 7-21)</i>	<i>Minerals, etc. (classes 1-7)</i>	<i>Coal class</i>	<i>Total loaded wagon-miles</i>	<i>Total empty wagon-miles</i>
Pre-War						
28 January . . .	343.3	131.3	21.4	73.9	226.6	116.7
25 February . . .	369.0	142.6	25.6	76.5	244.7	124.3
25 March . . .	373.5	149.7	27.4	72.7	249.8	123.7
22 April . . .	351.5	141.5	26.9	67.1	235.5	116.1
20 May . . .	379.2	155.8	30.2	68.0	254.0	125.2
17 June . . .	351.5	147.8	28.9	60.7	237.4	114.1
15 July . . .	365.8	154.9	28.9	63.3	247.1	118.7
12 August . . .	344.4	145.9	25.9	59.9	231.7	112.7
3 September . . .	329.6	137.9	22.4	60.8	221.1	108.5
1 October . . .	342.8	145.9	23.2	62.5	231.6	111.2
29 October . . .	365.8	149.5	25.3	70.1	244.9	120.9
26 November . . .	353.0	145.8	25.4	66.1	237.3	115.8
24 December . . .	344.5	138.9	22.2	70.9	232.0	112.5
1941						
19 April . . .	400.5	171.2	39.5	78.6	289.4	111.2
17 May . . .	411.7	171.2	41.4	82.6	295.2	116.5
14 June . . .	406.5	172.1	39.9	81.3	293.3	113.3
12 July . . .	413.9	172.8	40.3	86.1	299.2	114.8
9 August . . .	388.4	161.2	36.9	78.8	276.8	111.6
6 September . . .	408.3	170.1	39.6	85.7	295.4	112.8
4 October . . .	428.9	181.0	41.0	90.6	312.6	116.3
1 November . . .	421.6	179.0	41.7	88.4	309.1	112.6
29 November . . .	418.2	179.0	41.1	87.9	308.0	110.2
27 December . . .	389.3	168.0	38.6	80.4	287.0	102.3
1942						
24 January . . .	372.1	159.9	35.2	74.6	269.6	102.5
21 February . . .	383.2	167.0	35.0	80.7	282.7	100.5
21 March . . .	410.8	183.6	39.0	81.9	304.5	106.3
18 April . . .	413.3	189.6	41.5	75.5	306.6	106.7
16 May . . .	434.9	196.1	43.2	83.0	322.3	112.6
13 June . . .	410.8	184.5	41.7	76.5	302.7	108.0
11 July . . .	434.0	189.9	42.3	84.2	316.4	117.6
8 August . . .	404.9	181.4	40.1	73.8	295.3	109.7
5 September . . .	422.4	189.7	42.6	79.1	311.4	111.0
3 October . . .	443.3	197.6	45.4	86.3	329.3	114.0
31 October . . .	441.6	195.5	47.0	87.5	330.0	111.6
28 November . . .	422.4	188.8	40.7	84.6	314.2	108.2
26 December . . .	401.2	178.5	38.8	80.3	297.6	103.6
1943						
23 January . . .	390.3	174.3	37.2	75.9	287.4	102.8
20 February . . .	417.7	188.8	38.8	81.6	308.7	109.0
20 March . . .	432.7	195.8	42.4	80.5	318.7	113.9
17 April . . .	434.4	196.6	41.5	80.6	318.8	115.6
15 May . . .	406.3	186.9	42.0	71.4	300.3	105.9
12 June . . .	441.3	201.8	44.3	79.0	325.1	116.3
10 July . . .	419.5	194.8	41.6	72.5	308.9	110.6
7 August . . .	411.3	193.3	39.1	69.3	301.6	109.6
4 September . . .	428.2	207.1	41.0	73.2	321.3	106.9
2 October . . .	441.2	213.3	42.6	77.5	333.4	107.8
30 October . . .	431.4	206.2	42.7	77.5	326.4	105.0
27 November . . .	420.8	201.3	42.7	75.3	319.3	101.5
25 December . . .	368.8	177.6	38.2	66.3	282.1	86.7

[continued on following page]

TABLE 3—continued

<i>4 weeks ended</i>	<i>Total loaded and empty</i>	<i>Merchandise and livestock (classes 7-21)</i>	<i>Minerals, etc. (classes 1-7)</i>	<i>Coal class</i>	<i>Total loaded wagon-miles</i>	<i>Total empty wagon-miles</i>
1944						
22 January . .	378·5	181·3	37·9	68·2	287·4	91·1
19 February . .	407·8	194·7	40·2	73·4	308·4	99·4
18 March . .	411·8	197·8	39·2	73·2	310·2	101·7
15 April . .	408·9	198·9	37·9	67·9	304·6	104·3
13 May . .	446·2	209·8	40·1	79·3	329·2	117·0
10 June . .	444·9	202·8	39·5	78·8	321·1	123·8
8 July . .	457·0	207·9	40·6	81·6	330·1	126·9
5 August . .	435·9	201·2	38·0	76·1	315·2	120·7
2 September . .	404·5	194·9	32·4	66·4	293·8	110·7
30 September . .	432·9	209·1	34·6	77·6	321·3	111·5
28 October . .	432·2	205·8	36·3	78·2	320·3	111·9
25 November . .	429·9	206·2	37·4	77·4	321·1	108·9
23 December . .	400·2	193·1	35·2	72·3	300·6	99·5
1945						
27 January . .	354·8	168·9	30·6	65·3	264·8	90·0
24 February . .	378·5	180·9	31·5	72·5	284·9	93·6
24 March . .	428·6	213·2	38·1	74·8	326·1	102·5
21 April . .	414·2	202·8	36·9	69·9	309·6	104·6
19 May . .	398·8	189·3	34·2	71·4	295·0	103·8
16 June . .	400·6	187·6	34·0	74·4	296·0	104·6
14 July . .	402·7	185·3	32·7	76·9	295·0	107·7

Note. Figures do not necessarily add to totals because of rounding.
Source: Ministry of Transport.

TABLE 4

Passenger Journeys Originating (monthly)

Millions

Month	Total ¹	Grand total ²	Month	Total ¹	Grand total ²
Pre-War			1942		
January	60·6	106·7	January	66·1	97·3
February	55·0	81·2	February	59·0	77·1
March	61·1	90·5	March	66·6	87·1
April	66·2	98·6	April	71·9	95·9
May	72·6	102·9	May	74·5	93·7
June	70·9	96·9	June	77·4	96·3
July	77·9	106·5	July	86·6	105·6
August	84·6	113·2	August	93·2	114·7
September	69·2	112·3	September	81·8	112·4
October	66·7	98·5	October	74·2	98·1
November	61·2	89·8	November	67·6	89·6
December	67·4	94·6	December	73·5	93·7
1939			1943		
September	48·2	78·0	January	70·4	105·7
October	49·0	76·1	February	65·4	85·2
November	50·7	73·7	March	73·8	96·8
December	59·4	79·8	April	79·4	102·7
1940			May	81·5	107·2
January	52·7	89·2	June	86·7	106·2
February	51·0	72·8	July	99·0	119·2
March	60·9	82·5	August	99·5	123·6
April	58·1	90·8	September	86·9	121·3
May	57·9	78·9	October	82·0	106·1
June	59·0	76·9	November	74·3	97·0
July	61·4	83·8	December	76·6	97·0
August	64·5	87·8	1944		
September	47·3	71·1	January	76·9	114·6
October	48·7	68·2	February	72·0	93·0
November	47·2	63·1	March	78·6	100·8
December	49·7	65·6	April	82·3	109·1
1941			May	83·9	108·5
January	48·1	74·4	June	76·2	96·5
February	45·0	61·4	July	87·8	110·2
March	51·0	69·5	August	98·4	121·0
April	53·5	73·7	September	86·6	121·0
May	59·0	77·4	October	80·0	106·1
June	62·8	80·1	November	74·1	95·7
July	73·1	90·8	December	79·1	99·6
August	77·3	95·8	1945		
September	69·3	98·5	January	70·8	110·0
October	66·7	87·3	February	68·2	88·7
November	63·6	82·4	March	82·3	103·9
December	68·2	87·2	April	81·4	112·4
			May	87·8	109·5
			June	89·7	109·6
			July	97·7	120·9

Note. These figures cover the main line companies and the main line companies' proportion of joint lines.

¹ The 'Total' column comprises full fares; monthly return, excursion, week-end, etc.; workmen; tourist; and other descriptions.

² The 'Grand Total' comprises 'Total' passengers originating plus season tickets of all descriptions.

Source: Ministry of Transport.

TABLE 5

Locomotives

4-weekly returns: 1942-1945

Date	Operating stock	Available during 24 hours	Not available	Date	Operating stock	Available during 24 hours	Not available
1942				1944—contd.			
18 April . . .	19,441	15,839	3,602	18 March . . .	20,653	16,737	3,916
16 May . . .	19,470	15,843	3,627	15 April . . .	20,711	16,703	4,008
13 June . . .	19,496	15,798	3,698	13 May . . .	20,748	16,879	3,869
11 July . . .	19,523	15,892	3,631	10 June . . .	20,803	16,954	3,849
8 August . . .	19,550	15,773	3,777	8 July . . .	20,824	17,066	3,758
5 September . . .	19,562	15,831	3,731	5 August . . .	20,823	16,907	3,916
3 October . . .	19,581	15,958	3,623	2 September . . .	20,754	16,885	3,869
31 October . . .	19,595	16,036	3,559	30 September . . .	20,400	16,571	3,829
28 November . . .	19,600	16,005	3,595	28 October . . .	20,389	16,673	3,716
26 December . . .	19,624	16,122	3,502	25 November . . .	20,357	16,635	3,722
				23 December . . .	20,236	16,748	3,488
				30 December . . .	20,223	16,652	3,571
1943				1945			
23 January . . .	19,640	15,866	3,774	27 January . . .	20,088	16,284	3,804
20 February . . .	19,674	15,859	3,815	24 February . . .	20,015	16,125	3,890
20 March . . .	19,696	15,904	3,792	24 March . . .	20,047	16,161	3,886
17 April . . .	19,725	15,997	3,728	21 April . . .	20,031	16,145	3,886
15 May . . .	19,800	16,018	3,782	19 May . . .	20,046	15,976	4,070
12 June . . .	19,913	16,143	3,770	16 June . . .	20,068	16,140	3,928
10 July . . .	20,013	16,237	3,776	14 July . . .	20,100	16,165	3,935
7 August . . .	20,110	16,183	3,927	11 August . . .	20,110	16,177	3,933
4 September . . .	20,195	16,333	3,862	8 September . . .	20,115	16,113	4,002
2 October . . .	20,297	16,443	3,854	6 October . . .	20,126	16,065	4,061
30 October . . .	20,380	16,619	3,761	3 November . . .	20,107	15,995	4,112
27 November . . .	20,456	16,656	3,800	1 December . . .	20,152	15,973	4,179
25 December . . .	20,548	16,755	3,793	29 December . . .	20,225	16,349	3,876
1944							
22 January . . .	20,587	16,605	3,982				
19 February . . .	20,626	—	—				

Notes.

- (1) 'Operating Stock'. These figures include locomotives stored and in working order.
- (2) 'Not available'. Locomotives in the following categories are included in the figures:
 - (i) in the Chief Mechanical Engineer's shops,
 - (ii) stopped at sheds awaiting repair decisions,
 - (iii) waiting material,
 - (iv) under or awaiting repair,
 - (v) under examination, and
 - (vi) those available by 6.0 p.m. after shed attention, but which could not be used.
- (3) 'Available during 24 hours'. This is the 'operating stock' minus those 'not available'.

Source: Ministry of Transport.

