The Future Employment of the 40-Seater Helicopter and the need for Dispersing Air Liners to Airstrips Round Britain's Coasts*

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Before 1960 we should be in a position to inaugurate services of large size 40/45 seater Helicopters probably cruising at a minimum of 150 m p h These could be used to cope with passenger traffic to and from city centres and coastal airstrips

Hitherto during the first 30 years of our Civil Aviation we have been compelled to concentrate air traffic into one Airport for London First Croydon and then Heath Row were selected The coming of the Helicopter is going to provide a unique opportunity for dispersing air traffic away from busy cities to coastal airstrips It is suggested that the most careful study be given to this novel plan for *dispersal* as against the dangers of continued *concentration* The traffic for instance, attracted by British Overseas Airways Corporation through tourism as well as by their excellent Service, through the first two months of cut rate traffic (May and June, 1952) rose 37 per cent above the comparable period of 1950 It might have been even higher had not the oil strike in U S A restricted allotment of fuel

T W A, an American line, reports an increase of 30,000 passengers into London Airport in the same period All air line operators are enjoying a boom on the world's air routes and the Coronation traffic of 1953—even without tourist rates—may bid fair to overwhelm the handling facilities at London Airport

The great reputation for safety and regularity on the N Atlantic route which all operators, especially B O A C enjoy, and the coming introduction by B O A C of the de Havilland 'Comet' II jet liner in 1953, on this route, coupled with its attraction on other Empire routes, is bound to bring a steep increase in traffic year by year

Even the provision of a second Airport at Gatwick to syphon off some of this traffic will never suffice to cope with more than a tithe of it Both airports will be overwhelmed long before 1960 if the present rate of traffic increases are maintained And the movement of British European Airways to London Airport from Northolt Airport will aggravate the problem

The solution therefore does not appear to lie in concentrating air traffic into either one or two Airports round London, but rather in dispersing it to the coasts

The Cunard liners *Queen Mary and Queen Elizabeth* do not demand anchorage at Westminster Pier just because the bulk of their passengers are

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bound for London They tie up at the coast at Southampton and indeed this is the general rule for all shipping with a few local exceptions as in the Mersey

Until the coming of the Helicopter it would have been impossible to consider any plan for dispersing air liner traffic to the coasts The Helicopter now makes this both practicable and desirable

Along the west coast there are at least three airfields which could be employed These are the great runway at Filton, Bristol There has been much criticism at its cost and at the cost of the great Assembly Halls there All this cost would have been amply justified—apart from development of the Bristol ' Brabazon ' air liner—if this airstrip could be used for some of the trans-Atlantic traffic

There is another on the coast at Liverpool which could doubtless be lengthened to 10,000 ft to cope with modern requirements There is a third at Prestwick on the coast which is already in use for Atlantic traffic

Possibly two or three others would be required and could be selected from R A F airstrips along the west coast between Land's End and Prestwick , or possibly one or two could be built from the coast out to sea in an east west direction (as has been done at Gibraltar)

Assuming six such airstrips were available, all air liners arriving from Canada, U S A , S America, Bermuda and the West Indies could alight at one of these airstrips

All air liners approaching England from the Near East, Middle East, India and Pakistan, S Africa, Australia and New Zealand should similarly be allotted airstrips on the South Coast between Land's End and Kent (the airstrip at Manston, Kent, is an ideal example)

All traffic of British European Airways and other operators from distant bases in Europe should similarly be allotted airstrips from the many R A F bases available along the East coast of Essex, Lincolnshire, Norfolk, Suffolk and Yorkshire For by 1960 war dangers should have evaporated and many could be made available, while the ultimate disappearance of the bomber by 1970 in favour of guided missiles will make them all available

These benefits would accrue if air liners were banished from Britain to the coasts

(1) The " freedom of the air " would be restored to the Royal Air Force in vital training areas

(2) The development of internal air services by Helicopter depends in the first instance on possessing this freedom (The very first scheduled service from Harrod's field London to Birmingham was cancelled because air liners were seeking their way into London Airport in conditions of poor visibility , though the weather was quite satisfactory for Helicopter flights)

