

**SIXTH REPORT**  
FROM THE  
**SELECT COMMITTEE ON**  
**ESTIMATES**

TOGETHER WITH THE MINUTES OF EVIDENCE  
TAKEN BEFORE SUB-COMMITTEE C ON  
WEDNESDAY, 23RD APRIL, AND SUBSEQUENT  
DATES, AND APPENDICES

Session 1946—47

**CIVIL AVIATION**

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*Ordered by The House of Commons to be printed  
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## ORDER OF REFERENCE

*Friday, 22nd November, 1946*

Estimates,—Select Committee appointed to examine such of the Estimates presented to this House as may seem fit to the Committee, and to suggest the form in which the Estimates shall be presented for examination, and to report what, if any, economies consistent with the policy implied in those Estimates may be effected therein:—To consist of Twenty-eight Members:—Mr. Alexander Anderson, Mr. Barton, Mr. Nigel Birch, Mr. Callaghan, Mr. Champion, Mr. Corlett; Mr. Cuthbert; Viscountess Davidson, Mr. Ernest Davies, Mr. Diamond, Sir Ralph Glyn, Viscount Hinchinbrooke, Mr. Howard, Wing-Commander Hulbert, Colonel James Hutchison, Mr. Kirby, Sir Peter Macdonald, Major Niall Macpherson, Mr. Mathers, Mr. Monslow, Mr. Parkin, Mr. Wilfrid Roberts, Mr. Granville Sharp, Mr. Norman Smith, Mr. William Wells, Mr. West, Mr. Frederick Willey and Mr. Willis:—Seven to be the Quorum:—Power to send for persons, papers and records; to sit notwithstanding any Adjournment of the House; to adjourn from place to place; and to report from time to time:—Power to appoint Sub-Committees and to refer to such Sub-Committees any of the matters referred to the Committee:—Four to be the Quorum of every such Sub-Committee:—Every such Sub-Committee to have power to send for persons, papers and records; to sit notwithstanding any Adjournment of the House; and to adjourn from place to place:—Power to report from time to time Minutes of Evidence taken before Sub-Committees.—(Mr. Robert Taylor.)

*Friday, 6th December, 1946*

Mr. Ernest Davies *discharged* from the Select Committee; Mr. John R. Thomas *added*.—(Mr. Poplewell.)

*Friday, 20th December, 1946*

Mr. Callaghan *discharged* from the Select Committee; Mr. Albert Edward Davies *added*.—(Mr. Robert Taylor.)

*Wednesday, 23rd April, 1947*

Mr. Diamond *discharged* from the Select Committee; Mr. Richard Adams *added*.—(Mr. Robert Taylor.)

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## SIXTH REPORT

The Select Committee appointed to examine such of the Estimates presented to this House as may seem fit to the Committee, and to suggest the form in which the Estimates shall be presented for examination, and to report what, if any, economies consistent with the policy implied in those Estimates may be effected therein, have made further progress in the matters to them referred, and have agreed to the following Sixth Report:—

### CIVIL AVIATION

1. Your Committee have examined the provisions made for expenditure on Civil Aviation for the year ending 31st March, 1948. Witnesses were heard from the Ministry of Civil Aviation; the Air Ministry; the Ministry of Supply; the British Overseas Airways Corporation; the British European Airways Corporation; the British South American Airways Corporation; Scottish Aviation Ltd., and the Society of British Aircraft Constructors Ltd. The London Airport and Prestwick Airport were visited. Whilst at Prestwick, Members took the opportunity of seeing the Signals Centre at Redbrae; the Scottish Division of the Ministry of Civil Aviation at Adamton, where evidence was taken; and the Royal Naval airfield at Heathfield. Explanatory memoranda, submitted by the Ministry of Civil Aviation, are printed as Appendices to the Report.\*

### REVIEW OF THE EVIDENCE

#### MINISTRY OF CIVIL AVIATION

##### *Origin and Growth*

2. A Department of Civil Aviation was first created within the Air Ministry in 1919. By 1939, it consisted of five Directorates under a Director-General, covering home and overseas services, research and production, operational services, intelligence, and finance. In 1945, the Ministry of Civil Aviation Act provided for the appointment of a Minister responsible for developing civil aviation, including the provision of aircraft, the promotion of air safety, and research.

3. The Civil Aviation Act, 1946, made further substantial provisions for civil aviation, including the creation of Corporations to operate air transport services under public control, and for the acquisition of land and administration of aerodromes required for air transport services. In consequence, the Ministry has been reorganised and expanded. It has been raised to the status of a first class Department of State, administered by a Permanent Secretary, and has been divided into four departments dealing with Planning, Air, Ground, and Technical Services.†

##### *Divisional (regional) organisation.*

4. In order to relieve Headquarters of much detailed technical and administrative work, four Divisions—Scottish, Northern, Southern and Western, London and Eastern—are to be formed, and placed in charge of Divisional Controllers. The Scottish and London Divisional Controllers have been appointed, and a Scottish Divisional Office has been opened but is not yet in full operation. It is expected that the other Divisional offices will be established during this year.

\* See page 175 et seq.

† For a fuller statement see Appendix I, page 175 and page 186.

5. Section 38 of the Civil Aviation Act, 1946, provides that the Minister shall appoint for each aerodrome vested in him "an officer who shall be responsible to the Minister for all services provided on the aerodrome on behalf of the Minister". Formerly, the responsibility for management and the responsibility for technical services were in different hands. Three Aerodrome Commandants have been appointed. They are stationed at London Airport, Northolt and Prestwick. These Commandants have Business Managers who deal with landing fees, accommodation, fire and rescue services, amenities and such commercial contracts as catering. The Commandants also supervise the technical services provided at the aerodrome, although on technical questions, the heads of these services are responsible to a Controller at the Ministry, or, in the case of the meteorological services, to the Air Ministry. It is intended that, in general, the Commandants will be in direct contact with their Divisional office and not with the Ministry.

#### *Delegation of powers*

6. At present, the powers to be delegated to Divisional Controllers and Aerodrome Commandants are still being considered. The intention is to give these officers the largest possible measure of autonomy in routine matters and to allow them financial discretion compatible with their responsibilities. It became clear to Your Committee during their inquiry that insufficient financial authority had in fact been delegated. The Ministry, however, later submitted a memorandum enlarging and defining the financial powers to be delegated to Divisional Controllers and Airport Commandants.\* These powers are "to be extended and supplemented later on, whenever there are reasonable grounds for believing that such a step will promote the efficiency of the aerodrome organisation and economy in its administration".

#### *Increase in establishments*

7. In August, 1939, the total staff of the department of Civil Aviation in the Air Ministry numbered 273. In May, 1947, the staff of the Ministry of Civil Aviation amounted to 4,950, consisting of 1,450 at Headquarters and 3,500 at outstations. Of those at outstations, 1,800 were employed on telecommunication work, approximately 850 on airport management and air traffic control, and 650 on police duties. It is estimated that the implementation of the aerodrome programme will involve an increase of establishment to 6,900 and that this will be followed later by a further increase to about 11,000. The Headquarters establishment will be increased to 2,250. Some 3,800 will be employed on telecommunication work, 2,550 on airport management and air traffic control and 1,500 on police duties, whilst the establishment of the four Divisional offices will amount to 400. In addition to the establishment referred to, 1,753 "industrial" staff are also at present employed by the Ministry. The establishments of the Ministry have been considered on three occasions and the assurance was given that they are under constant review.

### THE THREE CORPORATIONS

8. The three Corporations have power to provide air transport services.† Your Committee were informed that "it is the Minister's conception that Government policy requires the freest exercise of day-to-day management and authority by the Corporations direct".

\* See Appendix II, page 193.

† See Appendix I, page 179.

9. The British Overseas Airways Corporation (B.O.A.C.) was created by the British Overseas Airways Act, 1939, under which, on 1st April, 1940, it acquired the existing companies, Imperial Airways Ltd. and British Airways Ltd. The Secretary of State for Air, however, then made an Order requiring the Corporation to place its undertaking at his disposal. This Order is still in force, but Your Committee understand that it will shortly be revoked. Meanwhile, normal commercial operations are being resumed. The Corporation's sphere of operations covers the Far East, Australia, India, the Middle East, Africa and the North Atlantic crossing.

10. The British European Airways Corporation (B.E.A.C.) was created on 1st August, 1946, under section 1 of the Civil Aviation Act, 1946. It is responsible for European services and internal services within the United Kingdom. Previously, the European services had been the responsibility of B.O.A.C., which, having maintained services to certain neutral countries throughout the war, had set up a European Division in January, 1946. Internal services, excluded from B.O.A.C.'s sphere of influence, had been provided by the Associated Airways Joint Committee (controlled by the Railway Companies), Allied Airways (Gandar Dower) Ltd., and, since June, 1945, Channel Islands Airways Ltd. These companies are being purchased by B.E.A.C. The purchase of the first group has already been completed.

11. The British South American Airways Corporation (B.S.A.A.C.) was also created on 1st August, 1946. It provides services to South America and the Caribbean area. These services had been developed by a company formed in 1944 by five shipping companies. In 1945, the shares were purchased by B.O.A.C. which in 1946 sold them to B.S.A.A.C. The original Company is still in existence because certain agreements with other countries are in the name of that Company. New agreements have been negotiated but not yet ratified.\*

#### *Departmental control*

12. The Civil Aviation Act, 1946, provides that the aggregate of the amounts outstanding in respect of the principal of any stock issued and of any temporary loans shall not in the case of B.O.A.C. exceed £50,000,000; or, as regards B.E.A.C. or B.S.A.A.C., exceed £20,000,000 or £10,000,000 respectively. Grants may also be made by the Minister of Civil Aviation, with the consent of the Treasury, to make up any deficiency caused by expenditure exceeding revenue. These grants must not exceed a total of £10,000,000 for operations during the present year and £8,000,000 for each of the subsequent eight years. It is further provided that each of the Corporations shall, for an initial period of nine years, submit annual programmes showing their intended services for the year, together with an estimate of revenue and expenditure. These must be submitted in such form as the Minister may direct, and it is after examination of them that he and the Treasury will determine whether any grant shall be made at the end of the year. There is also provision in the Act for advances on account of the grants and for revision of grants in the event of unexpected contingencies.

13. The current Estimates provide for grants of £5,000,000, £2,250,000 and £250,000 to B.O.A.C., B.E.A.C., and B.S.A.A.C. respectively. These grants are intended to be in respect of balances of grants due for 1946-47

\* In order to provide the necessary services the Corporations have entered into various charter agreements with private operating companies. Section 23 of the Civil Aviation Act, 1946, reserves scheduled services to the Corporations and their associates. See Appendix IV, page 198.

and advances on account of grants to be determined for 1947-48. Although the Ministry stated that "it is hoped to provide an incentive to economical operation by fixing the grants (or the basis thereof) before, or early in, the year to which they relate", nevertheless, the programmes submitted by the Corporations on which the grants should be based have not yet been agreed by the Ministry. Various reasons were given in explanation of this delay. Of these reasons, two appear to have been of major importance. In the first place, it was uncertain what types of aircraft would be available to the Corporations. B.O.A.C., indeed, has prepared three different programmes based on varying assumptions. The decision of the Government not to proceed with the purchase of further American aircraft was not announced until 24th April, 1947. The Corporation then prepared the last of these programmes on the assumption that only British aircraft would be available. Secondly, it was difficult to accept the programmes submitted until the Government plans for the acquisition of airports were determined. B.E.A.C., whose internal services largely depend on this decision, was particularly affected. The Government's decision was not in fact announced until 9th July, 1947, and even then no indication was given of priorities of development. Apart from these factors, there has been some difficulty in keeping the grants within the limit of £10,000,000. Originally it was expected that these grants would be kept within the limit of £8,000,000 allowed in subsequent years, but whilst no final decision has yet been made, it is probable that the grants will be £7,000,000, £2,500,000 and £250,000 to B.O.A.C., B.E.A.C. and B.S.A.A.C. respectively. It does not necessarily follow that these grants will be required in full. Evidence was given that B.S.A.A.C. estimates that it may show a profit. During the course of the present discussions a grant formula is being agreed which should simplify the consideration of programmes in future years.

14. In addition to the annual programmes and estimates required during the 9-year grant period, the Corporations are required to submit programmes and estimates for 3-year planning periods and an estimate of expenditure to be incurred on capital account for each financial year.

15. Apart from his financial powers, the Minister may give directions of a general character. Moreover, he may by Order define the powers of the Corporations, so far as he thinks desirable for the purpose of securing that the public are properly informed, and can limit these powers to such extent as he considers necessary in the public interest. Your Committee were assured that the Minister does not wish to operate on the basis of giving written directions or orders to the Corporations. It is not his present intention therefore to make an Order defining the powers of the Corporations. It was clear that the Corporations are not prejudiced by this absence of definition.

#### *Economies.*

16. Whilst Your Committee did not have time to examine the question fully, evidence was given by the Corporations that they have endeavoured to effect all reasonable economies. They have, for example, reduced their overseas organisations and they have sought to reduce costs on the servicing and maintenance of aircraft. B.O.A.C. has recruited staff experienced in the study of methods of operational research and efficiency and has established an Economic Research Section. B.E.A.C. has set up a series of local and central efficiency committees, consisting of members of the staff. B.S.A.A.C. is also seeking to obtain the co-operation of the staff on questions of efficiency and has taken steps to secure some measure of integration of maintenance services with B.O.A.C.



*Demarcation of Functions between the Ministry and the Corporations*

17. In general, the functions of the Ministry and the Corporations are distinct and separate. Whereas the Ministry are responsible for ground aids and services—airports, landing aids, radio, technical and ancillary services—the Corporations are responsible for the actual flying operations, including the maintenance and servicing of aircraft.

18. Although, in the main, there is no difficulty, there are, in practice, certain points at which overlapping is possible.\* For instance, in the process of conveyance from the terminal to the aircraft at London Airport, a passenger's baggage is carried on a Corporation vehicle to the Airport, unloaded by a Ministry porter and carried to the Customs building. From here it is carried by the Ministry porters to the Corporation vehicle which conveys it to the aircraft where Corporation baggage-loaders, who require special skill, load and trim the baggage in the aircraft. Again, Ministry constabulary, appointed in accordance with the Act, are responsible for supervision of the passengers and baggage through the Customs, and the Immigration and Health Offices at the airport, whilst the passengers are conducted through these offices by Corporation traffic staff. A similar situation obtains in the case of other police duties, the marshalling of aircraft, and the operation of teleprinter services. The possibility of duplication at airports can be discussed at the regular meetings held by the Commandant and the Operators and is the subject of constant scrutiny. Better results are likely to ensue from such practical discussions than from any order or direction by the Minister.

## GROUND ORGANISATION

*Land acquisition.*

19. The Ministry provide ground services complementary to the air services provided by the Corporations. The foremost requirement is aerodromes. This, in turn, involves the acquisition of land, for which powers were given to the Minister in the Civil Aviation Act, 1946. It is estimated that the Ministry will eventually have control of 29,503 acres in the United Kingdom for aerodromes, of which 20,039 acres are already wholly or partly under their control.† These figures do not include 4,800 acres of Service aerodrome land, where the Ministry will have joint user facilities, and 144 acres of aerodrome telecommunication sites. The policy side of the acquisition is dealt with by the Ministry of Civil Aviation in a Division of the Aerodromes Department. This Division, of which one Branch, headed by a Principal, is concerned with the preliminary stages of acquisition, has to decide the boundaries of any land required for an aerodrome and clear up difficulties with other interested Government Departments. The Air Ministry Lands Branch, which acts as agent for the Ministry of Civil Aviation, is then instructed to proceed with the actual acquisition.

*Aerodrome development.*

20. Having acquired the land, which may or may not be already partially developed for Service purposes, the aerodrome has to be constructed or altered so as to conform to civil aviation requirements. The extent of the programme envisaged for aerodrome construction in the United Kingdom is best understood by reference to the Estimates (Subhead G—Works, buildings

\* See Appendix III, page 195.

† See Appendix I, page 186.

and lands) which, however, should be treated as provisional owing to the difficulty of forecasting fluctuations in the cost of labour and materials and even alterations in final designs over a period of years. These include the following totals:—

Total estimate for work	£ 31,305,000	(London Airport—£26,000,000)
Amount to be voted in 1947-48 ... ..	5,100,000	(London Airport—£3,000,000)
Further amount required	23,446,000*	{(London Airport—£21,000,000)

These works are carried out on an agency basis by the Air Ministry who are experienced in aerodrome construction. An Air Ministry Works Section is accommodated in the Ministry of Civil Aviation in order to give advice to the policy-making staff. When policy is decided, it is communicated to the regional offices of the Air Ministry Works Directorate, and the works are put in hand. A charge of fifteen per cent. on the ultimate cost is made by the Air Ministry to cover overhead expenses. In the special case of the London Airport Terminal Buildings, the design is open to architects throughout the Empire. The buildings will not be constructed by the Air Ministry.

21. It was stated that, although the Ministry of Civil Aviation have drawn up a programme for the preparation of 80-90 aerodromes, with proposed dates of acquisition and works services required, there was a likelihood of the Government deciding that the expenditure involved was too heavy and must be spread over a longer period. The consequent uncertainty about availability of aerodromes makes it impossible for B.E.A.C., at any rate, to complete its schedule of services, though the other two Corporations, relying almost entirely on London Airport, are not affected to the same extent. In order to keep all parties fully informed, it has been proposed to set up a joint committee representing the Ministry and the Corporations to deal with the question of ground facilities.

#### *Airport services*

22. At any airport, besides the provision of the actual runways and accommodation, the Ministry have to provide certain technical and other services. The Aerodrome Commandant, who is answerable for all routine questions of airfield administration, has a staff under his control for the provision of these services. The size of this staff will vary considerably according to the size and importance of the airfield. About 650 people are employed at London Airport, and 563 at Prestwick, of whom over 300 are engaged at a Signals centre, which has certain long-range Atlantic control responsibilities on behalf of the entire United Kingdom civil aviation organisation. On the other hand, at the smaller aerodromes probably not more than 20 or 30 people would be employed.

23. The technical services provided\* are air traffic control, telecommunication and briefing services, and a fire and rescue organisation. The heads of the technical services such as the Senior Traffic Control Officer and the Senior Telecommunications Officer, while under the day-to-day command of the Commandant, are also responsible, on technical matters, to their own technical superiors at the Divisional Office and thence to the Controller of Technical Services at the Ministry. There is an estimated expenditure for the year on radio equipment and installations amounting to £857,000.

\* The balance was voted in 1946-47.

† See Appendix I, page 187.

24. In the same category as these technical services are the Meteorological Services which the Air Ministry provide as part of their national service.\* Just as the other services at the airport have their own channel of communication on technical matters in addition to local control by the Airport Commandant, so the Senior Meteorological Officer reports direct through Air Ministry channels. For meteorological services in the United Kingdom, the Air Ministry will recover from the Ministry of Civil Aviation £180,000 this year, being the sum expended by them on eighteen meteorological stations maintained solely for civil aviation purposes. The benefit of the national meteorological service is available to civil aviation without charge. The increase in this year's Estimates is due to an adjustment for past services the basis of payment for which had not been previously agreed. It was stated that the work of the meteorological staff of the Corporations does not overlap that of the Air Ministry staff.

#### *Airport revenue*

25. At present, the only considerable income at an airport comes from landing-fees and from rents payable for use of buildings. This income, however, according to the accounts of some of the larger airports, appears to be less than one-half of their expenditure. The increase in traffic which is contemplated will go some way towards reducing the deficit, but it will be necessary, in any event, to depend to some extent on the development of amenities. These amenities, which in the United States are said to bring in as much as 40 per cent. of an airport's annual income, were defined as including restaurants, car-parks, shops and public enclosures. In this country, revenue from this source is only just beginning. A Director of Amenities has been appointed to study the problems involved and to submit a plan for Governmental decision. An obstacle to intensive development of amenities is the fact that it has not yet been decided what importance is to be attached to this subject and consequently how much of the nation's manpower could justifiably be employed in this direction. It was suggested, however, that the development of amenities would contribute largely to the growth of air-mindedness which, in turn, would increase air travel.

26. It was stated that the question of balancing expenditure and revenue at airports was necessarily subordinated to the need for providing the highest standards of ground service and fulfilling international obligations. This was justified on the grounds that all States who are members of the International Civil Aviation Organisation (I.C.A.O.) are interested in the provision of efficient services by other member States. Moreover, there were aerodromes where natural causes made it impossible to meet expenditure with revenue (for example, Gander airport, in Newfoundland, where the cost of snow clearance is out of proportion to the revenue-earning capacity of the airport).

#### *Overseas expenditure*

27. The estimated cost of ground services and expenses for Empire and other routes (Subhead H) shows an increase of £1,315,000 above last year's figure. Over £1,000,000 of this increase is attributable to capital expenditure and reflects the works necessary at aerodromes on the trunk route through Africa in order to fit them for use by the "Tudor II" and similar types of aircraft. This, being a commitment not essential for local requirements, is being borne by the United Kingdom. Such financial assistance is to be applied throughout the Colonies. Control and the recruitment of staff at aerodromes overseas will be a local responsibility.

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\* See Appendix I, page 192.

*Adequacy of present ground services*

28. In response to questions on a proposal that ground services should be the responsibility of a fourth Corporation, it was stated that this formed no part of Government policy and would not effect any economy in manpower. B.O.A.C. maintained that its financial deficit was partly due to the dispersal of bases in this country. It was realised that shortages of materials and labour made concentration difficult, but a hope was expressed that the building of hangars would be given some priority. Present facilities were said to be inadequate even for Tudor types of aircraft. Moreover, the "Constellations" used on the Transatlantic route to New York are overhauled at Dorval. This involves a "dead" flight of 400 to 500 miles each way. The necessity for this, it was maintained, was due to the fact that aircraft as large as the Constellation could not be serviced in this country owing to inadequate hangar accommodation. Evidence, however, was given by Scottish Aviation, Ltd., that they had serviced and overhauled Constellations belonging to foreign airlines. The Ministry have now set up a joint working-party with B.O.A.C. and the Ministry of Supply to expedite the transfer to this country of the servicing organisation at Dorval.

29. The difficulties of B.E.A.C., which depends to a large extent on the development of airfields in this country, have already been mentioned. B.S.A.A.C., which is dependent on London Airport only, is less affected, but also expressed a desire for priority for hangar-construction since it is at present burdened with the cost of "dead" flying from London Airport to its maintenance aerodrome. There is no control, outside the Empire, over the provision of adequate facilities at overseas bases.

*Prestwick Airport*

30. The original airfield at Prestwick was owned and run by Scottish Aviation Ltd. During the early years of the war, the Company with a staff of 485, trained R.A.F. pilots, observer-navigators and radio-operators, accommodated two Fighter Squadrons and a Coastal Command operational training unit, manned direction-finding radio services, and provided maintenance and airport services for the Atlantic Ferry and the Air Transport Auxiliary Ferry pools. On 1st July, 1941, a contract was signed with the Air Ministry, under which Scottish Aviation Ltd. continued its management on behalf of the Ministry; its activities, however, were reduced to those connected with transatlantic services, namely the provision of transport services (including marine craft for the flying boat base at Largs), airfield maintenance, fire services, duty crew, and radio-operators, and the servicing of aircraft and equipment; for this a management fee was received. In addition, there was a separate contract to provide messing for some 2,000 Service personnel. The reduction of services led to a corresponding reduction in staff to 320 but, by December, 1945, these numbers had increased to 825. During the last six months of 1941 expenditure (including wages) amounted to £48,146, while aircraft movements in the same period numbered 5,880 (including 580 trans-ocean flights). During the full year 1945, expenditure amounted to £318,483, while aircraft movements numbered 22,500 (including 9,500 trans-ocean flights). At the end of 1945 the Ministry of Civil Aviation became responsible for the airport, and amounts are now being paid on account to Scottish Aviation Ltd., pending the agreement of a contract to cover the interim period until the Ministry are able to take over the entire running of the airport. At present, Scottish Aviation Ltd. is still providing fire services and duty crew on behalf of the Ministry of Civil Aviation, and in addition transit services for foreign operators. There was insufficient

evidence to compare the present and the war-time administration of the airport. It appeared, however, that the services provided by Scottish Aviation have been, and continue to be, satisfactory. Besides the airport services, Scottish Aviation Ltd. also has a factory adjoining the aerodrome which was requisitioned and enlarged by the Ministry of Aircraft Production. There is some confusion about the ownership of this and other properties at Prestwick. During the war, an expenditure of £2,100,000 was incurred by the Government in the development of the airport (£1,500,000 by the Air Ministry and £600,000 by the Ministry of Aircraft Production). The future layout and status of the aerodrome are contingent on a geological survey now being carried out.

### AIRCRAFT

31. The Corporations' fleets largely consist of commercially uneconomical types of aircraft.\* This is the result of war-time concentration on military types, and the decision of the Government to buy no more foreign types. This decision was taken to save dollars, and to encourage the British aircraft industry. It has therefore been necessary to make the best use of converted bombers, such as the "Lancastrian", and adaptations of military transport aircraft, such as "Yorks" and "Jupiters", which have low passenger-carrying capacity. This use of uneconomic and, in some cases, slow types of aircraft gives some foreign operators an advantage over British air-lines, but a period of complete inactivity pending production of civilian types is being avoided, and what is being lost in passenger conveyance is in part being made up in mail services.

#### *Purchase and hire*

32. The aircraft used by the Corporations have been bought or hired by them from the Ministry of Civil Aviation. The Ministry ordered and bought these aircraft from the Ministry of Supply.† B.S.A.A.C., in fact, hires the Yorks and Lancastrians which form the greater part of its fleet, but it bought its "Lancasters" outright. It was found that, from a commercial point of view, it was sounder to buy in one case and to hire in the other. It was pointed out that, if the Ministry had to bear a loss, this would, in any case, be less than if no sale or hire arrangements had been made and the aircraft had become scrap. The hire-agreement was on a five-year depreciation basis. Your Committee noted that B.E.A.C., in its 10-year plan, allows the same period for depreciation. It was admitted that the Ministry may find themselves in possession of aircraft which are already ordered from the Ministry of Supply but which, owing to delivery of new types, they are unable to sell to the Corporations.

#### *Production costs*

33. A protracted and costly development of prototypes is inevitable before new types of aircraft can be delivered to the Corporations. The Corporations first specify their requirements. These are considered by the Ministry of Supply who then invite tenders from aircraft constructors. The Ministry of Supply and the Corporations agree which should be accepted and the contract is placed. If the type is new, a prototype is first ordered on which tests can be made before commercial production is started. Expenditure on the research involved in production of a prototype and the production costs

\* See Appendix I, page 182.

† In future the Corporations will themselves place their orders for aircraft through the Ministry of Supply.

themselves may well be beyond the financial capacity of any Corporation or constructor. Further, the new type may be of military or export value. For these reasons it was considered essential that the Ministry of Supply should play a major part in aircraft development. The purchase price for a successful type includes a "loading", which, on as accurate a forecast as possible of the total number to be sold, is expected to meet development costs both of the constructor and the Ministry of Supply. In some cases, the constructor bears a share of the cost, and this is recovered on sale of aircraft to outside buyers. It was agreed that at present a heavy expenditure might fall on the Ministry of Supply in the case of an unsuccessful prototype, and discussions with the Ministry of Civil Aviation and the Treasury on this point are proceeding. An example of the spread of development costs was provided by the "Viking", of which the two prototypes ordered by the Ministry of Supply cost £220,000. Part of this sum was recovered by adding £800 to the price of all Vikings sold through the Ministry. A third prototype was developed by the constructors at their own expense and the cost recovered on sales to outside buyers. There was general agreement that up to this stage in the development of an aircraft, the Ministry of Supply should act as an intermediary between the Corporations and the constructors. There were divergent views, however, whether, when the aircraft reached the production stage, the Corporations should not then make their further orders direct with the constructors. The Society of British Aircraft Constructors is consulted on questions of contracts with the constructors.

*" Brabazon I "*

34. The Brabazon I aircraft was designed on the recommendation of the Brabazon Committee on post-war aircraft requirements. A rough estimate of the cost of production of the two prototypes ordered by the Ministry of Supply was given as 2 to 3 million pounds. (A special runway for test flights is being constructed by the Air Ministry for the Ministry of Supply.) No decision has yet been made on the recovery of the development costs. If only a small number are ultimately purchased, it might mean adding an enormous load to the purchase price and, should it be unsuccessful, the Ministry of Supply may have to bear the entire cost. The contract for manufacture of the Brabazon I imposes a condition that no sale to any purchaser can be made without the agreement of the Ministry of Supply to the addition to the price to be charged towards covering the expenditure incurred by the Ministry.

#### OPERATING COSTS AND CHARGES

35. At present, it does not appear possible to ascertain comparative operational costs.\* B.O.A.C., although in operation throughout the war, was not then on a commercial basis. There was an extensive mutual waiver of charges between the Corporation and Government Departments. There were also abnormal methods of applying postal revenue over the period. The other two Corporations, not having been in operation a full year, have not yet sufficiently reliable figures.

36. B.O.A.C., it was stated, would be able to compare its costs on the transatlantic service with those of its competitors. Possibly B.E.A.C.'s operations may be compared with other Continental services and with the internal services of the United States. B.S.A.A.C. competes with other operators flying the South Atlantic. Eventually valuable comparative figures

\* See Appendix I, page 184, and Appendices V and VI, pages 199 and 200.

as between British and foreign operators should be available through the International Civil Aviation Organisation (I.C.A.O.) and the International Air Transport Association (I.A.T.A.).

### *Charges*

37. Charges can be divided into two main categories\* in accordance with the nature of the traffic—passengers (together with excess baggage and freight), and air mails. Mails are charged proportionately higher than passengers and freight, because they are carried on the fastest services. The charges should reflect this advantage. It is also important to avoid subsidising mail traffic. This explains why B.O.A.C. carries comparatively few passengers on the transatlantic route. Although it attracts more applications by passengers in proportion to its capacity than its foreign competitors, it has to give priority to the United Kingdom mails on this route. Passenger rates on external routes have to be agreed between the operators concerned, or have to be determined by the International Air Transport Association, which is the operators' association. To eliminate any possibility of this association becoming a "ring", rates fixed by it are subject to Government approval. Britain's recommendation to the association is that rates should be fixed at "the cost to the efficient operator using modern economical equipment plus a reasonable margin of profit", the object being progressively to eliminate subsidies. On domestic services, however, charges are being systematised on a long-term cost estimate based on the use of available aircraft. This amounts to 4½d.-5d. per mile. The Ministry's policy is to encourage the association also to determine air mail rates and the association has, in fact, already made certain recommendations which have been approved by this country. Existing mail rates are at present fixed by separate agreements, and there are instances where the Corporations are carrying mails on the same routes as foreign operators, but at considerably lower rates.