TABLE 6
Railway Trucks and Wagons
(4-weekly returns: 1941-1945)

Thousands

4 weeks ended	Railway owned			Requisitioned privately owned			Total available
	Total wagon stock	Under or awaiting repair	Available	Total wagon stock	Under or awaiting repair	Available	
1 September, 1939	660.4	—	—	591.8	—	—	—
1941							
25 January . . .	668.0	22.9	645.1	578.7	23.1	555.6	1,200.7
22 February . . .	668.1	23.9	644.2	578.7	24.5	554.2	1,198.4
22 March . . .	669.1	22.5	646.6	578.5	25.8	552.7	1,199.3
19 April . . .	669.2	25.1	644.1	578.3	28.5	549.8	1,193.9
17 May . . .	662.7	27.0	635.7	577.8	29.6	548.2	1,183.9
14 June . . .	662.7	28.2	634.5	577.9	29.9	548.0	1,182.5
12 July . . .	662.7	31.6	631.1	577.8	33.2	544.7	1,175.8
9 August . . .	662.3	34.9	627.4	577.9	36.1	541.8	1,169.2
6 September . . .	664.5	32.0	632.4	578.0	36.8	541.2	1,173.6
4 October . . .	664.3	30.2	634.1	577.5	37.5	540.0	1,174.1
1 November . . .	662.8	25.1	637.6	577.1	35.7	541.4	1,179.1
29 November . . .	662.6	23.5	639.1	576.9	32.6	544.3	1,183.4
27 December . . .	662.9	21.3	641.6	576.4	27.4	548.9	1,190.5
1942							
24 January . . .	663.1	21.4	641.8	576.3	26.7	549.6	1,191.4
21 February . . .	663.5	22.6	640.9	576.2	25.5	550.7	1,191.6
21 March . . .	663.9	24.3	639.6	576.0	28.1	547.9	1,187.5
18 April . . .	664.4	25.0	639.4	575.9	32.1	543.8	1,183.2
16 May . . .	665.1	27.9	637.2	575.5	33.8	541.7	1,178.8
13 June . . .	665.4	32.3	633.1	575.3	34.5	540.7	1,173.8
11 July . . .	665.6	34.2	631.4	575.1	35.0	540.1	1,171.5
8 August . . .	665.9	36.1	629.8	574.9	35.6	539.3	1,169.1
5 September . . .	666.0	34.8	631.2	574.8	34.7	540.1	1,171.3
3 October . . .	666.6	33.1	633.5	574.7	32.4	542.3	1,175.8
31 October . . .	667.3	29.5	637.7	574.8	28.8	546.0	1,183.7
28 November . . .	667.8	27.4	640.3	574.9	27.3	547.6	1,187.9
26 December . . .	668.6	27.1	641.5	575.1	25.7	549.4	1,190.8
1943							
29 January . . .	669.1	27.8	641.3	575.2	28.0	547.3	1,188.6
26 February . . .	669.6	29.2	640.4	575.3	29.3	546.0	1,186.4
27 March . . .	669.9	31.4	638.6	577.1	31.0	546.0	1,184.7
24 April . . .	675.1	36.1	639.0	577.3	29.9	547.4	1,186.4
22 May . . .	675.4	40.5	634.9	577.5	31.7	545.8	1,180.7
20 June . . .	675.7	46.0	629.7	577.6	32.9	544.7	1,174.4
18 July . . .	676.0	50.0	626.0	577.7	34.1	543.5	1,169.5
15 August . . .	676.5	51.7	624.8	577.6	36.1	541.5	1,166.3
12 September . . .	677.0	45.9	631.1	579.0	33.9	543.0	1,174.1
10 October . . .	677.5	38.6	638.9	580.6	32.3	548.3	1,187.3
6 November . . .	677.9	36.9	641.0	581.1	31.7	549.4	1,190.4
4 December . . .	678.3	32.9	645.5	581.0	29.7	551.3	1,196.8
1944							
1 January . . .	679.0	32.2	646.8	581.2	28.2	553.0	1,199.8
29 January . . .	679.4	31.2	648.2	582.9	27.9	554.9	1,203.1
26 February . . .	679.6	32.1	647.5	583.0	28.8	554.2	1,201.7
25 March . . .	679.8	31.9	647.9	583.2	30.7	552.5	1,200.4
22 April . . .	680.1	35.8	644.3	583.3	34.2	549.0	1,193.4
20 May . . .	680.2	38.9	641.4	583.3	35.9	547.4	1,188.8

[continued on following page

TABLE 6—continued

4 weeks ended	Railway owned			Requisitioned privately owned			Total available
	Total wagon stock	Under or awaiting repair	Available	Total wagon stock	Under or awaiting repair	Available	
1944—contd.							
17 June . . .	680·7	42·7	638·0	583·4	37·9	545·5	1,183·6
15 July . . .	680·8	51·4	629·4	583·7	38·0	545·7	1,175·1
12 August . . .	681·0	54·9	626·1	583·8	40·6	543·2	1,169·2
9 September . . .	681·7	56·9	624·7	583·9	43·4	540·6	1,165·3
7 October . . .	681·8	53·3	628·5	584·1	41·1	543·0	1,171·5
4 November . . .	681·6	53·3	628·3	584·4	41·5	542·9	1,171·3
2 December . . .	682·0	52·0	630·0	584·8	41·2	543·6	1,173·6
29 December . . .	682·3	53·0	629·4	585·3	39·5	545·8	1,175·2
1945							
6 January . . .	682·4	52·3	630·1	585·4	39·6	545·8	1,175·9
3 February . . .	682·8	53·0	629·8	585·9	40·4	545·5	1,175·3
3 March . . .	682·8	54·3	628·5	586·5	42·8	543·7	1,172·2
31 March . . .	682·5	55·5	626·9	586·6	46·0	540·6	1,167·6
28 April . . .	681·8	61·2	620·6	585·9	51·6	534·3	1,154·9
26 May . . .	680·9	66·8	614·1	585·2	54·5	530·7	1,144·8
23 June . . .	678·6	71·9	606·7	585·4	57·9	527·6	1,134·2
21 July . . .	677·4	81·8	595·5	585·5	60·7	524·8	1,120·3
18 August . . .	677·2	86·9	590·3	585·4	63·2	522·3	1,112·5
21 September . . .	675·9	90·0	586·0	585·4	66·6	518·8	1,104·8
20 October . . .	675·0	89·8	585·3	585·5	66·8	518·7	1,104·0
16 November . . .	674·3	88·4	585·9	585·4	64·8	520·6	1,106·5
14 December . . .	673·5	79·1	594·4	585·2	57·6	527·6	1,122·0
14 December, 1946	660·9	80·3	580·6	577·2	72·6	504·6	1,085·2

Note. Figures do not necessarily add to totals because of rounding.
Source: Ministry of Transport.

TABLE 7
Railway Staff
Numbers employed in Great Britain at March each year

Thousands

	1939	1940	1941	1942	1943	1944	1945
Total Staff	588·5	583·6	587·9	599·6	612·6	616·8	622·4
Men and boys:							
Total	563·3	557·7	547·0	525·6	524·1	523·4	531·1
Conciliation ¹	330·6	332·6	332·8	317·8	319·4	319·6	326·3
Shop and artisan	112·1	107·2	103·0	100·6	101·7	101·5	102·4
Officers, clerical and supervisory	86·0	83·0	81·1	77·5	72·2	70·1	69·4
Police, electrical generating							
station and miscellaneous	6·6	7·0	7·6	7·8	7·8	7·7	8·1
Ancillary	27·9	27·9	22·6	22·0	23·0	24·5	24·8
Women and girls:							
Total	25·3	25·9	40·8	74·0	88·5	93·3	91·3
Conciliation ¹	—	—	9·3	24·3	32·3	36·1	35·6
Shop and artisan	1·0	0·9	2·3	10·5	13·9	14·0	11·4
Officers, clerical and supervisory	12·2	13·4	17·6	26·7	29·3	29·6	30·3
Police, electrical generating							
station and miscellaneous	6·2	6·0	5·5	5·7	5·9	6·4	6·8
Ancillary	5·9	5·7	6·2	6·8	7·0	7·2	7·3

¹ Conciliation grades include both railway operating staff and permanent way grades, e.g. locomotive drivers, firemen and cleaners; passenger department guards; ticket examiners, shunters and porters; goods guards and shunters; goods checkers, porters, carters, vanmen, stablemen and labourers; signalmen and pointsmen; telegraph and permanent way men.

See F. Gilbert, *Transport Staff Relations* (Pitman 1951), pp. 6-7.

Source: Statistical Digest of the War, Table 31.

TABLE 8
Coastal Shipping
4-weekly Employment Returns: 1941-1945

Month ending	Thousand dead-weight tons in coasting and short sea service ¹	Thousand dead-weight tons of coastal shipping employed (tramps and liners)	Thousand tons of cargo discharged	Coal carried in coastal tramps	
				Thousand dead-weight tons of shipping employed	Thousand tons of cargo discharged
1941					
15 April	1,445·4	1,192·5	2,267·8	879·6	1,606·3
15 May	1,408·2	1,152·8	2,341·9	871·0	1,761·4
15 June	1,381·9	1,125·2	2,526·5	826·5	1,980·6
15 July	1,306·5	1,094·3	2,548·6	821·8	1,936·8
15 August	1,276·7	1,018·7	2,607·8	706·7	1,985·8
15 September	1,289·6	1,039·2	2,511·4	732·9	1,896·7
15 October	1,396·3	1,136·5	2,409·2	767·2	1,778·1
15 November	1,500·1	1,173·6	2,324·4	789·6	1,699·9
15 December	1,496·7	1,213·4	2,250·3	814·4	1,641·8
1942					
15 January	1,494·6	1,195·9	2,286·9	785·0	1,587·8
15 February	1,462·7	1,211·6	2,270·7	793·8	1,614·9
15 March	1,458·4	1,231·1	2,322·8	790·5	1,642·3
15 April	1,373·3	1,148·1	2,705·4	744·4	1,805·6
15 May	1,340·8	1,122·7	2,504·5	741·6	1,733·6
15 June	1,315·2	1,054·8	2,549·9	742·2	1,756·9
15 July	1,306·1	1,022·4	2,669·8	688·6	1,867·4
15 August	1,307·3	1,009·3	2,430·8	635·4	1,672·3
15 September	1,322·2	1,130·6	2,801·5	789·7	2,060·2
15 October	1,300·4	1,109·9	2,849·5	741·3	2,056·4
15 November	1,408·6	1,230·9	2,373·3	857·6	2,004·7
15 December	1,396·7	1,196·5	2,692·1	845·7	1,932·5
1943					
15 January	1,367·4	1,153·8	2,407·6	768·0	1,749·1
15 February	1,388·2	1,117·8	2,526·0	754·8	1,815·1
15 March	1,376·9	1,138·6	2,427·4	764·7	1,705·8
15 April	1,322·6	1,114·2	2,682·2	728·9	1,848·3
15 May	1,226·0	1,025·3	2,407·0	677·7	1,613·1
15 June	1,222·3	986·3	2,714·3	633·0	1,912·5
15 July	1,216·1	989·6	2,477·0	636·5	1,670·1
15 August	1,259·4	1,002·6	2,343·5	627·4	1,572·2
15 September	1,317·9	1,070·6	2,617·6	682·1	1,842·4
15 October	1,358·8	1,114·2	2,587·4	703·5	1,794·0
15 November	1,399·2	1,173·5	2,624·7	740·2	1,831·4
15 December	1,408·9	1,204·0	2,432·8	793·9	1,682·0
1944					
15 January	1,430·7	1,154·2	2,445·8	722·4	1,713·3
15 February	1,413·7	1,176·0	2,531·0	729·8	1,728·5
15 March	1,416·7	1,142·0	2,568·2	660·7	1,706·7
15 April	1,347·7	1,082·8	2,625·1	655·7	1,723·4
15 May	956·8	819·6	2,260·6	531·2	1,714·7

[continued on following page]

¹ 'Thousand deadweight tons in coasting and short sea service' is the figure in the second column, 'thousand deadweight tons of coastal shipping employed' plus the following tonnage: vessels employed in salvage work; vessels undergoing minor repairs; vessels being degaussed or fitted with defensive equipment; vessels out of commission (undergoing or awaiting repair or laid up); vessels engaged in estuarial work, in ballast unfixed and employment not known.

Month ending	Thousand dead-weight tons in coasting and short sea service ¹	Thousand dead-weight tons of coastal shipping employed (tramps and liners)	Thousand tons of cargo discharged	Coal carried in coastal tramps	
				Thousand dead-weight tons of shipping employed	Thousand tons of cargo discharged
1944—contd.					
15 June	1,012·0	854·1	2,169·5	568·0	1,603·5
15 July	1,054·4	895·4	2,104·9	565·9	1,575·0
15 August	1,064·3	814·2	2,061·4	479·6	1,485·5
15 September	1,061·2	891·5	2,075·6	606·2	1,519·3
15 October	1,029·6	856·8	2,110·8	571·9	1,601·4
15 November	1,066·5	883·4	2,180·8	586·4	1,624·6
15 December	1,098·3	931·2	1,988·6	628·0	1,453·7
1945					
15 January	1,153·8	972·0	1,735·9	596·8	1,262·7
15 February	1,203·4	991·0	1,993·1	632·7	1,461·5
15 March	1,250·5	1,041·2	2,005·0	568·4	1,436·8
15 April	1,220·5	1,051·5	2,096·0	538·0	1,401·6
15 May	1,127·7	935·0	2,159·1	516·8	1,534·1
15 June	1,106·1	890·5	2,244·9	522·3	1,636·8
15 July	1,067·2	885·4	2,087·4	490·7	1,559·2
15 August	1,053·9	878·3	1,912·6	417·0	1,454·6
15 September	1,174·6	1,015·3	1,970·2	490·7	1,433·8

¹ 'Thousand deadweight tons in coasting and short sea service' is the figure in the second column, 'thousand deadweight tons of coastal shipping employed' plus the following tonnage: vessels employed in salvage work; vessels undergoing minor repairs; vessels being degaussed or fitted with defensive equipment; vessels out of commission (undergoing or awaiting repair or laid up); vessels engaged in estuarial work, in ballast unfixed and employment not known.