(3) Nearly every air liner arrival would be completed under visual landing conditions Pilots would be given the airstrip selected by Air Traffic Controllers for landing on their given coast While still an hour's flight from land—say 600 miles by 1960—pilots would commence let down procedures *always over the sea* and would alight at fogfree airstrips

(4) Only on very rare occasions would all the airstrips along one coast be so under the weather that air liners would have to be diverted to London Airport or to other coastal airstrips

(5) Added safety would therefore attend every landing and the days of instrument controlled landings would be mostly ended For high speed jet liners with

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limited fuel supplies this would be an attractive consideration

(6) Greater flexibility of operations would be conferred on the air line operator and greater flexibility on Air Traffic Control

It would matter little to the pilot of a 600 m p h jet liner of 1960 whether he was asked to land at Bristol, Liverpool or Prestwick, since none would be more than 20 minutes flight from the other And at each airstrip 40 seater or even bigger helicopters would be waiting to convey passengers and their baggage *direct to the city of selection* This might not necessarily be London Development of helicopters with jets on rotors may provide speeds of 200 m p h , passengers would require no more time to reach London or most other cities from coastal airstrips using these helicopters than is now required for a motor coach journey between London Airport and the West End of London

There is the objection that, after a long air journey, passengers would not wish to transfer to another aircraft for the final run in, but would expect a road trip But by 1960, the eastbound flight from New York to Britain aided by prevailing tail winds is unlikely to occupy more than 5 or 6 hours The days of 12 to 15 hour journeys would be ended on all overseas routes by 1960, since at 600 m p h even a five hour journey covers up to 3,000 miles and this would be the probable limit of stages with fair payloads

Gradually passengers would come to regard the helicopter ride merely as a motor coach ride, since the interior of the helicopter would be furnished exactly like a 40 seater motor coach , two or three such helicopters would cope with all passengers and baggage from any given ocean journey

We ought not to contemplate with equanimity either a continuance or an extension of the present methods of Air Traffic Control These are an inevitable part of the system of concentrating air traffic into one central airport and will be even more confusing if the traffic is concentrated into two, where the second one is so near to London as Gatwick

In conditions of restricted visibility to-day air liners are often waiting in a queue from the south coast to London Airport , are stacked up at varying altitudes , are kept queuing and orbiting in an ever mounting pyramid , every device up to radar and perhaps television has to be employed to locate these planes and bring them in safely

As the volume of traffic grows from 1953 onwards more and more stacking, orbiting and queuing will be experienced In time it will overwhelm the Air Traffic Controllers by its sheer mass , or air line operators will be compelled to refuse all traffic beyond saturation point at London and Gatwick Airports Thus the airfields will become the masters instead of the servants of the situation—and Gatwick was also under fog in December, 1952, when Heathrow and Northolt were " out " !

The whole pyramidical plan depends upon the human element on the ground more and more While the human element in the air is being given every mechanical aid to minimise risks of error, it is simply being transferred to the ground The signalman in the box on the railway lines has a comparatively simple task by comparison Yet he is sometimes capable of error If the air liner departures are in the first instance all dispersed to airstrips, passengers will be flown by helicopters from their home towns direct to the airstrips on the coasts Many airstrips can be pressed into service

according to volume of traffic day to day and hour to hour , there should always be sufficient airstrips to cope with more than traffic requirements Visitors and friends would be trained over the years to say their goodbyes at the helicopter terminals in the towns, since they could not all travel to the departure coastal airstrips, though they should not be forbidden to do so and much traffic and revenue might accrue from such additional passenger movements

Similarly those waiting to greet passengers on arrival should be encouraged to wait at helicopter terminals, since Air Traffic Controllers might not know more than an hour before E T A which of several airstrips will be used for any given arrival

The plan of dispersal brings in its train the problem of dealing with Customs, Immigration, Currency Control, Health and other similar vexatious factors

The general aim should be to ensure a pleasant, flawless, unbadgered passage from incoming air liner direct to waiting helicopter, so that within 15 minutes of all passengers alighting they and their personal baggage would be in the air en route to final destination

Before 1960 we should have dissolved the menace of war and the coastal airstrips—especially on the east coast—now required by the R A F and U S Air Force would become available for commercial air liners

