II-The present pattern of traffic between main centres of population and industry

It is obvious that the traffic moving over many sections of existing routes may be compounded of a mixture of flows between quite different pairs of points in the country, and the nature of the mixture may be strongly influenced by the chance characteristics of the existing network. Therefore, measurements of traffic densities along existing routes are of little value for our present purpose.

What it is necessary to know, as a basis for providing the most suitable services and routes of the right capacity, is the volume and nature of the traffic flowing between all pairs of main centres of population and industry.

Freight traffic

For rail traffic, comprehensive surveys were made in connection with the report on ' The Reshaping of British Railways ', which denned the flows of the main categories of freight between traffic areas in 1961. To establish the present pattern of rail traffic between main centres of population and industry, the Reshaping Report information was used as a back-ground. This information was modified in the light of special studies undertaken over the interim period, and checked by comparison with regular statistics of the forwarding of each of the principal commodities by traffic areas, now available to the Board.

Rail traffic was first divided into the following categories: —

(i) Coal

(ii) Iron and Steel (raw materials and products)

(iii) Oil

(iv) Other Traffic, including General Merchandise

These main categories were then considered in more detail so that, for example, individual consideration was given to the principal commodities and industries covered by (iv). A number of traffic centres was chosen to cover all the important producing and consuming areas. In total they amounted to about 40 centres which gave a geographical spread over the main areas of population and industry. This enabled the great majority of all freight requiring trunk transport to be identified and analysed.

For the four main freight categories set out above, data about the flows between the 40 centres were collated, analysed, and recorded on large tables or matrices, examples of which are given in Appendix ' C '.

Because of the configuration of the country and the distribution of populous areas, even 40 centres proved to be too many for the purpose of considering trunk flows. Because many of the centres are so close together in relation to trunking distances, there is, inevitably, a grouping of traffic from them for the purpose of trunk haulage.

Therefore, for ease of comprehension and presentation, the 40 centres were grouped into 14 areas (see Map 3).

The omission of particular towns does not mean that their traffic potential has been disregarded: adjacent centres such as Southampton and Portsmouth, or Leeds and Bradford, have been grouped together because they can both be served by the same trunk flows.

Maps 4 to 7 show, in diagrammatic form, the rail freight flows between14 main areas, of coal, iron and steel, oil, and other freight. Map 8 shows the total flows of rail freight.

The trunk flows of coal shown on Map 4 cover the movement of about45 million tons per annum, and of particular importance is the East and West coal movement in the industrial Midlands. On this same map, heavy local flows have also been indicated because they account for the major part of the total rail tonnage, and their magnitude is indicated by the size of the red circles. In many cases they pass mainly over feeder routes which exist solely to cater for them, and make relatively little use of the main through route network. Even so, the potential of the trunk route system is better appreciated if the place of the railways in handling intense local flows is not lost to sight.

It will also be noted that the iron ore, and other materials and products, of the iron and steel industry have been distinguished in Map 5, because of their greatly differing characteristics from the transport point of view.

For road traffic, the main source of information was the Ministry of Transport 'Survey of Road Goods Transport 1962'. Part I of the Final Results of this Survey has already been published and it was possible to supplement this by advance information drawn from the partially completed analyses of individual commodities and traffic flows. Whilst full analyses may reveal differences of detail, it is not considered that they will be important enough to affect the basic pattern that has emerged. In addition, much detailed information about road traffic was available from the surveys undertaken in connection with the Reshaping Report. Also, in assessing the future availability of liner train traffic, account was taken of detailed market assessments which have recently been completed in relation to the first five routes to be developed.

Road-borne freight between main centres has not been subdivided into commodity categories, as in the case of rail freight, because the majority of long distance traffic falls into the general merchandise category. Thus, although large tonnages of coal are moved by road from the pits, and also during final delivery, nearly all these movements are over the shorter distances, and less than 3 million tons is conveyed by road for more than100 miles. The position is similar in the case of oil, only about 2 million tons being conveyed over 100 miles. These quantities are small in relation to the total of 70 million tons of freight moved by road on direct trunk hauls over 100 miles. In the case of iron and steel, road traffic between main centers is largely limited to products of the industry and, from a transport point of view, these do not

differ from other general merchandise traffics in any significant respect. The flows of all road-borne freight traffics are shown in Map 9.

Coastwise freight amounts to about 50 million tons. It consists largely of coal and oil, with only about 5 million tons of other commodities. For both coal and oil, this method of transport meets a specialised need. For oil, the main purpose is movement from refineries to depots and large consumers located on or near the coast. In the case of coal, most of the traffic flows from the North East to large consumers, such as power stations and gasworks, in the South East.

It is estimated that the traffic flows shown in Maps 8 and 9 cover more than 95% of the road and rail-borne traffics moving over distances of more than 100 miles. In the case of road very little traffic conveyed under 100miles has been included, whilst for rail, some traffic conveyed for distances of somewhat less than 100 miles, notably in the coal and iron and steel categories, have been included.

Passenger traffic

From statistical information available to the Board it was possible to establish the flows of passengers between the main centres. The results of this analysis are shown in Map 10. The dense flows in the South Eastern area, centred on London, have been excluded, together with commuter traffic around other conurbations, and other short distance traffic generally.

A study was made of the movement of passengers on the domestic air routes. Where published traffic figures were available these were used, but in general the flows were derived from an analysis of the scheduled flights by taking into account the types of aircraft used and applying an estimated load factor. The result of this analysis is shown in Map 11.

The long distance coach flows shown in Map 12 were derived in a similar manner. A detailed analysis was made of all the long distance scheduled coach services. From this analysis the flows were estimated by taking into account the seating capacity of the coaches and the load factor indicated by sample observations. This was then checked against the available published information of road coach traffic.

Reliable and comprehensive information is not available about the inter-city journeys made in private cars.