Source: Ministry of Transport, Monthly Employment Returns.

TABLE 9

Losses of Coastal Ships during the War

Tonnage figures in thousands

	Losses due to enemy action		Marine losses			Losses due to enemy action		Marine losses	
	No. of ships	D.W. tonnage	No. of ships	D.W. tonnage		No. of ships	D.W. tonnage	No. of ships	D.W. tonnage
1941					1943—contd.				
April	14	14.1	4	3.9	September	—	—	—	—
May	12	21.0	5	8.6	October	—	—	3	1.1
June	12	20.6	2	0.4	November	3	6.9	3	2.2
July	12	20.9	1	3.0	December	1	2.5	2	0.9
August	3	10.3	6	14.1					
September	6	16.5	3	2.4	Total	10	22.0	19	10.9
October	4	8.0	—	—					
November	11	17.5	3	2.1	1944				
December	11	26.8	3	3.2	January	3	5.7	1	0.4
Total	85	155.7	27	37.7	February	2	3.8	2	3.0
1942					March	1	3.3	1	1.9
January	11	22.9	2	0.6	April	—	—	—	—
February	3	6.4	5	6.7	May	—	—	—	—
March	4	5.8	2	2.1	June	—	—	—	—
April	5	8.3	1	1.5	July	—	—	—	—
May	4	10.9	2	1.2	August	—	—	1	0.7
June	2	0.9	—	—	September	—	—	2	4.9
July	7	5.7	—	—	October	—	—	1	1.1
August	—	—	1	0.6	November	—	—	1	0.4
September	—	—	—	—	December	—	—	3	2.4
October	4	12.7	2	2.5	Total	6	12.8	12	14.8
November	2	4.5	1	0.6	1945				
December	9	16.5	3	3.6	January	—	—	3	3.2
Total	51	94.6	19	19.4	February	3	8.6	—	—
1943					March	8	20.3	1	0.5
January	1	2.0	3	2.3	April	6	21.0	1	0.2
February	—	—	2	1.0	May	3	8.7	1	4.5
March	1	4.8	—	—	June	—	—	—	—
April	2	2.2	1	0.7	July	—	—	2	1.1
May	1	1.1	1	0.4	August	—	—	1	0.8
June	1	2.5	2	0.8	Total	20	58.6	9	10.3
July	—	—	—	—	GRAND TOTAL	172	343.7	86	93.1
August	—	—	2	1.5					

Source: Ministry of Transport, Monthly Employment Returns.

TABLE 10

Consumption of Motor Spirit and DERV by Goods and Public Service Vehicles in Great Britain (excluding Northern Ireland)¹

(Weekly averages based on calendar months)

Thousand tons

Date	MOTOR SPIRIT		DERV OIL		Date	MOTOR SPIRIT		DERV OIL	
	Public service vehicles	Goods vehicles	Public service vehicles	Goods vehicles		Public service vehicles	Goods vehicles	Public service vehicles	Goods vehicles
1938 ²	9.8	32.4	5.4	1.4	1942—contd.				
1940	3.3	23.7	5.7	2.2	July	4.0	22.9	6.6	2.2
1941	4.1	24.9	6.3	2.2	August	3.8	18.3	5.8	2.3
1942	4.0	22.3	6.3	2.2	September	3.9	22.5	6.4	2.2
1943	3.4	20.8	5.9	2.0	October	3.9	22.3	6.3	2.3
1944	3.4	21.4	6.4	2.0	November	3.7	21.4	6.1	2.1
1945 ³	3.6	22.4	7.0	2.1	December	3.8	21.7	6.0	2.2
1940					1943				
January	3.0	21.8	5.2	2.0	January	3.5	20.2	5.7	2.1
February	3.0	22.8	5.7	1.8	February	3.7	21.7	6.1	2.1
March	3.2	24.1	5.6	1.8	March	3.8	22.3	6.2	2.1
April	3.7	26.5	6.2	1.9	April	3.5	20.8	5.9	2.1
May	3.5	25.3	6.1	1.9	May	3.4	20.8	5.9	1.8
June	3.1	21.8	5.6	2.2	June	3.3	20.4	6.0	1.8
July	3.3	23.6	5.9	2.4	July	3.3	20.3	6.0	1.8
August	3.4	23.2	6.6	2.3	August	3.0	19.6	5.7	1.8
September	3.4	22.8	5.7	2.1	September	3.2	21.1	6.0	1.9
October	3.3	24.9	5.6	2.5	October	3.1	20.4	5.9	1.8
November	3.2	24.2	5.8	2.5	November	3.4	21.6	6.2	1.9
December	3.6	23.1	5.2	2.7	December	3.3	20.6	6.1	1.9
1941					1944				
January	3.8	23.0	5.6	2.4	January	3.2	19.9	5.9	1.9
February	3.8	23.9	6.0	2.3	February	3.5	21.6	6.4	2.0
March	3.9	24.8	6.1	2.3	March	3.6	22.6	6.6	2.1
April	4.2	26.9	6.4	2.2	April	3.2	20.2	6.0	1.9
May	4.3	27.7	6.5	2.3	May	3.3	21.5	6.5	2.0
June	4.3	24.4	6.2	2.1	June	3.4	21.9	6.6	2.0
July	4.4	25.1	6.6	2.2	July	3.1	20.3	6.1	1.9
August	4.1	24.0	6.3	2.0	August	3.3	21.2	6.3	2.0
September	4.4	25.4	6.6	2.1	September	3.4	21.5	6.5	2.0
October	4.3	25.4	6.4	2.2	October	3.4	21.5	6.6	1.9
November	3.9	22.9	6.1	2.1	November	3.7	23.3	6.9	2.1
December	4.0	24.0	6.2	2.2	December	3.2	19.9	6.3	1.9
1942					1945				
January	3.9	22.2	6.2	2.0	January	3.4	20.8	6.8	2.0
February	4.3	21.9	6.3	2.3	February	3.6	22.2	7.1	2.1
March	4.3	21.9	6.2	2.3	March	3.7	23.0	7.1	2.1
April	4.2	23.8	6.6	2.0	April	3.6	21.8	6.8	2.0
May	4.0	22.6	6.4	1.9	May	3.7	22.6	7.0	2.1
June	4.2	24.6	6.5	2.2	June	3.7	23.7	7.0	2.1

¹ These figures are based on total net coupon issues. They include quantities issued against Service department indents, i.e. civilian lorries and buses working for the Services.

² The figures for 1938 include Northern Ireland.

³ Based on 6 months.

Source: Ministry of Fuel and Power.

TABLE I I

Fuel Consumed by Goods and Public Service Vehicles,¹ 1940-1945
Annual Totals

Thousand tons

<i>Year</i>	MOTOR SPIRIT			DERV OIL		
	<i>Total</i>	<i>Public service vehicles</i>	<i>Goods vehicles (excluding local authorities vehicles)</i>	<i>Total</i>	<i>Public service vehicles</i>	<i>Goods vehicles (excluding local authorities vehicles)</i>
1940	1,481·7	179·4	1,302·3	412·4	313·9	98·5
1941	1,543·6	217·3	1,326·3	440·5	336·9	103·6
1942	1,422·3	211·2	1,211·1	442·9	337·7	105·2
1943	1,357·2	186·1	1,171·1	412·9	329·2	83·7
1944	1,335·9	180·3	1,155·6	439·0	342·1	96·9
1945	1,477·1	199·6	1,277·5	480·3	382·1	98·2

¹ Based on total net coupon issue, i.e. gross coupon issue minus unused retained coupons, if any.

Source: Ministry of Fuel and Power.

TABLE 12
*Passenger Journeys Originating and Passenger-Miles on London
Passenger Transport Board Routes, 1939-1945*

Year	Passenger journeys originating						Estimated total passenger-miles
	Railways	Central buses	Country buses	Coaches	Trams and trolleybuses	Total	
1938-39	472,665,000 100	2,062,272,000 100	136,151,000 100	24,272,000 100	1,086,738,000 100	3,782,098,000 100	8,648,336,000 100
1940	352,295,000 75	1,470,576,000 71	158,311,000 116	12,145,000 50	936,927,000 86	2,930,254,000 77	7,211,116,000 83
1941	332,795,000 70	1,438,450,000 70	198,111,000 146	29,969,000 121	858,143,000 79	2,856,868,000 76	7,828,720,000 91
1942	418,665,000 89	1,623,653,000 79	222,668,000 164	22,382,000 92	987,572,000 91	3,274,949,000 87	8,659,926,000 100
1943	472,942,000 100	1,712,089,000 83	248,335,000 182	—	1,013,427,000 93	3,446,793,000 91	9,210,133,000 106
1944	491,531,000 104	1,641,254,000 80	255,093,000 187	—	956,228,000 88	3,344,106,000 88	8,914,522,000 103
1945	543,191,000 115	1,831,132,000 89	258,842,000 190	—	1,025,071,000 94	3,658,236,000 97	9,805,501,000 113

The railway figures shown in the above table do not include passenger journeys originating at stations on lines owned by other Railway Companies or Joint Committees. In the last full year before the war the journeys made by the passengers who booked at such stations but completed their journeys on the Board's system were estimated to approach 100,000,000 per annum.

Source: L.P.T.B. 12th Annual Report.

Index

INDEX

(The suffix letter 'n' denotes a footnote)

- Admiralty, 25, 41, 85, 86, 89, 131n, 137, 158, 160, 169, 170n, 183n, 233, 238, 251, 325, 365n, 366, 394, 413, 522n, 592n, 602
See also Royal Navy, Services
- Agricultural products
transport of, 458, 495, 575-6
rail priorities, 63
See also Apples, Flowers, Potatoes
- Air attack on United Kingdom
First World War, 6, 39, 40, 47
pre-1939 assumptions about, 39, 41, 42, 70, 86, 87, 93, 94, 96, 97, 101, 112, 131, 174, 197, 247
Second World War, 73n, 101, 113, 114, 129, 131, 141, 178, 180, 191, 195, 196-202, 205, 207, 215, 216, 217, 218, 219, 223, 224, 225, 226, 229, 231, 232, 240, 245, 248, 249, 251, 252, 256, 272n, 281, 321, 328, 329, 330, 333, 335, 350, 351, 367, 375, 391, 424, 454, 538, 611-13, 636
flying bombs and rockets, 611-13
See also Coastal Shipping; air attack and air raid precautions, Railways; air attack on
- Aircraft production
See Munitions
- Airfields
construction, 220, 300, 575, 576
use of, 330
- Air Ministry, 81, 114n, 199n, 325, 377, 385, 390, 563, 597, 602, 622
See also Royal Air Force, Services
- Air Raid Precautions (including blackout), 6, 47, 86, 97, 102, 112, 113, 114, 115, 161, 196-202, 224, 272, 328, 426, 454, 464, 611, 637
See also Coastal Shipping; air attack and air raid precautions, Railways; air raid precautions
- Allen, Mr. W. P., 278
- Amalgamated Society of Locomotive Engineers and Firemen, 278
- Anderson, Sir Alan, 293, 294, 297, 557
See also Railways; control over; Controller of Railways
- Anderson, Sir John (now Lord Waverley)
See Lord President of the Council
- Apples, transport of, 450-1
- Area Traffic Commissioners, 13, 14, 15, 54, 55, 323n, 324, 565
- Banbury, 210, 217, 225, 248, 258, 261, 386, 393, 455, 465, 466
- Barrington Ward, Mr. V. M., 121n
- Battle of the Atlantic Committee, 265, 281
- Behrens, C. B. A., *Merchant Shipping and the Demands of War*, 42n, 62n, 64n, 93n, 163n, 168n, 176n, 179n, 191n, 202n, 209n, 238n, 251n, 269n, 343n, 346n, 356n
- Belgium
acquisition of coastal shipping from, 347
relief to, 633
- Bell, R., *History of British Railways 1939-1945*, 109n, 114n, 131n, 221n, 243n, 387n, 401n, 412n, 414n, 426n, 428n, 429n, 513n, 515n, 603n, 632n
- Bevin, Mr. Ernest, 150
See also Minister of Labour
- Board of Trade, 5, 9, 59, 110, 377, 390, 494, 495, 497, 498, 501, 602
Mercantile Marine Department, 85, 86, 87, 88, 90, 104n
President of, 231, 435n
See also Food (Defence Plans) Department
- Bolero (movement of U.S. Troops to U.K.), 257, 382, 385, 408, 409, 417, 428n, 429, 430, 539, 572, 576, 577, 603, 611
See also United States
- Bordesley, 199, 210, 217, 248, 258, 455
- Bricks
rationalisation of transport of, 467, 489-90, 496