During the next eight years, therefore, we should plan as follows if we are to secure the full fruits of a helicopter transport system within the British Isles , and if we are to cope with future growth of air traffic by the plan of dispersal instead of concentration

(1) Show faith in ourselves by ordering 2,000 British built helicopters of approved designs Work on these to commence when re-armament ends in 1955/56, so that workers attracted to armament factories can be assured of continuous lucrative employment By building them on assembly lines the prime cost of aircraft and of, perhaps, 10,000 engines, will be made as cheap as possible This is the prime influence on fares

(2) The Bristol ten seater will probably be ready for its Certificate of Airworthiness by the close of 1953 at the earliest During 1954 production models may be constructed and through 1955 the Services will probably absorb all the output By 1955 the 40/45 seater should be constructed and by 1957 should have its Certificate of Airworthiness From 1958 to 1960, after re-armament requirements are met, the large scale well tried helicopters should be coming off the assembly lines in large numbers All we cannot employ we can sell in markets which hungrily await them British Firms with experience could undertake the construction and sub-contracting

(3) During the period 1952-1960 we should survey and prepare the alighting sites on provincial railway stations , commons or roof tops, etc In London one gigantic roof should be built over Euston, St Pancras and King s Cross combined Railways provide good approaches as a rule , they are the natural meeting places for traffic and roofs over their stations would appear to be natural sites Victoria, Paddington and Waterloo (or the South Bank site) are other suggested sites Big cities like London will require several suburban sites for the two seater helicopter taxi

(4) Gatwick Airport should be kept for use for hangarage, storage, maintenance, fuelling and servicing of helicopters

(5) All the Municipal Airports and Light Plane Club fields which so far have in many cases proved " white elephants " will know a new lease of life as they will all be wanted to provide hangarage space, fuelling and servicing, etc , for the hundreds

of helicopters which will be in use on internal air services and on schedules between cities and coastal airstrips

It should be borne in mind that all the nearer European Plages and Capitals, etc, will be served by helicopter direct from our cities, in fact, all towns within a radius of 300 miles from British towns will have helicopter services

Thus London Airport will be 'milked' of its short range continental traffic which will be helicopter traffic and of its long range European traffic which should use east coast airstrips

There may remain a belt of middle-distance traffic, say, in the 700 mile belt, where the journey is too long for a helicopter flight and too short to justify a halt at the east coast Such traffic might be allotted London Airport, which would otherwise be well occupied with V I P traffic, emergency traffic, charter work, etc, etc

None of the foregoing could have been accomplished until the arrival of the helicopter None of it becomes practicable until the helicopter is available as a large seater and in large numbers The year 1960 ought to be taken as target year and all of these activities ought to be co-ordinated to a plan which, as far as the needs of re-armament permit, the exigencies of a war situation allow, and as far as the finances of the country permit, should be studied and carried out to a staged timetable between 1952 and 1960 It is a task to which some section of the Ministry of Civil Aviation, under an energetic leader with vision and organising ability, should devote full time

Under such a plan the central policy should be the decision to decentralise air traffic, to end the policy of *concentration* with all its attendant delays, absurdities and dangers, and substitute a policy of *dispersal* based on the use of a large number of coastal airstrips and of the full implementation of the helicopter

The survey siting and completion or extension of the coastal airstrips will require perhaps 3 or 4 years of work, the planning of air traffic control at them will require much study, the plan for reducing or abolishing Customs, Immigration, Currency Control and Health requirements will require much study and possible legislation and perhaps international agreement in some form

The plan must be sold to the air line operators and it must be integrated with the planning of internal helicopter services The development of the helicopter can be safely left for the time being with British constructors They know what air line operators require, their timetables for design, construction, testing and development of the ten and forty seater helicopter should allow of completion by 1960 of many of the helicopters required, and if they and the engine and accessory manufactorers were given large scale orders in sufficient time to encourage their workers to remain, long after the needs of re-armament were met, we would have the beginnings of a vast new industry It would take up the slack as re-armament ended, remove fears that if men worked hard they would work themselves out of a job, would attract the timid into the industry with the promise of a lifetime of lucrative employment, and from a Government's viewpoint would remove both the fear and fact of mass unemployment