

Airport Access to Heathrow Airport, London

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•TO GIVE the proper picture of the public transportation demands of London's airports, I will discuss the traffic position of Heathrow, the major airport serving the London area. The number of passengers handled at Heathrow in relation to the other major airports in the world is high, particularly the number of international passengers. This is important in that the high proportion of international passengers, and especially those who are not residents of the United Kingdom, affects our attitude toward the provision of public transportation.

Heathrow is to the west of the center of London and connected by a freeway for 9 of the 15 miles from the airport to the city center. Gatwick, the second major airport, is 27 miles to the south. Stansted, which is a smaller airport, is 33 miles to the north-east. As yet, we do not know the location of the proposed third major airport to serve London, but sites suggested by the commission investigating this problem are beyond the 45-mile distance.

A number of scheduled buses operate between Heathrow and airline town terminals, and they are based on check-in facilities for departing passengers in town. The disadvantages of buses operating in mixed traffic are, of course, apparent; and increasing road congestion is resulting in increased travel times and a reduction in the use of the service between the airport and the city center.

Gatwick, at which traffic increased by 43 percent last year, is likely to become increasingly important over the next few years. It is one of the few European airports served by rail as it is located on a main trunk route between London and the South Coast. The station, terminal building, and road access are integrated into one passenger-handling unit. The time between the airport station and the city center at Victoria is 40 min, and about 40 percent of the passengers use the rail link.

The principal demand for public transportation will be to Heathrow where we anticipate that traffic will double in the next 6 to 7 years and be over 30 million by 1980. Demand for transportation to the airport for air passengers cannot be satisfactorily met by the road system, and public transportation from the city center to the airport is absolutely vital to the airport's continued satisfactory growth. At this point I would like to mention the difference in ground traffic characteristics of airports serving European cities and those serving U. S. cities. These differences are influenced by the nature of the cities, with the older European cities having defined city centers, compared with the decentralization noticeable in the United States. The city center is the focus of all tourist and business activities and attracts a significant number of visitors traveling to the hotels in the city. There are severe limitations on the improvement of road access due to the character of the city, and public transport, although declining, is still widely used in Europe as compared with the United States. The overall effect of this is that public transportation between the airport and the city center is a more viable proposition in Europe than in the United States.

Traffic studies at Heathrow Airport that were conducted in 1966 established that 40 percent of departing passengers originate in central London, mainly in the hotel zone of the West End, and 30 percent originate in the suburbs. Fifty percent of passengers are nonresidents of the United Kingdom, and 80 percent of those originating in central London are nonresidents. About 50 percent of passengers use public transport to reach

the airports (principally buses). Passengers originating in central London make the greatest use of public transport—about 70 percent use public transport. Therefore in London, the principal market to be served by public transportation is passengers between the city center and the airport. Most of these passengers are nonresidents of the United Kingdom without other means of transport and, inasmuch as London is the hub of a rail network serving the whole of Great Britain, a public transportation link to the airport would also serve passengers originating in the regions outside London.

To show how public transportation systems can serve Heathrow, it is necessary to describe the existing transportation systems that can be adapted to serve the airport. The urgency of the need for the service that I have mentioned is such that it is essential to limit consideration to current technology. London's public transport system can be divided into the following three categories:

1. British rail services, which serve the commuting region of the remainder of Great Britain and terminate at a number of main-line terminals on the circumference of the city center and which might be described as conventional duorail;
2. Subway or underground services, which form a complex network within a radius of about 20 miles of the city center, primarily on a radial pattern with interconnecting routes within the city center; and
3. Ordinary London Transport bus services.

Only the two rail systems could be adapted to serve Heathrow Airport. Schemes for both systems have been proposed for many years and, following proposals by both parties, the Authority decided that the system offering the most advantage to the traveling passenger was the direct line from Victoria to Heathrow. This service would be nonstop between the town terminal at Victoria and the airport, offering check-in and baggage-handling facilities and a journey time of 23 minutes. It would operate mainly over existing tracks with a 2-mile extension to the airport. The London Transport service would be a 3-mile extension of an existing line as far as Hounslow West station, without baggage-handling facilities and with a travel time of 35 minutes between the airport and Hyde Park Corner.

The subway, or tube line, connects to the general system within London and is not designed to serve any specific category of user, although it would provide good facilities for some of the 42,000 people who work at the airport. However, its defect as far as air passengers are concerned is that it gets very congested as it passes through the city center, and we doubt the ability of the system to provide the air passenger with a satisfactory level of service during the peak hours. In addition, although the main-line duorail operates on a 24-hour basis, the subway system is closed for several hours at night for maintenance purposes, and buses would have to serve the airport during this period. The proposed route to the airport for both systems passes in a tunnel underneath the runway and taxi systems into a passenger terminal in the center of the airport, which presents formidable but surmountable construction problems. All passenger terminals will be within easy walking distance of the central station and, with the aid of subways and passenger conveyors where necessary, access to these terminals will be very good. Therefore, the interchange between the public transportation mode to the air mode is easy and potentially one of the best for all major airports in the world. The layout of the station is not yet in final form, but early designs covering the ultimate implementation of both systems allowed for an interconnecting concourse with easy access to terminals.

Either system is economically viable, although the fare levels necessary to ensure this are substantially different. The higher fare level for the conventional duorail reflects the high standard of comfort and convenience that would apply. As to traffic volumes likely to use the fixed rail link, we estimate that by 1980 about 9 million people, or 30 percent of Heathrow's traffic, would want public transport to central London. This is the equivalent of about 2,000 passengers per hour in each direction. The British Rail conventional duorail system would be capable of handling all this traffic with ease. The London Transport system might handle about two-thirds of it or 6 million people, leaving 3 million people to be continued to be carried by buses.

In conclusion, may I pose two questions that we are trying to answer. We believe the answers to these questions are important in the development of public transportation to Heathrow Airport. Should public transport serving a large airport be viewed as a system designed around the needs of the air passenger, or should it be part of the public transportation system that air passengers can use if they so desire? Will air passengers of the future expect, in addition to town terminal facilities and associated check-in and baggage-handling services, an exclusive transport system to the airport that these require, or will they be prepared to use the common system that the public uses to reach the airport?