- Bridges, 81, 197, 198
See also Roads and bridges, Thames crossings
- Building materials
 transport of, 467
 D-day cuts and, 596-7
See also Bricks, Cement
- Burgin, Mr. L.
See Minister of Transport
- Bus services, 11, 148, 149, 277, 300, 302, 303, 322-42, 386, 387, 433-4, 519-30, 556, 559, 657
 buses
 economies in use of, 279, 325, 336, 338, 396, 433, 434, 520, 521, 523, 524, 529-30
 maintenance and repair, 336, 337, 338, 520, 524-5
 manpower for, 337, 525
 mobilisation of unused buses, 524
 new vehicles, 323, 324, 325, 327, 331, 334, 336, 337, 341, 342, 398, 521, 522, 523, 525, 560
 requisitioning of, 325, 339, 522, 523, 525
 releases by Services, 341, 523, 525
 size of fleet, 325, 525
 transfers between towns, 329, 334
 demand for services
 changes in, 322-3, 324, 326, 327, 328, 330, 331, 520
 control of, 329, 339, 529-30
 fares, 567
 London problem, 327-9
 manpower shortage, 323, 324, 327, 331, 333, 338, 341-2, 398, 520, 525-8, 560
 mileage, 327, 520
 mutual aid schemes, 339
 peak hour problem, 323, 324, 325, 326, 327, 328, 329, 331, 332, 333, 334, 336, 340, 341, 387, 396, 433, 529, 530
 traffic diverted to railways, 339, 340, 386, 433, 529, 566
 traffic, volume of, 520, 657
See also Motor fuel, Road passenger transport
- Cadbury, G. and S. P. Dobbs, *Canals and Inland Waterways*, 8n, 21n
- Canada
 coasters lent to U.K. by, 616
- Canals
 amalgamation of, 21
 control over
 First World War, 7, 8, 21, 82, 83, 84, 170, 172, 174, 446
 pre-1939 preparations, 82-5, 170
 Second World War, 170, 172-4, 177, 268, 395, 443, 444, 446, 447-8, 561, 565, 567
 cost to H.M.G., 85, 447
 diversion of traffic from, 133, 134, 139, 171, 172, 173, 443
 diversion of traffic to, 277, 446, 447, 455, 488
 maintenance and equipment, grants for, 445
 manpower for, 7, 8, 78, 83, 85, 171, 172, 395, 454, 620, 621, 633
 mileage of, 4
 nationalisation of, 639
 rates and charges, 7, 18, 83, 134, 171, 172, 173, 443, 444, 446, 547, 565, 567
 state of, 3, 4, 21, 443
 subsidy to, 172, 173, 174, 177, 443, 444, 446
 traffic, volume of, 8, 21, 33, 83, 84, 85, 171, 270, 395, 443, 444, 448, 457, 571, 605, 620, 621, 634
- Carlisle, 40n, 209, 226, 261, 386, 392, 428, 429, 455, 593
- Carson, Sir Frederick, 228
- Cement
 rationalisation of transport of, 467, 488-9
- Central Transport Committee, 119n, 271-9, 283, 339n, 354, 355, 380n, 391, 409n, 412, 416, 456, 458, 462, 473, 480, 487, 488, 490, 555, 562, 563, 564, 571, 575, 576, 577n, 610, 623, 627
See also Inland Transport; allocation of
- Chancellor of the Exchequer, 127, 128, 287

- Chester, D. N., *Public Control of Road Passenger Transport*, 12n, 13n, 16n
 Chiefs of Staff, 51, 249, 595
 Churchill, W. S., *The Second World War*, 170n
See also Prime Minister
 Civil Defence Committee, 139, 140, 264, 328, 487
 Clapham, J. H., *An Economic History of Modern Britain*, 3n, 4n, 5n
Coal
 allocation of coal traffic between different forms of transport, 164
 coastal shipping and, 4, 25, 26, 27, 33, 36, 40, 46, 52, 67, 68, 69, 70, 86, 87, 88, 91, 102, 117, 135, 136, 137, 142, 143, 155, 161n, 162-6, 180, 215, 216, 217, 232, 233, 343, 350, 351, 352, 353, 354, 362, 394, 425n, 427, 428, 449-50, 452, 453, 455, 468, 474, 478, 607-8, 629, 652-3
 demands in new places, 216
 demurrage regulations and, 109, 110, 111, 112, 135, 239, 240
See also Coal; railway traffic in; wagons for
 distribution crisis, early 1940, 102-3, 117, 118, 136-9, 165
 distribution crisis, 1940-1941, 191, 231-4, 263, 351
 distribution
 rationalisation of, 139, 490-1
 See also Coal; railway traffic in; organisation and planning of railway traffic
 exports, 70, 135
 to France, 26, 88, 102, 135, 136, 155, 157, 162-6, 179, 180, 215, 216
 effect of cessation, 179-80, 195, 215, 216, 218, 343, 348, 350, 351, 490
 output, 67, 70, 94, 95, 135, 213, 216, 255, 378, 382, 383n, 454, 468, 477, 478, 618, 621, 622, 629, 630
 opencast, 619, 629
 output lost through transport difficulties, 575, 578, 579, 580, 587, 596, 604, 629, 630, 631, 632
 opencast, 578, 629, 631-2
 pre-1939 assumptions about war-time coal traffic, 67, 68, 69, 70, 86, 87, 135, 174, 175
 railway traffic in
 charges for, 12
 difficulties over, 67, 68, 69, 70, 86, 87, 94, 102, 103, 104, 117-18, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 179, 180, 191, 202, 215-19, 227, 246, 247, 255, 382n, 384, 386, 392-3, 425, 427, 428, 454, 477-9, 482-3, 577, 578, 579, 580, 585, 587, 600, 601, 629-32, 633
 organisation and planning of railway traffic, 7, 138, 139, 219, 231-4, 246, 247, 256, 464, 477, 478, 479, 491, 562n
 priority for coal, 63, 117, 118, 138, 157, 231, 579
 transport from South Wales, 180, 264, 468-9, 470
 volume of, 6, 29, 113, 118, 139, 142, 143, 144, 215, 216, 217, 222, 352, 378, 382, 383, 384, 393, 579, 603, 622, 623, 630, 634, 640, 643, 644
 wagons for, 68, 69, 86, 87, 109, 110, 111, 112n, 135, 238, 239, 240, 243, 575, 576, 578, 604, 630, 632
 stocks, 102, 111, 117, 136, 138, 143, 165, 216, 491, 578, 579, 583n, 630n
 subsidy for coastal shipping coal freights, 186
See also London; coal supplies to, Public utilities; coal supplies to
Coastal shipping
 air attack on, and Air Raid Precautions, 86, 87, 89, 93, 102, 161, 178, 195, 344, 367
 allocation of bulk traffics to (other than coal), 277, 354-5, 361, 362, 395, 450, 451, 452, 453, 458, 489, 565, 576, 585, 618
 building of coastal ships, 167, 347
 carrying capacity of, 89, 102, 160, 161, 168, 179, 215, 217, 348, 349, 351, 395, 584, 585, 608, 617
 chartering and acquisition of foreign ships, 165, 167, 168, 170, 185, 343, 345, 347, 358, 615n, 616
 financial terms, 350
 coal and, 4, 25, 26, 27, 33, 36, 40, 46, 52, 67, 68, 69, 70, 86, 87, 88, 91, 102, 117, 135, 136, 137, 142, 143, 155, 161n, 162-6, 180, 215, 216, 217, 232, 233, 343, 350, 351, 352, 353, 354, 362, 394, 425n, 427, 428, 449-50, 452, 453, 455, 468, 474, 478, 607-8, 629, 652-3
 coal exports to France, 26, 88, 102, 135, 136, 155, 157, 162-6, 179, 180, 215, 216
 compensation pool, 186-7
 control over, war-time
 preparations for, 87, 90, 91, 92
 control at work, 101, 105, 155-9, 162, 163, 164, 165, 176, 177, 269, 349, 353, 354, 355, 358, 359, 362, 363, 557, 560, 565, 606

- Coastal shipping, *contd.*
 control over, war-time, *contd.*
 machinery of control, 90-1, 155-9, 353
 licensing scheme, 91, 92, 101, 156, 157, 158, 159, 165, 177, 184, 269, 349, 350, 363, 560
 de-control, 639
 priorities, 91, 92, 155, 156, 157, 158
 requisitioning of coastal liners, 169, 269
 requisitioning for Straits of Dover convoy, 367
 convoys and, 89, 102, 160, 161, 215, 217, 233, 344, 348, 369-71, 584, 608
 South coast convoy fleet, 367-8
 dangers to, 85-6, 87, 102, 179, 215, 217, 344, 350, 364-71, 449, 617
 deep sea ships used to help, 584-5, 607, 617
 demands, war-time, generally, 86-9, 102, 135, 155, 161-70, 175, 343-4, 347, 348, 350-64, 387-8
 departmental responsibility for, 58, 104, 105, 268, 271, 282
 diversion of traffic from,
 First World War, 6, 7, 25, 86, 91, 134
 Second World War, 46, 67, 70, 86, 87, 90, 94, 96, 97, 102, 133, 134, 135, 136, 137, 139, 142, 143, 155, 163, 164, 168, 169, 215, 247, 351, 352, 354, 478, 578, 585
 diversion of traffic to
 See Coastal shipping; allocation of bulk traffic to
 Dunkirk and, 169-70
 employment figures, 182, 347, 350, 362, 363, 582-3, 585, 652-3
 enemy attacks on
 See Coastal Shipping; air attack, Coastal shipping; dangers to, E-boats, Mines
 foreign competition, 27, 28, 90
 in pre-1914 period, 4, 22
 in 1914-1939 period, 25-29
 loans from U.S.A., 595-6, 615-16
 Overlord and, 571, 581-3, 588, 594-6, 599, 600, 605-8, 611n, 614-15, 618, 628
 port clearance and, 86-8, 93, 102, 156, 166, 167, 168, 343, 349, 351, 355-61, 362, 575
 overside discharge, 88, 89, 155, 166, 167, 168, 266, 353, 356, 357-9, 372, 452
 port facilities for, 28
 pre-war preparations, 85-91, 154-5, 162
 protective equipment for, 365-6, 368, 449, 582
 payment for, 366
 rates and charges, 7, 25, 26, 27, 46, 91, 134, 155, 156, 168, 183, 185, 349, 355, 358, 359, 360, 547, 567
 control over, 18, 156, 183-7
 costs, 134, 183, 349, 355
 repairs to, 347, 583
 requisitioning of
 by Services, 25, 85, 102, 137, 159, 160, 345, 347, 367, 560
 for Overlord. *See Coastal shipping; Overlord and*
 coastal liners, 169, 349
 restriction on routes, etc., 344, 345, 367
 short sea voyages and, 22-3, 25, 26, 90, 156, 343-4, 363-4
 See also Coastal shipping; coal; coal exports to France
 size of fleet, 159, 160, 345, 346, 347, 348, 362, 394, 449, 455, 457, 486, 578, 579n, 582-3, 585, 595, 596, 607, 616-18, 652-3
 shortage, 89, 155, 165, 166, 167, 168, 170, 343
 structure and definition of industry, 22, 23, 24, 35
 subsidy to, 25, 28, 29
 traffic, volume of
 before 1914, 4
 First World War, 7, 25
 1918-1939, 24, 25, 26, 28, 32, 36, 87n, 161n
 pre-war preparations, 87-90
 Second World War, 161n, 162, 163, 165, 351, 352, 353, 354, 359, 361, 362, 364, 394, 449, 450, 451, 452, 455, 457, 579, 584n, 585, 608, 617, 618, 652-3
 under-employment of coastal liners, 134, 155, 163, 168, 169, 170, 177, 349
 war losses, 169-70, 215, 347, 367, 368, 369, 449, 583, 617, 654
 war-time function, generally, 343-5, 350, 353-8, 361-2, 388, 449, 452, 454, 469
 Committee of Imperial Defence, 37, 39, 44, 45, 49, 51, 52, 53, 56, 64, 69, 71, 72, 73, 82, 83, 87, 93, 176

Committee of Imperial Defence, *contd.*

Sub-Committee on Distribution of Imports (Headlam Committee), 41-44, 45, 46, 49, 64, 65, 71, 86, 93, 131, 204. *See also Ports*

Sub-Committee on Supplies of Coal for Public Utility Undertakings, 68, 86, 135

Court, W. H. B., *Coal*, 67n, 70n, 88n, 105n, 136n, 163n, 164n, 165n, 179n, 191n, 215n, 231n, 234n, 383n, 491n, 629n, 630n