### *Costs*

38. B.E.A.C. called attention to two important factors affecting its operating costs. The first of these is the scale of landing-fees charged in the United Kingdom, especially in Scotland. A comparison with continental landing-fees showed that, whereas on the Continent these charges absorb, on the average, only 1½ per cent. of the expected revenue, on internal services in this country this proportion rises to as much as 40 per cent., and on one particular service (Cardiff—Weston) to 93 per cent. It is true, of course, that revenue is less from shorter flights, but the landing fees charged are higher than those charged for the same types of aircraft on the Continent. The Ministry explained that the scale of fees was fixed in accordance with weights of aircraft and the facilities provided at airports. Their object is to assist in making airports self-supporting, and the fees are under constant review. This nevertheless involves high costs to B.E.A.C. on internal services. If charges are increased, traffic will be discouraged. Owing to international agreements, there must be no discrimination in charges for overseas services. The question of landing fees, however, is now being considered by the International Civil Aviation Organisation.

39. The second factor was the price of petrol in this country. At 23.3 pence per gallon, rising to 29.25 pence in the Orkneys, the price is appreciably higher than at foreign airports, with the exception of Ankara. It is true that a drawback of seven-eighths of the duty is allowed on services outside Britain, but this is not allowed on internal services. The estimated cost of petrol duty to B.E.A.C. for the current year on internal services is £150,000.

\* See Appendix I, page 182.

*Revenue*

40. Evidence showed that it was difficult accurately to forecast revenue at this early stage in the Corporations' development. The demand for passenger-accommodation is subject to seasonal fluctuation and it is not possible to estimate on the basis of a constant load-factor.\* On certain routes B.O.A.C. is obliged to use uneconomic aircraft, such as Yorks, on the South African services. B.E.A.C. has worked on a load-factor of sixty per cent. for its continental services and fifty-five per cent. for English and Scottish services. B.S.A.A.C. based its estimate on sixty per cent., but admitted that it could not be certain of maintaining it, especially if it received its new larger aircraft this autumn and had to commence operating them in the winter when it expects least demand on its services. Owing to the necessity of maintaining regular mail-services, services cannot be cut down during the "non-seasonal" period.

## STAFF

*The Ministry*

41. Modern technical ground control systems are essential. Consequently provision for the adequate training of ground staff is of considerable importance. For the past two years civil aviation has had the advantage of the extensive training organisation created by the R.A.F. during the war. Now, however, the burden is falling more heavily on civil aviation. Wherever possible, efforts are being made to integrate the training system with that of the R.A.F. in order to diminish the overhead costs.

42. The Ministry announce their staff vacancies by public advertisement. A Selection Board, which is associated with the Civil Service Commission, interviews suitable candidates and makes appointments. This process makes inevitable a delay of some months, which at the moment is especially inconvenient in the case of higher grade appointments but is in accordance with Government policy of covering the widest possible field of applicants. Among other difficulties mentioned was the fact that some of the technical staff inherited from the earlier administration were not always of the highest quality. This is a result of low rates of pay and limited prospects. It is considered imperative to provide adequate conditions, the prospect of a permanent career and the maximum of interchange of employment between the aerodromes, Divisional offices, the Ministry and the Corporations. It was stated that present conditions, especially in those categories of employment which are common to the Ministry and the Corporations, for instance, police and teleprinter operators, were a source of dissatisfaction. The Ministry are bound by Civil Service rates established through Whitley Council machinery, while it was stated that Corporation employees on similar work are in some instances more highly remunerated. Inadequate housing accommodation, especially for married couples, is an even greater obstacle to recruitment. On the telecommunications side, the shortage of staff is already causing anxiety.

43. It is intended to develop a Colonial civil aviation technical service, which will be administered by the Colonial Office with the Ministry of Civil Aviation acting in an advisory capacity.

*The Corporations*

44. Each Corporation recruits its own staff and has its own Appointments Board.† There were no serious complaints of difficulty in recruiting staff, except for temporary shortages of certain types of skilled workers due to the

\* Load-factor is the ratio of actual weight carried to total weight-carrying capacity.

† See Appendix V, page 199.



fact that civil aviation training is only in its early stages. Although there is some contact with junior technical colleges, no scheme for student apprenticeship is in existence.\* It was explained that the staff required have to be of such a high standard from the outset that inexperienced workmen cannot be taken on. An attractive scheme, mentioned by B.E.A.C., allows pilots, who have finished their flying service, to draw a pension, at the age of about 45, while continuing to do a ground job.

45. Consultation on terms and conditions of employment takes place through Joint Industrial Council machinery. Evidence was given that through this machinery rates of pay had been agreed amongst all three Corporations, thereby eliminating any possibility of competitive bidding for staff. In some cases contracts between the Corporations and their employees showed some variation, but this does not appear to have caused any difficulty. As already mentioned B.E.A.C. has begun a system of "efficiency committees", outside the normal trade organisation machinery; there will be a central committee, founded on local committees, consisting of staff representatives elected regardless of the particular trade association to which they belong.

46. It was stated that, where possible, the Corporations pooled their technical and maintenance staffs, but there was little scope for further collaboration. The fact that the types of aircraft used by each Corporation were to a large extent different was adduced to show that extensive pooling of maintenance staff was not feasible. Further, each Corporation, in view of the importance in air operations of first-class maintenance, felt an individual responsibility in this matter. This is in accord with Government policy that each Corporation should develop independently in order that the techniques evolved may be compared over a period of years. In recruitment and training, a certain amount of co-operation is possible. For instance, the three appointments boards are in touch with each other and waste of suitable skill is reduced by reference of an applicant whom one Corporation cannot absorb to one of the other Corporations. B.O.A.C. and B.E.A.C. are also carrying on a joint training scheme at Aldermaston, but B.S.A.A.C. prefers to run its own training and, as far as flying staff are concerned, concentrates on giving them training as supernumerary officers on its scheduled services.

#### RESEARCH

47. Research is divided into operational and technical research. In operational research, each Corporation follows its own course. Duplication is avoided to some degree by periodical meetings of the three Chairmen. Their findings are co-ordinated by the Operational Research Branch of the Ministry, consisting of five technical officers, who collate the work and are responsible for relating it to the more fundamental technical research on construction and aerodynamics carried on by the Ministry of Supply. The Ministry of Supply are advised by the Aeronautical Research Council, an independent body with long experience of development and research. At the Council's suggestion, the Ministries of Civil Aviation and Supply have agreed to the formation of the Civil Aviation Research Committee, composed of scientists, and representatives of the Departments and of such bodies as the Air Registration Board. It is the duty of this committee to study new problems affecting operational and fundamental research. The committee reports to the Council, but the interested Departments are kept fully informed. Similarly, aircraft constructors are fully informed of the results of the research work of the Ministry of Supply.

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\* One Corporation suggested that it was time this problem was considered.

## SAFETY

48. The Air Safety Board, a technical committee, is in regular session dealing with day-to-day problems of air safety. B.O.A.C., with an average annual traffic of well over 150,000 passengers, had for two and a quarter years a record of no passenger fatalities. There have, however, been two accidents during the past ten months in which some lives were lost. B.E.A.C. has not yet had any fatal accidents, though there have been two accidents in which passengers were injured. B.S.A.A.C. has had two accidents involving loss of life.

## ADVISORY BODIES

### *Air Transport Advisory Council*

49. By an Order made under Section 36 of the Act of 1946, the Air Transport Advisory Council has been set up. It held its inaugural meeting on 10th July, 1947. Generally its functions are twofold; to consider any representations from the public with regard to the operations of the three Corporations and to consider any matter referred to it by the Minister in connection with the development and improvement of the services of the Corporations. The chairman, who must be a barrister or solicitor, is appointed by the Lord Chancellor, and the members, not exceeding four, are appointed by the Minister. The basis of remuneration is at present being discussed. The Act provides that the council shall make an annual report to the Minister who shall lay it before Parliament.

### *The National Civil Aviation Consultative Council*

50. This is a similar body to the National Councils established by the President of the Board of Trade and the Minister of Labour and National Service. These Councils were formed as a result of wartime experience of the National Council established by the Minister of Production. The National Civil Aviation Consultative Council represents interests and organisations associated with civil aviation, including operators, constructors, users, insurance interests, trade unions, and local authorities. Its function is to give the Minister expert advice on which he can draw for the solution of any relevant problem. The council meets about once in two months and has set up sub-committees to tackle particular problems, such as safety precautions and passenger-handling at airports. The services of members of the council are given without payment though provision is made for payment of expenses.

### *Scottish Advisory Bodies*

51. The Scottish Aerodromes Board has been formed consisting of the Divisional Controller as Chairman, two members of his staff and four members appointed by the Minister in consultation with the Secretary of State for Scotland. There is also the Scottish Advisory Council on Civil Aviation, which is a non-technical body appointed by B.E.A.C. to advise the Corporation on air routes affecting Scotland. It has the right of access to the Minister, and its Chairman is a member of the board of B.E.A.C. and the Scottish Aerodromes Board. In both cases, the services of the members are given without payment.

## CONCLUSIONS AND RECOMMENDATIONS

52. It has become increasingly clear that the new organisation provided for civil aviation is still at too early a stage of its development for Your Committee to formulate any decisive conclusions. For some time improvements will continue to be made largely as a result of trial and error. Generally, however, Your Committee have been assured that both the Ministry of Civil Aviation and the Corporations are endeavouring to provide, with

reasonable economy, services as efficient as circumstances allow. The following conclusions, therefore, are necessarily provisional.

(1) *Delay in Governmental decisions.*—Both the Ministry of Civil Aviation and the Corporations have been hampered by the Government's delay in announcing their decisions on the purchase of aircraft and aerodrome development. These delays have caused much work which might otherwise have been avoided.

(2) *The Establishments of the Ministry of Civil Aviation.*—Your Committee accept the assurance that the establishments of the Ministry are under review and that care has been exercised "in expanding these establishments to meet current needs. Nevertheless, they emphasise the necessity for strict and constant scrutiny and recommend that, not only the advice and assistance of the Organisation and Methods Division of the Treasury should continue to be sought, but also the Ministry should institute their own Organisation and Methods Branch. The possibility, owing to inadequate salaries, of limiting appointments to applicants already in receipt of pensions should be avoided and generally the present procedure for making appointments should be reviewed. The delegation of responsibility to Divisional Controllers and Aerodrome Commandants, which is to be revised in the light of experience, also needs special attention. It is important that the interests of efficiency and economy should not be sacrificed to uniformity and that the Ministry of Civil Aviation should seek to achieve the maximum flexibility in their commercial activities.

(3) *Exchequer Grants.*—Your Committee noted with satisfaction that a grant formula is being agreed and believe that such a formula can simplify consideration of future programmes.

(4) *Demarcation of Functions between the Ministry and the Corporations.*—It appears that any duplication of the services provided by the Ministry and the Corporations can best be avoided by discussion at the airports. Again, however, it is possible that assistance might profitably be sought from the Organisation and Methods Division of the Treasury.

(5) *Maintenance of Aircraft.*—Although Your Committee appreciate that each Corporation feels a particular and individual responsibility for the maintenance of its aircraft, nevertheless the Corporations should endeavour to obtain the utmost co-operation and collaboration between their technical and maintenance staffs.

(6) *Acquisition of Land.*—The possibility of transferring to the District Valuer the agency work done by the Air Ministry Lands Branch on behalf of the Ministry of Civil Aviation should be examined.

(7) *Aerodrome Development.*—Whilst it is appreciated that the work is of a specialised nature, the transference of the civil aerodrome construction work of the Air Ministry Works Department to the Ministry of Works should be carefully considered.

(8) *Airport Amenities.*—To reduce the heavy adverse balances shown in the accounts of the larger airports, the immediate development of revenue-earning amenities, even of an improvised nature, which may also help to popularise air transport, should be considered. The Director of Amenities should submit his report without any delay.

(9) *Landing-Fees.*—Your Committee noted with some concern the difficulties caused by high landing-fees, especially to B.E.A.C. on internal lines. Whilst the Ministry's endeavour to make airports self-supporting is appreciated,

their scale of landing-fees should be reviewed where they amount to such a proportion of the total operating costs as to deter services on routes well suited to air transport.

(10) *Petrol Tax*.—Your Committee observed that the cost of petrol duty to B.E.A.C. for the current year on internal services is estimated at £150,000. The suggestion that internal air lines should receive relief from petrol tax, of course, involves fiscal considerations but Your Committee call attention to the fact that the Report of the Cadman Committee,\* presented in 1938, stated:—

“ In view of the fact, however, that this tax bears far more heavily on aviation than on motor transport, owing to the much higher powered engines necessarily employed, with correspondingly increased fuel consumption, there is, in our opinion, justification for re-examination of the matter.”

(11) *Hangar Construction*.—The absence of adequate hangar accommodation adds to the maintenance costs borne by the Corporations. It was maintained by the Ministry that, owing to unsuitable hangar accommodation, it is at present impossible to service Constellations in this country. Exceptional priority in labour and materials should, therefore, be afforded to ensure the early completion of the accommodation necessary to enable Constellations and the new types of British aircraft to be accommodated and serviced in this country. The use of Dorval is clearly uneconomical. During their inquiry, Your Committee learnt with satisfaction that the Ministry have set up a joint working party to expedite the transfer to this country of the Dorval servicing organisation. Presumably, this working party will also examine the possibility of utilising accommodation already available. It is desirable that it should present its report at the earliest opportunity.

(12) *Prestwick*.—Every effort should be made to conclude the protracted negotiations between the Ministry and Scottish Aviation Ltd., and to complete the survey to determine the future development and status of the airport. Your Committee consider that in the final arrangement made between the Ministry of Civil Aviation and Scottish Aviation Ltd. endeavour should be made to provide for the utilisation of the skill and experience at present engaged.

(13) *Aircraft construction*.—Your Committee are satisfied that the Ministry of Supply are now playing a useful part in promoting research and development of aircraft construction. On financial grounds alone, it is necessary that the Ministry of Supply should continue their responsibility for ordering prototypes of aircraft of new design. Your Committee, on the other hand, were impressed with the need for close co-operation between the Corporations and the constructors in the exchange of information and in the provision to the constructors of as much operational information as possible. It was suggested by the Society of British Aircraft Constructors Ltd., that at present the Corporations are not able to supply the technical information required.

53. In conclusion, Your Committee emphasise the preliminary nature of their present inquiry. A useful purpose has undoubtedly been served, but, in view of the importance of ensuring that the formative development of civil aviation shall be conducted with all reasonable economy and efficiency, Your Committee recommend that a further inquiry be made next Session and that, in particular, a special examination be made of the Estimates for the Brabazon I prototypes and the construction of London Airport.

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\* Report of the Committee of Inquiry into Civil Aviation, Cmd. 5685.

# MINUTES OF EVIDENCE TAKEN BEFORE SUB-COMMITTEE C

21

WEDNESDAY, 23RD APRIL, 1947.

Members present:

Mr. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. A. E. Davies.  
Colonel James Hutchison.

Mr. Howard.  
Captain Sir Peter Macdonald.  
Major Niall Macpherson.

## CIVIL AVIATION.

Sir HENRY SELF, K.C.M.G., K.B.E., C.B., Permanent Secretary, Ministry of Civil Aviation, called in and examined.

*Chairman.*

1132. Sir Henry, as you realise, we are a Sub-Committee of the Estimates Committee, and we propose to enquire generally into the Estimates relating to the Ministry of Civil Aviation. We understand that you are the Permanent Secretary to the Ministry?—Yes.

1133. We are much obliged to you for the very helpful Memorandum that we have before us?—Thank you.

1134. We thought this morning that you could probably help the Sub-Committee by generally amplifying the Memorandum on broad grounds, in order to assist the Sub-Committee in beginning their Inquiry. I notice that on page 10 of the Memorandum you refer to a Memorandum in which it is hoped, by the time the Sub-Committee is ready to take evidence, it will be possible to give further information. I wonder if that information is yet available?—The difficulty there, Sir, is that the Corporations are obliged, by the statute, to submit their programmes for the year; all three of them did that. We prescribed the form in which they should submit their programmes. The programmes were submitted. They envisage a very substantial step-up in the scale of their activities, and the budgetary total clearly became one which wanted a very detailed scrutiny because it was possible that we should find ourselves not able to finance the full scale of activities that the programmes envisaged; so we had preliminary discussions with the Corporations, and they are now revising their programmes in the light of current knowledge of possibilities and we hope to have those programmes submitted in the very near future.

One of the critical problems, of course, that affected those programmes was the set-back in the deliveries of the "Tudor" type aircraft so far as B.O.A.C. were concerned, the grounding of the "Vikings" for B.E.A.C., on which their programmes turn, and the extent to which we, as a Ministry, on our side, could do our part by providing the ground facilities which they needed for their operation. In all those three factors there have been uncertainties, and particularly under the last heading because the Government programme

for the acquisition of airports in the British Isles has not yet been finally determined, so that the B.E.A.C. cannot say exactly when they can introduce particular services on particular routes serving particular centres. Equally, there has been a measure of uncertainty about the aerodrome facilities which will be available overseas. For example, the "Tudor II" has certain potentialities of service which depend on availability of suitable aerodromes which we cannot make available in time for the inauguration of services with "Tudor IIs" and it may well be that the limiting factor on the ground organisation side will prevent the "Tudor IIs", in the first phases, from operating beyond South of Nairobi on the South African route and East of Calcutta on the Far East route; so that necessarily means a phasing of the programme to bring the aircraft into service as soon as they can be made available and as far as they can be operated in relation to available ground organisation. Those problems are all being faced within our planning organisation at the Ministry of Civil Aviation, which is a new creation over the last 12 months; that is just getting into its full working stride; it will throw up a co-ordinated programme which will be reflected in these revised programmes of the three Corporations. We shall then be able to adjust the figures with the Corporations and clear the programmes for final implementation; but I am afraid that phasing the programmes is going to take, possibly, the best part of six to eight weeks before it is complete. That is where we stand at the moment.

1135. That is six to eight weeks from this date?—Yes, before I should think we should have the programmes finalised.

*Major Niall Macpherson.*

1136. May I ask two questions, Mr. Chairman? Firstly, to what extent do the airfield facilities to which you were referring, that is South of Nairobi and East of Calcutta, depend upon the exertions of the Ministry of Civil Aviation, and how far are they completely outwith their control?—Mainly, they are out of our control, except at Singapore. South of Nairobi the critical issue is Johannesburg where, as you know,

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Sir HENRY SELF, K.C.M.G., K.B.E., C.B.

[Continued.]

the operation has to be at aerodromes between 5,000 and 6,000 feet altitude. The performance of any aircraft at that altitude is necessarily a limiting factor, and we cannot operate "Tudor IIs" into the existing airport at Johannesburg because of the limitations of the runway there. The South African Authorities, of course, have full responsibility for that area, and they have already put in hand their scheme for a full international airport at Kempton Park; work is progressing very fast and hard on that to meet all their international obligations. They take the position that it would be difficult, and they do not think they could justify it, to switch labour and effort from the Kempton Park new aerodrome to create an extension of the existing airport, which would have no continuing use; so that is a matter which is within their jurisdiction, and we have to hope for the early completion of the Kempton Park Aerodrome, when our "Tudor IIs" could go in, but it may be a matter of two years before that can be so.

East of Calcutta the limiting factor is, of course, the fact that the aerodromes there were in Japanese occupation; they are in very bad shape, and in many cases, with the current development, such as in Burma, it means that we cannot act on our own initiative in getting the aerodrome facilities in order, except in the case of Singapore where we have had a very full review of the whole position and have reached a general arrangement with the R.A.F. whereby certain developments of the facilities there are being put in hand at once, pending a much bigger scheme for Singapore which will take a matter of three or four years. With the development of facilities at Singapore, it will be possible to over-fly some of the intermediate aerodromes, even if they are not brought up to full specification, and we may be able to operate long-range aircraft, but, in that case, the "Tudor II" may not be able to go through because of the limitations of range which were in the original specification; there was never any intention that it should be long-range; so it is possible that we may have to wait on some of the intermediate airfields being put right after enemy occupation.

1137. How long do you expect that the intermediate scheme at Singapore will take to come into operation?—I should think the intermediate scheme will be in operation in one and a half or two years.

1138. But it will not be possible to operate direct between Calcutta and Singapore with "Tudor IIs"?—No.

1139. Then the other question I was going to put was: To what extent will these limitations result in varying the programmes that have already been submitted? Is that one of the reasons why the programmes have had to be remitted back to the Corporations?—No. We had, in fact, got a programme laid out for the

Australian route whereby, although the Australians are going to operate "Constellations" on their side, we should be operating with "Lancastrians" fast services, supplemented by "Hythes" slow services to be replaced by "Solents" this year, and the programme was definitely phased in January on that basis. The critical problem is this, that the Corporations have rightly budgeted for a very substantial increase in their over-all capacity. You have probably seen the last accounts for 1945-46 in which B.O.A.C. gave their notional expenditure as something over £15 million. The notional expenditure they gave us in January for 1947-48 was between £25 million and £26 million; in fact, that increased expenditure reflected an increase of 60 per cent. in their capacity operations. The question is: What is the best estimate of revenue that can be set against that expenditure, and can we, within the over-all statutory limit provided by the Act of 1946, allocate to B.O.A.C. sufficient to bridge the gap between the best estimate of revenue and the best estimate of expenditure? That is the critical issue. I am bound to confess to you that the real problem is how far can we, apart from mails revenue, expect to get revenue on aircraft which are converted wartime types, and very often cannot give much passenger capacity because of the heavy mail loads already taken up. The "Lancastrian" service particularly is in a difficulty there, but again we are up against this very difficult problem that the "Lancastrian," with nine seats or six bunks, has to operate with an engine power of four "Merlins" in the aircraft, when a modern civil air transport, specifically designed from the beginning for civil work, would probably take thirty to forty passengers with that engine power; so that we can give the services, and we give them, as we must, with British type aircraft, but the cost must be much more difficult for us than for our competitors; that is why this subsidy factor has to appear as it does. But, at the same time, Parliament fixed a limit on the subsidies we can pay, and we have got to relate the activities undertaken by the Corporations to the available money to balance the deficiencies due to the operation of these wartime craft. That is the problem. At this stage we have to say whether the revenue which we can budget for permits this scale of activities to go forward, whether or not there must be a cut back on the scale of activities.

1140. There is one point regarding the ratio of mails to passengers that I have never been clear about. I appreciate the difficulty of the "Lancastrian" only being able to carry six to nine passengers as compared with 30 to 40 in a 'plane designed for civil aviation, but what is the balance of mail that can be carried in each case? Does it mean that, at the same time,

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the same mail would be carried in each case, or does it mean merely that the ratio between mail and passengers carried is different in the case of a war-designed plane as compared with a civil designed plane?—The ratio of mails carried to passengers in such a type as the "Lancastrian" is very much higher than it would be in the ordinary type. The "Lancastrian" has an available maximum load of something of the order of 5,600 lbs., and very often that is so taken up that instead of being able to put six or nine passengers up with the available seating we can only take two or three because of the load being absorbed by the mails. You must put your mails on the fast service; you cannot send them through by "Hythe" flying boats, so the passenger work is mainly done by the flying boats.

Colonel *James Hutchison*.] I was going to ask a question or two, Mr. Chairman, on the subject of the programme about which Sir Henry has given us certain remarks. Would you prefer that I should ask those questions at the end?

*Chairman*.] I prefer that you should do it now, as I raised the question of the programme. That was a matter specifically referred to in the Memorandum as one upon which we would get additional information.

Colonel *James Hutchison*.

1141. May I put this point to you, Sir Henry? When you talk about the programmes, I take it it is April 1947-48 that you have thrown back to the Corporations, and it is a programme for all three Corporations?—Yes.

1142. You have told us that according to the estimate of their requirements, and the cost of financing it, so far as you could see the present expenditure, as compared with the probable revenue, would leave a gap which could not be bridged under the Act?—It might not be bridged under the Act.

1143. Now the Act allows, does it not, £10 million for 1947/48 and £8 million a year thereafter?—Yes; that is for all three Corporations and for grants to Associated Companies.

1144. So that the gap, in your view, might have been greater than they could have covered?—It might have been greater than those statutory limits but, obviously, as you have noticed from the figures on this estimate, we are endeavouring this year to start working within a figure which would have come nearer to the £8 million for the next year than the £10 million for this.

1145. Under Section 8, the Corporations may create and issue any stock required for the purpose of exercising their powers. None has been issued yet, has it?—B.O.A.C., if you recall, issued in 1940, under the Act of 1939, £4½ million of stock redeemable

over 30 years. In, I think it was, June of last year, they issued a further £5½ million as announced by the Chancellor of the Exchequer in the House. This last January they issued another £10 million, so B.O.A.C. have, in fact, got a total issue of £20 million. B.E.A.C. have not issued anything yet; they have been dependent upon borrowings authorised by the Treasury, but there is to be a capital issue during the course of the current year to cover that. The position of B.S.A.A.C. is not clear yet.

*Sir Peter Macdonald*.

1146. Is it not a fact, Sir Henry, that the B.O.A.C. have been acting as a "parent" Company; they have been financing the other two?—There was, of course, the original purchase of the equity of the original B.S.A.A. Company when the B.O.A.C. took over as the "parent" concern on the 1st January, 1946. The actual Company is still being kept in being at the moment, because it is the body to whom the licences were issued to fly over these different routes, and there are certain formalities to be cleared before the Company can disappear, but the assets of the Company were available for continuing activities.

1147. And any losses which the B.O.A.C. may have incurred in the last year may be shared by these other subsidiary Companies?—Yes, until 1 August, 1946; but, of course, it was a particularly good year last year on the South American route and it may be, as far as B.S.A.A.C. are concerned because of the high load factor they got on that route there will not be any serious deficiency there; but I think the Sub-Committee will appreciate that that illustrates the point I was groping towards, that if the very high load factor to which they have been working on that South American route, which has been running something like 76 per cent., dropped, then there is immediately a substantial deficiency on the route because they are also working with "Yorks" and "Lancastrians," these converted wartime types; so that one of the main critical factors on which we have to work out our best estimate of revenue is what is going to be the load factor. That depends entirely upon the traffic offering, how long the seller's market continues, and how long we can hold our own with the aircraft that are operating the routes.

Colonel *James Hutchison*.

1148. You are led back really to this, are you not, that you have been forced to cut down the programme owing to the estimated gap between revenue and expenditure largely because, or at any rate one of the main contributory factors, is the type of aircraft you are offered or have available is not really suitable?—Well, may I somewhat qualify your presentation of it? You said we have cut back. I said we hope

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not to have to cut back if, on the examination of the estimates, we can balance matters. There are quite a lot of items, for example, the question of the training of the aircrews. Is that a fair charge against current revenue, or should some of it be carried to capital account? There are a number of those items which we are examining, and my hope is that we shall be able to strike a balance between chargeable expenditure and reasonable revenue expectations which will enable us to say to the Corporations: "Go ahead with your plans." I only felt it was my duty to the Sub-Committee to warn you that it is possible that there might be in the picture ultimately settled some curtailment of activities, not because the aircraft are not good aircraft but because they have not the capacity for passengers that they would have had if they had been built as civil air transport from the beginning.

1149. If I may ask a further question, it may help the Sub-Committee—it certainly will help me. I think that a number of us feel that you are struggling to try to make a proposition into a good commercial proposition with the wrong tools. I would like to have had from you as to whether you are thoroughly happy with the tools you have got, the aircraft you have got, for these services, because I think it is eventually going to lead us back to what are the kind of aircraft and where are we going to get them from to carry out the services you have in mind?—Nobody would profess to want to operate air services in aircraft not giving the right capacity, but the Government decision has always been, as I have said, to employ British aircraft as far as practicable. The war situation has left us with a bad critical period of three to four years, and we must make the best effort we can during that period and plan the new types to come into service as soon as possible, when of course we shall stand to be judged by whether we operate those aircraft efficiently against the world's best standards, and when they come into operation we ought to be able to operate them better than anybody else. In the meantime, we are up against this war legacy, and we must make the best we can of the situation.

*Chairman.*

1150. You have mentioned the present critical period, and also world standards. In your opinion, is there any possibility of British Airways being prejudiced because of the limitations placed upon the financial assistance that the Corporations can get?—I think, Sir, that if there is any immediate limitation within the subsidy limits imposed by the Act, it would be a purely temporary matter, and that we should find that inside the next 18 months or so we will eliminate quite a number of factors. The "Hermes IV," which is a new Handley-Page aircraft, will come into service; that is going to take a lot of the

strain off us, and we shall find that we can carry forward with our plans. This is the sort of planning that is going ahead; this is purely tentative thinking at the moment—a sort of target that the B.E.A.C., for example, are reaching towards. Last year they were doing something of the order of 40 million passenger seat miles—the total available capacity. In this current year it will certainly be rising from 150 million to 200 million for passengers alone; that is a terrific increase in the curve; every year it goes up a further 200 million passenger miles, until you reach some sort of flattening out of the curve at nine times, that is 1,800 million passenger seat miles about seven years hence; but that is a continual planning forward of a vast increase in capacity. On top of that there is a big programme for freight and mail carriage. I am only trying to make the point that we are expecting that this planning will be possible even with reductions of the subsidies payable to B.E.A.C. within the total permitted by the Act, because the cost will come down rapidly with the disappearance of the war-time difficulties, and with the spread of the overheads over the much greater capacity that can be operated. With the "Vikings," and later with the replacement of "Vikings" which will certainly come in, B.E.A.C. will be able to work to commercial standards within a reasonable period of time.

*Sir Peter Macdonald.*

1151. Did you say the replacement of "Vikings," or with the "Vikings"?—With the "Vikings"; but even more so with the replacement of the "Vikings" which is already on the stocks, in view of the time it takes to get these aircraft out; but we anticipate a very considerable life for a "Viking," bringing about the replacement by 1950, and you have a progressive replacement using "Vikings" for a continued period after that in supplementation of the improved type as it comes into service.