Crewe, 74, 209, 210, 262, 600

Customs and Excise, 90n, 157

Deakin, Mr. A., 278

Denmark

coastal ships chartered from, 165, 170, 347

Department of Scientific and Industrial Research, Fuel Research Station, 435, 436n

Didcot routes, 107, 225, 257, 258, 261, 430

Distribution, rationalisation of

See under Inland transport; economies in

Diversion room

See Ports; administrative machinery

Dunkirk, evacuation of, 140, 160, 169-70, 178

E-boats, 215, 344, 367, 368

Economic Policy Committee, 228, 235, 237, 254, 264

Economist, The, 12n, 125n, 126n, 127n, 171n, 184n, 187n, 265n

Ellis, L. F., *The War in France and Flanders*, 141n, 169n

Essential Work Order, 337, 446

See also Manpower, Railways; manpower

Estonia

acquisition of ships from, 347

Evacuation scheme, 56, 62, 71, 81, 97, 102, 129, 130, 322, 326, 330, 331, 513, 516, 519

flying bombs, 612, 613, 623

Fertilisers

transport of, 450, 458, 488, 489, 562, 585, 597, 598, 628n

First World War, 3-8, 25, 39-41, 44, 45, 46, 47, 65, 71, 72, 82, 83, 84, 85, 86, 111, 119, 123, 126, 134, 168, 170, 172, 174, 243, 279, 287, 288, 289, 291, 400, 446

Flowers

ban on transport of cut flowers, 495, 497, 503-5

Food

D-day transport cuts and, 596, 597

imports, 65, 71, 72

planned transport of, 354-5, 376-81, 467, 469

rail priority for, 63, 116

rail traffic

volume of, 71, 72, 94

rationalisation of distribution, 492-7, 506, 507

transport difficulties, 627

Food (Defence Plans) Department, 57, 59, 65, 67, 70, 72

See also Hammond, R. J., Ministry of Food

Food Policy Committee, 264

France

coal exports to, 26, 88, 102, 135, 136, 155, 157, 162-6, 179, 180, 215, 216

coastal shipping acquired from, 347

fall of, 165, 178, 179, 195, 196, 206, 221, 343, 365

relief to, 633

Garcke, Mr. S. E., 308, 313, 314

Geddes, Sir E.

See Minister of Transport

General Post Office, 53, 59, 504

Gladstone, Mr., 5, 13

Gloucester-Cheltenham Line, 30n, 74, 260, 426

Great Western Railway, 30n, 34, 40n, 112, 199, 210, 217, 218, 220, 221, 225, 226, facing 226, 227, 233, 242, 244, 250, 355, 386, 392, 393, 425, 462, 463, 464, 465, 466, 467, 470, 512, 557, 574, 575, 600, 601, 627

new works, 257-62

Greece

shipping acquired from, 347

Griffith-Boscawen, Mr., 278

Hammond, R. J., *Food*, 105n, 129n, 210n, 242n, 252n, 494n, 497n, 500n, 501n

Hancock, W. K., and Gowing, M. M., *British War Economy*, 37n, 103n, 264n, 265n, 281n, 418

Hare, T. B., *British Railway Operation, Practical Railway Operations*, 192n

Hargreaves, E. L., and Gowing, M. M., *Civil Industry and Trade*, 237n

Harriman, Mr. W. A., 407n

Hartley, Sir Harold, 435

Heaton, Sir Frederick, 278, 279, 338, 523, 524, 525

Hicks, Sir Maxwell, 278, 318n

Highways

See Roads

Hill, Mr. R. (now Sir Reginald), 292n

Holland

coastal ships from, 167, 170, 346, 358

relief to, 633

Home Office, 56, 74

Home Policy Committee, 110, 264

Hore-Belisha, Mr.

See Minister of Transport

Horse racing, 519, 599

Hostels

transport and, 277

Hurcomb, Sir Cyril (now Lord), 17n, 26n, 282n, 420n, 520n, 525n, 540n, 555n

Hurstfield, J., *The Control of Raw Materials*, 180n, 210n

Imperial Tobacco Company, 498, 502

Import Executive, 204, 301

Imports, 41, 42, 65, 71, 72, 95

diversion from East to West Coast ports. *See under Ports*

import policy; effect on railways, 208, 210, 211, 214

level of, 41-2, 65, 71, 93, 95, 132, 142, 195, 208, 209, 214, 250, 575

loading of cargoes abroad; effect on inland transport, 237

mechanism of distribution, 43, 71-2, 132, 202-4

organisation and planning of distribution, 211-14, 223, 228, 229, 234-8

railway traffic priority for, 231

sources of supply, 180, 195, 210, 214

Inflation, 103, 126, 287

Inland sorting depots, 251-3, 266

Inland transport

administrative machinery, 265-298, Chapter XV, 608

allocation of, 57, 115, 119, 140, 164, 166, 172, 256, 266, 267, 270, 271, 272-8, 317,

354, 355, 362, 453, 458, 469, 482, 488, 536, 539, 555, 561n, 562-5, 568, 635

central machinery for

See Central Transport Committee

regional machinery for, 562-5

as limiting factor on war effort, 191, 192, 217, 255, 265, 587, 588-602, 636

capacity generally, 38, 39, 43, 44, 50, 93-5, 139, 174, 175, 176, 178, 179, 180, 217, 234,

256, 263, 264, 274, 375, 391, 398, 446, 577n, 587, 588-602, 610, 622, 633, 635, 636-7

See also Railways; capacity generally

Committee on Inland Transport, 588, 589, 595, 596, 597, 604, 608

control generally, 8, 13, 33, 91-2, 176, 177, 178, 229, 256, 264, 267, 272, 276, 375, 539,

Chapter XV, 608, 635, 636, 637

See also Canals; control over, Coastal Shipping; control over, Railways; control over, Road haulage; control over

co-ordinating organisation of user departments, 104, 105, 106, 115, 116, 211-14, 229,

235-6, 271-9, 357, 379-81

Movement Officers, 61, 212, 236, 357, 360, 381, 416, 534, 542, 543, 549, 550, 563,

564

demands generally

estimates of, 275, 276, 277, 376-81, 562, 588 *et seq.*, 635

regulation of, 92, 139, 140, 178, 236, 256, 266, 267, 270, 271, 272, 275-6, 635

D-day cuts, 596-9

- Inland transport, *contd.*
 economies in, 277
 bulk loading, 277
 elimination of cross hauls, 277, 278
 planned traffic movements, 277, 458, 488, 489, 497, 555, 562, 608
 rationalisation of distribution, 277, 278, Chapter XII, 542, 559, 597, 620
 port diversion and
 See Ports; diversion from East to West Coast Ports
 pre-war position generally, 29-33
 pre-war preparations, Chapter II, 101, 103, 106, 112, 115, 120, 123, 124, 133, 135, 149,
 154-5, 162, 164, 170, 174, 175, 176, 177, 188
 statistics, availability and use generally, xvi, 38, 39, 48, 274, 276, 277, 376
 Inland Transport War Council, 278, 279, 283, 318n, 338, 515, 518n, 519, 523, 524, 525
 Invasion of United Kingdom
 transport and, 278, 321
 Ireland
 coal exports to, 352, 584, 617
 trade with, 22, 26, 163, 344, 349, 352, 354, 363, 452, 584, 617
 Iron and steel
 transport difficulties. *See under Steel*
 Iron ore
 transport difficulties, 132, 207, 219, 220, 222, 253, 356, 385, 393, 411, 428, 464-5, 475,
 489
 Isserlis, L., article in *Journal of the Royal Statistical Society*, 24n, 35n, 160n, 345n, 346n, 348n
- Jabelmann, Mr., 407n
 Jenkin Jones Committee, 228, 242, 244
- Kohan, C. M., *Works and Buildings*, 220n, 385n
- Lancashire
 coal supplies for, 216, 218, 233, 234, 352, 474
 Leathers, Lord
 See Minister of War Transport
 Llewellyn, Colonel (now Lord), 293n
 Location of factories
 transport considerations and, 277, 466
 Locomotives
 availability
 See Locomotives; shortage
 engine hours in traffic, 402, 403, 459
 imports of, 392
 loans from United States, 406, 409, 410, 456, 572, 625, 626, 632
 loans from War Office and Ministry of Supply, 402, 403, 409, 410, 456, 572, 625, 626,
 632
 operating stock, 29, 107, 112, 114, 401n, 402, 409, 459, 573, 634, 648
 output, 107, 114, 391, 392, 398, 400, 401, 402, 403, 404, 405, 406, 408, 410, 456, 572,
 626, 638
 manpower for
 See Railway workshops; manpower in
 standardisation of, 404
 scrapping of, 107, 391, 400, 401, 402, 407n
 sent overseas, 40, 64n, 107, 399, 402, 403, 408, 465
 shortage, 255, 391, 398, 399, 403-10, 453-6, 459, 460, 465, 466, 479, 512, 539, 572, 573,
 574, 589, 626, 627, 628, 632, 637
 technical improvements, 30, 402n
 under repair, 40, 107, 391, 392, 398, 400, 401, 403, 404, 405, 406, 407, 408, 410, 459,
 573, 626, 634
 manpower shortages for repair and maintenance, 591n, 592n, 626, 636
- London
 bombing of, 47, 94, 198, 199, 201, 224, 225, 328, 329
 bus problems, 327-9

London, *contd.*

- coal supplies to, 25, 27, 46, 52, 68, 69, 70, 86, 87, 88, 90, 102, 135, 136, 137, 155, 164, 165, 180, 202, 215, 216, 217, 227, 231, 232, 246, 343, 350, 351-3, 427, 428, 474, 478
- D-day difficulties, 600-1
- Port of London, 40, 69, 278
- railway difficulties in, 40, 47, 73n, 216, 224, 231, 248
- railway new works, 106
- London County Council, 81, 612
- London Midland and Scottish Railway, 34, 73n, 74, 106, 132n, 142, 143, 199, 202n, 224, 226, facing 226, 244, 278, 293, 386, 392, 393, 406, 407n, 408, 428, 482, 490, 577, 578, 599, 600, 601, 631
 - new works, 257-62
- London and North Eastern Railway, 30n, 34, 106, 113, 120, 121, 142, 143, 198, 202n, 216, facing 226, 228, 244, 253n, 386, 392, 393, 406, 407n, 425, 427, 428, 473, 475, 476, 479, 480, 483, 490, 512, 575, 577, 599, 600, 624, 631, 632n
 - new works, 257-62
- London Passenger Transport Board, 52, 60, 101, 114n, 119, 124, 125, 127, 128, 174, 198, facing 226, 284, 289, 324, 328, 329, 557, 565, 566, 611, 639, 657
 - A.R.P. measures, 75
 - creation of, 16, 17
 - new works, 257-62
 - volume of traffic carried by, 32
- Lord President of the Council (Sir John Anderson, now Lord Waverley), 231, 233, 239
- Lord President's Coal Committee, 231, 232, 233, 234, 246, 491
- Lord President's Committee, 228, 237, 249, 252, 264, 265, 278, 287, 288, 290, 300n, 301, 339, 340, 341, 432n, 435n, 436, 446, 447, 492, 493, 503, 505, 516n, 517, 518, 521, 522n, 530, 579n, 580, 598

Mahaffy and Dodson, *Road Traffic Acts and Orders*, 13n

Mance, Sir Osborne, 446

Manchester Ship Canal Company, 255n

Manpower shortage generally, 239, 250, 251, 252, 338, 418, 575, 636, 637

For individual shortages see manpower sub-headings under *Bus services, Canals, Locomotives; under repair, Railways, Railway workshops, Road haulage*

Materials Committee, 439, 485

Meat

Meat Transport Pool (road haulage), 314-16, 319, 320, 321

railway difficulties, 210, 241, 242

Wholesale Meat Transport Association, 154

Metropolitan Water Board, 278

Milne, Sir James, 293, 557

Mines (sea laid), 137, 215, 344, 365

Mines Department, 57, 59, 67, 68, 69, 70, 94, 105, 110, 111, 117, 118, 135, 136, 137, 138, 139, 164, 165, 186, 215n, 216, 238, 246, 353, 377, 378, 379, 435n, 436n, 464, 468-9, 481, 482, 487, 491, 630

Secretary to, 218, 231, 435

See also Ministry of Fuel and Power

Minister of Food (Lord Woolton), 303, 316

Minister of Fuel and Power, 579, 580, 588n

Minister of Home Security, 328, 329

Minister of Labour, 340, 588n, 590

(Mr. Bevin), 332, 335, 339, 341, 403, 424, 526, 580, 594, 624

Minister without Portfolio, 228, 235

Minister of Production, 580, 587, 588n, 590, 591

Minister of Shipping, 158, 231, 235, 265, 281, 282, 363

Minister of Supply, 132, 208, 213, 440

Minister of Transport, 9, 14, 15, 18, 20, 37, 51, 53, 55, 59, 60, 61, 62, 63, 82, 84, 101, 108n, 119, 120, 128, 231, 265, 278, 279, 281, 282, 286, 288, 292, 307, 313n, 328, 487

Sir E. Geddes, 9

Mr. Hore-Belisha, 37

Mr. Burgin (May 28th 1937-April 21st 1939), 18, 19, 57, 60, 71, 72, 80, 83, 87, 176

Captain Euan Wallace (April 21st 1939-May 10th 1940), 21, 108, 109, 110, 124n,

127, 135, 139, 140, 150, 151, 179n, 413, 414

Sir John Reith (May 10th 1940-Oct. 3rd 1940), 128, 174, 180, 206, 285, 287

Lt.-Col. Moore-Brabazon (Oct. 3rd 1940-May 9th 1941), 207, 213, 228, 235, 238, 239, 250, 278, 286, 287, 547

- Minister of War Transport, 282, 289, 293, 294, 297, 298, 363, 380, 381, 395, 418, 549, 555, 557, 558, 572, 588n, 612
 (Lord Leathers), 282, 288, 289, 290, 292, 293, 297, 318, 319, 320, 335, 339, 340, 341, 403, 404, 422, 439, 466, 479, 485, 492, 493, 515, 518n, 521, 530, 574, 579, 580, 591n, 592n, 623, 624
- Ministry of Agriculture, 59, 503
- Ministry of Aircraft Production, 277, 377, 385, 390, 407, 519, 571, 597
- Ministry of Food, 67, 79n, 105, 154, 212, 227, 234, 235, 236, 238, 241, 243n, 252, 272, 274, 294, 295n, 312, 314, 315, 316, 354, 355, 357, 360, 377, 379, 390, 451, 467, 476, 481, 487, 492, 494, 495, 496, 498, 503, 559, 563, 564, 575, 576, 602, 627
- Ministry of Fuel and Power, 383, 434, 437, 560, 578, 587, 602, 621, 622, 629, 630, 631, 632n
- Ministry of Home Security, 114n, 147n
- Ministry of Labour, 127, 131, 332, 335, 336, 405, 406, 410, 418, 419, 420, 421, 422, 423, 424, 513, 525, 526, 527, 528, 529, 542, 574, 587, 589, 591n, 592, 594n
- Ministry of Production, 406, 410n, 422n, 440n, 519, 528, 563, 589, 590, 601, 602
- Ministry of Shipping, 90, 92, 101, 104, 105, 137, 139, 158, 164, 167, 183, 184n, 227, 232, 233, 234, 235, 236, 237, 251, 268, 269, 271, 272, 275, 280, 281, 282, 344, 347n, 349, 350, 353, 357, 360, 365n, 366
 amalgamation with Ministry of Transport, 279-83
- Ministry of Supply, 67, 105, 110, 117, 212, 213, 234, 236, 237, 238, 253, 254, 272, 274, 312, 336, 337, 338, 340, 357, 360, 377, 379, 390, 405, 408, 409, 439, 440n, 442, 445, 465, 466, 481, 488, 489, 491, 519, 521, 522, 524, 556, 560, 563, 564, 571, 575, 597, 622, 628n
- Ministry of Transport, 9, 10, 19, 20, 23, 24, 37, 44, 51, 52, 53, 56, 59, 62, 63, 64, 65, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 82, 83, 84, 85, 92, 93, 95, 104, 105, 106, 107n, 111, 114n, 116, 120, 121, 122, 123, 124, 126n, 128, 137, 138, 139, 145, 146, 147, 149, 150, 151, 153, 154, 164, 167, 170, 172, 173, 174, 176, 177, 178, 179, 198n, 203, 204, 205, 206, 219, 227, 228, 231, 233, 234, 235, 236, 237, 240, 241, 243, 244, 248, 249, 251, 252, 253, 254, 255, 267, 271, 272, 274, 275, 276, 280, 281, 282, 285, 287, 289n, 292, 301, 302, 305, 306, 307, 309, 312, 313, 314, 315, 316, 317, 322, 324, 330n, 334, 336, 337, 383, 400, 401, 488, 489, 552, 565
 amalgamation with Ministry of Shipping, 279-83
 co-ordination with Ministry of Shipping, 280, 281
 Defence Plans Section, 52, 57, 58
 departmental organisation of, 104, 105, 267-70
 Engineering Departments, 57, 80, 81
 Inspecting Officers, 48, 73-4
 organisation of, 104-5, 267-70
 Port and Transit Division, 65, 71, 89, 104, 175, 178, 179, 204, 205, 206, 207, 211n, 230, 252, 268, 280, 282
 Railways Division, 104, 116, 122, 123, 252
 Road Transport Division, 104, 268, 305, 307, 308n, 318, 535, 536n, 537, 542, 544
- Ministry of War Transport, 109, 237, 275n, 276, 284, 289, 292, 293, 294, 298, 303, 304, 305, 316, 318, 319, 320, 321, 322, 331, 332, 335n, 336, 337, 338, 339n, 340, 354, 366, 375, 376, 378, 380, 381, 386, 400, 404, 406, 412n, 415, 420, 424, 428, 429, 430, 432, 433, 434, 436, 440n, 441, 442, 445, 446, 447, 451, 453, 454, 465, 467, 468, 476, 480, 488, 490, 494, 495, 497, 498, 499, 500, 501, 502, 503, 504, 511, 512, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 527, 528, 529, 535, 537, 539, 541, 544, 545, 546, 551, 555, 556, 558, 559, 560, 561, 562, 563, 564, 565, 567, 587, 589, 590, 591, 592, 598, 602, 604, 608, 612, 614, 615, 616, 619n, 620, 622, 624, 627, 628n, 631, 632n, 635, 637
 Coasting and Short Sea Division, 557, 560, 615
 formation of, 279-83
 Highways Division, 556-7
 organisation of, 281-2, 555-7
 Port and Transit Control, 281, 282, 283, 556, 557, 561
 Railways Division, 289, 297, 298, 381, 515, 556, 557, 558
 Road Transport Division, 318, 319, 321, 542, 544, 556, 559, 560
- Ministry of Works, 377, 390, 467, 592
- Modern Transport*, 282n
- Moore-Brabazon, Lt.-Col. (now Lord Brabazon)
 See *Minister of Transport*
- Motor Agents' Association, 337
- Motor fuel
 consumption by road transport, 151, 152, 181, 299, 300, 301, 302, 304, 432, 433, 435, 454, 457, 507-8, 546, 552-3, 586-7, 655, 656

Motor fuel, *contd.*

rationing, 50, 56, 76, 77, 78, 79, 80, 92, 102, 133, 134, 145-53, 268, 270, 299, 300, 301, 302, 303, 305, 306, 313, 316, 323, 324, 325, 326, 330, 331, 334, 342, 396, 398, 430-4, 439, 454, 519, 520, 530, 536, 539, 540, 542, 552, 556, 558, 559, 561, 570, 576, 586, 620, 655

black market, 431-2

savings through rationalisation of transport, 507-8

supplies and stocks generally, 50, 76, 102, 150, 299-302, 304, 309, 484, 538, 546

See also Petroleum Department, Producer gas, Road Haulage, Road Passenger Transport, Road Transport

Movement Officers

See Inland transport; co-ordinating organisation of user departments

Munich crisis, 52, 54, 55, 56, 57, 58, 59, 65, 66, 75, 76, 77, 95

Munition industries

bus services for workers, 322, 326, 327, 330, 331-6, 339, 340-1, 396, 519-27, 528, 559

Munitions

transport of, 6, 46, 142, 180, 195, 215, 220, 300, 382, 384, 385, 466, 491, 513, 571, 580, 596, 597

Munitions production

railway workshops and

See Railway workshops; munitions production in

National Farmers' Union, 110

Nationalisation, post-war, 639

See also Railways; nationalisation

Newton, R., *Railway Accounts*, 13

Northallerton-York railway line, 386, 392, 425, 427, 428, 453, 473-82, 593, 600

Norway

coastal ships chartered or acquired from, 165, 167, 170, 347

Overlord, 257, 345, 382, 385, 423, 430, 437, 456, 497, 539, 546, 555, 565n, Chapter XVI, 636

Payton-Smith, D. J., *Oil*, 301n

Petroleum Department, 56, 76, 78, 147, 148

Secretary of, 432

Oil Control Board, 76, 80n, 151, 299n, 301

See also Motor Fuel

Pick, Mr. F., 174, 444, 445, 446

Plant, Professor (now Sir) Arnold, 440, 441, 442

Poland

coastal ships acquired from, 347

Portal, Lord, 440

Port Emergency Committees, 62, 66, 89, 105, 159n, 236, 237, 269, 276, 280, 309, 310, 357, 358, 363, 561, 563, 564, 565

Ports

air attack on, 39, 40, 41, 42, 86, 87, 93, 96, 101, 178, 251, 252, 281

administrative machinery, 64-66, 104, 105, 204, 235-6, 237-8, 280-3, 556, 557, 561

Diversion Room, 66, 214n, 268, 280, 355, 359, 466, 561, 575

Port and Transport Standing Committee, 65, 204

departmental responsibility for, 267-9, 271, 280-2

diversion from East to West Coast ports, 39-44, 46, 48, 71, 72, 83, 86, 87, 88, 93, 96, 101, 102, 110, 131, 132, 141, 155, 156, 159n, 166, 167, 168, 174, 178, 179, 180, 191, 196, 202-14, 225, 226, 230, 235-8, 247, 256, 263, 265, 301, 306, 309, 310, 344, 355-7, 636

diversion to Northern ports before D-day, 588, 599

facilities in, 28, 30

overside discharge in, 88, 89, 155, 166, 167, 168, 266, 353, 356, 357-9, 371, 452

Regional Port Directors, 237-8, 269, 280, 312n, 316, 357, 358, 363, 467, 561, 563

use of S. Wales ports restricted through transport difficulties, 462-3

See also Imports

Postan, M. M., *British War Production*, 210n, 211n, 215n

Potatoes

transport for, 354-5, 450, 467, 476, 489, 507, 576, 585, 586, 618, 627, 633

Pratt, E. A., *British Railways and the Great War*, 4n, 6n, 8n, 9n, 47n, 111n, 197n, 243n

Prescott, Sir William, 278

Prime Minister

(Mr. Chamberlain), 127

(Mr. Churchill), 180, 211n, 252n, 264, 265, 281, 341, 505, 594n, 595

Priorities Committee, 116, 117, 118, 278

Producer gas, 279, 435-8, 441, 560

Production Council, 264

Production Executive, 250, 264, 334, 340, 403

Public utilities

coal supplies to, 25-6, 52, 63, 68, 69, 70, 86, 87, 90, 117, 135, 136, 137, 191, 344, 449

Railway companies, 5, 9, 31, 43, 51, 60, 61, 72, 73, 92, 94, 95, 101, 119, 120, 121, 122, 123, 124, 126, 127, 248, 251, 252, 284, 288, 290, 424, 557

amalgamation of, 9, 10, 31, 288, 289

war-time proposals for, 288-9, 290

financial position between wars, 10, 11, 17, 29, 34, 45, 124

Government assistance, 30

Governments' financial agreements with

First World War, 6, 123, 287, 288, 291

Second World War, 52, 55, 58, 60, 103

1940 agreement, 123-9, 176, 271, 283, 284, 285, 286, 287, 288, 290, 294, 295, 566

companies' dividends, 285

1941 agreement, 198n, 284-96, 447, 448

results of, 291

meetings of General Managers, 31, 52

operation of road services by, 12

ports and, 28

'Square Deal' campaign, 17-19, 27, 95, 248

subsidy proposals, 284, 285, 286, 287, 288

Railway Executive Committee

First World War, 5, 6, 9, 44

Second World War, 52, 55, 58, 59, 60, 61, 62, 63, 64, 69, 73, 94, 101, 104, 105, 106, 109,

111, 112, 113, 114, 115, 119-23, 127, 135, 138, 164, 176, 177, 191, 197, 204, 205, 206,

211, 223, 224, 226, 228, 231, 237, 239, 241, 243, 244, 245, 247n, 248, 249, 250, 251,

254, 255, 268, 275, 283, 284, 285, 287, 292, 293, 339, 354, 378, 389, 390, 401, 403,

404, 405, 406, 409, 410, 413, 414, 415, 416, 417, 419, 422, 429, 456, 466, 469, 479,

489, 490, 491, 494, 513, 514, 515, 557-8, 570, 572, 573, 574, 577, 578, 579, 581, 588,