1152. The "Vikings" have not been put into service yet, have they?—Yes; they are going into service again this week; they have been cleared of all their troubles, and everybody is very happy about them.

*Mr. Howard.*

1153. If I may return from long-term planning to the programme for the current year, Sir Henry has mentioned various physical and technical factors, the importance of which I appreciate; but I am rather disturbed by the uncertainty of one of the programmes for the current year, whether it will, in fact, be approved and agreed, and I cannot at the moment see clearly which of those physical and technical factors were not ascertainable and could not have been made known to the Corporations by now so that they could have borne them in mind when preparing their



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programmes, which apparently have had to be revised by them?—That is a very pertinent question, if I may say so. If you take the “Tudor I” and the “Tudor II” position, of course, as everybody knows, they were expected to be delivered and available by this date. The difficulties experienced with the “Tudor I” will be solved by modifications now being worked out and applied to those aircraft, but it will put the actual programme of delivery back. The “Tudor IIs” have also had to be checked for any possible repercussions on them, so that the Corporations, who could do nothing about it, have had their plans set back in time by the difficulties in delivery of the particular aircraft. Turning to the available ground facilities, the problem is, of course: What allocation of labour and material can be made available for civil aviation against the whole of the national picture? I should be quite misleading you if I tried to imply that we were satisfied with the progress of our bricks-and-mortar programme; we are definitely not satisfied. The available labour and material implies a lag of effort which is extremely difficult to sustain in relation to the planned programme ahead, but that is all inherent in the national situation, the economic position and labour availability.

*Chairman.*

1153A. Whether you are satisfied or not, Sir Henry, is your allocation of labour and materials definite and decided or is it uncertain?—We have received a labour allocation for the works services already in hand, of which we have to make the best use we can; but the Government programme for the acquisition of new airports, which was referred to in the White Paper submitted to Parliament before the Bill of 1946 was presented, clearly envisaged acquisition of airports used for the operation of scheduled services. There have been many questions in the House asking why that programme has not been decided. It has not been decided; it is awaiting Government decision now; it has been formulated—but the decision turns on the whole implications of that situation. Also it is my duty, as Accounting Officer, to bring particularly to the attention of the Government the financial considerations involved, and they are very heavy; so that the Government decision has to be taken in knowledge of what is the effect of this programme on the available labour and material, for works services in particular. It would seem to be not so much a question of whether the programme should go forward, but rather on the time-phasing of it, as to whether particular airports can be scheduled to come into service at particular dates for which the Corporations have previously budgeted, or whether there must be some slight deferment in the introduction of those services. There has been no misunderstanding, I think, on that position

because time and time again questions have been asked: “Why has not this or that particular airport come into service yet?” We have had to reply that the limiting factor is these works services and that the clearance of the Government programme against the over-all economic position has to be obtained first.

1154. In other words, you have your programme but you are awaiting its clearance?—That is the position.

*Sir Peter Macdonald.*

1155. It is a question of high policy?—Yes.

1156. And whether or not all these aerodromes are going to be nationalised, or whether they are going to be municipal aerodromes?—That point has already been cleared by the statement of Government policy in the White Paper of, I think, December 1945, in which it was clearly stated that the Government intend to acquire all aerodromes used by scheduled services. The point is, having scheduled possibly 80 or 90 aerodromes in the British Isles which have got to be acquired, and having decided which scheduled services are to call at those places, we then have to submit the programme for Government approval, including the proposed dates of acquisition of those aerodromes, the works services which are involved on them, and what the effect will be on the available labour and material. We have phased it as we think it ought to go, but the Government may well say: “Oh, that is very nice, but we just cannot stand it at the present time. You have to re-phase your programme on a slightly extended basis.” That means that the B.E.A.C. may have to hold back some services, and many people will say: “Why has not our service started from our particular town to the Continent as planned?” Of course, that is a phasing of the programme in accordance with the national economic situation.

*Colonel James Hutchison.*

1157. I would like to return to the question of the suitability of aircraft. I think we are all quite clear that the aircraft which you have to use just now are by no means ideal. I wonder if this is a fair question? If you were to be able to choose the perfect aircraft for all your services, you would choose a certain type. Are you being interfered with in that choice by outside considerations, or by pressure by the Ministry of Supply, shortages of dollars, and so on, which, if your answer is “Yes,” would lead us to suppose that for a long time ahead you are not going to get what you consider the perfect aircraft for running your services?—If I may recall, if I had had my choice, I would have liked to operate the Fairey and the Short aircraft which were ordered in 1938 against this very period. Those aircraft were ordered and

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started, and Heath Row, if you recall, was the home of that civil airport to make the Fairey prototype which was going to uphold British prestige. They had a labour force of 900 people engaged on that job when the war came, when we had to shut down the whole enterprise, switch the labour, and we lost a world winner in the form of civil air transport. Short's had a similar type on the stocks. We lost our chance of an aircraft designed *ab initio* for the job. It would be impossible for me to say, as I sit here, that we are happy to operate aircraft which were not designed for civil air transport. What I would say is that, although we are operating at a disadvantage until we can get our new types, that position is fully accepted by declared Government policy; that the available British aircraft must be used to carry through this difficult intervening period. We must make our effort to achieve the very best results we can in carrying through that policy.

1158. But I am thinking further ahead than that, Sir Henry; I appreciate that, but in your further planning you may have views on "Tudor IIs"; you may have views on "Constellations" and Boeing "Strato-Cruisers." Are you a completely free agent, as far as your Ministry is concerned, in choosing what you consider, irrespective of nationality, irrespective of pressure by the Ministry of Supply, the aircraft that you consider would be ideal to make this a commercial proposition?—No, Sir. We are in the same position as any other member of this Nation. Our hopes are very often not realisable on account of the national economy. There are many people who would like to spend dollars who are not allowed to spend dollars. An operator would obviously like to have an aircraft of the best quality, irrespective of who makes them; he would be very wrong if he did not; but the Government must impose restrictions upon him; they are related to the dollar situation, and considerations of the maintenance of the British aircraft industry, related also to making use of our resources to the utmost possible extent, and to the maintenance of our effort to get new type of British air liners into operation at the earliest possible moment. If the operator could feel that he could buy an unlimited number of aircraft wherever he could find them of the best type, he would naturally never feel very much pressure to urge on the production of British air liners which would meet his real needs, so that you are in danger of a cumulative difficulty under a field for him to acquire what he wants wherever it comes from. We, therefore, have to apply the Government policy against the national situation as it exists to-day. The arguments for and against the policy, I submit, with respect, are not for me to deal with to-day. I believe you have a debate on the subject to-morrow?

1159. Yes. I am not trying to criticise or approve the Government policy. I wanted to clear my mind that on policy we put you under a permanent disability as compared with what you could, under ideal circumstances, bring about?—I have to put the two schools of thought. Another school of thought would say equally that you may put the British Aircraft Industry under a similar permanent disability.

1160. I agree?—It is a balancing of whether the interests of the air operator are to be paramount, or whether the overriding balance of national considerations is to be the final determining factor.

*Chairman.*

1161. Turning to aircraft production, are any delays there due to difficulties of determining the allocations of labour and materials?—They are not due to any question of priorities in the Ministry of Supply or elsewhere. I speak with feeling on this because I have had probably longer experience than any public servant on this production game. The real truth of the trouble is that nobody will ever believe that forecasts of the time needed for new types are always rosy and optimistic. No aircraft producer has ever delivered his aircraft within the time he originally forecasted for it, except one, and if I may, with great respect, recall it, I was rather rebuked by a parallel Committee for having been somewhat unorthodox in ordering that aircraft; that was the "Empire," "C" Class flying boat, which by some very fortunate combination of circumstances came out to time and was an extremely good type, but that is the only type I remember.

*Sir Peter Macdonald.*

1162. Is it not a fact that the manufacturer is very often, and generally, hampered by the fact that he has to put up with any number of modifications before the thing comes off the drawing board?—They are not abnormal, with great respect. I well remember that Lord Austin was given the "Fairey Battle" to standardise and produce in mass. Then he came up and said: "Do you know, I have had on the aircraft for which there have been sealed standardisation sheets, 6,000 modifications in the last three months". I went through those in complete detail and there was nothing abnormal. I am only trying to make the point that there is nothing abnormal about this. I saw the complete details of the "Constellation" as early as May, 1940; it did not get finally through its teething troubles until the beginning of this year,—seven years later; it was actually put on the stocks sometime in 1938. I could take you through a string of aircraft. There is nothing abnormal in the

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British aircraft position other than the fact that people will always credit rosy and optimistic forecasts.

Mr. A. E. Davies.

1163. Will Sir Henry tell us whether, apart from dollar considerations, the Ministry would be free to buy whatever planes it wanted and where it wanted, or has not a preference been expressed, if not instruction given, to concentrate upon British planes, and has some criticism not been made in the House already on the fact that we have used American planes?—I think my Minister has quoted in the House of Lords, and the Parliamentary Secretary in the House of Commons, that the Government policy is to use British aircraft to the utmost practicable extent. That wording means that the purchase of foreign aircraft must be most exceptional, entirely abnormal. That was the basis on which we said we bought, first, "Constellations" and then Boeing "Strato-Cruisers" in order to maintain our prestige for the North Atlantic route.

Major Niall Macpherson.

1164. Can I ask whether that is irrespective of operating costs? If there were a vast difference between operating costs of, let us say, American planes as against comparable planes of British manufacture, would it still be the same policy in the hope, say, that British planes might improve and operating costs be reduced?—I think the answer to that is that it is a measure of the balance of considerations. How much are you prepared to pay in order to secure the best national advantage? If it is decided that the best national advantage is that you must continue to operate British types knowing it is to cost so much extra in the way of subsidy, that is a matter for Government decision; but if the Government say: "This is costing too much and on the balance of consideration, we will go elsewhere," that will be another decision, but it is a decision taken in the knowledge of the over-all picture and the balance of financial, operational, war potential and other considerations.

Mr. A. E. Davies.

1165. But there is no hard and fast rule at the moment?—The hard and fast rule is that we use British aircraft, save in the most exceptional circumstances. The question is: What are the most exceptional circumstances?

Major Niall Macpherson.

1166. Arising out of that, I think it would be well for this Sub-Committee to know at this juncture what considerations presented themselves in that way to the minds of those ordering the "Brabazon" types; that is to say, what the estimated comparison of operating costs of the "Brabazon" types was in comparison

with similar foreign aircraft at that time?—As an original member of the first Brabazon Committee, I think I can answer that fairly readily. We aimed to beat the best American practice, and we believe we shall. The actual figures working out for the "Brabazon I," as it is coming through, encourage one to hope that we shall be able to operate as economically as the Americans do; but, there again, you might have put your point, with respect, in another way: How is the B.O.A.C. operation of the "Constellations" comparing with the American operation of "Constellations"? That is the direct question. If I may anticipate another point, you might say to me: How is it that K.L.M. show the same apparent profit on their operation with the American type? The answer is that they have had a clean-cut approach to the job; they have had American aircraft from the beginning. They have, in fact, got a better mail rate. If you look at the figures you will see that they have been getting a mail rate of six gold francs as against a figure of 3½ gold francs or less than we have been working to for those Empire routes, so you have to analyse the mail figures in the first place. In the second place, it is definitely clear that B.O.A.C. attract passengers to their Transatlantic services in greater proportion to the capacity they offer than their competitors. You look at the published seat capacity taken up and you would say: "That is not true," but the answer is that B.O.A.C., from their smaller capacity, have to give priority to the United Kingdom mails, flying on the critical west-bound services against prevailing winds, and that obscures the actual number of passengers they carry against the available seat capacity; but it is quite clear, from every analysis we have made, that B.O.A.C. are operating those aircraft every bit as efficiently and economically as their competitors, but there is also the ground situation to allow for. Owing to the lack of ground services, we cannot bring those "Constellations" back to this country because the hangars are not available, so we have to service them at Dorval, just outside Montreal. We cannot fly passengers on those aircraft into Canada because that would be interfering with the rightful traffic between Canada and the United States which is operated by agreement between those two Governments. Therefore, although we operate a direct service from these Isles into Montreal, we have to operate also our services to New York and then fly "dead" up to Montreal to service them, which means you have 400 or 500 miles each way to fly "dead" without revenue, and that has to come into the accounts, which shows that they are not yielding the same financial results as their competitors. I am not seeking to paint you a story of hard luck, or anything like that. It is just a plain

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straightforward fact that this country is up against the results of war that America did not endure in her own locality.

1167. Could Sir Henry clear one point about the freight rates for mail? Is it a fact, then, that if K.L.M. carry mail from Amsterdam to Montreal they are paid at the rate of six gold francs, whereas if we carry mail from Prestwick to Montreal we carry at 3½ gold francs?—The actual advice I have got is that the rates that K.L.M. have been receiving, particularly on their South American operation are, in some cases, higher than ours. The present North Atlantic rate of 6 gold francs is practically an agreed rate, but there is the question of getting rates generally standardised between the various operators. The I.A.T.A. rate machinery has already made some propositions which are now being brought in by agreement between the operators, but in the past there have been operations under which the rates varied, and, on the whole, I believe it is correct to say that K.L.M. have been getting a higher rate on the average. The general picture is illustrated by the position on the South American services, where our operator is carrying for 3.50 francs, whereas the other operators have been getting as much as 10 gold francs, and are proposing to drop to something like six with a compensating figure for second-class mail at 1½ to 2 gold francs. But this general picture is confused until I.A.T.A. have straightened it out; it is their job to try to work out a common picture for all the operators, and we shall hope that these anomalies will be straightened out very soon.

Mr. Howard.

1168. With your permission, Mr. Chairman, I would make one further effort to pin-point the cause of the delay between translating ultimate hopes into an immediate practical programme for the operations for this year. If I might address two questions to Sir Henry, the first is: Do the Corporations rely upon the Ministry to supply them with some idea of the facilities both as regards aircraft and aerodromes which will be available?—So far as the aircraft are concerned, we have had, since last May, as has been announced in the House, a Standing Committee under my Chairmanship, with the Ministry of Supply, the Ministry of Civil Aviation, and the three Corporations, which co-ordinates the whole aircraft supply picture, and they have worked in with that throughout. They have just recently (I must be frank with the Sub-Committee) said that as that Committee has proved so successful, could they not have a parallel one to deal with precisely the problems to which you are referring; that is, the availability of ground facilities. We propose to set up that joint machinery equally to make sure that the Corporations and the Ministries' activities are kept in close touch and each side knows

what the other is expecting or getting; but in the past, the procedure has been by *ad hoc* discussions. We have had a series of talks, with the B.E.A. people in particular, during the last eight months at which (I want to be perfectly honest in this) the B.E.A. have told us, quite frankly, that they feel that we are not giving the facilities at the date they ought to have them. I have had to address to them letters saying: "I entirely agree with you; we would have liked to have given you these facilities, but we cannot give you more than the availabilities of labour and material will permit us to do." So that B.E.A., being very enterprising people, as you will have seen from the plan to which I referred just now, have been planning their efforts in the hope of getting maximum facilities that they could use, whereas the national picture has made us turn to them and say: "We are sorry, but we cannot give you those facilities by those dates."

Sir Peter Macdonald.

1169. May I ask a question arising out of that? On the question of aircraft, you are just setting up a Committee now to co-ordinate?—To formalise the arrangements that have previously operated in regard to ground facilities and, as I have said, handled *ad hoc* by discussions between the departmental officials and the Corporation officials, or between the Executives, the Chairmen, and the Minister or myself.

1170. Do I understand by that that types like the "Brabazon I," for instance, were ordered and put in hand without consideration of what the ground facilities were to handle them?—The "Brabazon I," of course was planned as long ago as January, 1943.

1171. Knowing all the time that there were only two aerodromes in the world that can service them?—It would not, I think, be correct to say that there are only two aerodromes in the world that can service them, but I will deal with that as a separate issue. It is not, in fact, correct, if I may say so. At Amsterdam they can do it.

1172. They can handle the "Brabazon I"?—That is my information.

Sir Peter Macdonald.] It is not mine.

Chairman.] I do not think we should pursue the question of the "Brabazon I" any further at the moment. I think perhaps we might allow Mr. Howard to put his second question.

Mr. Howard.

1173. Was the Corporations' programme, which has had to be remitted, based on a belief that they would obtain certain facilities which the Ministry have, in fact, not been able to provide, or was it based on the assumption, which they had no right to

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[Continued.]

make, that they would get facilities which were obviously unobtainable?—You are referring now to the programme which has been submitted this year. I am sorry. I have been talking in terms of the activities which have been going on over the last year, since last year.

1174. I am still concerned, in my one-track mind, with the exact cause of delay in translating hopes into a definite programme?—The actual programme, if the Honourable Member will permit me to say so, that the B.E.A. submitted revealed a deficiency between revenue and expenditure of something over £3 million. That is the rock-bottom difficulty with that particular programme.

1175. Was that after taking into account the subvention or subsidy, or would that not have been covered by it?—That is the amount which, on that presentation, would have had to be covered by subsidy. The question is whether it is possible, within the available statutory limit of £10 million this year, to allocate £3 million to B.E.A. In our judgment, that is too high a figure. We have discussions proceeding at the moment on whether particular items should be withdrawn from the account, and so reduce it. I have items listed here which suggest a reduction of the order of £1,700,000 of that picture which would immediately bring down the application for subsidy to a much lower figure. That is the problem with the B.E.A. on the financial side; but on the ground organisation side there is the question when these direct Continental services and these internal services can start up. My point on that was that the main aerodrome programme has not yet been finally approved by the Government. Until the main programme has been approved we cannot be certain that B.E.A. will be able to bring in the services on the dates that they have assumed from the knowledge of the programme that we have shaped. We have shaped a programme of which they are aware; they have based their schedule of activities on the assumption that that programme will be implemented, but I have no Government decision to implement that programme yet. It may be that the economic position of the country, as a whole, will mean some spread over of the timing of that programme, in which case B.E.A. will automatically have to set back the introduction of certain services so that their scale of capacity ton mile operations for this year is, at the moment, an unknown quantity until we have cleared this ground problem.

Major Niall Macpherson.

1176. Is it necessary to prepare or to approve the whole aerodrome programme all at once? Could they not approve a phase of it and leave the rest open?—That is a perfectly possible approach, but I cannot anticipate what the Government decision will be; whether it will take that form, or will take the form of saying: Take the whole programme and implement it as you propose, or re-phase it, or do it in bits. I cannot say until I get the Government decision.

Mr. Howard.

1177. Would it be an unfair summary of Sir Henry's replies to say this: That the delay in getting this precise programme agreed is in no way the fault of the Corporations? It is due to difficulties at the Ministry in deciding whether they can allocate so much as £3 million for this particular year to this particular Corporation and, secondly, to doubts in the Ministry as to whether, in fact, they will be able to provide the facilities which are dependent upon Government decisions outside their control?—I would accept that statement with one modest qualification, and that is: I do not think I can quite absolve the Corporation from the responsibility for the preparation of their financial statement upon which I, as the Accounting Officer, have a number of queries to put to them; so there is the question of whether the financial programme calls for some re-shaping in the light of the criticisms I am making of it.

Colonel James Hutchison.] Would it be possible for the Sub-Committee to have the original estimate, and then in six weeks' time or so the revised estimate, just to show us what it has all amounted to?

Chairman.] I suggest that that is a matter which we could pursue when we receive the programme, which we will obtain during the course of our enquiries.

Witness.] I should hope to give you a note as soon as we have cleared what the position is.

Mr. Howard.] I apologise if I have pressed my point unduly, but I am very clear now.

Chairman.

1178. I think we are very much obliged to Mr. Howard for bringing us back to the original point of this morning's inquiry.

I am afraid, Sir Henry, we will have to adjourn at this juncture, but it is quite clear that we would very much like you to come before us again?—I was afraid so, Sir.

(The Witness withdrew.)

[Adjourned till Wednesday next, at 11.30 a.m.]

30 April, 1947.]

Sir HENRY SELF, K.C.M.G., K.B.E., C.B.

[Continued.]

WEDNESDAY, 30TH APRIL, 1947.

Members present:

Mr. FREDERICK WILLEY (*Chairman*).Mr. Barton.  
Mr. Corlett.  
Mr. A. E. Davies.Mr. Howard.  
Captain Sir Peter Macdonald.  
Major Niall Macpherson.

Sir HENRY SELF, K.C.M.G., K.B.E., C.B., Permanent Secretary, Ministry of Civil Aviation, recalled and further examined:

*Chairman.*

1179. Sir Henry, I think this morning we can best pursue our inquiry by following the memorandum which you have submitted to the Sub-Committee, raising matters which the Sub-Committee feel should be explained rather more fully than they appear in the memorandum; but before we do this, and before we leave the matter we were discussing last time, perhaps I can refer you to page 10, where you say: "Owing to uncertainties over the types of aircraft to be available in 1947-48 the programmes of the Corporations are still under discussion at the time of preparation of this memorandum." I presume you would agree now that that is a little narrow, and that in fact there are broader considerations which are also tending to hold up the decisions on these programmes?—Yes. The position was, as I explained last week, somewhat obliquely: I fear, that the programme was drawn up on certain assumptions as early as January last. Then the question came up as to whether aircraft of a larger operational capacity could be obtained for the services, and certain estimates were worked out of what would be the effect of possible alternatives, and the matter was submitted for Government decision. That decision was announced in the debate last Thursday. We have since had talks with the three Corporations, and the estimates are being worked in line with that decision.

*Chairman.*] Thank you very much. Perhaps we can now turn to the memorandum.

*Mr. Howard.*] Before you pass to that, Mr. Chairman, may I lodge a gentle protest, that I have not yet received the minutes of the proceedings which took place last week. I have no doubt there are good reasons why that has happened, but it makes it very difficult to follow up the evidence which we listened to on an earlier occasion without refreshing one's mind on the details. I mention that in particular because I had wished to follow up a particular point you had raised, and there is no more prolific cause of waste than delay when you have got a heavy overhead administrative expenditure, and it is unfair to the administrators concerned, when there is any suggestion of delay, when one does not have an opportunity of probing it fully. I had hoped to pursue that

matter this morning, but as I have been unable to go into the details of the evidence which we heard last week it would be unfair to both the Sub-Committee and to the witness to try to pursue it this morning.

*Chairman.*] Yes; I have seen the Clerk to the Sub-Committee, Mr. Allen, about this point. There have been exceptional difficulties over the minutes, which we have not received. In future we hope to have the minutes, and I fully agree with Mr. Howard that in connection with this particular inquiry it is especially important, and in fact I only asked the general preliminary question so that it would be on record in the minutes of this meeting, and will call Members' attention to it, so that if necessary we can return to it next time.

*Mr. Howard.*] Thank you, Sir.

*Captain Sir Peter Macdonald.*

1180. I have already called the Chairman's attention to this fact that we did not have this report, and it is the first time it has happened. There may be some good reason for it, but it does seriously handicap Members of the Sub-Committee?—Would you permit me to say that we did our best to help. We returned the draft minutes inside a few hours of receipt; and as far as we are concerned, will do our best to collaborate in that.

*Chairman.*] Thank you.

*Mr. Howard.*] I was not suggesting that I had any knowledge of the cause of our not getting them. I was merely objecting to the fact that we had not got them, which made our proceedings more difficult.

*Mr. Barton.*] Can we pursue that point? We do not depend, surely, on the return of the draft minutes by witnesses before the draft minutes are actually issued; they are issued for other purposes, are they not?

*Chairman.*

1181. In this case, as Sir Henry has said, the delay caused was only a few hours, so that I do not think we can grumble on that account.

If we could now turn to the memorandum, I notice in dealing with the origin and pre-war growth of the Department you say that by August, 1939, the total staff of the Department was 273. I wonder whether you can tell us what the figures are for the present size of the staff?—Yes. We have

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[Continued.]

gone into the man-power position quite carefully, and I can give you the current establishment strength for the non-industrial staff if you would like to have it, comprising 1,450 at headquarters and 3,500 at out-stations, making a total of 4,950. In addition to that, of course, there are the industrial staff totalling 1,753, which makes a total of approximately 6,700 altogether. I can give the breakdown of that main total, 3,500, if you wish it, for out-stations.

Mr. Howard.

1182. May I interject one question there? Out-stations cover the world, not merely this country?—Where we have people overseas, it includes them.

Mr. Barton.

1183. That is the number of staff exclusive of staff employed by the corporations?—Yes, definitely.

Major Niall Macpherson.

1184. Would it be of advantage to the Sub-Committee if Sir Henry did give us the breakdown of that? I do not suggest he should give it now, but if he gives a breakdown in relation to the chart that is attached to his memorandum that will help me?—Yes, I can give you the breakdown of headquarters; I was rather hoping the Sub-Committee would let me, in fact. Just broadly, that figure of 3,500 at out-stations includes a figure of 1,800 for the telecommunications system alone. That system, which is a network over the whole of the country, is both the life-blood and bones, if that is the right expression, of the whole system of navigational aids and air traffic control, and as the system develops so that number must increase, as we take on new airports, and the number will progressively rise until it is more than double, in due course. If you take 1,800 out of the 3,500, and if you take in addition to that a total of 850 approximately for the airport management and air traffic control, with 650 for the constabulary, you are left then with an over-all total of 116 for divisional headquarters and 76 for the aeronautical information service. The point I am trying to make is that the total is very largely built up of people who have executive jobs to do in connection with the running of airports and providing technical operational services, that are necessary for safety and servicing the airline operators.

Chairman.

1185. You have referred to progressive rises in the establishment figures. What will be the figure for the establishment?—We have made a provisional estimate of progressive rises, and during the course of this year the expectations are that the aerodrome programme will necessitate a rise in the non-industrial total from 4,950 to approximately 6,900, and that thereafter there will be a further rise to something between 10,750 and 11,000.

Mr. A. E. Davies.

1186. In what sections will the increase mainly occur?—I can reflect that immediately by the fact that headquarters at the moment are 1,450, and that will rise to 1,900 and ultimately to 2,250, which is a rise of roughly 50 per cent. Then divisional headquarters, which have just been formed, will go from 116 to 400; telecommunications from 1,800 to 3,800, which is a rise of 2,000; the airport management and air traffic control from 849 to 2,550; and the constabulary from 650 to 1,500. I keep on having to refer to this aeronautical information service, rising from 76 to 250. That is a new service we are creating, whereby pilots are fully briefed before they leave their airport. We have developed a scheme for intensive briefing of pilots before they leave, and those facilities are to be extended also to charter operators under the Act, and also to private fliers engaged on flights which intrude upon the air control regions.

Mr. Corlett.

1187. Could Sir Henry tell us on what basis the constabulary establishment is fixed?—The constabulary is fixed on the basis of the police necessary for the protection of aerodromes and the safeguarding of immigration and customs rules and regulations at the airport. The Act of 1946 clearly authorises us to have this force of constabulary, and if you take the total of 1,500 there you will see that on the basis of 100 airports over-all it would be about 15 per airport. That, of course, is in many cases a 24-hour period, and therefore they are working in shifts.

1188. Fifteen per airport?—That is the average. I am not wishing to suggest to you that that is a reflection of the number required at, say, London Airport, because in the 100 airports there would be a number which would be comparatively small and police provision would be small. I could give you a statement showing the actual provision for these main airports. The actual position at Heath Row is probably indicated by the fact that the total staff operating there are 300 industrials and 350 technical and other personnel, so that there is a Ministry strength there of 650, and I should think the constabulary is fairly large in numbers, though I have not the actual number.

Major Niall Macpherson.

1189. Could Sir Henry explain what he means by industrials, and what it covers?—The industrials are the men actually engaged on the airport at a weekly wage doing the business of the airport, labourers, cleaners, sweepers, and people who are serving on the fire rescue and crash tender crews, in addition to what other duties they can undertake without detriment to those duties; but, of course, there is a dividing line to which we go in handling the passengers and clearing them through, and

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[Continued.]

the point at which the operators take over and see their own luggage and other arrangements through.

1190. It is really maintenance of ground facilities, then, is it not?—Yes.

Mr. Barton.

1191. Can you give us any idea of the ratio increase in establishment as compared with the passenger miles and ton miles?—Well, I do not think that would quite be a fair yardstick for our activities. It would be in the case of the Corporations, and I could give you that figure for the Corporations; but for our activities the measure is really the ground facilities that we have to provide for all operators, foreign and British. We also have to provide a network of navigational aids and radio aids and the like over the country, regardless of the number of airports at which they are actually calling, so that that system is not reflected by the yardstick of capacity and ton-miles operated; it is really indicated by the general increase in the responsibilities of the Ministry placed upon it by the Act of 1946.

1192. So that the actual establishment charges are no reflection of the costs of running the service to the Government Department concerned?—I will put it in another way, that roughly 90 per cent. of the whole of our organisation and strength is directed to the provision of operational and technical services to aid aircraft in the air or to handle them on the ground. We are in fact doing an executive field of work in parallel with the Corporations, charter operators and private fliers, which accounts for 90 per cent. in broad of our over-all man-power needs.

Captain Sir Peter Macdonald.

1193. Is it the special policy of the Ministry that they should carry all the ground facilities or is it contemplated to set up a separate Corporation for that purpose?—No, Sir; the matter was considered, if I may recall it, when the White Paper of December, 1945, was published, and the Government policy was restricted to the three Corporations and the performance of these executive responsibilities by the State organisation direct. The matter of the fourth Corporation was considered then, and has been considered from time to time, but the Government policy remains as at present, to execute these by direct responsibility. There would, of course, be no saving in man-power by such a transfer, and possibly the reverse.

Mr. Barton.

1194. I am concerned with the cost. Do I understand that none of the cost of the establishment falls on the Corporations?—Not as a direct repayment except through landing charges, landing fees for the use of the airports. The Chicago Convention, to

which His Majesty's Government are signatories, provides for the establishment of the International Civil Aviation Organisation, which is now holding this week its first assembly, following the ratification of the Treaty by the requisite number of Member States. That Organisation has been working for the last eighteen months to two years, and has drawn up a code of regulations to which all Member States have subscribed, under which the individual States undertake to provide airport facilities up to specified standards for the equal use of all operators, both their own nationals and foreign operators, and there will be a standard charge appropriate to all operators at the particular airport, those landing fees being kept in step throughout the world, to be commensurate with the measure of facilities provided; so that we are largely charged with the direct State responsibility for the provision of these facilities, to charge everybody at the same fee and to keep our fees in step with international practice. I should add, to make that position quite clear as affecting any proposal for a fourth Corporation, that it is also expressly provided in the statement that if a State should entrust the execution of those responsibilities to another organisation it will remain directly responsible to the International Organisation for their efficient performance. That is an important point in considering whether it would be compatible with our international responsibilities to entrust the operation of these facilities to an independent business organisation.

Mr. A. E. Davies.

1195. We can, I think—at least I can—quite see that such an international arrangement is necessary; that is to say, the State shall be responsible for providing facilities, and, as you have mentioned, they would be commensurate. Does that mean that there is a common figure, or is there a different figure operating in different countries in respect of landing charges? What we are seeking to establish is this: whether there is any relation between the provision of these facilities and payment, or whether—it may be because of bad planning or bad layout—a State has to underwrite, I suppose, in the case of a very serious difference as against some other country?—That is a matter on which we feel very warmly with you, if I may say so, the need for trying to get international practice straightened out. Our delegation which has just arrived in Montreal this morning has been expressly asked to develop this question of trying to get equality of financial treatment and performance. You have the case, for example, at Gander, Newfoundland, where we are directly interested in view of our current financial arrangements, where there is only traffic coming through belonging to foreign lines. Transatlantic traffic, but with no



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[Continued.]

benefit to Newfoundland in the form of amenities and so on, other than benefit to their trade, and yet the clearance of snow alone in winter is a very heavy charge, and on current landing fees it is almost impossible to see how you are going to break even between expenditure and income, quite apart from getting any return on capital charges. If you turn to another airport, for instance Washington, I believe on their amenities alone they collect some 40 per cent. of their income, which makes a very great difference to their balance sheet. In addition to that, they have an incessant flow of traffic from their domestic lines, as well as foreign people coming in, and they have tremendous scope for balancing their accounts which is denied to other people. It is a very difficult problem. Then there comes the question of whether you are going to provide an airport of one of the many graded classes, Classes A, B, C or D; they are the four main classes, which indicates to you the relative differentials between them. But in broad the cost is substantially proportional to the grading of your airport; therefore there must be a differential between the landing fees to reflect the standard of the airport; but that is no new criterion as to whether the country concerned is going to be able to balance its accounts. That is a very difficult problem. The international scheme provides that where a country feels that it is providing facilities for other people for which they get no commensurate benefit, or if they feel it is beyond their financial capacity to provide this airport they are entitled to appeal to the International Organisation, and then the Member States will consider whether their interest is so acute that they are prepared to make joint subscriptions towards the cost of providing the airport.

1196. Yes, I think one would agree that in certain instances the position must arise where for common convenience there must be facilities, where it is not revenue-earning to the immediate country concerned?—Quite.

1197. But there is a joint interest, and as such there should be a joint responsibility, as some people would argue. I can quite see that?—Yes.

Mr. Howard.

1198. May I pursue that point? I can see that there may be a difference between the income and expenditure at any given port which will vary according to traffic and weather conditions. What I am concerned with is this: what steps are we taking, or can we take, to arrive at the costs at our own airports, and what the real difference is between revenue and expenditure?—We shall certainly expect to provide this Committee or the Public Accounts Committee when they are reviewing past operations with direct information on this matter, together with balance sheets and so on, of all these airports. If I may enter

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a personal caveat there, I think one must at this stage face up to the fact that the return on capital will probably depend substantially on the extent to which the amenities of the airport can be developed.

1199. I appreciate that?—If you take the London Airport, there is great scope for developing amenities there, but the question at the moment is whether that is the right direction in which the manpower of this country can be employed or not, so that the speed with which we can be allowed to develop these amenities will be reflected in the presentation of our annual accounts.

1200. Would Sir Henry agree that what he describes as amenities are in the nature of by-products to true operating costs?—I would agree entirely, and I was trying to make my point that without the by-products there is unlikely to be any return on capital.

Major Niall MacPherson.

1201. To put it in another way, would it be possible to get a notional figure of the cost of running an airport together with the revenue that could be expected once the amenities are fully developed and regulate your charges accordingly, carrying any deficiency in between, in the expectation that ultimately you will be able to develop the necessary amenities to make the thing self-supporting?—Yes; we tried to do that last year, when we tried to strike a provisional balance by putting out a schedule of increased landing fees which, you will remember, tried to reflect the benefits of hard runways as opposed to grass runways of the different types airports use. It was merely a tentative effort to get some better balance between receipts and expenditure; but we have had very little post-war experience, and that cannot be more than just an essay towards a right balance. I personally feel that we shall need at least twelve months' operational experience from now on before we can strike anything like a fair balance between the two.

1202. To what extent has it been possible to use the experience of those who have operated; for example, I have in mind Prestwick, which had developed these amenities to a certain extent? Have you had full co-operation from such operators?—Indeed, yes, Sir. At the moment, of course, Prestwick is being in broad administered in collaboration with the previous management people, who are continuing to help in the management or are undertaking a number of services, and we have the benefit of all their past experience available as a guide to what is possible there; but, you see, Prestwick is a subject that we are very anxious to press forward with. Then there is the problem of the extension of Prestwick which is of very considerable magnitude. Those are being prepared now; the site is being surveyed from all possible

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angles, as to where the best location for runways will be, the extension of runways and the like, and the reflection of that increased capital expenditure will depend very largely on the increased traffic we can attract to that airport in consequence.

1203. May I ask a further question to clear up this question of charges which I am not quite clear on: are the charges to be related not only to the facilities available at the airport but also to the type of aircraft landing?—It is related to the size of the aircraft, and it rises very steeply, of course. For instance, when our friend the Brab. I comes into service it will have to pay in relation to its all-up weight. Other aircraft which are even bigger will have to pay on the same basis.

1204. It is similar, in fact, to dock dues?—Very broadly so.

Mr. Howard.

1205. In referring to size, would you include weight as an important factor?—Weight 's the determining factor.

Chairman.] Can we summarise the position fairly in this way?

Mr. Barton.] You are not going from the establishment, are you?

Chairman.

1206. No. I want to see if we have got the points clearly before us. Can we summarise them in this way, Sir Henry, that your expenditure is largely determined by maintaining internationally accepted operational standards?—Yes, that is true.

1207. And, if we turn to your balance sheet, you feel that you could improve your position on the balance sheet if you could undertake capital expenditure on ancillary services that would be revenue-producing?—Yes.

1208. Is the difficulty that you cannot be certain as to how far you can go in capital expenditure outside direct operational matters?—Not only capital expenditure but actual running expenditure, the employment of people to work these amenities and collect the revenue.

1209. The difficulty is that both on capital expenditure and on man-power you want a decision as to how far you can go in providing amenities at airports?—Yes. We are at a very tentative stage at the moment in all our preparations for this. We have appointed recently an officer called a Director for Amenities. His job is not to run amenities from the Ministry; that has to be done locally; he is charged first to prepare a scheme to bring out the problems involved, and then to submit a plan for governmental decision, and he is now engaged on that task.

Mr. A. E. Davies.] Before Sir Henry leaves that point, can we have a little elaboration—and I think Mr. Corlett more or less wanted that too—of this word "amenities"?

Chairman.

1210. Yes; but just before we reach that, may I put one final point, Sir Henry? If we look at our world position, and if we compare ourselves with our competitors, in your opinion is it necessary for us to extend our amenities urgently and rapidly?—No, Sir. The whole point of provision of amenities is to enable the British public to have an opportunity to enjoy the benefit of these airports and also to improve our revenue account.

1211. Now perhaps we can deal with Mr. Davies's point as to what are amenities?—Amenities can best be illustrated by LaGuardia Airport. If you go there on a Sunday afternoon you will probably find 10,000 people going to LaGuardia and paying 25 cents a head for the privilege of going into the special enclosure and watching the arrivals and departures of a stream of aircraft. If you go to Washington Airport or to any of the main U.S. airports, you will find there are very good restaurants open, and that it is quite a normal habit to take your friends to the airport to dine on the roof, or possibly to dance, and to watch the aeroplanes in between, on a beautiful night. There is also the provision of shops, the provision of car parks and the like, all of which we hope to organise, and some enthusiasts would like to extend it quite considerably and make these airports the focus of local interest so that they can contribute to municipal life and can give them a new centre for social activities, which in the end would also serve us very substantially by promoting air-mindedness and the use of these services, which would depend very much indeed on the attraction of new traffic. I showed you last week B.E.A.C. plans to develop from 40 million passenger miles last year to 1,800 million in seven and a half years. That means attracting the people of this country to the use of internal and Continental services, and one feels that the provision of these amenities will be one of great importance in trying to get them to see civil aviation as part of the national life.

1212. Would you not, Sir Henry, agree that the position in America is somewhat different from the position in this country, certainly in respect of internal services?—Entirely. If I may qualify that, I would have said entirely pre-war, because pre-war they were operating these shuttle services in practically every place backwards and forwards, and in the war they were intensified to such an extent that they actually got 4,950, or roughly 5,000, hours' utilisation per aircraft per annum. If you reflect that there are 8,760 hours in a year and they managed to get each aircraft in the air for 5,000 out of 8,700, you will realise the intensity of operation they were able to achieve. That seller's market has gone, and they are now down to working something like 3,000 hours for their internal

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[Continued.]

services, but again that 3,000 contrasts with the utilisation factor externally, which drops to about 2,500, or even as low as 2,000, because conditions are completely different. That is your point. Internal services are in a very privileged position in regard to this matter, and when I quoted the B.E.A.C. I wanted to make the point that we see no reason why we should not, once the economic conditions of this country permit, develop our own internal services equally intensively, as well as our Continental services, and if you take the European service as a whole I submit it is fair to say that they ought to be able, with the progress of the years, to show a comparable picture of efficiency and concentration like that of the American internal situation, because as far as we are concerned we have the very great additional advantage of flying over a strip of water which is a handicap to surface transport. So that I personally would say that, with the development of navigational aids, making it possible to be able to operate in our bad weather conditions, we ought to be able to develop an intensity of service, both Continental and internal, over a period of years—and it must be over a period of years—that should not compare unfavourably with the American situation.

*Major Niall Macpherson.*

1213. Pursuing again this question of amenities, it is obviously a matter of very considerable importance for revenue purposes; and I should like to ask two questions: first, as to the previous experience of the present Director?—The present Director held pre-war a number of business appointments. He has been concerned with quite a number of promotional activities in food schemes and the like. He has been serving with the Ministry of Food as a business man brought into the Ministry of Food, and he has undertaken a number of new and novel schemes for them. He has recently been established in the Civil Service in an executive capacity; and we felt that with this range of activity in novel work of a commercial character and of a promotional character he would probably be the best person we could find to undertake this task; but my Minister has very much in mind that any scheme of this sort must be the subject of review and adoption by really competent business authorities, and he is particularly concerned to ensure that when a scheme is worked out he is able to get and will invite the assistance and guidance of real expert authorities in the business world. This is an effort to get a first working scheme by somebody who has had experience in working out novel schemes of this character.

*Captain Sir Peter Macdonald.*

1214. He has had no transportation experience before?—No; but I submit that transportation experience as such would be provided for him by collaboration with

a second appointee who is just about to be made, and that we are proceeding in a similar way to work out a scheme to develop the possibilities of a Director of Ground Traffic as opposed to air traffic, and also concerned with the movement of passengers in and out of the airport and to and from the centres of the cities, together with the actual turn-round and movement of aircraft on the ground. The problem will be, of course, to get these very big aircraft turned round physically on the ground and brought into the best positions where they have to disembark or embark, and then get them away quickly to their maintenance or servicing centres. That will mean having transportation experience available to us analogous to the ports and railways terminal background. We are consulting the railway companies, and have had a list of candidates suggested for this appointment, with direct operational experience, including such things as being the master of a railway marshalling yard or of a port. These officers will work out two parallel schemes for ground traffic movement and amenities involved, working in close association with each other.

*Major Niall Macpherson.*

1215. Does this mean that as far as the current Estimates are concerned the cost reflected in the current Estimates is only for planning, and that at the moment there are no Estimates for the development of amenities?—In broad that is true. The figure for Heath Row in itself, as you will see from its size, is sufficiently all-embracing, I think, for one to hope that there may be scope within it when the thing is finally worked out for financing some amenities, but it cannot finance anything over-elaborate, and if there is to be over-elaborate provision it will mean extra finance.

*Mr. Howard.*

1216. May I make an observation which I hope will not be unfair; it is rather to indicate the question which I should like to ask at a later date than to ask the question now. The impression I have now got is that there is no hope of civil air transportation having an income which will balance its expenditure; therefore no steps are being taken to investigate the present operating costs, but all energies are being directed to finding other means, other than transportation, of producing additional revenue. I prefaced my remarks by saying it might be an unfair observation, but it will indicate the sort of question which I might like to ask at a later date?—I should very much like to comment upon that, if I may, now, and I do not think that that observation is in the least bit unfair. I should personally have thought it was a fair conclusion from what I have said, with one, as I see it, modest qualification. I have indicated to you that I do not think that we see our chance of balancing the accounts on the provision of

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[Continued.]

these airports; that will be an international and not merely a national experience. I have said that we would improve our position by the third part of your statement, to wit, provision of amenities, but I equally, I think, led you to suppose that we were not actively engaged at the moment in trying to reduce the operating costs. The main qualification comes in that passage, because we will certainly ensure that operational costs are kept down to a minimum; but because we have not brought them up yet to anything like the right standard that is necessary as a minimum, we are in process of creating and building up, and the necessity to keep operating costs down to the lowest minimum means that we must build up carefully and not extravagantly, so that that is where our present attempt lies, to avoid extravagance in the build-up, and when we have built up to what we think to be the necessary minimum, then we must apply every check to make sure that we have been right in our judgment or that we have endeavoured to keep hold on the situation as it develops.

1217. If I gave the impression that I wanted an immediate reduction in operating costs, I gave a wrong impression. What I am anxious about is that there should be an immediate attempt to relate the present actual operating costs to the present and the anticipated revenue?—I accept that, Sir, and I think we must do that at the earliest possible date. Our first effort was made last year, when we increased the landing fees. We are going to review those landing fees again, and in the early future, and they have been working upon it for two or three months, to try to bring out the best assessment they can make as a guide; but my own judgment is that although those reviews are already being made we shall not get to the true measure of the situation until we have another twelve months' operational experience.

1218. Would it help Sir Henry in his task if we were to ask him to provide us, in the reasonably near future, with, say, *pro forma* income and expenditure accounts for new or for two selected aerodromes or airfields?—I will very gladly do that. We could give you a picture within a reasonable time for three or four or a few in current operation.

Chairman.

1219. Yes, I think that would be helpful. Are your fears, Sir Henry, that when you have eliminated all unavoidable expenditure, you anticipate that there will still be a gap between expenditure and revenue and that therefore you are looking at the airfields as centres of attraction and seeing how you can utilise them in providing revenue for other purposes?—Yes.

1220. To give an example which may be a little fantastic, if you had an aerodrome that was giving a particularly bad balance sheet and it was possible to put a dog

track upon it, you might consider that? I am not asking you to accept that as an example, but you might put, for instance, a restaurant upon it?—Yes.

1221. Not so much for the people using the aircraft but for the people who lived near the airfield; in other words, make use of the space to provide the best revenue you can?—That is what we had in mind in terms of amenities as they developed.

Mr. A. E. Davies.

1222. May I break in there before Sir Henry develops the point: would it be improper to ask if there are other major considerations taken into account in the whole set-up of civil aviation as distinct from merely balancing the budget and the profit and loss account? That is to say, it may be considered that in relation to national defence here is a bigger layout which is necessary in modern times?—The whole of our programme is shaped, not with primary reference to balancing revenue and expenditure, but to serving the needs of the nation from all angles: defence, promotion of the life of the community, the creation of air transport as a critical avenue to the promotion of trade, both at home and overseas—all those are the main first factors; and having done that, it is our duty as efficient administrators to ensure if we possibly can that the revenue and expenditure balance. Indeed, I imagine that the nation would not be averse to receiving some return, if it could, by way of a little profit.

Mr. Howard.] It might be regarded as an amenity!

Chairman.

1223. You referred us to the National Civil Aviation Consultative Council. Does that body consider such questions as these?—We hope very much that that body will assist in such matters. It, of course, is primarily concerned with air problems as such, as would be apparent from its constitution, but there are a number of independent members on it, and the present procedure of the Council is to set up small working groups on particular problems. At the right stage, when we have this provisional scheme worked out, it will, I think, almost certainly go to them for their help, and they will presumably set up a working group which will call in people to assist it. But, over and above that, my Minister, I think, will wish to have the best and the highest expert advice that he could obtain on the scheme in its broad essentials.

Captain Sir Peter Macdonald.

1224. May I ask whose responsibility it is in the Ministry to see that overheads are not extravagant and that they are kept down to the lowest minimum at all your centres? I have in mind Cairo, which you consider an important centre for the Middle East. I gather that there you have your organisation spread over the whole of the

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[Continued.]

city; you have got three or four or probably more headquarters for B.O.A.C., and there must be overlapping and extravagance as a result of that. Have any steps been taken to get the whole organisation under one roof?—I have to make the formal point, if you will permit me, that this is the responsibility of the management of B.O.A.C., which has been expressly reserved to them by the Government's policy. It is my duty, coming before you, in consideration of the Estimates, to explain to you what we have done in negotiating the proposed grant to the Corporation to ensure that due economy is being observed when we arrive at that figure. This particular point was actually the subject of discussion between myself and the Chairman of B.O.A.C. With reference to the spread of their organisation, the number of employees they have, etc., he was very willing that I should explain to you that they have in the last two or three months intensified a plan that they had been working on for some little while to get concentration overseas, and to get the number of employees reduced wherever it could be done. They have launched a special effort throughout all branches of the Corporation to concentrate on a reduced establishment and to align themselves with the post-war situation.

*Chairman.*

1225. Have you taken any steps in the Department to review your establishment's requirements recently?—Of the Ministry?

1226. Yes?—Yes; and I speak feelingly upon that subject, because when I went there at the beginning of 1946 it was to prepare the Ministry for its nationalisation programme. The organisation pre-war there was small enough in itself, but during the war it had been reduced practically to a mere maintenance party. But now we have had to take on all these greatly enhanced responsibilities, and my one prior pre-occupation has been to build up this organisation pursuant to the idea that we ought not to build up ahead of what we were clear was justified, and I have made three different assessments of the prospective organisation, proceeding by stages. We had our last review in February of this year, which led to the final scheme which you see in the charts which have been circulated, so that the establishments are under constant review, but they have been expanding and must expand in certain fields still further. The aerodromes department is completely overloaded, and I really feel very acutely the extent to which the senior staff there have borne the overloading, and I have just got to get some relief for them if the programme is to go forward.

*Major Niall Macpherson.*

1227. Could I ask if Sir Henry would say a few words regarding the extent to which his responsibility for ground organisation extends outside this country, particularly

in the Colonies?—The broad principle on which we have worked hitherto was laid down first in the Empire airmail scheme under which several members of that scheme agreed to the provision of ground facilities on a financial basis, reflecting the split between the local interest and the Empire interest. The Colonial Governments have reaffirmed by a series of agreements their readiness to carry a proper share of that cost reflecting the use of those facilities for the regions in which they are located. The balance of cost within the Colonial territories is borne on the Votes that you have before you now. The Dominions, of course, assume full responsibility for their own territories, and we do not have any status other than to seek their collaboration through the machinery of a string of Empire conferences and committees which are well organised and working extremely well; so that we endeavour to take the initiative in the Colonies to secure that the best facilities are provided to meet the needs of the Empire air routes. The Colonial Governments readily accept our initiative in this matter and our general advisory function, and the schemes are agreed with the Colonial and United Kingdom financial authorities, and then an agreed split comes into operation. But, of course, when you come to an entirely new project it is extremely difficult. If you take the long-term situation down through Africa, for example, we have been arranging during the last few months for a certain extension of the existing facilities which will hold the situation for two or three years, but with the new aircraft coming along there have got to be provided certain major new airports for that operation, and so there is a really difficult problem to overcome, and a very heavy cost involved. For example, Salisbury in Southern Rhodesia is one particular place where there should be a big airport, a new airport. With regard to the resources of Southern Rhodesia, I would not like to give you the actual figures, but I suppose the actual income of Southern Rhodesia would not be sufficient for them to be able to carry the cost of an airport running into three million pounds or even more of capital expenditure, so that we have to discuss with them how this is going to be provided, and we have to go to the Treasury in the early future with a scheme sponsored by the Southern Rhodesian Government towards which this country will be a contributor, and a fairly large contributor.

1228. Does that mean that our responsibility, or rather your responsibility, is limited to initiative, to advice, and then to being a contributor, but that the actual control of these airports will remain with the Colonies?—In broad that is correct. It so happens, of course, that in many cases the R.A.F. have been operating these facilities during the war and since, and we have had a great deal of difficulty in arranging for the recruitment of personnel

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[Continued]

by the Colonial Governments concerned to replace the R.A.F. personnel as they are withdrawn. Those difficulties have become so real that the recent Colonial Civil Aviation Conference which terminated last week specially went into this question, and they have agreed in principle to the establishment of a common Colonial technical service for civil aviation which will enable people to be transferred from one country to another or from one Government to another, and we shall be the main sponsors, through the Colonial Office, for giving technical advice and help to get that service built up.

1229. One last question to follow that up. I take it, then, that the development of the airports will not come out of the sums that have been voted by Parliament for the development of the Colonies; that is entirely separate: is that so?—In so far as the United Kingdom contribution goes, it will be on the Ministry of Civil Aviation Votes. There is provision in this Estimate for the payment we shall be making this year on that account under Subhead H, I think it is.

*Chairman.*

1230. I wonder whether we could now turn to another point arising on administration. You mention recent developments of which the most important seems to be the divisional organisation?—Yes.

1231. And you make the point that if this is decentralised you would like to refer to the fact that certain financial establishments and accounting powers are delegated. Could you explain that a little more?—We are hoping that the divisional headquarters would be the means of decentralising blocks of executive work away from the Ministry in order to avoid this excessive centralisation to which we are all rather prone. As an example, we established the Scottish Division at the beginning of this year. The Commandant has been up there and taken over his duties and is in full charge now, and a very appreciative note came from him referring to the fact that we had transferred to him as a whole the particular division concerned with the executive work on aerodromes for Scotland in their day to day administration. They have gone up, and the Ministry has agreed to complete the work under the Divisional Controller in Scotland. We shall hope to get the London Division and the other two divisions similarly to function on a footing of decentralisation away from the Ministry. We regard it as absolutely essential that we should do that. I was hoping myself that the best approach to it would be to find some of our senior financial and administrative officers and send one such person out to each of the divisions, to the Divisional Controller and help him in his problems, with a delegated authority from myself as the Accounting Officer, to give authority on the spot within certain limits.

That will avoid matters being referred to headquarters continually, because once they go to headquarters they get into the departmental machine, and everybody inevitably spends time over them.

1232. Two supplementary questions: are the limits of this delegated authority clearly understood; and secondly, are those limits sufficiently wide to allow each division reasonable autonomy?—I should like to answer that question in about two months' time, when the detailed scheme for this divisional headquarters has been worked out. We have only appointed two of the Divisional Controllers in the first place, but the other two will be appointed as soon as the Selection Board has suggested names, and the scheme and the terms of reference, together with the limits of authority, are now being drafted. I should hope to be able to report them to this Sub-Committee in about two months' time. We are feeling our way, advisedly.

1233. We can assume your objective is to allow them the largest measure of autonomy?—Yes. I would say personally if we do not do that we had better by far not have the divisional headquarters.

*Mr. A. E. Davies.*

1234. Would it be out of order if I asked this question? We have Scotland, Northern, Southern and Western, London and Eastern. Have any towns or centres been ear-marked?—London, of course, is the focus for the London Division; the Scottish Division will normally operate from Prestwick, but will have offices in Edinburgh so that it may be closely associated with the Scottish Advisory Council; the South Western Division will be located at Bristol; and the North Western Division will be either at Liverpool or Manchester. We are prospecting in Manchester at the moment to try to find the right headquarters there.

*Chairman.*

1235. How has this development of the divisional organisation affected your estimate of establishment requirements?—It has been the framework upon which we have built our estimate. We had not the estimate until we had this framework of the divisional set-up, and we built our estimate round that framework.

1236. Yes. I asked the question because you did mention the fact—I think I am right in saying this—that you had reviewed the establishment requirements three times?—Yes.

1237. I wondered whether on each occasion you had had the divisional organisation in mind?—In the first stage the divisional organisation was put in for later working out; then we came to the second stage and we got a proper approach to the third stage, where it really crystallised, and we have started making the appointments.

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[Continued.]

and the scheme is wrapped entirely round it.

Mr. Barton.

1238. Just a minor point on establishment. I should like to know the number of the staff of the Air Transport Advisory Council, and if that is included in your global total for the administrative staff?—It is included under Subhead C. The Air Transport Advisory Council will be set up as soon as the Parliamentary period expires, as it does towards the end of next week, and we propose to appoint a Principal—that is the grade of officer selected—to be Secretary and he will have attached to him a small nucleus staff until we see how the business of the Council develops. It is all included in the figures we have given.

Mr. A. E. Davies.

1239. One point about the divisional organisation: is that the lowest level which you envisage, or do you expect that you will have to break the administration down to a lower level?—I should not want to repeat in the divisional headquarters the idea of over-centralisation. As we have to appoint Air Commandants under the Act, and it is desirable to do so anyhow, we shall most certainly expect to delegate as much as possible to the individual airport Commandant, with facilities for the financial adviser of the division to be in regular touch with him, getting round the aerodromes and clearing the problems on the site, in so far as higher authority is necessary. There must be problems of local airport management which ought to be decentralised today to the airport itself.

1240. With no intermediary?—No, other than a visiting commission from the division, and for the financial adviser for the divisional headquarters to get round to clear problems on the spot.

Chairman.

1241. If we can proceed to the next item you have given us for consideration, Sir Henry, I have got this general impression, and I should like you to explain this point. The general problem is that you are making the point that we cannot, in looking at the air transport services, get a commercial yardstick to judge costs because of the peculiar and exceptional position operating during the past years?—You can get commercial yardsticks in terms of hourly operational costs of the aircraft themselves; there would be no difficulty whatever in giving a statement of the actual operational costs for particular aircraft with a consequential spread of the overheads over the whole set-up, but the operational costs of those aircraft would then have to be balanced by a corresponding spread of the revenue, and that is where you would not get a comparable picture by reason of the capacity of different aircraft not yielding a comparable revenue; for instance, you

compare efficiency with a unit like horsepower hours and the like, and those sorts of comparisons are made quite definitely, but these would be commercial checks on operational costs, and it is the spread of the revenue against non-comparable capacity which distorts the picture.

1242. There is a small point on the B.E.A.C. which you might be able to clear up. You refer to the purchase of private air line undertakings and explain that the basis of the price calculated is on the net maintainable revenue and an appropriate number of years purchase?—Yes.

1243. What is the appropriate number of years?—An agreement was reached for the payment of a sum of £550,000—I am speaking from memory now—which I have worked out at £33,000 per annum as the net maintainable revenue spread over 16½ years, I think it is, and if that comes to £550,000 that is the actual number of years.

1244. Have the negotiations to which you have referred been concluded?—The arrangements with the Associated Airways Joint Committee are concluded, the shares have been transferred, and the whole thing is clear. On the question of the Channel Islands negotiations, that is equally clear to the extent that the operation of the undertaking has been transferred, and B.E.A. are now operating the service, but agreement could not be reached on the price. There was too wide a gap between what we thought and what the company thought. We have agreed that the matter shall be the subject of arbitration on the same basis of net maintainable revenue over a reasonable period of years. The position in regard to the Gandar Dower Company is that the services have now all been transferred and are being operated by B.E.A., and the company have agreed, though the document has not yet been finally drawn, to the transfer of the undertaking on the basis of a similar arbitration failing agreement to reach an agreed price.

Major Niall Macpherson.

1245. There is one question I am not quite clear upon at the moment. I understood from the memorandum that the actual responsibility for B.O.A.C. had not yet been finally transferred away from the Government. Is that so?—That is an awkward question, because I had previously stated that we are working on the basis that the Wartime Control Order had been terminated as from the 1st April of this year; indeed the whole basis of our activities is proceeding on that footing; but by reason of legal technicalities the final Revocation Order has to coincide with the release of the Minister's Order under one of the early sections of the Act of 1946 which prescribes that he shall issue an Order stating the powers of the Corporation, so that the legal advice is to couple the formal revocation of the Order with this definition of their functions. But, of course, the position is clearly established.

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[Continued.]

I think that the Act of 1946 is overriding, and as it provides specifically for the operation of the Corporations to be carried on in accordance with the provisions of that Act they must so operate the Act. We have clearly got to operate the Act of 1946 for the year 1947-48, because it so directs, despite the fact that there is the technical fact that Section 32 of the B.O.A.C. Act of 1939 has not been cleared by the formal revocation of the Order issued under that section. I am sorry that those legal difficulties do rather hold it up.

Mr. *Howard*.] It sounds to me as though it is necessary to continue an illegal position in order to comply with the existing law.

*Chairman*.

1246. I do not entirely agree. If we could now turn on further to the rates and charges, I am going to ask a very elementary question which will possibly reveal some ignorance. In dealing with those rates, can you explain the basis of the ratio of A to B?—Why that puzzles you, Sir, is precisely why it puzzled me, because you would expect the ratio to be the other way round. But your reading is quite right. It is an astonishing fact that the ratio is in favour of mails. If you take the weight of mails equal to the average weight of a person, you then get this ratio in terms of the mail charge and the passenger fare. I hope you will not read from that at least that we are subsidising passengers at the expense of mails. The answer is that mails are getting the benefit of rapid transport, and therefore you pay a price which is reasonably related to the cost. It means, of course, that passengers are getting the main benefit of the subsidy but they are not getting the subsidy at the expense of the mails.

1247. Thank you very much. That has cleared up something that seemed confusing to me. Now, if you turn overleaf to the rate-fixing machinery, you mention the fact that services should be provided at reasonable charges based on an agreement between the operators in the first instance, and subject to approval by the Governments.—The rates are determined by the Regional Traffic Conference of the International Air Transport Association.