589, 598n, 599, 600, 613, 614, 623, 627, 628n, 632n

functions and organisation, 120, 121, 557-8

membership of, 101n, 104, 119-20, 557

reorganisation, 1941, 289, 292, 293, 294, 297-8

weaknesses of 1939 body, 121-3, 286, 287, 288, 289, 292

Railways

air attack on, 6, 42, 47, 70, 73n, 94, 96, 97, 112, 113, 114, 129, 131, 141, 178, 180, 195,

196-202, 205, 207, 215, 216, 217, 219, 223, 224, 225, 226, 229, 231, 232, 240, 245,

247, 248, 249, 256, 272n, 350, 351, 375, 424, 454, 611-13, 636

analysis of damage, facing 226, 611

number of incidents, 198

Air Raid Precautions. *See Air Raid Precautions*

precautions taken by railways, 74, 75, 198

distribution of cost of, 53, 57, 74, 75, 81, 123n, 198

effect of blackout and A.R.P. on railway working, 6, 47, 97, 112, 113, 114, 115,

196-202, 224, 272, 426, 454, 464, 611, 637

before First World War, 3, 4

between wars, 9-13, 17-19, 29-33

bottlenecks. *See Railways; line capacity*

capacity generally, 43-8, 66-75, 106-15, 127, 139, 140, 164, 166, 175, 176, 177, 178,

200, 201, 202, 205-7, 217, 218, 224, 247, 248, 249, 264, 274, 351, 362n, 394, 398, 580,

581, 593, 599, 600, 610

surplus capacity, 30, 31, 43, 44, 45, 46, 47, 48, 76, 93, 106, 175, 247, 248, 264, 270

capital equipment generally, 29, 30, 46, 47, 73, 637, 638

coal transport demands and difficulties, 67, 68, 69, 70, 86, 87, 94, 102, 103, 104, 117-18,

135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 179, 180, 191, 202, 215-19, 227, 246,

247, 255, 382n, 384, 386, 392-3, 425, 427, 428, 454, 477-9, 482-3, 577, 578, 579, 580,

585, 587, 600, 601, 629-32, 633

competition from road transport, 11-19, 30, 45, 49

Railways, *contd.*

congestion on

First World War, 8, 41, 47

Second World War, 47, 48, 73, 118, 119, 137, 138, 180, 191, 192, 193, 194, 197, 200, 201, 202, 203, 207, 208, 212, 213, 214, 219, 221, 223, 224, 225, 226, 227, 229, 231, 232, 240, 245, 248, 251, 255, 263, 287, 309, 310, 382n, 384, 392, 407, 415, 418, 421, 424-30, 453, 456, 462-83, 506, 508, 546, 570, 574, 575, 576, 577, 578, 579, 580, 581, 586, 588, 593, 599, 603, 611, 612, 613, 627, 628, 636

control over

before First World War, 4, 5

First World War, 4, 5, 6

inter-war period, 9, 12

pre-Second World War preparations, 50-3, 55, 58, 59, 60-4, 95

September 1939-summer 1941, 101, 119-23, 129, 176, 229, 241, 243, 256, 268, 272, 283, 288

summer 1941-end of war, 276-96, 457, 557

Railway Control Officer, 59, 60, 62, 63, 64, 101, 104, 115, 116, 120, 121, 122, 123, 268, 289n, 292, 293

Controller of Railways, 288, 289, 293, 294, 297, 298, 557, 558

Controller of Railways' Conference, 293, 298, 410n

See also Railway companies; Government's financial agreements with, Railway Executive Committee

crisis of 1940-41, Chapters V and VI

D-day and

See Railways; Overlord and

demands

co-ordination of, 56, 59, 61, 67, 70, 72, 105-6, 195

Railway Communications Committee, 59, 60, 61, 64, 66, 67, 70, 71, 105, 115, 271, 278, 343

See also Inland transport, co-ordinating organisation of user departments

diversion of traffic from canals to, 133, 139, 171, 172

diversion of traffic from coastal shipping to, 26, 40, 46, 67, 70, 86, 90, 91, 94, 96, 97, 102, 117, 133, 134, 135, 136, 137, 139, 142, 143, 155, 163, 164, 168, 169, 215, 247, 351, 352, 354, 474, 478, 585, 600, 635

diversion of traffic from railways, 277, 284, 300, 304, 310, 351, 469

diversion of traffic from road transport to, 50, 76, 80, 94, 97, 133, 134, 139, 142, 150, 176, 177, 300, 536, 542, 548, 570, 635

passenger traffic, 339-40, 386, 433, 529, 566

diversion of traffic from other forms of transport to railways generally, 103, 125, 129, 133-5, 139, 176, 283, 284, 286, 578, 579, 635

Dunkirk and, 140-1

electricity for, 48

electrification of, 30

engineering and, 3, 198, 199, 572

evacuation and

See Evacuation scheme

junctions, 43, 48, 74, 140, 197, 200, 201, 209, 210, 216, 217, 218, 219, 223, 224, 226, 228, 245, 246, 248, 455, 574, 631

length of haul, 70, 102, 137, 139, 140, 143, 144, 175n, 209, 210, 211, 212, 215, 216, 222, 223, 354, 361, 378, 379, 393, 427, 457, 474, 482, 487, 490, 588, 634n

liaison between railways and Government departments, 59-62, 105, 194, 195, 212-13, 229, 234, 275, 379-81, 413, 416

liaison between railways and other forms of transport, 62, 105

line capacity, 6, 40, 46, 47, 48, 112, 114, 193, 194, 218, 219, 224, 225, 229, 255, 274, 354, 386, 392, 398, 399, 424-30, 454, 457, 480-2, 506, 512, 571-2, 574, 593, 631

manpower

absenteeism, 577, 578, 628

effect of air raids on staff, 97, 200

employment of women, 419, 420, 421, 422, 651

loans by Services, 592

morale of staff, 196

numbers employed, 419, 421, 591, 592, 634, 651

overtime work, 30

pay and conditions, 98, 422, 423, 573, 590

productivity, 424

recruitment of juveniles, 422-4

reservation from military service, 419-20, 421

Railways, manpower, *contd.*

- shortage generally, 40, 392, 398, 418-24, 453, 454, 455, 456, 465, 512, 569, 572, 573-4, 577, 578, 580, 581, 589, 590-3, 609, 610, 625, 632, 636, 637
 - firemen shortage, 421, 423, 591-2
- sickness, 392, 421, 577, 578, 581, 628
- transfers, 421
- marshalling and goods yards, 6, 30, 44, 46, 73, 94, 140, 194, 196, 197, 201, 212, 218, 219, 222, 223, 226, 245, 246, 429, 453, 574, 611
- nationalisation of, 9, 284, 285, 287, 288, 639
- new works, 30, 31, 73, 74, 75, 95, 106, 114, 140, 198, 206, 225, 229, 248-51, 252, 255, 266, 270, 399, 426, 428-30, 454, 463, 479-80, 571-2, 593, 631
 - expenditure on, 107, 248, 249, 250, 251, 257-62, 426
 - list of, 257-62
- operating difficulties, 47, 48, 191, 196-202, 212, 213, 214, 218, 219, 224, 245, 292, 573, 611, 614
- operating techniques, 192-5
 - improvements in efficiency, 240-7, 255, 270, 457
 - freight train control, 244, 250
 - through train working, 245, 246, 247
 - traffic analysis, 245, 246
- operational unity, 121, 229, 241, 243, 244, 287, 288, 289, 292, 293, 297, 639
- organisation and operation of traffic, 228, 229, 426, 457, 482, 636
 - coal traffic, 7, 138, 139, 219, 231-4, 246, 247, 256, 464, 477, 478, 479, 491, 562n
 - Government traffic, 194, 229, 230-40, 256, 270
- Overlord and, Chapter XVI
- passenger travel
 - control of, 46, 394, 514, 515, 516, 517, 518, 581, 598, 599
 - propaganda, 394, 517, 518
 - cuts in services, 7, 97, 112, 113, 232, 233, 277, 279, 393, 465, 479, 511, 512, 513, 514, 515, 516, 518, 519, 567, 574, 580, 598, 599, 601, 602, 610, 613, 614, 623, 624, 625, 633
 - demand generally, 512, 513
 - See also Railways; traffic; volume of*
 - permanent way, 6, 29, 40, 47, 572, 638
 - port diversion and
 - See Ports; diversion from East to West Coast ports*
- pre-war preparations, 37-53, 55-6, 58-75, 91-5, 97-8, 101, 103, 106, 112, 115, 120, 123, 124, 135, 164, 174, 175, 177, 178
- rates and charges
 - control over, 5, 7, 8, 9, 10, 12, 13, 15, 16, 18, 25, 26, 27, 103, 123, 125, 126, 139, 140, 284, 547, 565-7
 - for Government traffic, 123, 125, 126, 128, 129, 291, 294-6, 566
 - level of
 - First World War, 6, 7, 123, 126
 - between wars, 11, 16, 46
 - Second World War, 103, 125, 126, 127, 128, 129, 133, 134, 168, 284, 285, 286, 287, 291, 340, 355, 487, 548
 - Railway Rates Tribunal, 9, 10, 26, 27, 127, 128, 566
 - road-rail competition and co-ordination (inter-war), 11-19, 30, 45, 49
- safety, 31, 637n
- Services and,
 - See Services; transport demands*
- signalling equipment, 60, 426, 429, 463, 572
- signalling system, 193
- speed, 31, 40, 97, 112, 114, 144, 200, 637n
- track mileage, 3, 4
- traffic embargoes and restrictions, 110, 115, 116, 225, 226, 227, 382n, 425, 453, 455, 473, 565, 574, 577, 578, 588, 600, 601, 602, 604, 627, 628, 630, 631
- traffic forecasting and planning, 376-81, 382, 389-90, 391-4, 416, 570-1, 588, 589, 596-7, 599-602, 622, 623
- traffic flow, changes in, 71, 72, 180, 191, 208, 209, 210, 214, 215, 218, 219, 220, 221, 222, 223, 224, 225, 236, 242, 245, 246, 248, 356, 361, 379-80, 385, 386, 425, 427, 464, 474, 578, 593, 629
- traffic priorities, 56, 59, 60, 61, 63, 64, 92, 115-19, 138, 157, 230, 231, 270, 483, 565, 579, 580, 602
- traffic types, changes in, 191, 208, 210, 211, 214, 221, 222, 223, 224, 427, 474

Railways, contd.

- traffic volume
 - before First World War, 4
 - First World War, 6, 7, 8, 46
 - between wars, 29, 41, 45
 - Second World War, 129-44, 175n, 208-10, 222-4, 249, 256, 378, 381, 382, 383, 384, 389-90, 393, 454, 456, 457, 507, 569-70, 576, 589, 603, 622, 623, 632, 634, 640, 643, 644
 - coal traffic, 113, 118, 139, 142, 143, 144, 215, 216, 217, 222, 352, 378, 382, 383, 384, 393, 579, 603, 622, 623, 630, 634, 640, 643, 644
 - passenger traffic, 144, 220, 221, 225, 249, 386, 387, 393-4, 455, 456, 511, 515, 518, 531, 570, 580, 581, 589, 598, 599, 603, 613, 623, 628, 632, 633, 634, 647
- train loads, 113, 144
- wages, 127, 129
- war damage costs, treatment of, 125, 285, 286, 288, 290, 291
 - See Railway companies; Government financial agreements with*
- Railways Act, 1921, 9, 10, 11, 12, 17, 26, 34, 52, 124**
- Railway trade unions, 200, 465, 592n**
- Railway wagons, etc.**
 - coaching stock, 512, 625, 626, 627, 633, 634, 638
 - under repair, 626
 - coal distribution and, 68, 69, 86, 87, 109, 110, 111, 112n, 135, 238, 239, 240, 243, 575, 576, 578, 604, 630, 632
 - demurrage charges, 53, 56, 68, 69, 97, 109, 110, 111, 112, 114, 135, 219, 239, 240, 413-16
 - Government departments, 414-15
 - standage scheme, 414, 456
 - insulated vans, 6, 227, 241, 242, 243n
 - loans to France and Belgium, 627
 - operating stock, 29, 40, 52, 68, 69, 108, 109, 112, 114, 392, 412, 416, 417, 634, 649, 650
 - output, 108, 109, 253, 254, 398, 411, 412n, 418
 - pooling arrangements, 7, 53, 56, 68, 69, 97, 108, 109, 135, 229, 241-3, 392, 399, 411, 412, 416, 575, 639
 - inter-company wagon control organisation, 243, 392, 416
 - requisitioning of private wagons, 68, 69, 108, 109, 114, 243
 - shortage
 - First World War, 6, 40
 - Second World War, 132, 207, 208, 226, 227, 238-40, 241, 253, 255, 399, 410, 411, 412-18, 455, 456, 573, 574, 575, 576, 577, 578, 580, 581, 586, 589, 626, 627, 628, 633
 - special types, 211, 220, 236, 241, 253, 254, 255, 357, 399, 410, 411, 455
 - statistics summarised, 461
 - turn-round, 53, 56, 68, 94, 109, 110, 111, 194, 205, 207, 208, 212, 213, 214, 217, 218, 219, 223, 226, 235, 238, 239, 240, 241, 245, 266, 272, 392, 411, 412, 413-16, 418, 456
 - under repair, 108, 392, 398, 410n, 412, 416, 417, 418, 461, 573, 626, 633, 634, 638, 649-50
 - manpower for repairs, 418
 - repair arrangements, 109
 - wagon miles, 645, 646
 - wagon sheets, 6, 7, 40, 208, 242
- Railway workshops, 107, 108, 109, 114**
 - machine tools, 405
 - manpower in, 40, 398, 400, 401, 404, 405, 406, 407, 408
 - munitions production in, 6, 40, 114, 400, 403, 405, 410, 466
- Rates and charges**
 - relative levels of different forms of transport, 7, 8, 11, 12, 16, 17, 18, 57, 58, 83, 91, 92, 133, 134, 155, 168, 171, 172, 178, 186, 206, 355, 395, 443, 444, 445, 488, 547, 548, 549, 562, 565-8
 - Government departments to ignore, 562
- Raw materials**
 - rationalisation of transport and, 488
 - transport of, 376-81, 466-7
 - D-day cuts, 596, 597
 - See also Iron Ore, Steel*