1248. Are the rates fixed minimum rates?—They are agreed rates. I should like to enter a caveat about that reference to their being determined by the international machinery. There could be no suggestion that the International Air Transport Association was operating, as it were, in the form of a ring; we could not possibly accept a situation under which prices were determined and imposed upon a Government by this international agreement of operators. It is a convenient means of resolving international difficulties to ask this Association to see if they can agree amongst themselves what would be the rate on the principle of efficient operation with economic aircraft available at a particular time, so

that you would get an agreed rate reflecting efficient operation with economic aircraft. If we, as we must, operate uneconomic aircraft, we shall still have to operate at the agreed rate if it has received Government endorsement and make up the balance by subsidy, so that when the rate is reported to Governments we are entitled to say whether or not we will approve it as either too low or too high. Recently the trend, that is up to the last few months, has been to bring the rates down. Now there is a slight feeling that they have gone too far, and the rates may have to go up; indeed there has been an increase in the United States domestic rate of 10 per cent. I feel that it would be my duty to advise the Government, if I thought the rate was either too high or too low, to avoid any suggestion that there was a ring being allowed to control this situation. That situation has also been very much protected by the fact that the American authorities have recognised this machinery in the very special circumstances for a period of time to see how it works. I think, having in mind the general trend of thought in America and the fact that they have recognised the need for this machinery for a trial period and as a means of preparing the ground for inter-governmental discussion, that testifies to its purity and worth-whileness.

Captain Sir *Peter Macdonald*.

1249. May I put one question? To arrive at a basic rate, has any attempt been made to determine the cost per passenger mile of the different types of aircraft?—Yes. I think you will find in the paper which you have before you that we indicate that they are working to a rate pattern at the present time which is 4½d. or 5d. per passenger mile for internal services. That is a general rate structure which reflects economic assessment within our Ministry as well as within the Corporation as to what should be the trend of fares. We hope to get some very valuable data cumulatively from our own economic section, who have been working on this problem for a long time. We think that the trend will be appreciably downward as soon as we get improved aircraft types into being, and we have very real hopes that when we get the successor to the Viking in a few years' time into service the cost will come down to something not appreciably different from first class rail fare.

1250. Have you worked out, for instance, what the rate would be with a type like the York, which is obviously very expensive?—The York is quite uneconomic, and the practical pattern for overseas operation would be something of the order of 6d. a mile, but that would not be a true index to the cost of operation.

Major *Niall Macpherson*.

1251. Can I clear up something on the question of mails? Is it true to say that there is no competition in the carrying of



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mails, as most countries carry their own? To what extent are we competing in the field for the carriage of mails?—I am afraid there, Sir, that the Post Office would regard themselves as the custodians of the public interest, and would wish to put their mails on the fastest service available if British operators were not able to provide it. For example, when the Australian authorities put the Constellations on the Australia to England route, that will be one of the essential reasons for keeping our Lancastrian services going so as to enable us to provide a fast service and keep our share of the carriage of mails; otherwise

they would have all been carried by Australian Constellations. I believe I am also correct in saying, though it has not been noticed in the Press, that the Americans carry a share of our mails across the Atlantic, when we have not had our facilities operating with sufficient frequency.

*Chairman.*] I anticipate we shall have an opportunity of studying the evidence before we meet again at our next session, and we will probably come well briefed to pursue this further; but before you go may I thank you for the assistance you have given us this morning?

(The Witness withdrew.)

[Adjourned till Wednesday next, at 11.30 a.m.]

WEDNESDAY, 7TH MAY, 1947.

Members present:

MR. FREDERICK WILLIÉY (*Chairman*).

Mr. Barton.  
Mr. Corlett.  
Mr. A. E. Davies.  
Mr. Howard.

Colonel James Hutchison.  
Mr. Kirby.  
Captain Sir Peter Macdonald.  
Major Niall Macpherson.

(The Sub-Committee deliberated.)

SIR HENRY SELF, K.C.M.G., K.B.E., C.B., Permanent Secretary, Ministry of Civil Aviation, recalled and further examined.

*Chairman.*

1252. Sir Henry, you remember we began last time by discussing the publication of the Minutes of Evidence?—Yes.

1253. We have now received the Minutes of our first session, and I think the Sub-Committee would like an opportunity of putting some further questions on the division of responsibility and the division of functions between the Ministry and the Corporations. We have the general impression that the intention is to give the Corporations autonomy subject to general directions from the Ministry?—Yes.

1254. I wonder whether you could tell us in somewhat greater detail how far the Ministry is going, or intends to go, in giving such directions?—The position is regulated by the Act of 1946. You will recall that Section 2 makes it the responsibility of the Minister to define the functions of the Corporations, while Section 4 of the Act prescribes that he may "after consultation with any of the three corporations give to that Corporation directions of a general character in matters appearing to the Minister to affect the national interest". The significance of that Section 4, if I may recall the debate on the Bill, was that there was previously a specific provision empowering the Minister to give

particular directions on any matters that appeared to him to call for such particular directions. As a result of the representations then made that power was withdrawn, and we were limited to this specific instruction that general directions deemed by the Minister to affect the national interest would be the normal procedure. There was again, you will recall, in, I think it was, Section 22 provision to the effect that the Annual Report of the three Corporations shall include "any direction given by the Minister to the Corporation during that year unless the Minister has notified to the Corporation his opinion that it is against the national interest so to do." Taking those two sections together, the intention is clearly evident, I submit, that the Minister will only give general directions on matters affecting the national interest. The question of what would be a general direction obviously depends upon the circumstances, but in a particular case, that of using British-produced aircraft, that would be a clear case, if necessary, for the exercise of this general power. But to say, I submit, within that general direction, that you shall use a particular British type in preference to another British type on a particular route might be not a general direction, that would be a particular direction; and then I think there is another

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[Continued.]

section which refers to the manner in which the Corporations shall carry out their functions. That would seem to me to be determined in this way. Suppose, for example, the Corporation said: "We do not want to operate type X aircraft on a particular route, because it is too expensive", it would seem to me to be within the Minister's authority to say: "I require you to operate that type, but I recognise that I shall have to pay you a subsidy grant to cover the difference in cost." That would be a direction in the manner in which they exercised their functions, but that again relates back to Section 2, where the Minister is to make an Order in Council defining the general powers and functions of the Corporations. That is subsection (3) of Section 2: that is, he may make this Order defining the powers "so far as he thinks it desirable so to do for the purpose of securing that the public are properly informed as to the general nature and scope of the activities in which the Corporation may engage."

Mr. Howard.

1255. And it goes on?—Yes. There is a proviso, of course: "but nothing in any such order shall prejudice the generality of the powers conferred by the preceding provisions of this section". It was clearly intended, I think, to bring out into public form the broad scope of the Corporations so that the public might know broadly what they are going to do, and this was done in this way rather than to recite in the Act the articles of association which would normally be appropriate to a company, in which they would take all-embracing powers for anything which might impinge upon their activities; so that the Corporations were given this broad general power under Section 2, and the Minister has a discretionary power to make the Order, defining the field within which those powers will be exercised. Against that background, I think I am correct in saying that it is the Minister's conception that Government policy requires the freest exercise of day to day management and authority by the Corporations direct. In the last resort he would feel, I think, that he is responsible to Parliament for the overall efficiency of the Corporations' activities, and that therefore he would be necessarily obliged to exercise the powers that he has in Section 22, subsections (6) and (7), to obtain any information he needs from the Corporations. That information would be called for to satisfy himself that they are performing their duties efficiently, when he is determining the grant that shall be made to them at the beginning of the year. The actual expenditure of that grant when determined and allocated falls within the discretion of the Corporations. Their accounts come forward and are presented to Parliament. There is, of course, no question of reviewing the amount of the grant in the

light of the outturn in the trading account; they are simply matters for examination and for discussion at the next annual grant determination in view of the relative efficiency shown in the past as a guide to the future, so that in any one year you question efficiency when determining the amount of the annual grant, and having done that the Corporation then have until the next year's grant is determined a clear field of management in the expenditure of the moneys granted to them.

Mr. A. E. Davies.

1256. May I ask Sir Henry a question to elucidate the point which he is now making? He says that under Section 2 of the Act the Minister has power to define the functions of the Corporations. Has such a definition already been made, and is each Corporation in possession of such a definition?—A draft has been prepared; it has been tentatively discussed, I believe, with the Corporations' representatives without commitment of them in any way, and the draft is being shaped by the Treasury Solicitor on our behalf, and will, I am sure, be discussed by the Minister with the chairmen before it is actually made.

1257. So that in no case is there a complete definition for any one of the functions?—That is so. May I just explain? The position is, of course, really defined for them in broad as far as the period prior to the new Order is concerned by the B.O.A. Act of 1939. The B.O.A.C. are acting broadly within the ambit of that Act, except in so far as it is qualified by the Act of 1946, and the other two Corporations having functioned within that Act for their preliminary period are now also in possession of that broad background. I do not think there will be any marked breach of continuity of practice between the B.O.A.C. Act and the new Order in Council.

1258. Could Sir Henry then tell us—or is he in a position to tell us—what are the functions of B.O.A.C. as a guide to what is likely to happen in respect of the other Corporations?—The functions of the Corporations were defined in the B.O.A. Act of 1939 in very full terms: power to secure the fullest development consistent with economy of efficient overseas air transport services and to undertake activities which are necessary and incidental to those services. The catalogue is very comprehensive. It runs from letter (a) to letter (o) in the subsection.

Chairman.

1259. It is Section 2?—Yes, and in Subsection 3 from letters (a) to (o) there is a detailed catalogue of commercial and other activities incidental to operating air transport services. I think, in broad, that the draft Order in Council will not differ radically in principle from the powers there

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[Continued.]

defined, but I cannot say definitely until I get the draft from the Treasury Solicitor.

1260. Can you say whether in practice the autonomy of the Corporations is in any way prejudiced by this present lack of definition?—I say definitely it is not prejudiced. I would give an illustration. B.O.A.C. have recently acquired, as Honourable Members may have noticed, the Simonds factory on the Great West Road. That acquisition was reported to us in accordance with the wartime control requirement that capital measures had to be approved by the Minister. I advised the chairman that in the opinion of the Ministry this was a purchase which fell entirely within the commercial responsibility and autonomy of the Corporation, and that we did not wish to take advantage of the wartime necessity for getting approval to capital commitments to be presumed in any way to give approval or disapproval to the exercise of their commercial responsibility; they must decide that for themselves and be answerable for it as an act of commercial discretion.

Colonel James Hutchison.

1261. Sir Henry has mentioned Section 22, subsection (3), of the Act of 1946, in which it says that the Report for any year shall set out any direction given by the Minister. I have the Report for the year 1946, and I suppose it is too soon for that to function, but can Sir Henry tell us whether any direction under that section was in fact sent?—That, of course, was the Act of 1946, and the accounts you have there are for the year ending 31st March, 1946.

1262. Yes?—So that this would not apply until you come to the accounts for the year 1947-48. I should say that no directions have in fact yet been given by the Minister to the Corporations under Section 4.

1263. I said under Section 22, subsection (3)?—Under that section the report includes the directions given under Section 4.

Colonel James Hutchison.] Yes, quite right.

Major Niall Macpherson.

1264. Could I ask, just reverting to this Simonds factory, a question for clarification? Under Section 22, subsection (5), of the 1946 Act, an estimate has to be made of expenditure incurred by a Corporation on capital account as from the 1st April, 1947?—Yes.

1265. Was this acquisition made before that time?—This acquisition was made during the course of 1946, but, of course, it would have been included if it was going to occur this year in the current programme,

Mr. Howard.

1266. May I ask Sir Henry to go back to Section 2, subsection (3), of the main Act? He used the words that this section "makes it the function of the Minister to define," and he seemed to take the view that it was completely general. May I direct his attention to the fact that the actual wording of the section is that the Minister may "define the powers . . . so far as he thinks it desirable so to do for the purpose of securing that the public are properly informed," and so on, and then there is the proviso to the effect that "nothing in any such order shall prejudice the generality of the powers conferred." Does he wish to revise his previous answer or limit it in any way?—I may have misled the Honourable Member there. It is quite clear, as he points out, that Section 2, subsection (3), intends that there shall be a definition of particular functions without prejudice to the generality of the powers conferred. That is precisely what we are trying to do, and when I used the words "in general," I had in mind that it would not in general depart from the basic conception of powers necessary for air transport services as set out in the B.O.A. Act, 1939. The wording of the precise delimitation may be varied, but the broad intention is that the Corporations shall have all the powers genuinely necessary and incidental to the operation of air transport services, such as, in particular places, the provision of hotel accommodation at overnight stops where no local facilities are available; that would be part of their reasonable powers for routes operated overseas.

Mr. Howard.] The point I want to make is this. As I read this subsection, it gives power to the Minister to make Orders solely for securing that the public are properly informed. It has nothing whatever to do with plans or with operational control. As I understood Sir Henry's first answer, he seemed to take the view that it did extend over a much wider field.

Captain Sir Peter Macdonald.

1267. As regards types of aircraft?—The general question of the use of British aircraft as such would fall under Section 4; the types of aircraft as operated on particular services would operate by way of financial control and grant; the programme has to be approved by the Minister under the financial sections of the Bill, and he decides to make a grant if he approves the programme. It would therefore be, in my submission, relevant for him to say that in the public interest "we require you to operate a particular route with a particular type, even though it involves more money, and we will make provision for finance in this grant and make it a condition of that grant that you do operate that service."

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[Continued.]

Colonel James Hutchison.

1268. It really amounts to this, then, does it not, that the Minister in your view has power to define the assets of the Corporations, and having supplied the assets to the Corporation, it is left to the Corporation to use those as they think best in the interests of efficiency?—Yes, subject to the overall policy as reflected in the scope of the activities to be undertaken. We made this point, if you will recall, in previous sessions, when we had a discussion as to whether the limitation of total subsidy grants might mean some limitation of activities, so that obviously it might be necessary under the Act to say: "We cannot pay you more than so much subsidy, and you must, therefore, curtail your activities to keep within that subsidy limit, even though your assets might sustain in themselves a larger field of activities."

Mr. Corlett.] I may be wrong, but I thought Mr. Howard's emphasis was that you could only do it to keep the public informed. I do not know whether I have misunderstood him.

Major Niall Macpherson.

1269. May I follow up that point there by way of clarification? Do I understand that in actual fact his case is that in the 1939 Act, Section 2, subsection (3), gave what are virtually articles of association of the company?—Yes, that is right.

1270. And that your view is that it is necessary that the public should know what are the articles of association of the company quite obviously so that they could know what their powers are, and that therefore the object of subsection (3) of Section 2 is to enable you by Order in Council to establish the articles of association of the company so that the public may be informed of them: is that the point?—I agree with that statement, Sir; but I must, with respect, draw Honourable Members' attention to Section 2, subsection (5), which does specifically empower the Minister by an order "relating to any of the three Corporations," to "limit the powers of the Corporation to such extent as he thinks desirable in the public interest, by providing that any power of the Corporation specified in the order shall not be exercisable except in accordance with a general or special authority given by him."

Mr. Howard.

1271. I am grateful for that, and I would immediately ask this question: has the Minister issued any order under subsection (5), and if so can we be told the extent to which he thinks it desirable to limit the powers of the Corporation?—No order has been issued yet under subsection (5). The question of whether an order might be necessary under that subsection would depend upon discussion between the Minister and the three chairmen as to the draft Order in Council under subsection (3) when

it is ready. Obviously, we hope to secure the full agreement of the three chairmen to the text of the draft order. But if public policy necessitated something with which they were not quite in agreement it might be necessary for the Minister to make a separate order under subsection (5) in order to achieve the purpose dictated by public policy.

Chairman.

1272. I think the Sub-Committee will now be quite clear that the Ministry have very wide powers in regard to the Corporations. They have got powers under Section 2 to which you have just referred and they have got wide powers under Section 4, but apart from that it is also clear to us that they have wide powers as a grant-aiding body, because the Corporations are dependent upon the Ministry for grants. In those circumstances, is not it particularly urgent to define as soon as possible what the functions of the Corporations are?—I whole-heartedly agree with you, Sir.

1273. Is there any particular difficulty in getting that precise limitation immediately?—Only limitations of legal drafting procedure. We have really placed a very heavy load on the Treasury Solicitor's Department, who have a host of work, and naturally this has to fit in with its priority. I would remind you, Sir, that subsection (3) is permissive; it is not compulsory; and the speed, therefore, with which this drafting is completed has to take priority against more urgent work.

1274. Can the Sub-Committee, therefore, assume that the difficulties are purely legal and technical difficulties and that it is clearly understood that the purpose of such definition will be to place the provision of the air transport services four-square on the Corporations, and the ancillary services equally clearly will be the responsibility of the Minister?—I can give an unqualified yes to that. I know of no point on which any of the three Chairmen of the Corporations is likely to have any difficulty; certainly they have raised none with me; but, of course, they have not yet had the draft for consideration.

Colonel James Hutchison.

1275. Following up what you said about the powers, I should like to have my mind cleared as to how far the powers conferred under the B.O.A. Act of 1939 operate and how far they are used; for example, in Section 4 we find that the Corporation shall not, "except with the authority of an Order of the Secretary of State, . . . (c) undertake any flight on charter terms within the British Islands, or any flight for the purpose of aerial survey within the British Islands". Now, I cannot believe that in fact the Corporations have to come to the Minister for each charter flight which they propose to undertake.—That parti-

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[Continued.]

cular section is to be construed against the provisions in the 1946 Act. They have not to come to us, and indeed we should not expect them to.

*Chairman.*

1276. Sir Henry, if we could assume that this demarcation is clearly understood perhaps we could now turn to the chart you have kindly prepared for us. I think it is on page 5 of the memorandum. I wonder whether you could indicate on the chart where the Ministry will come into direct contact with the Corporations?—That is the specific function of the Air Services Department, the Under-Secretary whose initials are U.S.(A.), in the third column, U.S.(A.), Air Services Department. You will see that he has a series of divisions. The first division is concerned with B.O.A.C.; the second division with B.E.A.C. and B.S.A.A.C.; the third is concerned with foreign operators, Dominion operators, and charter operators; and the fourth division is concerned with miscellaneous flying problems and all personnel questions, licensing and so forth; whilst under the one Under-Secretary there is also a Director of Finance and Accounts, so that he is in himself embracing the whole field of relations with the Corporations. It is his duty to be fully appraised of the requirements of the Corporations in regard to other departments of the Ministry and to facilitate clearance of their problems where they pass out of his specific jurisdiction, such as the provision of aerodrome facilities, which comes under the Controller of Aerodromes; but there you have an officer of high standing whose basic concern is to be the focus for relationship between the Ministry and the Corporations, at the same time holding the balance with the charter firms, with the foreign operators and also with the Dominion operators who come in here; so that he has the whole field in balance and in relation.

*Major Niall Macpherson.*

1277. Could I ask a question there? Inasmuch as the B.O.A.C. and in fact all services do touch foreign concerns, how would that actually fit in with the International Division of the Planning Commission?—The International Division is concerned with relationships with foreign Governments and with the work of the International Civil Aviation Organisation at Montreal, of which there are 52 Member States. There is, of course, a tremendous range of problems, which involve, first, the clearance with all the Departments in Whitehall, and especially the Foreign Office, and, secondly, clearance by negotiation with the other Member States on that International Organisation. In particular, pending the negotiation of a multilateral agreement which all States will join, we have the responsibility of negotiating bilateral agreements with each of the Member States who will be willing to do so. That means very

heavy work on the International Division, but it in no way impinges on the work of the Air Services Department except when there is a detailed drafting of route specifications, ports of call and so forth, which usually appear as an Annex 1 to the basic agreement. Then the Air Services Department come in at that point and they are mainly concerned with the drafting of Annex 1, to make sure that the Corporations' needs are satisfied in regard to the actual specification of the routes, ports of call and the facilities available.

1278. So that under the Act of 1939 the power to enter into agreements with the Government of any country no longer exists?—That is still a function in so far as it is a business agreement; certainly they undertake a business agreement to perform services for foreign Governments: for example, in the Middle East, where they undertake a number of services, including the training of pilots and the like, which we very much encourage them to do.

*Captain Sir Peter Macdonald.*

1279. On a question such as cabotage, that is outside the purview of the Air Ministry; it is settled by the international body?—The principles of cabotage are all subject to general guidance by the International Organisation, but not more than that until a multilateral convention is drawn up under their aegis and signed by all Member States. Until we reach that happy day it is a matter for negotiation bilaterally between any of the Member States, as to the terms under which cabotage rights shall be surrendered or retained.

*Mr. A. E. Davies.*

1280. It is intended that each Corporation shall recruit its own staff?—Certainly, Sir.

1281. With a separate Maintenance Department in each of the Corporations?—Yes, each Corporation does its own maintenance. There are certain common services which the three Corporations agree to operate, but they are not such as to interfere with the individuality of the Corporation, and its responsibility for developing its own methods and technique, which, of course, you will recall was a basic principle in Government policy, to have three Corporations developing separate lines of technique, to see which was best in the long run.

*Major Niall Macpherson.*

1282. It is just an agreement between the three Corporations, and such establishments would be in no way under the Ministry of Civil Aviation?—In no way. For example, in the field of operational research, which is a very important field, there would be the residuary field or the co-ordinating field in which the Ministry would also function, but the rule quite definitely there is that operational research

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[Continued.]

is primarily for each of the three Corporations, but the Ministry's Operational Research Branch would be concerned to ensure that we get the results of their activities, put them together and match them with the Government work which will be done on central and fundamental problems; so that just in that way we could hand back to them a synoptic or synthetic appreciation of the several strands of effort, saying: "You might like to have this back as throwing some light on what you are trying to do," or with some suggestion on some point which in general they might be willing to follow up on their particular service. But we in no way attempt to intrude upon their direct field of responsibility or the manner in which they execute it.

1283. Could we relate that to the chart?—The Director of Operational Research will come into the organisation of the Controller of Technical Services. We are trying to get an Operational Research Branch established, and the scheme has been worked out and is under discussion at the moment with the three Corporations and the Ministry of Supply to bring it into being.

*Chairman.*

1284. Can you give us an illustration of a central and fundamental problem?—There are so many that I would not like to take up your time with them, but on the immediate problem there has been a host of work done by Air Transport Command, who have been very active indeed on operations research problems and with material that has to be brought into the picture in relation to civil possibilities. We turn again to the field of new type development. Somebody has to be sitting back and thinking very far ahead on what is going to be the physiological effect on passengers operating at very high speeds at very high altitudes. Does anybody know all there is to be known about the temperatures and the average winds to be experienced at heights of 40,000 or 50,000 feet. What would be the effect on passengers of running into a severe bump at that altitude? What would be the effect of minor incidents in flight, and so forth? That, again, is a very far-reaching field where this branch should be reflected in its relationship with the Ministry of Supply, in connection with the very problems which will affect the operation of this air transport service as seen from the passenger standpoint whilst the Ministry of Supply will see it from the point of view of the structure of aircraft. Again, both of them and the Corporations will put those problems to the Civil Aviation Research Committee which has just been established under the aegis of the Aeronautical Research Council specifically to foresee those problems from the point of view of fundamental research, and they are receiving guidance on the problems which we think want to be looked at from the

point of view of our members, of the Corporation members, and of the Ministry of Supply members upon that Committee.

1285. It may well be that the Research Departments of the Corporations are conducting research into the same matters simultaneously?—Yes; but we should not do the research; we do not propose as a Ministry to undertake research. This would be a very small branch collating the data and background and putting them to either the Ministry of Supply as the responsible authority for controlling the research and development programme before it passes into the operational stage on the one side, or on the other side they would give the benefit of their collation of these data to the Corporations as a guide to actual research they may undertake. In the B.E.A. there is a very efficient research organisation from the point of view of actual operational development, and they have been discussing whether they could undertake certain specific questions which they formulated in consultation with our technical people through the operational side of B.E.A. The Ministry of Supply readily agreed, and a contract was arranged direct with the B.E.A. to undertake specific items of operational research for the general benefit of everybody; but always the operation would be done by the Corporations if it is actual operational work. Again, we are now embarking upon this flight refuelling experiment, and the B.O.A.C. are associated directly with that experiment even though they are preoccupied at the moment; they are arranging that the work and the actual flights should be undertaken by a charter firm, but they will be associated with sponsoring the experiment from the beginning. We will finance it but they will sponsor it.

1286. Is there any machinery to ensure co-ordination of research as between the Corporations?—They have, of course, their own co-ordinating machinery through the joint meetings of the chairmen and of their executives at the different levels, and they are very much associated; but, of course, again the Ministry has some measure of co-ordinating responsibility there, because we are informed of the very general field of activities, and in this particular problem the Operational Research Branch would put the three together and see whether there was overlapping or whether the thing could better be co-ordinated, at the same time making suggestions, but they are merely suggestions.

1287. If we could return to the graph, Sir Henry, I think it would be helpful to the Sub-Committee if you could just very briefly describe the sort of matters that are the concern of the Air Services Department?—The Air Services Department is at the moment heavily engaged in clearing the programmes of the three Corporations. It is, as we are required by the Act,

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[Continued.]

clearing with the Corporations their three-yearly plans which they are required to put in under Section 22. On the other hand, they have to put in their annual programmes which are the basis of the grant. At earlier sessions you will recall that I promised to try to get those finalised somewhere about the middle of June. They are financially responsible for the whole background of this grant, for putting estimates forward for clearing the appropriate accounts on the financial side, for all negotiations and discussions with the Corporations, and for priority problems, so as to facilitate the clearance of the Corporations' relations with the Ministry as a whole. I regard it as a cardinal matter to have people there who will serve the Corporations' interests in getting speedy and efficient execution within the Ministry, so that these individuals act as spiritual godfathers and guides in promoting speedy and harmonious relations between the Ministry and themselves, whilst actually performing in the same spirit their executive responsibility for the administration of the grant.

1288. How far are they godfathers and how far are they fathers? To what extent will they be responsible for shaping the current policy of the Corporations?—Well, I would say, Sir, that it is their duty, being in full knowledge of the mind of the Minister, to reflect to the Corporations the reactions to the proposals of the Corporations which they provoke in our mind, if that is the right word. I would put it this way. We have on the one hand subsidy limits, and may say: "We cannot finance these activities." On the other hand, policy might say: "If the subsidy were available we feel you are not thinking on a big enough scale on this job. Do not you think you can step this effort up a bit?" Policy may indicate that we must think in broader terms about a service based on Bermuda. We have had a lot of discussion about maintaining, for instance, the Baltimore to Bermuda service, and that is a case where the Under-Secretary has been making certain representations, and we think the scope of the service might be developed there. The Corporation may say: "Yes, but if we do it, it is going to cost so-and-so, and the problems are so-and-so", and so they try to work out an agreed picture.

1289. Which is the fairest way of looking at this? In the first place, supposing a Corporation came along and said: "We want a subsidy of such and such an amount", and that happened to accord exactly with the subsidy that was in the mind of the Minister, would the Minister say: "That is excellent. Go ahead with your work", or would the second picture be more accurate, and would the Minister say: "Well, that is a happy coincidence, but we are very much concerned in what you intend to do, and we want to be sure

whether you are showing enterprise, or perhaps we want to be satisfied that you are not too enterprising"?—I should be distressed if I left you with the impression that they would not immediately take an account so presented and say: "Yes; but we have got to analyse this. We want to see what sort of efficiency that reflects." Then you would bring in all the relevant yardsticks you could bring to bear against the picture that was presented to you in order to check whether the subsidy was genuinely justified or not. You would say: "What other yardsticks have you got?" You would pick out, for example, what was done by the Civil Aeronautic Board of America. On February 27th they gave a picture showing that for the twelve months ending November, 1945, with a revenue of 212 million dollars the American domestic air lines made a profit of 38 million dollars. The following year, although the revenue went up from 212 millions to 305 millions, the profit of 38 millions is transformed into a loss of minus 4 million dollars, and yet if you look at the actual operating expenditure against the revenue miles you will find that the average is about 1 dollar for operational cost per aircraft mile, which is, therefore, a fair index of American operating conditions. Then immediately you have a clear conspectus of what is happening there over the whole of their domestic field, and you expect to have a corresponding picture, with the detail that we have here of the over-all British picture, and check up to see whether it reflects efficiency or not, and you immediately, of course, find from your analysis of those figures that the whole explanation is the drop in load factor which has occurred between wartime and now, and you say: "All right, what load factor have you worked on?" and you find that they have taken different load factors and different conditions, and you get such checks upon it as you can. Finally, you agree that a certain load factor is a reasonable expectation. Then they say upon that: "That is all very well, but are we going to carry this particular risk entirely?" You say: "No. We think you ought to take a measure of risk, but the Act provides that the grant may be varied later in the year if the actual fact is that the outturn has differed appreciably from what we call material assumptions, not ordinary assumptions, but what are basically material assumptions." Then we should have to make an adjustment of the grant. There is a running job for these people to do to administer these grants, and from past experience I fear that if we do not take the broadest picture we can, painted big on a wide field, with all the knowledge we can collect, and then see the general comparisons we can pick up all over the world, and focus them against our own particular line, we shall not be in a position to exercise the critical survey that we must make

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[Continued.]

of these Corporations' proposals; so that these officers are actively engaged with the air attachés' reports and sending people out to collect the widest possible background that they can get. In these early years we have to do a lot of work in building up the initial accumulation of evidence and knowledge which will be automatically added to year by year thereafter.

1290. Do you anticipate, therefore, that there will be wide and radical changes in the programmes submitted?—I think the Corporations would agree that they are feeling their way as much as we are. For example, I think the Sub-Committee would wish to know that only in the last few days have we received an advice from two Corporations that the forecast they gave us of their outturn for the year just ended will be materially exceeded. My first observation was naturally one that will spring into your mind: "Good heavens, why could not they have foreseen a difference of this magnitude?" The answer is that there has been such a translation from war to peace, with the growing pains of getting into a peacetime stride, that their forecast was materially varied, and at some stage in the year it will be inevitable, as I see the picture at the moment, that we shall have to ask for a Supplementary Estimate to cover that increased expenditure accruing in respect of the past year when they were being paid on a purely deficiency grant basis. So that I make my point indirectly through the fact that the Corporations themselves are feeling their way, and there must, therefore, under those conditions, be substantial variations in the working out of those programmes.

(The Witness withdrew.)

[Adjourned till Wednesday next, at 11.30 a.m.]

WEDNESDAY, 14TH MAY, 1947.

Members present:

MR. FREDERICK WILLEY (*Chairman*).

Mr. Corlett.  
Viscountess Davidson.  
Mr. A. E. Davies.  
Mr. Howard.

Colonel James Hutchison.  
Mr. Kirby.  
Captain Sir Peter Macdonald.  
Major Niall Macpherson.

Viscount KNOLLYS, K.C.M.G., M.B.E., D.F.C., Chairman, British Overseas Airways Corporation (a Member of the House of Lords, attending by leave of that House), examined; and Sir HAROLD HARTLEY, K.C.V.O., C.B.E., M.C., F.R.S., Chairman-Designate, British Overseas Airways Corporation, called and examined.

*Chairman.*

1295. Lord Knollys, I think in the first place the Sub-Committee should record their appreciation of the action you have taken

*Mr. Howard.*

1291. May I ask you a further question on the generality of the autonomy of the Corporations and their powers, because I have been a little bit clouded by the reference to the Act of 1939? May I refer Sir Henry to Section 25 of the Act of 1946 which says that the provisions in the Act of 1939 specified in the Second Schedule shall cease to have effect. Will Sir Henry agree that the provisions of the 1939 Act which are specified in the Second Schedule to the 1946 Act cover practically the whole of the clauses covering the functions of the Corporations?—Yes.

1292. Will he, therefore, agree that unless and until the Minister makes an Order under Section 2, subsection (5), of the new Act limiting the power of the Corporations, it must be assumed that the Corporations have the fullest possible powers as Sections 1 and 2 may be interpreted?—Yes.

1293. Therefore, if it is intended to limit those, it is highly important that an Order should be got out at the earliest possible moment?—It is important that an Order should be got out. I was only referring back to the Act of 1939, and I think my evidence will show it, to indicate the broad scope of the powers which the Corporations would expect to exercise.

1294. That Act now has no legislative or operative sanction?—No.

*Chairman.*] I think, if there are no further questions, this would be an opportune time to adjourn. I thank you once more, Sir Henry, for the very helpful way in which you have assisted us, and I am sure that shortly we shall be quite expert in the field of civil aviation.

in meeting us this morning. I understand that you would otherwise be on your way round the world?—(Viscount *Knollys*.) I should have started.



14 May, 1947.] Viscount KNOLLYS, K.C.M.G., M.B.E., D.F.C.,  
and Sir HAROLD HARTLEY, K.C.V.O., C.B.E., M.C., F.R.S.

[Continued.]

1296. We are extremely obliged to you in altering your arrangements to meet us?—I am very glad indeed to be able to do so.

1297. As you understand, we are a Sub-Committee of the Estimates Committee at present investigating the Civil Aviation Estimates. We know that you are the Chairman of the B.O.A.C., and I believe that Sir Harold Hartley has recently become a member of the B.O.A.C.?—(Sir *Harold Hartley*.) I shall become Chairman on July 1st. (Viscount *Knollys*.) He succeeds me as Chairman on July 1st.

1298. Thank you. So that we have before us the present Chairman and the Chairman designate?—Yes; we thought that might be appropriate.

1299. We thought you might be of considerable assistance to us. The first point which is concerning us is this. We understand that you submitted your programmes in January in the proper prescribed form but they have still not been cleared. As far as we could gather, it appears to us that this has been due to a setback in deliveries of the Tudor type aircraft, the grounding of the Vikings, the difficulty in being certain about what ground facilities would be available, and also what aerodrome facilities would be available overseas. I wondered whether you would like to enlarge upon that, or whether you agree that these are the matters which have caused delay in settling the current programme?—Those are some of the causes, but I think really the main cause in this particular instance was a different one, and that is the proposal which was being put forward, concerned with the Empire routes, on account of delays in the Tudor aircraft to which you have referred, that we should buy other aircraft which would be immediately available, more economic and more suitable for those routes, for the next few years, pending the introduction of quite new British aircraft, particularly in the case of our all-Empire routes to Australia and to South Africa. That proposal came forward in January, and the question of policy had not been settled by the Government as to whether we should or could use those aircraft or not. These decisions, whichever way they went, did affect vitally the whole of our planning, and therefore as far as our estimates were concerned we could not get them out until we knew what our plans were, what type of aircraft we would be using, what frequencies there would be, what the cost would be, and how many services we should run to certain countries, when we worked out those figures before it was quite clear that the total cost was very considerable indeed, in fact it ran into probably a difference of £2½ millions. Therefore we were held up ourselves in finalising these plans and therefore these estimates, and we could not pursue them with the Ministry until that decision was

taken. The decision was only taken and announced, as you know, about a fortnight ago. Two sets of estimates were put in, and we would not have known which was going to be the right one until that major point of policy had been settled.

1300. May I ask a question which may be embarrassing? Are you satisfied with the decision?—We accept the decision completely, because that is policy. One thoroughly understands that British aircraft should be used on these routes; it is our duty as operators to put forward plans based on aircraft which are available, and which we think, at that particular moment, or for two or three years to come, will be the most suitable, and particularly the most economic, for those particular routes. Therefore we shall have these British aircraft, which will be chiefly flying boats, put into these services to Australia, South Africa and the Far East, and I hope, and I feel confident, that we shall be able to provide a great deal of what the public wants, but it is at a considerable cost. Therefore, from the point of view of putting forward estimates of what our results will be during the current financial year, it makes a very serious difference indeed. That, I think, was contemplated in the reply of the Minister of Supply in the House of Commons, when he said that the Government would accept what arose out of that policy. We were quite clear as to what the effect of this would be one way or the other, particularly on the financial side. In one case with few aircraft we had really economic types to operate, which would have simplified operations; it would have got rid of several types, of which we have so many, which are expensive, and we would have had a smaller and more compact organisation and been able to work upon that satisfactorily for several years to come until the new types came along. Therefore, although we are always glad to think that that decision means that we have to use British aircraft, we are very conscious, and shall continue to be very conscious during the next two or three years, that the financial effect of that decision will be considerable.

1301. It means that you will have to rely on subsidy to a far greater extent than otherwise?—Yes, and it means that the deficit will be considerably increased. We cannot tell yet what the effect on our revenue will be, but it will be between £2 millions and £2½ millions a year for the next few years, an increase in the deficit which we have to put forward and allow for.

1302. Will you be prejudiced regarding competing operators?—That is perhaps a difficult question to answer. We shall be able to put up what we think will be a first class show in providing the service; it will be a different type of service, and we shall be able to cater for

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a larger part of the travelling public by providing rather slower and more leisurely services with flying boats on these particular routes which we know are very popular with the travelling public, but we are prejudiced so far as providing any fast service is concerned. We have to take that into account when we are estimating the revenue potential, and there are some ways in which we could say we should not get as much revenue now under this present policy as we would if there had been other aircraft.

1303. How far has delay been caused by the absence or apparent absence of any definite programme for airfield development?—Airfield development for overseas so far as it affects Empire routes for B.O.A.C. has made it necessary to consider different types of aircraft on different routes; for example, because there are no suitable aerodromes for dealing with the Tudor II beyond Calcutta, on the Australian route in the East Indies and going down to Central and South Africa, we have not been able to consider that aircraft for those routes, and therefore we have to come on in any case to flying boats in that case. Other aerodromes are short for various other reasons, but we are able to operate upon them. However, we are counting in all our future plans on all those aerodromes, mainly aerodromes for these particular routes, being brought up to certain international standards. Then there are what are known as Class B aerodromes under PICAQ, and we have to assume that aerodromes needed by us are going to be brought up to those standards. The immediate effect is that present aerodromes will take existing aircraft.

1304. How soon do you anticipate the necessary improvements will be made?—On the Australian route there is going to be a continuing gap in Java, where it is necessary, if you are going to carry any load at all beyond Singapore, to have an aerodrome there, but that all depends upon circumstances outside our control. It is Dutch territory. As far as, say, Nairobi, which is a new aerodrome on the African route, is concerned, and Johannesburg, these aerodromes are either being constructed as in the case of Johannesburg, or, as in the case of Nairobi, being improved, and Johannesburg, which is being dealt with by the South African Government, will be finished in about three and a half years; Nairobi will be a matter of a year to eighteen months; but there is a difficult gap in between, in Rhodesian territory, at Salisbury, which has not even been planned or started, so that we cannot count upon that at all; but there is going to be an alternative one in Northern Rhodesia.

1305. So that on both grounds it would appear that it is going to take three or four years before you are really through

your troubles and in full commercial operation?—Certainly, Sir. That all has its effect, which I think you have in mind, on the Estimates, because if you are limited by those ground factors you have to have plans which are usually less economic and therefore they cost you more. It is a sequence of events.

1306. Another point which has been perhaps puzzling the Sub-Committee a little is the demarcation of your functions and powers. We understand that they have not yet been defined under the new Act?—That is so. The way we actually work them out is under Section 2 of the new Act. As you may know, there was in the original draft a statement setting out the actual functions in detail on the same lines, but elaborated, as appeared in the 1939 Act. We had seen that and discussed it, and it seemed to cover all the functions it was proper for us to have in the light of experience of the last few years. There has been some delay in putting those out. We are counting on those being put out under an Order, and if they are in the form in which we have seen them before it will define our functions clearly enough. At the moment we are making a working arrangement really in the knowledge that those are the lines on which the Order will be made. Technically, as you know, we are working under directives which were given under Section 32 of the old Act which applies to us in the B.O.A.C. but has not yet been revoked, and will not be revoked until the new Order is put out. We are finding it quite workable on the understanding both of what it was before under Section 32 and what the functions will be defined under the Order when it comes out.

Colonel James Hutchison.

1307. We seem to have passed on to a new subject, but there are two questions in my mind arising from what Lord Knollys has told us earlier. I take it the types which were turned down were in fact American types?—They were American Lockheed Constellation aircraft into which British Bristol Centaurus engines were to be put.

1308. I want to ask a question about the programme that was put forward, and I want to make my mind clear as to whether it was a programme including Constellations and whether it showed such a probable deficit or demand for a deficiency grant that it looked like exceeding the powers under the Act and the programme was sent back to be thought over again because that deficiency grant demand was going to be too great. If, therefore, the effect of throwing the programme back is to put you on to other aircraft which is going to increase the demand by £2 millions or £2½ millions you would seem to be in a sorrier position than even on that original programme?—The position as regards the total amount, bearing in mind the total which is available for everybody concerned, was that we did the

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programme originally on the basis of not getting what I may call American-British aircraft. That amount would have been so high a figure that it would have eaten up practically the whole of the grant available, the £10 millions, and we had to review it to see where we could reduce the services to a reasonable amount; but had the so-called project X been sanctioned there would have been no problem about that at all; we should have been well within a reasonable proportion of the total.

Mr. Howard.

1309. Were there in fact three programmes: the first one which included mainly the use of British aircraft which had to be abandoned because it would be too costly; secondly, the one which included Anglo-American aircraft, which appeared to be a more economic proposition; and, thirdly, as a result of the Government's decision to revert to purely British aircraft, which, while less expensive than the original programme, was more expensive than the second programme?—Those are the three on which we have been working; we did not actually finalise any one after looking at the first one, because we knew that the decision was pending in that way.

1310. May I ask one further question which seems to be important? Before preparing this programme, you presumably had consultations with the appropriate Ministry, and those programmes were prepared after those consultations, so that you had reasonable ground for supposing that the facilities on which they were based would be made available?—May I ask what you mean by facilities?

1311. The discretion which you would have in the purchase of aircraft, for instance?—No. May I explain to the Subcommittee how we have worked out these estimates and the basis of them? We started off with responsibility for the parts of the world which we have to serve from this country, that is to say, the whole of North America, all the Empire routes except the West Indies, the Middle East and the Far East. We started out on the basis that it is our responsibility to provide our share of the air transportation which is needed along those routes, bearing in mind that we have partners at the other end. Our Commercial Department then work out the programme, taking into account such things as traffic potential, how many people we are going to carry, mileage and freight facilities which are likely to be available along those routes, to serve the Australian route, for instance, or at Shanghai or the South African route or East Africa, and having done that our operational people then see what aircraft are being made available and what is most suitable for the purpose of translating that traffic potential into numbers of services which are run along that route, whether it is a daily service or

three times a week, or whatever it may be. We then look really to see what that may cost; but our difficulty about doing that was that we had always had the greatest difficulty in knowing some of these costs, because, as you know, we received a great deal for nothing, and have not received a great deal of revenue to which we are entitled, and in that way we have always worked it out on what we thought our responsibility would be. We then looked at the bill and then said that as we ought to serve these places as well as we can, we ought to see how we can do it. In some cases it gets to the point where the more services you can run the more expensive it would be, contrary to the usual practice. There are several routes where you can cut that down; in other places you do not suffer by running three times instead of six. Having got that figure out—and that was the first one we got which you referred to in your first statement, which really would have taken up most of the amount available—we said: "That is not reasonable, and we must see how we can still provide the services we ought to have at slightly less cost," and then while we were doing that the circumstances completely changed. We did not complete that, because the whole picture would have changed completely from that angle of total cost if we had been able to have those aircraft.

Mr. Howard.] Thank you very much.

Captain Sir Peter Macdonald.

1312. Might I ask how much freedom of choice you have in choosing your own types of aircraft? I suppose you consult the Ministry of Supply, do you, if they ask for a programme for the various types?—In obtaining completely new aircraft for the future we now say the type of aircraft we want, or rather the purpose for which we want the aircraft. We have now got to the position, in the case of a particular type for medium range stages on Empire routes, where we have put out tenders; our requirements have been put cut to tender, and those tenders are coming on; so that at that stage we have made our requirements known, and we shall have, we hope, an appropriate say and a final say as to whether the aircraft are suitable or not. That is the kind of arrangement which I feel is the best one for the future. It has not been in force up to now because there has been a series of aircraft upon which everybody has had to comment, and we have given our opinion as to whether one is suitable and another is not. In the case of stopgap aircraft like Yorks and Tudors, that was all that was available, and therefore we had to do the best we could about it. We have not had complete freedom of choice of doing just what we want and then dealing with the manufacturers direct, which would be a great advantage, although we naturally appreciate that there are other

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factors that come in, including the needs of the Services. The Ministry concerned, the Ministry of Supply, must come in obviously at a certain stage, but we have got now to the stage of saying what we want. The position has not been as clear as that, I am afraid, up to now, but we are looking forward to the future. We have got aircraft and we are using aircraft during the year under review, 1947-48, which, though they are not ideal aircraft for the job, we are making do with them, and in the case of ourselves and the Ministry concerned we have had to accept those as being the only ones available. Where we had freedom of choice was on the Atlantic, where there were no British aircraft at all that would do the job. For that reason we said that there was no existing British aircraft, and therefore we asked first for five Constellations and then for six Boeings to follow on.

1313. When you make a choice and when you place an order, as the users, you have to place it through the Ministry of Supply as well?—That is the practice now.

1314. They choose the manufacturer, do they?—Well, up to now, with these new aircraft, which were only really started during the war, and it was a question of seeing which manufacturer was available, whether, for instance, it was the Bristol Aircraft Company for the Brabazon I or whatever it might be, it was distributed to them in that way, and we had no choice until this present stage when tenders will be considered and, I presume, settled by us finally, I think if we had one particular manufacturer there might be service or finance conditions which might come into play if we were so occupied with other work that they could not take advantage of them.

Colonel James Hutchison.

1315. Do you find that tenders which are coming in have been in any way varied from your original requirements in their passage through the Ministry of Supply, or are you getting tenders for exactly the type of aircraft you have specified?—We have not seen the tenders yet for these particular aircraft; they have not been examined to see how far they fit in with our requirements, but if they did not we should say: "This is not what we want."

Major Niall Macpherson.

1316. I understood the witness to say that he anticipated over the next two or three years or so the loss or deficit that would be made would continue about the same. Does that take into account the type of aircraft the delivery of which is in view now? You see why I ask that, because during the debate in the House we had the fullest assurances regarding the satisfactory nature of the Tudor II?—We cannot speak actually of the Tudor I or of the Tudor II, because we have not got the Tudor II yet

and we do not know what it will do. As originally anticipated, it would have been an improvement economically on what we have now. In taking figures over the next, say, five years, the difference which this decision about British aircraft makes, the use of the Hermes IV, which was needed for the longest stages, because the Tudor II would not do that because of the aerodrome position, all that has been taken into account, so that in round figures I think the amount in the first year or so will be higher than in the second part of the period, but it will work out on an average of, say, £2 millions, which in five years makes £10 millions overall; but those aircraft certainly will be more economical than the ones we are using now, which are Yorks, Dakotas and Haltons, as well as the Tudors. When it comes into service that Hermes type will be more economic.

1317. But yet not so economic as your original calculation on foreign aircraft?—When we get down to the Hermes IV, which will be in about two and a half years' time, before we can really expect that to be in operation, they will be very nearly the same when the figures are applied to certain routes. If you take the capacity per ton mile, which is a reasonable test along a route, the Hermes IV will come out better compared with these other aircraft, but until then the difference is very great, because they were not designed for that.

Mr. Howard.] Would it be in order for me to refer to the actual financial aspect of the programme in the light of the evidence we had before us on a previous occasion?

Chairman.

1318. I thought we might ask the general question whether, apart from the considerations which have been mentioned, there are any other factors, financial or otherwise, which have held up agreement regarding current programmes?—As far as the operational plans and programmes are concerned and translating them into detailed estimates, the only two outstanding ones now are, first, on the Australian route, on which we have not completed our talks yet with the Ministry, and indeed I shall be, the week after next, in Sydney discussing it with our partners out there in Australia, this question of just the pattern of the services, and as to which type of aircraft and how many services should be run. Then there is the further problem which we ourselves are considering as regards our Far East Service. There is a general agreement already about operational plans, and therefore that is now being at this moment translated into estimates.

1319. Perhaps I could put it in this way: Have you been obliged to re-shape your programme in view of criticisms that have been made on financial grounds?—Only, if I may put it, self-criticism.

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1320. Perhaps you could reveal a little more of your self-criticism?—As I explained, when we got out our first figures, if we were going to do all we had planned to do before—and it is only now that we have been able to get out the figures—the total deficit was so large that from the ordinary practical point of view, although we have got to have the different things that are necessary, we have also to get out estimates on a commercial basis, and we felt it would be too much in itself. Also, being realistic, we realised there was a certain sum available, £10 millions, which we gathered was the total sum Parliament wanted to spend on all the services, and therefore we worked it out on our own share of it.

1321. Your own share being £5 millions?—Yes. I think it is all in round figures in the Estimates. It was put in as a token figure. It might have been rather less had one plan come off. It will be a great deal more because of this; but I would say that what we are aiming at now is to see that the best service which we can provide within our own sphere of responsibility within a figure of, say, round about £6½ millions for this year, is provided, and that is really what we have done ourselves. We have not done much at this stage, knowing that it must be done, except that we have read the Act and know what the figures are and have estimated what other people's reasonable requirements might be. Subject to that, we must have an operational plan giving the services we want within that figure of £6½ to £7 millions, the deficit for this year. That is what I meant by self-criticism. I realise that does not relate to the figure in the Estimates.

Mr. Corlett.

1322. I wondered if Lord Knollys could tell us if there is any unreasonable delay on the part of the Ministry that is preventing him from formulating his plans?—Not at this stage. We have had the delay ourselves in putting them forward; there is an enormous amount of discussion with them; but there has been no delay from their point of view as far as we are concerned at the moment.

1323. There is nothing preventing you going forward with any plans you want to put forward?—No.

Viscountess Davidson.

1324. Except the limitation of money?—Yes; but we had set ourselves a particular standard to which to work, and if that is agreeable to Parliament, as it should be, then within that standard we shall be going ahead.

Chairman.

1325. Do we gather that you have complete autonomy, commercially speaking, and that when these programmes are discussed

the points of discussion are confined to these broad issues of policy, or has the programme been revised in view of more detailed criticisms?—Not from criticism outside but from criticism by the Ministry. The way it works is this: for instance, if somebody is to have a certain service, they say that in the national interest it should be done. Or, to take another example, it may be very important from the point of view of the national interest to have a British service to Shanghai. We accept that. Then there are certain services in the Middle East which are the continuation of war services which we would not run if it was entirely a commercial concern, but we know they are required, and we shall be properly required to do that. At this stage there has been no criticism saying: "You must not put on certain services." On the other hand they say: "You must go on with your estimate, keeping it as low as you possibly can. We leave it to you to provide services." Generally the type of service or the frequency of service are left to us. Supposing we said we wanted to cut out one altogether, they might say: "Well, it is in the national interest that you should do it."

Major Niall Macpherson.

1326. Does that come under the heading of general directives?—Not on a specific route. There is that problem under Section 4 of the Act of the general run, and they could put it that certain services are in the national interest and that the services should be provided, but how they should be provided in detail or what particular aircraft should be used, I think, would not come under the heading of general directives.

Mr. A. E. Davies.

1327. Would that in Lord Knollys's opinion mean that it would not only be commercial considerations but national considerations such as he has mentioned which will determine policy, and may its effect be that it will never be possible to make an undertaking commercially profitable?—We do think that we have the responsibility to provide certain services which are not primarily commercially practicable. We are in this difficulty compared with other concerns, that we cannot probably charge more than other services which compete with us over long distances. One other factor which is also true is that in the present stage of development of services to, for instance, Australia and New Zealand, there is a loss to be faced, but I think one would agree that not to provide more services there would be out of the question. Therefore, we start with that assumption, that whilst certain services, for instance the Atlantic and certain other services to India and Java, should become commercially attractive services, breaking even at least, if not providing a profit, there will be some

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which over a very long period of time will not be commercially practicable, but we would not leave them out for that particular reason.

1328. As I understood the position from the questions that have been put, from what Lord Knollys has said, and also from the Annual Report of this Corporation, the high cost of operation is due to their having to use unsuitable types of aircraft and inconvenient bases, to which reference has been made by Lord Knollys this morning. Can he give us some indication, Sir, as to when we are likely to be feeling the benefit of the new types of aircraft, and is there any prospect of that in the immediate future?—It is, of course, perfectly true to say that the immediate cause of our large deficit in having to provide these services is uneconomic aircraft at the present time and in the dispersal of bases in this country and overseas, and also, I would say frankly, in a developing organisation we have always to be prepared to prune our own internal expenditure. The first two factors are outside our control, but there is always our own expenditure, and we are thinking all the time, and have started special measures, to be able to prune our own administrative internal expenditure so that we can do that. The benefit from really economic aircraft cannot be fully felt until we have economic aircraft on all our routes, and that cannot be for four or five years or even more; these new Brabazon types cannot be expected to be in service, the ones in which we are interested, until 1951 or 1952, so that until we get those on our services we shall have to continue to use something that is uneconomic; but we shall gradually effect changes. But it will not be complete until we get a completely new fleet; instead of having 150 aircraft of 18 different types, as we have now, we shall have a comparatively small number of aircraft of very few types. That is where you get your economy in the end, very few types concentrated. We have got economic aircraft coming on, like the Hermes, which will be doing some of the routes, and it will be compared with one taken from outside which was built for that purpose. As regards economy coming from the concentration in this country, that is a gradual process, the limiting factor really being the question of bricks and mortar, materials. We cannot do what we aim at doing, but our real objective is to concentrate all our best work. Maintenance and overhaul work are, of course, very important. Then there is the question of suitable equipment, such things as hangars, some of which have been built. That is a long-term programme, of course, but it does not have a high priority attached to it. We should like to have a priority, because the hangar comes first, and until that is completed, with the best will in the world we cannot carry on.

1329. I was thinking that Lord Knollys might care to say a word on the difficulties relating to overseas bases; he did make some reference to the expense incurred at Calcutta, which I think he referred to. At what level are these negotiations proceeding? Is it the Corporations' job to make terms overseas with somebody or is it the Ministry's job? Who does this negotiating? There may be several countries who want to use certain bases, and it obviously has a great effect on their operating costs if you have to run a great distance without a load, for example, for servicing and all the rest of it. What is the machinery for straightening out these very difficult problems?—As far as everything to do with aerodromes overseas and here as well is concerned, aerodrome requirements, the type of runway, the accommodation in an aerodrome, the passenger handling facilities, and the all-important question of ground aids, in regard to which so much still has to be done, we are behind, of course, and that is the cause of uneconomic operation, because you lose regularity if you need more aircraft for those services; you need landing facilities, including blind landing facilities, and all that has a great effect on our economic working. The procedure is this, that we say what our routes are going to be; we say: "These are going to be our stopping places to which we either want to run services, or at which we want to stop." Then we next say: "These are the types of aircraft we are going to operate on these routes," and then we have to ask the Ministry of Civil Aviation to see that those are provided. We do not negotiate ourselves except in a few small cases where we have flying boat bases or where we are the sole user. In that case I think the primary negotiation is between the Ministry of Civil Aviation here and the Government of the country concerned. We often have to do some of it ourselves and sometimes bear some of the cost, but primarily we say what we want and we look to the Ministry to provide it, either in this country or within the Colonial Empire, and to negotiate on other matters.

*Chairman.*

—1330. We understand that Constellations are serviced at Montreal and that this is placing a heavy cost on the service. What steps have been taken to cut out that extra cost?—We went to Montreal because for this all-important service, particularly as it was going to be operated with American aircraft, it was the only place which could physically take those particular aircraft. It is the only place where hangars are large enough or suitable enough to be able to take the Constellations, and later the Boeings. We had over there already a highly trained engineering ground staff, and there was nothing here at that time, nor is there yet proper accommodation into which we could move here, because it is not just a question of getting hangars and workshops; it is a

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question of providing proper housing accommodation for our staff. We should not be getting the right efficiency or the right economy if we did not have not only a first class staff but did not see that they are properly housed. It is impossible to do that here at the moment. Therefore, our policy is that it is absolutely vital to have a first class service across the North Atlantic; it is the primary service in that way as far as the world is concerned, and we must go to the place where we already have an organisation. We moved out from the United States into Canada, and we must plan to come over here at the earliest possible moment, by which we can save a considerable amount of sterling and also a considerable amount of dollars, of course.

1331. That is the responsibility of the Ministry?—Yes, it is for them to provide the hangars, and preferably, of course, hangars in the right place, in a central place, because we want to bring over a very large organisation and put it down in one place and then move it to Heathrow. We do not want it scattered about. It is their responsibility to provide what we need here, for which we pay rent, and we have to deal with the plant, which I hope to be discussing tomorrow in Montreal. We have a definite programme worked out so that we can bring them over here. It is dependent on the ground facilities in this country, on hangars and on proper accommodation for the staff, but at the same time you cannot do that in the middle of running services, otherwise you disrupt the whole service. It is a very complicated affair, and we must not bring it over piece-meal, otherwise the service will stop. The controlling factor in the end will be accommodation here.

1332. But your plan is accepted by the Ministry?—Yes. I think we have got the right relationship there. They are pressing us all the time, saying: "When are you going to bring it over? You must bring it over." It is the all-important policy question; and we say: "Yes, we are planning to do that as long as you provide us in good time with suitable facilities in this country." Then I presume the Ministry are up against problems which we all know.

1333. There is no possibility of making R.A.F. facilities available?—Over here?

1334. Yes.—There are actually no hangars—it is a very curious thing—even for the Tudor, which is a small aircraft in that way; there were no hangars available unless you build completely new ones, and there the question of priorities comes in. There is nothing that can be used at all, and we are already scattered; we have bases at Hythe, one at Bovingdon beyond Watford, and one near Bristol, and if we have the Tudors we shall need another one again. None of those places are spots at which we finish our service, so that to add to them will not in the end give greater economy, and it leads to every kind of splitting of control.

Viscountess Davidson.

1335. Does not Bovingdon take the big aircraft?—We use Bovingdon for some of our aircraft, but it will not take very large ones.

1336. It will not take the Tudors?—Yes, it will just take Tudors. The present hangars are suitable for height but not for the span of the aircraft, and concrete runways and rails will have to be built for the aircraft to go in sideways.

1337. But it is not big enough? That is the point: it is comparatively small; though it is all right for what it is doing, I suppose it is not big enough for what you want. You want a centralised aerodrome?—Yes, perhaps at a sacrifice of a little time and not making two moves.—We are using these hangars because they are most suitable for Halton aircraft, and they could be used for Tudors, although curiously enough it worked out that the most common type of hangar was exactly the same span as the Tudor itself, which was 120 feet, which meant that you had to put it in sideways.

1338. Are the runways big enough for Tudors at Bovingdon? I suppose only just?—The runways are too short for full load operation and only really usable in an emergency. They could be based there, because one of our problems is to get them to go there and to all these other bases from Heathrow as a start.

1339. Yes; it is only really a stable?—Yes.

Captain Sir Peter Macdonald.

1340. In regard to the Heathrow Servicing organisation, you are responsible for your own servicing?—Yes.

1341. Are there any steps taken to pool the service between the other Corporations and yourselves, seeing you are operating the same types of aircraft, because you have to carry all your own spares and they have to carry their own spares?—Ever since there were three Corporations we have been seeing how much common service we could provide, working in together to save duplication. That can be done where we use the same aircraft, but that is seldom, of course. We do not use the same aircraft as British European Airways; so that at Heathrow, although certainly for the Yorks and the Lancastrians on the Australian route the hangars and other services are common, there is no real room at this stage to do it very satisfactorily. British-South American Airways do it and we do it down at Hurn. There is a problem there, and we have discussed it very thoroughly to see where we could make economies in regard to the question of having a common service for looking after aircraft. It is a highly specialised and delicate job. One's responsibility is so great that really we think in the end, at this stage of

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development, at any rate, we would probably get better results if we were responsible for our own maintenance, although where you are actually servicing overseas we are prepared to accept certain maintenance facilities; for instance, out in Australia for the Qantas, where we are using exactly the same type as much as possible, but you cannot do that completely.

Mr. Howard.

1342. We have departed rather a long way from the financial aspect. There is one question I would like Lord Knollys to answer, to remove an impression which perhaps inadvertently I gathered on a previous occasion, and it is this: Is Lord Knollys aware of any observations or queries having been addressed by or on behalf of the Ministry to his Corporation in the course of the last six months which would suggest that the financial details of their programme were open to criticism on what I might call the highest commercial costing grounds? I can see that the final result might have brought a deficit which was greater than could be accepted as a matter of policy, but have there been any criticisms of the detailed presentation of the Estimates, that they were not according to the highest costing standards?—I am not personally aware of that; I have been discussing those matters myself; but, on the other hand, I would not say, that that point has not been raised. I wonder if it was suggested that the real problem is knowing some of the costs and figures in the past. We have been handicapped ourselves in not being able to get costs from the Ministry of Supply, and so there is a great deal of indefiniteness about the cost of aircraft and the cost of stores which we get from them, and we see that some of our Estimates would be guessing, from that point of view.