- Regional Transport Commissioners, 54, 55, 56, 57, 77, 78, 79, 80, 104, 134, 145, 146, 147, 148, 150, 153, 154, 268, 276, 299, 300, 303, 306, 307, 309, 310, 318, 319, 320, 321, 324, 325, 326, 330, 331, 334, 336, 337, 338, 339, 340, 432, 433, 434, 436n, 438, 496, 498, 499, 500, 504, 522, 524, 526, 527, 528, 529, 530, 536n, 538, 544, 547, 552, 558, 559, 560, 563, 564, 567, 586, 587, 601
See also Road transport generally; regional and local organisation
- Regional Transport User Committees, 601
- Reith, Sir John (now Lord)
See Minister of Transport
- Relief to liberated territories, 627, 628, 629, 631, 633
- Retail distribution
 rationalisation of, 278, 303-4, 431, 441, 487, 492, 494, 498-501, 508, 509, 525, 539
- Ridley, Lord, 435, 437
- Ritchie, Sir Douglas, 278
- Road and Rail Traffic Act, 1933, 15, 16, 53
- Road Goods Transport Special Emergency Committee, 308
- Road haulage
 capacity forecasts, 596
 coal and, 631
 competition with coastal shipping, 27
 control over
 pre-war plans, 53-7, 75-80, 92
 control 1939-1942, 101, 102, 145-54, 176, 177, 268, 302, 303, 305, 431
 effects on motor fuel consumption, 151, 152
 proposals for strengthening, 305, 307-8, 312-20
 weaknesses, 304-12
 control, 1942 scheme, 320-2, 440, 441, 442
 weaknesses, 533-8
 control, 1943 scheme (including Road Haulage Organisation), 538-53, 558, 559, 565, 575, 576, 586, 619, 639
 administration of, 541-5, 551-2, 556, 560
 criticisms of, 549-53
 fuel consumption, 552-3, 586
 numbers in scheme, 552-3
 value, 604-5
 volume of traffic carried by Road Haulage Organisation, 546, 554, 586, 587, 593, 604, 619
 decontrol, post-war, 639
 defence lines scheme, 538
 emergency pools and shadow groups, 279, 310-12, 317, 319, 320
 Emergency Road Transport Organisation, 76-80, 92, 145-54, 305, 306, 539, 540, 543, 544n, 556, 558, 559
 volume of traffic moved by, 559
 empty running, 550-1
 Government owned fleet, 314-21, 533, 534, 535, 536, 537
 industry's objections to control, 320, 322, 536, 537, 545
 Meat Transport Pool, 314-16, 319, 320, 321, 533, 536, 537, 544, 545
 Ministry of War Transport organisation for, 556
 diversion of traffic from railways to, 300, 304, 310, 469, 470, 576, 586
 diversion of traffic to railways from, 44, 50, 76, 80, 94, 97, 102, 133, 134, 142, 150, 176, 177, 300
 functions generally in war-time, 44, 49, 50, 54, 76, 80, 102, 133, 176, 387, 396-7, 453-4, 548, 558, 563-4, 570, 576, 586, 604, 619, 620
 licensing of, 14, 15, 16, 32, 53
 loan of vehicles from Services, 594
 manpower shortage, 309, 397, 594
 motor fuel consumption, 151, 152, 299, 300, 301, 302, 304, 432, 433, 435, 454, 457, 507-8, 546, 552-3, 586-7, 655, 656
 nationalisation of, 639
 number of vehicles licensed or rationed, 11, 31, 38, 43, 49, 54, 77, 152, 430, 454, 457, 546, 619n, 620
 port clearance and, 43, 44, 49, 54, 210n, 300, 304, 306, 309, 310, 604, 636
 pre-war preparations, 44, 48, 49, 50, 53-7, 75-80, 149
 rates and charges, 11, 12, 16, 17, 18, 311, 312, 534, 541, 542, 549, 550, 567
 control of, 547-9, 550, 565, 567
 Government traffic charges, 548-9, 567
 rationalisation schemes, Chapter XII

- Road haulage, *contd.*
 registration duty, 14, 15
 requisitioning of vehicles, 54, 56, 76, 79, 306, 307, 308
 retail delivery cuts, 80, 303-4, 431, 441, 487, 492, 494, 496, 497, 498-501
 Road Haulage Consultative Committee, 76, 154, 313, 314
 Road Haulage (Operations) Advisory Committee, 319, 320, 534n
 statistics, availability of, 48, 49, 53, 54, 152, 153
 structure of industry, 11, 17, 32, 53, 153, 306, 322, 540, 553
 volume of traffic carried by, 49, 134, 387, 396-7, 457, 533, 535, 536, 542, 546, 593, 594, 619, 634
- Road passenger transport generally
 control over and cuts in, 7, 53, 76, 78, 101, 112, 113, 145, 148, 149, 268, 300, 301, 302, 324, 325, 330, 331, 334, 394, 433-4, 529
 effect on motor fuel consumption, 151, 152, 432, 433
 post-war decontrol, 639
 licensing system, 13-16
 numbers licensed, 11, 31, 38, 49, 78, 152, 323, 532
 rates and charges, 11
 control over, 565, 566, 567
 requisitioning of, 53, 76, 79
 structure of industry, 32, 78, 323-4, 332
 volume of traffic, 31, 32
See also Bus services, Motor fuel
- Road safety, 15
- Road Traffic Act, 1930, 13, 15
- Road transport generally
 control over
 regional and local organisation, 54, 55, 56, 57, 77, 78, 79, 80, 104, 149, 309, 316, 320, 431, 434, 442, 534, 535, 539, 540, 541-5, 551-2, 558, 559, 560
- Roads and bridges
 administration of, 556-7
 air raid precautions, 57
 classification of, 20
 construction and development, 4, 19, 20, 21, 32
 suspension of, 81
 costs, 14
 maintenance of, 81, 82, 442
 pre-war preparations, 57, 80-2
 Road Fund, 19, 20
- Robbins, Professor L., *The Nature and Significance of Economic Science*, 267n
- Rootes, Mr., 337
- Roskill, S. W., *The War at Sea*, 89n, 215n, 233n
- Royal Air Force, 160, 330, 522n, 592n, 621
- Royal Commission on Transport, 1929, 11n, 12n, 13, 14, 21, 28
- Royal Navy, 160, 169
- Salter, Sir Arthur (now Lord), 14
- Select Committee on National Expenditure, 265, 332, 335, 336, 340, 550
- Service Departments, 56, 59, 110
- Services
 transport demands
 bus travel, 322, 326, 327, 330
 manpower lent to inland transport by, 454
 railways generally, 40, 46, 56, 62, 71, 97, 102, 129, 130, 131, 195, 249, 385, 387, 393, 395, 455, 456, 468, 512-13, 515, 610, 612
 Dunkirk, 140-1
 Overlord, 385, Chapter XVI
 priority on, 115, 116, 117
 Railway Traffic Officers, 62n
 Service leave, 220, 387, 394, 512-13, 516, 518, 598, 603, 612, 623
 road transport, 56, 79, 147, 520, 558
- Severn Tunnel, 30n, 40, 73, 210, 216, 218, 225, 233, 259, 261, 262, 267n, 379, 425, 426, 463, 593
See also South Wales

- Shipping
 shortage generally, 265, 281
 turn-round time, 42, 207, 208, 227, 249, 253, 265, 280, 281, 282, 356, 557, 563, 636
See also Imports, Ports
- Sinnett, W. E., *Railway Amalgamations in Great Britain*, 6n, 9n
- Smith, Mr. F. G., 337
- Southern Railway, 34, 199, 201, 217, facing 226, 242, 244, 289n, 393, 611, 624
 new works, 257-62
- South Wales
 bus problems, 333-4, 338-9, 340
 transport difficulties in traffic from, 107, 180, 216, 217, 218, 225, 226, 233, 250, 267n, 379, 383, 386, 392, 393, 400n, 425-7, 453, 462-72, 512, 546, 562, 575, 593, 599, 600
See also Severn Tunnel
- Stabilisation policy, 126, 287, 291, 518, 548
- 'Staggering' of working hours, 279, 329, 336, 340, 396, 433, 559
- Stamp, Lord, 272-3, 278
- Steel
 imports, 211, 254, 575
 output, 142
 effect of wagon shortage on, 577
 transport difficulties, 211, 222, 236, 253, 254, 255, 355, 393, 411, 428, 466, 474, 479, 489, 575, 622, 628n, 633
 pre-D-day, 597, 599
- Storage space, 111, 112, 223, 228, 237, 466, 597
- Summer time, double, 454
- Szlumper, Mr. G. S., 292
- Thames
 bridges, 81, 82
 rail crossings, 73, 106, 199, 217, 224
- Thornton, R. H., *British Shipping*, 23n, 35n
- Tilling, Thomas, 278, 436n, 437
- Timber
 rationalisation of transport of, 489
 transport difficulties, 212n, 236, 254, 411, 467, 585, 597, 628n
- Titmuss, R. M., *Problems of Social Policy*, 130n, 612n
- Tobacco
 rationalisation of transport, 495, 498, 501-3
- Transport Advisory Council, 15, 18, 278
- Transport and General Workers' Union, 78n, 150, 278, 338, 523
- Treasury, 60, 68, 74, 79, 82, 84, 107n, 124, 125n, 137, 173, 198, 236, 248, 253, 285, 287, 296, 314, 355, 445, 447, 448, 488, 568
- Tyres, 304, 337, 342, 393, 396, 398, 433, 438-42, 454, 519, 533n, 536, 540, 542, 551, 552-3, 561, 570, 620
 control of, 439, 441, 442
 economies in use of, 439-42
 statistics for, 485, 576
- United States of America
 coasters lent to U.K. by, 595-6
 locomotives lent to U.K. by, 406, 409, 410, 456, 572, 625, 626, 632
 U.S. Forces' transport demands, 385, 386, 387, 391, 392, 393, 455, 513, 520, 570, 600
See also Bolero
- Walker, G., *Road and Rail*, 9n, 12n, 15n, 16n, 17n, 49n, 94n, 550n
- Walker, Sir Herbert, 5, 44
- Wallace, Capt. Euan
See Minister of Transport
- War Cabinet, 127, 128, 167, 169, 191, 205, 227, 231, 235, 250, 266, 267, 280, 285, 286, 287, 289, 290, 326, 328, 329, 332, 341, 349, 403, 487, 587, 597
 Committee structure, 264-5
 Economic Section of War Cabinet Office, 132n, 142, 202n
- War Office, 51, 81, 107, 117, 170n, 198, 275n, 325, 341, 377, 390, 402, 403, 413, 440, 467-8, 487, 522, 563, 591, 592n, 602, 622
See also Services

Weather

effects on transport, 113, 117, 136, 137, 138, 139, 164, 180, 206, 217, 393, 454, 455, 456,
571, 576, 580, 581, 603, 610, 620, 623, 628, 629, 630, 636

Wedgwood, Sir Ralph, xviii, 119, 197, 293

See Railway Executive Committee

Weir, Sir C., 228, 235

Willesden Junction, 201

Woolton, Lord

See Minister of Food

Zoning schemes

See Inland transport; economies in use of; rationalisation of transport