1343. So far there has been no suggestion that in the light of information made available there was any inaccuracy in the actual figures which you presented?—So far as I know, not with the Ministry of Civil Aviation. If it is connected with operating costs and which aircraft is cheaper to operate, there have been considerable arguments between us as to which is the best method particularly on the economic side, and our figures have worked out differently, I think, in the end. We have been comparing the different types of aircraft with our estimates of what it costs to operate them, that is to say, our estimates, and those of the Ministry of Supply would prefer. They are done in the light of our past experience, and we think that we ourselves are probably nearer than anybody else is likely to be, and it is our proper job to do that. I do not know whether that links up with what you are thinking?

1344. There is no generally accepted yardstick at the moment actually for arriving at these costs? Maybe some people

prefer one yardstick and some another, and there might possibly be a difference there. Would that be how it would arise?—Yes, I think so. It all depends on what assumptions you take at a period, such as now, when the basic information is very small indeed. We ourselves realise that in any estimate all those matters have to be taken into consideration, that next year or the year after our Estimates will be based on real facts and evidence, and as the years go on we shall feel much happier and more confident in putting our Estimates on that basis and information, more than we have been up to now; but on the basis of information which is available now (I think I recognise the point you are referring to) there have been differences as to what assumptions we should make.

1345. But you would not have disagreed with this, that perhaps in your Corporation you have more experience of the actual operating costs on which you can base your figures?—Not at all. I think it would be difficult to find anybody else other than ourselves with that information, and in that way it can be accurate, but they are all prepared on past experience.

Chairman.

1346. If we may now return to the functions of the Corporation and the cause of this delay in getting a definition of your functions, I wonder if you can help us?—I am afraid I do not know. It has not been with us at all. As I said before, we were quite content with what had been drafted originally, but not put into the Act. We have said that we hoped it would be defined. It is not a case of any practical difference really, but as to the cause of delay I do not know.

1347. Would the lack of certainty affect you at all?—Quite frankly, no. We had an understanding on which we were working, and there has been no real difficulty at all upon that basis. We had a good working arrangement, and we both understood the way it was done.

1348. You are not worried that your present functions may be subject to the question of whether the position is to be regarded as legal or illegal?—No. I am really tackling the legal working of the not very clear on the legal side. We are thing under the old Section 32, under which there was a directive given to us during the war in 1940, which was revised in 1944, so that if there was a dispute we have got something which I gather is perfectly sound legally as to our functions, even if it is not in effect now, and we would fall back then on what we had under Section 32.

1349. You anticipate that when it is formally defined that will merely endorse your present operations?—Yes, that is so.



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Colonel James Hutchison.

1350. May I ask about how the Ministry's divisional organisation dovetails in at the lower level with the Corporations, for example, Commandants' duties and so on, and is there any overlapping there?—No. The Air Commandant is in charge of all the activities at the airport. We provide our staff to look after our own servicing and passengers, and indeed the staff look after other people's services as well. We get paid for that, and the same thing happens on the other side. It is all perfectly well understood. We are lodgers on the aerodrome looking after our own functions, and the Commandant is in charge on behalf of the Ministry. If we cannot do that, or if there is something we want, our representative at the aerodrome goes and talks to the Airport Commandant.

1351. You would not say that there was any duplication of function there or anything along those lines which could be reasonably carried out?—Not as far as the relationship is concerned. We do not want to have the responsibility of running airports at all, but we must always have people down there. We are put into accommodation which we lease from the owner of the airport, in this case the State, and we put our people down there to look after our passengers, freight, mails and so on.

1352. So that then the Air Commandant would have no responsibility or duty *vis-à-vis* your passengers?—No, except to provide reasonable facilities which we ask him for, but not as regards the actual handling of them. If he provides something down there with which we do not agree, if the catering, for instance, is not good, our representative on the spot goes and talks to the Airport Commandant, and we make certain suggestions to them, and they work it out in the ordinary way. That is a fairly common practice, I think.

1353. It is up at division level, and the divisional area is functioning in Scotland already, but I believe it has not got very far elsewhere. Is that right?—At the Ministry of Civil Aviation?

1354. Yes, and the Ministry's divisional office; at any rate, there is a division in Scotland, and I wondered whether contact was maintained in the same way between yourself and the division Airport Commandant?—We are only very slightly concerned with the Scottish side of it as regards Prestwick and our use of Prestwick in transit across the Atlantic, and therefore our contact there is small. In fact British European Airways look after us there in the process of the complete change over that is going on. They are responsible for looking after us in connection with our Atlantic services, and their relations, I presume, would be of the same kind for the Airport Commandant at Prestwick as ours would be at Heathrow, and indeed British European Air-

ways at Northolt. There has been no problem that I know of, and we are having practically nobody at all in the airport in Scotland, because British European Airways act for us and look after us there.

Captain Sir Peter Macdonald.

1355. You are satisfied that the services provided by the Ministry, both ground and organisational, throughout your routes are satisfactory?—Well, at this stage of this particular post-war period I think we would be wrong if we felt that everything was satisfactory, because we have much higher ideas and standards which we are aiming at. For instance, ground aids and facilities are, of course, not at all satisfactory yet and we are not satisfied with them. Quite properly, no operator is satisfied, but if anything does come to our attention we never fail to bring it to the attention of the Ministry, and we know that improvements are being made; but I could not say that we are satisfied. We want the highest standards both for safety and economy.

1356. Are the Ministry and the Corporation agreed as to the requisite standards?—As agreed on the standard and objectives as they are on the place which should be provided and when it will be provided. I do not know whether their thinking is the same as ours as to what is needed, but speaking for myself I have every evidence that they do appreciate that. I think that is pretty general, but neither of us, although I cannot speak, of course, absolutely for this, but I should have thought that neither of us is satisfied.

Captain Niall Macpherson.

1357. Do you find that there is any difficulty arising out of the rather dual functions of B.O.A.C. as being on the one hand a Government service and on the other hand a commercial service for the public? Obviously, during the war period priorities existed, and it seems to me that if you are going to provide a service the one thing the public must know is whether the Government would have priority for certain reasons, or whether that is not so now, because I understand that you are handicapped in running it as a commercial service because a Government priority might step in at the last moment. Do you contemplate that that is something that will continue, because if so I rather feel that it is going adversely to affect the future from the commercial point of view?—The priority system has, of course, adversely affected us and does so still to a certain extent, but, of course, it is very much less than it was. The proportion of seats which are held on priority is much less. The priority system is becoming less and less, and I know that when we have pointed out the grave disadvantages that there are in that, for example, not having through bookings from America, they have been sympathetic. Of course, we want to attract people to come from the United

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States over here and to carry them on to India or elsewhere, but we have a disadvantage as compared to the Americans, because they have lines which can go right through to India. Unless we can guarantee them seats we cannot get over that difficulty of changing from one aircraft to another when they come to London. That has handicapped us, and still is to a decreasing extent. It has been made clear to us that it is the aim of the Ministry concerned to abolish at the earliest possible moment that sort of handicap, and it has gradually been coming down except for certain services from Singapore and Hong Kong, for example, which are completely priority. There has been an improvement, but unless we are to remain prejudiced it must disappear. I understand that is the ultimate intention.

*Chairman.*

1358. Perhaps we may now turn to a point Mr. Davies made, but before that may I ask a preliminary question about the staff? We understood that your staff had increased over the past twelve months. At the same time it appears that the aircraft hours and aircraft miles capacity or ton-miles and passenger-miles have probably decreased for 1946-47 as compared with 1945-46. I wonder what comment you would care to make upon that apparent discrepancy?—All those figures represent a decreased activity as far as we are concerned, a decreased activity chiefly to do with British European Airways, because their figures were included in those over-all figures to which you are referring, and these are excluded as from the 1st August of last year, so that therefore the mileage went down, although over-all we are running a great deal more services. So far as the total number of staff are concerned, we have been, during the last two years, recruiting for positions in the type of work of which we were short before; we were not giving services we ought to have been giving in that way. We feel clearly that it is an interim period, and as we are able gradually to centralise our activities and bring overseas bases back to this country, those figures will come down materially. It is bound to be a gradual process. We were talking about Bovingdon just now. In order to provide a service to West Africa we had to put on a new type of aircraft, and we had to create a centre or base at which they could be looked after, as near as possible to Heathrow. We therefore chose Bovingdon, and that, of course, meant an increased number of staff. There are two ways in which that increase is effected; one is for the reasons which I have just now stated, because we are actually still filling gaps in which we were deficient, where we were not giving services before which we ought to have given; and at the same time, as regards the number of people to do a job of work, we have under special scrutiny, and

we have done some studies and investigations into the matter, all our different types of operations to see where we can do it more efficiently with fewer people. We have been emphasising that the whole time. Not only are we doing that internally, these investigations and studies, to see that our staff is satisfactory and to reduce our establishment, but we are getting help from outside. We have set up a section inside with people who are experienced in this sort of research, and at the same time we have got those experienced in other types of business outside. That has been in operation for some time, and for all the reasons I have given they are being scrutinised. We have a certain number of possible improvements under our own control, but the main reduction in numbers will be when we are running more economically and therefore with fewer aircraft and at more concentrated bases.

*Mr. A. E. Davies.*

1359. In that connection I should like, if Lord Knollys can tell us, to know something more about the recruitment to this service, because he will appreciate, I think, that the quality of the service, and the satisfaction they feel in the service, are rather vital to this industry, as it is to every other industry, and I was wondering if there were some sort of Appointments Board. When Lord Knollys replies, would he say something further about this contraction to which he seemed to refer, of establishment when they get running, so to speak, which raises a question in my mind on what terms the staff are engaged? Does it mean the retention of those people who are no longer wanted for duties upon which they are engaged at the moment?—As regards recruitment there is a whole system and an Appointments Board. It is a joint Appointments and Promotions Board which goes into the whole question of people coming in and their promotion when once they are inside the service. We advertise for them, and when we have got them they are then dealt with by this Appointments Branch. We have now been able to get to the stage when we can have people coming in with much more chance of making it a proper career and also raising the standard of the whole quality of the staff and of the whole of the staff methods when we are dealing with our staff problems. We have in that connection, as you may know, recently established a Joint Council as far as our relations are concerned with industry, and that has already proved its use in the last few months of being able to deal with problems there. The effect of that, of course, is that the more you improve the quality of your staff, if it gives them a more settled career, the more they will settle down; and it meets also the other point which I have in view, that there will be a contraction of the staff.

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That raises the problem, not just that you save men and labour, which we look upon as a very desirable thing now, but we are trying to see what we can save in other directions, because if we do not need these people they can be doing more valuable work elsewhere. As regards the industrial staff and the way in which they are recruited, their terms and conditions are on the normal basis, so that when there is redundancy it is dealt with as well and as satisfactorily as we can. When they have been with us for any particular time and they are redundant, we do deal with them generally, particularly those overseas. I do not know whether you had those in mind?

1360. I had them all in mind.—We have a very difficult problem overseas; I was dealing with the question the other day in Durban in South Africa. It was a very difficult problem. We had a grand staff there, and we had to make very special arrangements which I think we consider thoroughly satisfactory for all those concerned so as to treat them as we would want to treat them. I do not quite know what other point is meant about their term of service as affects a contraction of staff.

1361. I was only wondering whether the Corporation was free to dismiss the staff or whether people could expect some permanent employment. It seems to me, from what you have said, that they are in the position to negotiate, to dismiss them or to make them redundant at some point if it were felt necessary?—If you mean giving long-term contracts, we do not. We try to be fair whatever position a man may hold. His good work and services are, of course, taken into account if we have to make him redundant.

Viscountess Davidson.

1362. What is the length of contract they have got with you? Is it a month or six months or do they vary?—All our industrial staff would be on shorter terms, weekly, but it varies.

1363. What about your flying staff? Are they monthly?—They are usually either three or six months. Then we have our very elaborate pensions scheme, a very special one, for pilots; we have a special one for them, so that they are able to give up flying but still to do other jobs, which is desirable both from their point of view and from ours.

1364. More or less a contributory pension?—The main one for the whole staff is contributory. We are revising the special pilots' pension scheme, which was not directly contributory in the past, although in a sense it was, because when it was first established about four years ago they in fact gave up some of their present

salary to have greater benefits later on. In future it will all be contributory. They pay 5 per cent. and we pay about 12 or 14 per cent. ourselves.

1365. At the present time do pilots have to be continually flying or are they given periods of rest, rather like they used to do in the case of submarines in the Navy, where they used to try very often to change them over to some other job on the submarines, which, of course, is really rather a special type? I wonder whether anything is being done with pilots in that way? Are they going to be on this job all the time until they retire or are they able to change?—The change during the period of active service is between air and ground, nothing more than 1,000 hours in the air, and there are very carefully worked out periods in between, when they must have compulsory days off.

1366. Just as they did during the war?—Yes.

1367. It is very important now in peacetime. Of course, in wartime they had to do other things.—We are very strict indeed about that. They are not allowed to fly more than a certain number of hours continuously without rest in any one week or month, and they must have certain specified periods on the ground after doing a certain amount of flying. A further scheme which is important, I think, although it is very expensive, but it is a very proper one, on which we spend, I think rightly, a great deal of money, is this. It provides that these pilots, at the age of forty-five, or indeed if necessary at an earlier age—though that is the normal age at which they can and should retire from flying—should have a generous pension which they can go on drawing whatever other job we may put them on, and we provide jobs for them on the ground. For example, the other day we had a pilot, a captain, who has flown probably more than anybody else in aviation today. He has been in it for a great many years and has now come off flying duty, and we have now put him on to the job of going down to a place near Cowes to look after the development of the new flying boat there; in that way we are going to give him more opportunity for training in administration.

Mr. Howard.

1368. As we are particularly concerned with the Estimates of the Department of Civil Aviation, may I quote one paragraph which I think Lord Knollys will recognise: "The Corporation is taking energetic steps through economic research, review of methods, costs and numbers of staff, to enable the shareholders, the public, to feel that their airline is being developed as efficiently and as economically as many uneconomic factors will allow." The question I want to ask is this: Could you give

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us any indication of what guidance or help your Corporation is receiving from the Ministry of Civil Aviation or from other Departments in the discharge of those particular duties?—We look upon the main part of what we are trying to do there as our own responsibility. We are making every study to see how we can run it more economically. The other question to be referred to is the uneconomic factors.

1369. Not so much. I was thinking more of general economic research and review of methods, and the guidance or help which you get from other quarters.—Well, we felt that at this stage it is our own responsibility to make our own arrangements, and we have done that not only inside, but getting people from outside. We have an Economic Research Section.

*Chairman.*

1370. Am I right in understanding that you have advised a scrutiny from independent sources?—We have brought in from outside people who have been experienced in the study of methods of operational research or efficiency studies. We have recruited the rest internally and built them up, and they are going round to our various departments and stations and seeing how our methods can be improved. We have also brought in from outside one particular man who has been experienced in this kind of efficiency audit study in many different businesses during the war, both Government and commercial, who fortunately happened to have been with us as an accountant before the war, so that he knows something of our own background, although he had not been with us for ten years.

*Mr. Howard.*

1371. The whole cost of that will be reflected in your accounts, of course?—Yes.

1372. What I am getting at is that Parliament has made provision for certain services in other directions through the Estimates, and I was anxious, if I could, to find out any specific point in which you, as an operating Corporation, were getting a direct benefit or help from the Department arising out of this expenditure which has been authorised?—In the broad sense of research and development we have a regular call on all the establishments of the Government, which I think perhaps you have under review, having to do with the improvement of our services. For example, on the question of medicine and medical study, both in the case of our air crews and of passengers' comfort, we not only have our own Medical Department, but they are in touch with Government institutions of research, and the scientists concerned are able to give us the best possible advice they can to help us. It does not cost us very much, but we are getting the best brains that are being set up for

that purpose, and the same thing in technical matters, where there is technical development in aircraft, or anything of that kind. There is the Royal Aeronautical Establishment at Farnborough; there is a committee which has just been set up there, that is the Safety Aviation Research Subcommittee of the Aeronautical Research Council; so we are getting the full benefit of all that kind of thing.

1373. That was the kind of line I wanted to get at, but frankly I have not discovered that any of these particular services you quoted are supplied direct by the Ministry of Civil Aviation. The technical assistance you get would not come from the Ministry of Civil Aviation; the particular Committee you referred to is not under the Ministry of Civil Aviation?—No.

1374. What is the medical assistance you get?—(Sir Harold Hartley.) That is the Air Ministry's Flying Personnel Research Committee, on which the three Corporations have joint representation. As an Air Ministry Committee they work at Farnborough, because they have research resources available at Farnborough, and it is to these, through the Committee, that we have access.

1375. I do not want to be unfair, but in so far as Parliament may have to provide money for research by the Ministry of Civil Aviation we have not any evidence yet of the benefit of it so far as the Corporation are concerned.—(Viscount Knollys.) I see the point. I was thinking of whether there is anything yet sufficiently developed in the Ministry themselves on which we have been able to draw. (Sir Harold Hartley.) I think it is long range research and development with whom our officers are in constant contact. That is a department which the Ministry of Civil Aviation have set up there, from which we shall certainly derive great advantage. (Viscount Knollys.) I have thought of another one, too. There is the operational research which they are only just now setting up. It is not working yet; but we shall get benefits from that. (Sir Harold Hartley.) I think the real answer is that it is early days. I see various things developing within the next twelve months which will become effective, but just at the moment I think it is just a little early to say.

*Chairman.*

1376. Supposing your inquiry revealed a duplication of effort at airfield level and that you found you were carrying on work which was also being carried on by the Ministry of Civil Aviation, what step would you then take? We have been talking about inquiries into establishments?—Yes.

1377. Let us assume that the results of your inquiries revealed duplication of work at, for the sake of example, airfield level, and that duplication is between yourselves and the Ministry, what steps are then taken to avoid duplication?—(Viscount Knollys.)

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That has occurred, and we took it up with them; in fact I discussed one particular point with them. It is important to draw a line very clearly between what they want to do and what we can perhaps do much better on the practical side. We welcome the opportunity of all they can gather in from sources perhaps not easily open to us, and from which we can draw, but the practical thing is a very clear understanding of where the line is drawn between centralised work of the Ministry and the type of work which we ought to be able to do. The difficulty on the operational side is in drawing that line, and we have to work that out in order to avoid duplication of effort. There have been cases of that.

1378. Does not that bring us back again to the question of your functions under Section 2?—I wonder whether it would be a practical question if you divided it up in that way in regard to any functions such as these, which would be in rather general terms. Where there is a question of duplication I should have thought it was a question of having it out between us rather than being—

1379. At present you can say that you do not anticipate any difficulties, that duplication if it existed would be revealed, and that a decision will be taken on practical common sense grounds?—Yes, that is the way we would approach it.

1380. There is one other matter which I should like to raise before we adjourn this morning. Can you tell us how your operational costs compare with competing lines when you are covering similar routes with similar aircraft; for instance, where you are operating Constellations?—That case is going to be a very useful yardstick for ourselves, and to a Sub-Committee such as this. We have now got to the stage when we can do that reasonably; we are actually doing it, and we have got, as far as they can be got, figures, through the various international organisations. Immediately we do get them we do use them as a yardstick to see where the differences may be and how far they may be justified. At the same time, having to operate from Montreal is more expensive, it is costing us more than it is costing our competitors. There are tremendous variations in conditions, and we do not always know what has been brought in under different headings. We find that if they are looked at and published one has to be very careful of taking one as absolutely right and another as not absolutely right. They are extremely variable. You may say: "Look at our costs; they are higher. Why?"

1381. I wonder whether it would be possible to let the Sub-Committee have a memorandum on that point?—On the comparative figures.

1382. How the operational costs compare, with possibly an explanatory note explaining why they differ?—I will certainly see

what can be done; in fact, I think they would be more realistic in the next series than this one, because they are only estimates. We have been doing that, and I hope we shall get something out of it, but our problem has been that if you are taking actual costs between Pan-American, American Overseas Services and the B.O.A.C., up to now we have been operating only a portion of our fleet of five Constellations. On account of that we have not yet been able to bring in the full utilisation for them, so that the only figures which are really comparable are the estimates for the coming year, quarter by quarter. They are not ascertained costs, and, frankly, do not give any real comparison.

1383. Because there is no real ground of comparison?—No. They have been running very much longer than we. We are not yet in full running, and therefore the figures cannot be fully comparable.

Mr. Howard.

1384. Could South Africa give any possibility of a true comparison?—There is no other place where we use the same equipment. The Atlantic is going to be a yardstick, and it will be a very useful yardstick, but it is simply on an estimate basis at the moment, and not on ascertained costs.

Chairman.

1385. I am sure the Sub-Committee would be willing to leave it to you, if you could let us have further information which you think would be most helpful to us in our inquiry?—Yes; and the next time I think there will be much more helpful information of that kind than can be produced now. I will certainly see what we can provide for the Sub-Committee.

Major Niall Macpherson.

1386. May I ask a question on running costs? I understand that it is the practice at the moment to use other planes for certain services. If that is still so, how do you consider that the costs that you are charged by the charter companies work out in relation to what it would cost you yourselves to run those services? That is the first question. The second question is a suggestion regarding chartering, and whether the B.O.A.C. is at present chartering planes itself for a special purpose, and whether that chartering is, in your opinion, remunerative or whether it is being done at a loss?—I would like to answer that question fully, and perhaps I may ask that it should not be recorded, because there are some commercial points coming out, and there might be some difficulty?

Chairman.] Certainly.

Major Niall Macpherson.

1387. I do not know whether you quite answered the last point as to whether you actually charter the planes yourselves?

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—We do not charter planes. We hire some planes from the Ministry. We charter the plane complete with the crew, the whole thing. We do that in the case of India, and we have done it in the case of other places for a special purpose. We actually charter from a charter company on an ordinary commercial basis.

1388. You do not let out your own planes on charter?—No, we only do that in the case of our associates overseas. We have got a charter arrangement with the Nigerian Government, for instance, to let them certain crews and planes to operate in the Nigerian circuit. We also do that in the case of Iraq. We could not get the aircraft for them which they wanted, and the only way to provide a service was to let them have Dakota aircraft with crews on an ordinary charter basis. But, as I say, we only do that with our own associates and where it is in the general interest, although we contemplate the time when we shall be able to do what Imperial Airways did before the war—provide charters; but we have not got enough aircraft for our regular services to be able to do that. We shall do that.

Mr. A. E. Davies.

1389. Are we meeting the public demand on every route at the moment, or could Lord Knollys tell us where the greatest delay in getting passages is arising?—We are not meeting the whole public demand; you will never, I think, meet that by one airline in certain periods of the year, because the traffic is very highly seasonal. At this moment it is all beginning to come to this country. As far as the West-bound was concerned, we were meeting that before. Now East-bound traffic is filling up, and we are getting quite full. It changes over about this time of the year and goes on till about November, and during those peak periods you never fully meet the public demand. Generally speaking, how-

(The Witnesses withdrew.)

[Adjourned till Wednesday next, at 4 p.m.]

WEDNESDAY, 21ST MAY, 1947

Members Present:

Mr. FREDERICK WILLEY (Chairman).

Mr. Barton.  
Mr. Corlett.  
Viscountess Davidson.  
Mr. Albert Edward Davies.  
Mr. Howard.

Colonel James Hutchison.  
Mr. Kirby.  
Sir Peter Macdonald.  
Major Niall Macpherson.

Sir HENRY SELF, K.C.M.G., K.B.E., C.B., Permanent Secretary, Ministry of Civil Aviation; Mr. A. H. WILSON, C.B.E., Under Secretary, Aerodromes Department, and Air Vice-Marshal Sir CONRAD COLLIER, K.C.B., C.B.E., Controller of Technical Services, called in and examined.

Chairman.

1393. Sir Henry, this afternoon we wish to turn to the administration responsible

ever, we have not got a sufficient service to take care of all those routes which are most full, one of which is the South African route where, although our services are running in partnership with the South African services. On that service we use York aeroplanes. They do not carry more than twelve to eighteen, so that it is a very large aircraft with a small number of people. That is fully booked outwards until October or November, so that the answer is No to the beginning of your question. It never will be completely, but it is worse now than it ought to be. When we settle down there will be a period when we shall be able to provide the services that are required.

1390. I was wondering what the tendency was.—It is a problem we have here. The difficulty is we cannot switch our aircraft in the winter on to other routes, as they can in America.

Chairman.

1391. Finally, may I put on record our appreciation of your excellent safety record. We are delighted to hear that no passenger was killed or injured in any aircraft operated by your Corporation during 1945/46, and we hope that record has been maintained to date?—We had it for two and a quarter years without any passenger fatality, and then we had that unfortunate crash with a Dakota a few months ago, in the autumn, which got held up in France in bad weather and came back here. I appreciate your remarks very much, and I am sure those who are responsible for it will also appreciate them.

1392. May I thank you very much once again for coming before us, and may we wish you a very pleasant journey round the world?—Thank you. I shall be back in four weeks' time, if you should want to see me again; that will be the middle of June.

Chairman.] Thank you very much.

for the aerodrome services. There is just one question that I ought to ask arising from previous enquiries. We understand

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[Continued.]

that one of the difficulties which has made the agreement of the programmes submitted by the Corporations difficult was the difficulty caused by man-power and material shortages which, in turn, made it at least not easy to finalise the programme of airfield construction?—Yes.

1394. The question I wish to ask is this: Does that mean that the provisions in the Estimates for works, buildings and lands may have to be revised?—Yes.

1395. We can only accept this as a very provisional Estimate?—Those Estimates were framed last December on the best information that was available at the time. The Government's approval of the aerodromes programme will, of course, be reflected by the amendment of those provisions in detail; it may be that some of the aerodrome services will have to be somewhat deferred, in which case the expenditure provided there would be similarly curtailed.

Major Niall Macpherson.

1396. Is it possible to draw a distinction between those Estimates described as provisional Estimates, and others? There are some marked with daggers described as provisional estimates, or are they all subject to review?—Perhaps it would be better if Mr. Wilson, an Under Secretary of the Aerodromes Department, who is here with Sir Conrad Collier, could take that point. (Mr. Wilson.) The whole of these figures, Sir, to some extent, are provisional. Those that are specifically marked "provisional" were very much shots in the dark; there was not so much information in regard to what was going to happen to those aerodromes, but the others are also subject to revision; they are also "provisional" in the sense that the whole thing is overshadowed by what it is physically possible to do, how the man-power and material situation develops, and so on.

1397. There are, of course, two points there, because the provisional dagger is shown against the total estimate for work, not the amount to be voted in 1947-48?—Yes, that is so. The total amount, of course, must be very provisional because it is based upon current estimating. We have not a great deal of experience of what current costs for labour and materials are going to come out at; in some cases there are certain unknown factors in the actual design of the work that is contemplated at particular aerodromes. The designing of such things as runway extensions depends upon detailed physical surveys, both from the operational point of view and from the engineering point of view. That is a formidable task, even in the case of one aerodrome; it is still more formidable for the whole programme, so that the whole of that surveying has not yet been done

and, to that extent, the total figures have got a certain element of speculation about them.

Mr. Howard.] I take it we shall be returning to this particular subject, Mr. Chairman?

Chairman.

1398. Yes. (To the Witness.) If we could now turn to the administration there are two general preliminary points. I notice that the Estimates for "Ground Services for Empire and other routes; Grants and other expenses," show an increase of £1,315,000. I wonder whether you could generally indicate what are the factors which have caused such a very substantial increase in the estimate?—(Sir Henry Self.) The capital services, you will see, are, in the main, the cause of that increase from £355,000 to £1,435,000. That, in its particular setting, reflects the extent to which these aerodromes have to be increased. The whole way down through the East African and Central African routes, the aerodromes had not been prepared to take aircraft such as the "Tudor II," and the runways have had to be lengthened. The provision of the extensions to the aerodrome facilities there arises in respect of the through trunk services and not because of the regional needs, so that the cost of the additional facilities for the through trunk services falls upon the United Kingdom Exchequer, and not upon the Colonial Governments concerned, following the principle that, as I previously explained, the cost is apportioned roughly in the ratio of what is for the benefit of the through services and what is for the benefit of regional activities. So that the figures of increase you have there are a direct reflection of these increased facilities provided at aerodromes in Colonial territories along the Empire routes. The corresponding figure of increase in cost of maintenance is an increase of £365,000 to £600,000; that, I think, is reasonable in relation to the extended activities that are going on.

1399. The second general preliminary point is this: Are we right in assuming that since the Civil Aviation Act of 1946 there has been a change in policy regarding the administration, and that now, in view of the provisions of Section 38, subsection (2), the administration is unified, whereas before it was a form of dual control?—You are referring, I take it, Sir, to the subsection which provides for the appointment of one Commandant at each airport?

1400. Yes, responsible for all services provided?—The original thought was to maintain parallel responsibility, making the Airport Manager primarily concerned for what I would call the lay activities rather than the technical services. We had ourselves, with the appointment of Sir Conrad Collier as Controller of Technical Services,

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reached the conclusion that they ought to be unified under one head, and when the same thought was proposed during the course of the Committee stage of the Bill, we readily accepted the suggestion, so that it is a development in previous practice to bring them all under one head on the particular airport concerned.

1401. Does this unification end when we leave the airport, or has it reflected itself in the administration generally?—The airport Commandant is the responsible officer for the administration, the activities and operations at that airport, but the technical officers, the Heads of the technical services, of course, have to report through Divisional Headquarters, or even direct to Headquarters, on their technical problems. Exactly as happens in the Royal Air Force, you have technical services dealing directly with Command Headquarters, or even with Air Ministry Headquarters, on technical problems as opposed to direct local administration and control of operations, so that there is this parallel sphere of reference of the technical officers and equally of the Airport Managers, to the Under-Secretary in charge of aerodromes administration to enable them to deal with technical problems of principle and policy apart from the actual supervision of their day-to-day control. That is the extent to which the unification of Command does not go right up through the tree.

1402. There remains a division between technical services and other services?—Yes.

Sir Peter Macdonald.

1403. The Aerodrome Manager is responsible for administration?—I see your point, Sir. You will see it on the chart. The regional organisation is shown as bifurcating responsibility up to the two Controllers. Does that answer your point, too, Sir?

Sir Peter Macdonald.] I am not sure that it does. I want to know the functions of this Aerodrome Manager.

Chairman.] I think it will probably be more convenient if we were to come back to that. I asked the preliminary question to find out what was the effect of the provision in Section 38 (2). I think it will be more convenient if we start at the top with Mr. Wilson, if he could indicate his Headquarters Establishment, and then we can work back to divisional establishments, and then eventually to aerodromes. Perhaps Mr. Wilson could help us by telling us what his establishment comprises, if it is not too difficult, by reference to the Estimates.

Colonel James Hutchison.] Yes; that is page 155?

Chairman.] Yes.

Mr. Howard.] Have you got on record Mr. Wilson's position, so as to relate it to the chart which was given us in connection with this matter?

Chairman.] He is U.S. (G.), Aerodromes Administration.

Mr. Howard.] Thank you.

Chairman.

1404. We might also keep in mind the chart also when we go to the divisional administration.—(Mr. Wilson.) My Headquarters Establishment does not come out in the Estimates as a separate item. My department is staffed with administrative officers, assistant secretaries, principals, super-clerical officers, and so on, and with a certain number of operations officers, grades which are employed in other parts of the Ministry, and my establishment is lumped with the other establishments in the Ministry in these tables on page 155 so that one cannot pick out the Aerodromes Department from this omnibus statement of Headquarters staff. You would perhaps like me to tell the Sub-Committee how the department is organised internally, Mr. Chairman, and what grades we are employing?

1405. Yes; if we could deal, first of all, with the Headquarters staff before we pass to the divisions?—Yes. So far as the main work is concerned, it is divided into a number of divisions; at the moment, four administrative divisions and, in addition, I have a Finance Division dealing with the finance of ground services and the directorate of accounts. Of the four administrative divisions, three are doing purely administrative work in connection with the aerodromes; one of them deals with the London Airport, with over-all planning, and with foreign and overseas airports. A second division is concerned with the actual implementation and, for that matter, the formulation of policy at individual aerodromes once it has been decided to take particular aerodromes over. Then there is provision also for the work in connection with the acquisition of aerodromes, lands questions. All that is spread over three administrative divisions. The fourth division is operational in character; by that I mean, it is concerned with problems which require knowledge of the practical operation of aircraft. That division is concerned with the standards for aerodromes, runway lengths and widths, and so on; for dealing with airfield lighting, and it also covers such things as specialised transport required on aerodromes, with the organisation of the services for rescue and fire-fighting, first-aid, and things of that sort. That is, broadly, the make-up of the Headquarters Divisions working under me.

1406. If we could pause for a moment there, we understand that a Scottish Division has been created and that there has been some measure of decentralisation?—That is so.

1407. What steps have you taken to avoid overlapping between the work you have indicated as being carried on at



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Headquarters and the work that will be carried on in the Scottish Division?—The broad distinction is that Headquarters is responsible for the formulation of policy; The Scottish Division and the other Divisions, when they are formed, will be responsible more for the day to day affairs that occur at the aerodromes which cannot be settled at aerodrome level, and for progressing and implementing the policy that has been laid down at Headquarters. That work, pending the formation of any geographical Divisions, was, of course, done at Headquarters, and there still exists a Branch which does that work for the geographical Divisions that have not yet been formed. The formation of the Scottish Division is just in process of taking that work out of Headquarters so far as Scotland is concerned, and eventually the Branch dealing with the day to day work will disappear, and some of the work of implementing the policy which is now done at Headquarters in other Branches will disappear and so relieve the strain on those Branches.

1408. Have any of the staff been transferred to the Scottish Division?—No staff have actually gone from the Aerodromes Department to the Scottish Division, with one exception, and that is an Operations Officer who deals with operational and technical questions. Some staff has gone from other parts of Headquarters, because in addition to the devolution of functions dealt with in the Aerodromes Department, there is devolution of establishment functions and finance functions which are dealt with elsewhere in the Ministry; thus, someone has gone from the Establishment Division to the Scottish Division to undertake establishment work.

Colonel *James Hutchison*.] If I may ask a question, I think it would be interesting, if it is not too much of a labour, for us to have a sort of bird's eye view of what the staff is under these, at any rate, first three Aerodrome Divisions, A, B and C, because if it is dealing entirely with policy as and when you set up your outside Divisions—I do not want to confuse the two Divisions—but Divisions comparable to the Scottish Division, you would expect either that there would be overlapping between the functions of the Scottish Division and these Divisions A, B and C, or else Divisions A, B and C could be very considerably reduced?

Mr. *Howard*.

1409. May I interpose one thing to clarify the point made by Colonel Hutchison? Are we not at this point using the word "Divisions" in two different senses?—That is so.

1410. Branches at Head Office and separated outside regional organisations?—Yes. It is a little confusing that we are using the two terms for the same thing.

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Mr. *Howard*.] Thank you. Now, would Mr. Wilson answer Colonel Hutchison's other point?

Colonel *James Hutchison*.

1411. I hope my question is clear, but you know the two types of Divisions of which I am talking?—Yes. I think the position is this, that if we had already all the aerodromes we are going to have and if they were all working fully and we had the right Headquarters Establishment, and we then decided that we would set up a geographical Divisional Organisation, then undoubtedly the Establishment at Headquarters would suffer a very considerable reduction, but the position is not quite that, because we have only at the moment taken control of something like half the total number of aerodromes that will come under State control. Those we have taken over have been taken over in various stages of under-development; there is a great deal of work to be done on them; there are lots of new problems in connection with them; there is a heavy load of work in connection with the tidying up of lands questions, the actual acquisition of aerodromes, the closing of roads, and all that sort of thing; so that what will happen by the formation of the divisions is not so much a reduction in the Headquarters policy branches as a provision for work in the divisions which would otherwise have had to be provided for at Headquarters by additions to staff.

Colonel *James Hutchison*.

1412. Am I right in thinking that it is a peculiarly difficult time to size up this situation because, in fact, you have got, if I may call them so, branch divisions which are carrying on part of the duties and responsibilities which already have gone to such, if I may call them, country divisions as have been established, but because only some country divisions have been established you still have got to hold a large number of individuals carrying out the duties for the country divisions which have not yet been established?—That, of course, is perfectly true. In fact, only one division has so far been formed, and that is not functioning fully because it has not its full complement of staff. A second division will be formed fairly soon.

Mr. *Howard*.

1413. I am sorry to interpose, but could we keep off the term regional divisions and Headquarters divisions so that we can be quite clear what we are talking about, instead of Divisions?—I will try to do that. If I might repeat what I said in those terms, only one country division has been formed; that is the Scottish one, and that is not fully operative because it has only just been formed. The Controller is getting into his stride, collecting his staff, and so

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on, and until he has got his full staff in he cannot function fully effectively, and he cannot take over all the duties that he has to take over from Headquarters. The other divisions will be formed in due course, we hope, during this year, and they will tend to take over work from Headquarters; but as they are taking over work from Headquarters so the Headquarters work is growing by the taking over of new aerodromes creating new problems, and that will balance, to some extent (it is a very rough balance) the reduction of staff that would otherwise take place.

*Chairman.*

1414. But will not the work that remains at Headquarters be conditioned by the amount of responsibility that is delegated to the regional divisions?—That is true, to a great extent.

1414A. If we take one of the Headquarters divisions, acquisition of aerodromes, surely when policy is decided then there should be little work remaining outside the regional divisions?—On that particular point, the acquisition of aerodromes must be done by Headquarters branches because it does involve, in the first place, considerable contact with the Headquarters of other Ministries, the Ministry of Town and Country Planning, the Ministry of Transport as regards roads, and so on; it also involves a very close liaison with the Air Ministry Lands branches who are our agents in this matter of acquisition and who, moreover, have all the past history of most of the sites because they are on requisition; they were requisitioned during the war; and the past history carrying with it claims to compensation is very much tied up with the final acquisition by the State so that the acquisition work is not work which can be put out to these country divisions.

1415. Perhaps it would be helpful to the Sub-Committee if you could indicate what work can be profitably carried on by the regional divisions?—The main tasks, as I suggested a little earlier, will be in connection with the day-to-day running of the aerodromes. The Divisional Controller will be responsible for the day-to-day efficiency of the technical services, a subject on which Sir Conrad Collier can talk better than I can. On the management side, the Divisional Controller will be responsible for generally supervising the management, dealing with a certain number of works services questions, minor alterations to buildings within certain limits, day-to-day questions that crop up in connection with buildings, the placing of certain contracts in connection with buildings such as cleaning and sweeping chimneys, and all that sort of thing; he will have powers to approve certain establishment complements of weekly paid staff; he will be res-

ponsible for authorising certain claims in connection with staff, such as overtime, travelling and subsistence, and things of that sort, all matters which otherwise would have to come to Headquarters in order to get a superior check over the local Aerodrome Commandant. The exact limits of the financial powers of the Divisional Controller have been set down quite tentatively at the moment, and the intention is that they will gradually be extended as the divisions get into their stride, so as to get as full a measure as possible of devolution to the divisions of all day-to-day matters not involving questions of high policy.

1416. What sort of establishment do you anticipate for, shall we say, the Scottish Division?—The Scottish Division, taking in the technical side, and its messengers and typists, and all the rest of it, will probably have an establishment of about 80 people.

*Major Niall Macpherson.*

1417. When you say "technical", you mean works really, as opposed to Radar, meteorology, and so forth?—No. Works come into the matter, but I also included Radar, telecommunications and traffic control.

1418. They are all centralised under the Divisional Controller?—The Divisional Controller will have people qualified in those subjects.

*Sir Peter MacDonald.*

1418A. The functions of the Ministry, I understand, are to be responsible for an aerodrome until it becomes operational; responsibility for the acquisition of an aerodrome, for the acquisition or building of new buildings for the works departments. That comes under you, or will be under you?—Yes.

1419. At what stage is it to be handed over for operational purposes?—The aerodrome is never completely handed over to the country division, except for day-to-day operational control. Certain things must always remain at Headquarters, more particularly in connection with the long-term planning of the aerodromes. One visualises that Headquarters will probably have to decide whether a particular aerodrome is going to be extended because that links up with the over-all planning of the air services that are going to use the aerodrome, so that certain aspects of aerodrome administration will continue always to be dealt with at Headquarters.

*Major Niall Macpherson.*

1420. What are the channels of command? Do I understand that the Commandant will come directly under the Head of the division for all purposes, or will he be receiving orders on some technical subjects through different channels of com-

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[Continued.]

mand?—No; the channel of command will be from the Aerodrome Commandant, through the Divisional Controller to Headquarters on all subjects.

Colonel James Hutchinson.

1421. Did I understand you to say that the 80 individuals that you mentioned a short time ago are all direct employees of the country division Headquarters?—That is so, yes.

Chairman.

1422. Are we right in assuming that the technical services for which Sir Conrad is responsible are quite apart from this chain of control?—They come under the Divisional Controller; they are part of his staff; he has on his staff both technical people, operations men, traffic control men, telecommunications men, and someone looking after administration.

1423. They are housed in the same regional Headquarters?—They are all housed in the same building and they are all under his command.

1424. Can you allocate the staff between the two services?—In numbers?

1425. Yes.—I have not the detailed figures by me, but I should think the balance would be rather less than half on the administration staff and rather more than half on the technical services side.

Chairman.] Then, if we could go to the airfield question—

Mr. Howard.] Are we leaving Headquarters yet?

Chairman.] No. If you would like to pursue it, let us pursue it. I was only going to complete the picture, and then perhaps we could deal with it again?

Mr. Howard.] Yes.

Chairman.

1426. When we get to the airfield, then we have the Aerodrome Commandant?—We have the Aerodrome Commandant in charge of the airfield, and all that is on it. He is called Aerodrome Superintendent in the printed Estimates. The title has been changed since these Estimates were got out. He is a man required to be appointed under Section 38 (2) of the Act, and under him there are the Aerodrome Business Manager dealing with administration and management, the Senior Traffic Control Officer, the Senior Telecommunications Officer dealing with telecommunications, and of course, linked but not in quite the same way, is the Senior Meteorological man; his position must be slightly different because the Meteorological Service is, as the Sub-Committee know, a unified service provided by the Air Ministry.

1427. And, by virtue of Section 38, all four Officers are subject to the Superintendent?—Yes, that is so.

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1428. If we could take the Superintendent's relation to the Division, I gather from an answer to a previous question that on all financial matters he will have to refer to the Division?—The Aerodrome Commandant or Superintendent will have certain financial powers, but they will of course be more limited than those of the Divisional Controller.

1429. Have they been defined as yet?—Yes, they have been defined; they are very small. They are limits of £5 on certain things, for instance, with a limit of £20 a month, and so on; that kind of figure.

1430. I said relatively small matters, because I noticed you mentioned cleaning and sweeping of chimneys?—Yes, exactly.

Mr. A. E. Davies.

1431. Does the man on Airfield work whom you have called Superintendent have any access direct to Headquarters as distinct from the Divisional Controller?—He should not normally have access to Headquarters when the Divisions are fully functioning.

Colonel James Hutchison.

1432. What sort of number of staff do you contemplate for a normal Division? What has the Scottish Airport Commandant got now?—That will vary very widely as between one aerodrome and another. To take Scotland, you will have at one end of the scale an aerodrome such as Prestwick at the other end of the scale, you may have these remote places in the Outer Highlands or in the Orkneys and Shetlands with perhaps not more than 20 or 30 people, if that, on the aerodrome; so that it will vary very widely from aerodrome to aerodrome.

1433. I put the question because I am informed that the Commandant at Prestwick has some 500 individuals at the present time under him. I wondered if you had the figures for Prestwick?—I am afraid I have not the detailed figures at Prestwick. I think that number of 500 is probably right, if it includes the technical services. The technical services at Prestwick which, of course, has got responsibilities in connection with transatlantic flying, do use a very considerable number of staff. (Sir Henry Self.) May I suggest that it would be helpful if Sir Conrad explained why that Prestwick figure is so large? Indeed, the figure is very largely technical.

Chairman.] Yes.

Viscountess Davidson.

1434. Is it correct that the number is 500?—Judging by Sir Conrad's nod, I should have thought the figure of 500 was not far out. (Mr. Wilson.) I see I have a figure here of 563 people at Prestwick, so that seems to be about the figure. (Sir Conrad Collier.) Well, Sir, at Prestwick, on the Signals side alone, which, of course, is

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always by far the biggest bulk of the technical services side, there is an establishment approved for 366 of all ranks. Of those, 312 posts are manned to-day. If you would like to hear the numbers in bulk of those, Direction-finding Operators are 23; Wireless-Telegraphy Operators, 98; Teleprinter Operators, 76; Traffic Clerks, 16. Those sort of bigger figures will give you some sort of indication of the numbers of the larger pockets that go to make up the total. The reason why Prestwick has a large ground staff is that it has certain long-range Atlantic control responsibilities as well as being a first-class Continental Airport. It has 5 W/T air-to-ground channels with direction finding, and air-to-ground W/T channels, without direction finding, another 7. Air-to-ground Radio Telephone, with direction finding, 2 channels. Air-to-ground R/T without direction finding, 4. For navigational aids it has 6. It has a Beacon and a Radio Range; S.B.A., B.A.B.S., Eureka and S.C.S., 51. All those, of course, require a certain amount of manning. The fixed service communications at Prestwick are point to point. W/T channels, 7. That is for communication on the ground from point to point where teleprinter or land-lines are not available. I took a note of those before coming here. I thought it would interest you to know the points covered. They are Bermuda, Dorval; Dorval, very largely, for meteorological reasons. Uganda, Reykjavik, 2 at the Azores, Copenhagen, Amsterdam, Oslo, and one or two others I did not note down. Two or three places are sometimes covered on the same channel. In addition to that, there are 26 teleprinter circuits. I have not brought you a list of those; I thought it would be too comprehensive; but that shows you the sort of communications network that you have to have to-day at a modern airport to cover purely operational needs. Those are not administrative needs; at off times some of these circuits will be carrying administrative messages, but they are all working; they work throughout the 24 hours and quite intensely.

Sir Peter Macdonald.

1435. But that, I gather, would not be required at all airports? Prestwick is serving the Atlantic Route for practically the whole of this country on some services?—On some services. As Mr. Wilson said, at some of the airports, the major airports, very heavy responsibilities are reflected in man-power, and at others, very light ones.

1436. But many of these services which are being carried out at Prestwick would serve other inland aerodromes without duplicating the service, would they not?—Definitely, yes. (Sir Henry Self.) That was a point I hoped Sir Conrad would bring out, that, in fact, where you designate such an advanced airport like Prestwick or the London airport for international use, then

you have a large proportion of personnel engaged in long-range operations and not local, so there is no index to the local activities by reference to the size of the staff.

Chairman.

1437. I think it is clear to the Sub-Committee that a substantial proportion of the establishment at any airfield must be technical; that the responsibility for that staff will come up through the chain of responsibility to Sir Conrad; but the chain of responsibility at airfield level is the Superintendent; he is responsible for technical as well as other staff?—(Sir Conrad Collier.) When Mr. Wilson has finished explaining his duties and channels of responsibility to the Sub-Committee, might I have an opportunity to explain them from my side, too?

1438. I think it would be helpful if you did it now, Sir Conrad, because we have got to the airfield where both services, technical and other services, are in operation.—Possibly it would be best if I started off by explaining that today flying operations are largely organised from the ground; that is the vital difference, as compared with flying before the war. During the war the regularity, range and safety of flying have been increased enormously by the introduction of new methods, and the most striking difference is the fact that we achieve our results in the air by providing services from the ground; that is all part of the operational system; it is not just something that you throw in extra; it is something without which aircraft cannot fly, and they have to stop on the ground; they can only fly when the weather is suitable, and even then they crash because they can never count on the weather. Firstly, there is that point.

The other point that strikes all of us who have come over from the Service to Civil Aviation is the fact that Civil Aviation is only now beginning to take over all these technical policy staffs, problems and responsibilities, and all these technical organisations which the Royal Air Force and military aviation have been carrying on their backs during the last years of the war. Transport Command was created to provide transport organisation, a military transport organisation throughout the world; it provided, in fact, for either civil or service, the requirements were quite the same. At the Air Ministry, which used to include the Director-General of Civil Aviation, many of these problems were thought out and solved in a side of the staff of the Air Ministry not corresponding to civil aviation but to military and transport. Now, with the creation of a Ministry of Civil Aviation and its rapid growth, we are trying as hard as we can to take over all those responsibilities and cover them in a way in which they have never been covered

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before by Civil Aviation, because, as I explained, they did not exist before the war; so all these area control problems, briefing problems and signal problems are very largely new to a separate Ministry of Civil Aviation as compared with the organisation during the war, or before the war. When talking about the decentralisation into four geographical regions of the technical services, it is important that the Sub-Committee should know that with two of the technical services, air traffic control and signals, one found it necessary to decentralise purely as technical services before any thought of Divisional Controllers came in. They were choosing their own districts and the air traffic control was not alongside the Headquarters of the Telecommunications Controllers. In the same way, when you got down to aerodromes you found that the signal staff and the traffic control staff probably hardly had any communications together at all. In many aircraft accidents one of the first problems that arises is probably a dispute between the telecommunication services and the air traffic control service. The air traffic control relies so essentially on signals that if something went wrong the matter is often in dispute. As I see it, in the past, any such dispute could only have been solved in the first place by myself at Ministry level, which is rather over-loading someone who should have been thinking of policy matters, so an Aerodrome Commandant and a Divisional Controller over him can take off all that local solution of disputes but, far better, can blend the whole organisation into one, as it is; it is a team; each section relying upon the other, and from a Ministry hundreds of miles away, worrying about policy matters, it is difficult to get that team work. Equally, if one of Mr. Wilson's commercial staff, driving a vehicle, had a habit of parking his vehicle in the way of taxi-ing aircraft, the dispute might have had to come to Mr. Wilson and myself at Ministry level instead of the Aerodrome Commandant being there on the spot to prevent the trouble ever arising and to prevent wastage, which occurs only too frequently in matters of that sort. So the Aerodrome Commandant organises all the services together, including the commercial services, as I see it, as being part of the team, their activities often impinging on the technical services or *vice versa*, and he commands and co-ordinates the team. But the specialists have got their own specialist channels for purely specialist matters, such as technical procedure, supply of spare technical parts for certain equipment, repair of technical equipment, matters which are far best discussed direct by technical specialists at each level, so that you can have the technical channel going direct from a technical officer at an aerodrome (Specialist Officer) to his specialist opposite number at Divisional Headquarters, and thence direct to the

Director concerned in the Ministry; but any matter that requires co-ordination and command on the spot would not be solved in that way, but the channel would be: Aerodrome Commandant, after hearing all the views concerned, to the Divisional Controller, and upwards to the Ministry.

Sir Peter Macdonald.

1439. I gather that you are basing your organisation on very much the same set-up as the Royal Air Force; they call them Groups and Commands, and you call them Regional and Divisional Organisations. The functions of the Aerodrome Superintendent are similar to those of a Station Commander in the Royal Air Force, responsible for discipline, for co-ordinating all the services on the aerodrome, and being responsible to Divisional Headquarters and, in turn, they should be responsible to Air Ministry Headquarters?—I think, Sir, that the Ministry of Civil Aviation has organised its aerodromes and territorial divisions in the same manner for practical and technical purposes as has been evolved in the Royal Air Force for the same services, to obtain as good technical services and good sound organisation; but, of course, there are commercial channels relating to passengers and freight as opposed to armament channels, and things like that; but I think it is the practical way of decentralisation and of providing a degree of specialist control, but not a specialist dictatorship.

Chairman.

1440. Will you find, from a technical point of view, the four proposed geographical divisions adequate?—The four proposed geographical divisions are related to air safety regions, to air traffic control, and as long as that pattern does not change radically we hope that they will be adequate. I see no reason why it should not be adequate.

1441. I suppose, on your side, you have, in fact, got a divisional organisation at present?—No. Until the Divisional Controllers come into being with their Headquarters, and above all with their land lines upwards and downwards, and with their staffs, we are still organising and operating direct; of course, that throws a very heavy strain on ministerial staffs, who should be giving much more time to policy.

1442. You would be very anxious that these divisions should be instituted as soon as possible?—Very much so, because we have an enormous field of work ahead in policy which is being upset by local practical details which we could decentralise.

1443. Perhaps Sir Henry could help us? When do you anticipate, Sir Henry, the four divisions being in full operation?—(Sir Henry Self.) I am glad you have

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asked me that question, Sir, and not Sir Conrad, because he feels strongly on the subject. I share his feelings, but I have to tell him that the speed of activities is tempered by the Government machine in terms of recruitment through the open door, which means advertising, and it takes six weeks to get the advertisement accepted and published at the present time, the sifting of thousands of applications, the preparation of a short list, the assembly of a Board, and detailed interviews with all the applicants before a recommendation can be made. I say that Sir Conrad would speak feelingly on the subject because that has been his major difficulty for the past 12 months; it has held up staff recruitment all along the line. At the moment we are seeking the appointment of two new Divisional Controllers through this open door, and until they are available the divisions cannot come into being although the recruitment of the auxiliary staff is also being organised through the same means, but it is a bottleneck of recruitment of staff.

1444. Allowing for present difficulties, when do you anticipate that they will be in operation?—I think my two colleagues would probably agree that, inside three or four months, they ought to have them in being. (Mr. Wilson): I should say by the end of the year. There is the difficulty of getting suitable premises, of course, and the difficulty of trying to get two or three into being simultaneously. I think they will probably have to follow at short intervals.

Mr. Albert Edward Davies.

1445. Where, in fact, will the divisions be actually placed geographically? It says Manchester or Liverpool, I notice, in the Memorandum.—Manchester or Liverpool. The choice is still open; that depends almost entirely on where we can get premises. The West Country one will be at Bristol, and we have a hope of premises there. The one dealing with the London Area and the South-East of England will be in London; not in Central London, but a bit West; we have a hope of premises there.

1446. As Sir Henry has referred to the method of recruitment, I gather from what he says, and the evidence we have heard, that a lot of new staff will be required to man the divisions. Could he tell us something about the method of recruitment? Is it that the jobs are advertised and there is an Appointments Board, or is there some written examination?—(Sir Henry Self): The procedure is to issue advertisements inviting applications from all who feel they have the qualifications. Those applications are then screened to sort out all who have a *prima facie* case for consideration; those are then submitted to a Selection Board with which the Civil Service Commission

is associated; the Board interviews all the people they have on their limited list for interview after they have reviewed the list of applicants who have been screened; they then make recommendations of the appointees and they are duly brought into the service.

Chairman.

1447. The majority of the staff, I gather, will be technical staff. Are they not available in the Air Ministry?—Well, Sir, it is presumptuous to recall to you the criticisms there have been in the House on the question of not pursuing the widest possible field of selection for these appointments. That is the considered policy for recruitment of Government personnel. Sometimes one is tempted to wish we could make a short cut, but in the long run one must believe that it will operate for the good that they have gone through the full procedure.

Mr. Albert Edward Davies.

1448. So far, we have been dealing primarily with the divisions in this country, but some consideration has got to be given to overseas ground facilities and bases. What kind of organisation is envisaged, as far as that goes?—We have no responsibility for the direct manning of these overseas bases. The whole principle of Civil Aviation is that each of the 52 Member States of the International Civil Aviation Organisation is subscribing to the liability so far as may be practicable for them to provide airports and navigational aids and other necessary services for the operation of air transport services. Insofar as they represent to the International Organisation that they cannot provide it fully because of financial difficulties, it is for the Organisation to see how the other Member States can collaborate in financing the necessary steps; but the facilities provided are operated and maintained by the countries in whose territory they lie. We, therefore, have no responsibility for manning any of these organisations, except as we are doing at the moment in the case of the Azores, I believe, and also in Egypt we have loaned some staff in order to help the Government concerned and get their facilities in full operation. We then come to the Colonies and there, as I have explained in earlier sessions, the practice is for us to advise and help the Governments concerned, but the appointments are theirs; they are under their control, and it is hoped to develop this Colonial Civil Aviation technical service which will be administered by the Colonial Office with us advising, which will provide a regular means of interchange, in getting efficient staff; but the whole problem, at the moment, is aggravated by the fact that the Royal Air Force had developed very widespread systems of navigational aids and controls manned by the

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Royal Air Force for war operations. They have been progressively shutting those down, withdrawing personnel further, not because they could help it, but because they had to retrench on demobilisation. Local governments have been obliged to build up their own personnel, and that has often led to a good deal of difficulty; but, broadly speaking, we are not responsible for manning overseas personnel.

1449. So that the countries concerned make their own appointments, as you have said, in regard to the provision of facilities; there is no international jurisdiction over them?—No.

1450. You contribute what you can, and balance the thing out as best you can, and that is all subject to discussion?—Yes.

1451. You did mention two stations, but you did not refer to Montreal where I thought there was some staff seconded from this country to the "Constellations"?—That is a different matter; that is the provision of a base, a servicing base, to enable the B.O.A.C. to service their "Constellation" aircraft because we cannot provide a servicing base in this country for them at the moment; so they have obtained these premises at Dorval, outside Montreal, and are flying their aircraft there to service them.

1452. And have the other Corporations similar arrangements where there is a gap of that sort?—B.E.A.C. and B.S.A.A.C. are able to service their aircraft in this country entirely.

Mr. Howard.] Will it be convenient to turn now to the Estimates for Headquarters staff at this point, Mr. Chairman?

Chairman.] Yes, certainly.

Mr. Howard.

1453. I would like to ask two questions, of Sir Henry. The first is this: I can see no provision in the Estimates for a Controller of aerodromes, although one is mentioned in the chart supplied to us. Is Mr. Wilson responsible, therefore, direct to Sir Henry through the Deputy Secretary, or is there, in fact, a Controller of Aerodromes?—The Estimates, as I mentioned earlier, were prepared in December. The appointment of a Controller of Aerodromes was only sanctioned recently, and the appointment has not been made yet. Mr. Wilson, as you will see from the chart, will be working under the Controller of Aerodromes when he is appointed. Meanwhile, he is continuing to report direct to me, and not through the Deputy Secretary.

1454. Thank you. The second matter is as regards the Sub-Divisional Organisation at Headquarters. We have heard the terms "Divisions" and "Branches" used. Is there any difference between them or are the two words synonymous?—There is in

the Civil Service organisation an appreciable difference between a "Division" and a "Branch." A "Division" connotes Assistant Secretary or Director rank. A "Branch" is a sub-section of a "Division." A Department comprises so many "Divisions", and a "Division" comprises so many "Branches", and "Branches" comprise so many "Sections", if it gets down that far.

1455. Having got that information, I understand that Mr. Wilson is one of the three Under-Secretaries for whom provision is made in the Estimates?—(Mr. Wilson.) Yes.

1456. He has under him 6 Divisions in all. What are the points in the hierarchy or what ranks are the heads of those Divisions?—Assistant Secretaries or Directors. There are four Assistant Secretaries and two Directors. With your permission, I would like to explain what is happening at the moment. I mentioned at a previous sitting that the Aerodromes Department was grievously over-loaded, and that is the reason for the appointment of a Controller of Aerodromes, in order to give relief to Mr. Wilson, who will concentrate on the administrative work, and some of the executive work will be re-grouped direct under the Controller; but before we can do that, we have to re-shape the establishment for the whole Department, and we are now working out proposals for an increase in the number of Divisions, which will probably mean two further Divisions, for which we shall be seeking Treasury sanction, because of the very heavy over-load on that Department in connection with the aerodrome programme which we assume will be approved in the immediate future.

1457. So that each of the Divisions shown on the chart will have an Assistant Secretary or a Director?—Yes.

1458. Could we take the Division responsible for acquisition?—Would that come under an Assistant Secretary?—(Mr. Wilson.) Yes, it does.

1459. Could Mr. Wilson tell us what staff that particular Division would have? Which one is it on the Chart, first?—It is Division (A) on the chart. (Sir Henry Self.) May I say that we have just been able to get out a little brochure entitled "Distribution of Duties" for the Ministry. If I supplied a number of copies to the Sub-Committee, it would enable you to see the detailed split of the Branches and the distribution of duties.

Chairman.

1460. Yes; I think that would be helpful. I think we have also asked for an expanded chart?—That is being prepared.

1461. That will assist us to see it more clearly?—I do not know whether, before Mr. Wilson gives you any further detail,

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you would just take the broad split of numbers? It would help you, perhaps, to see the broad split throughout the Ministry. Taking the total of roughly 1,400 odd, you will find that of that total, something just over 420 is purely administrative in the whole Ministry. The Aerodromes Department is 400; the Technical Department is 320; Typing, Registry, Messengers and Cleaning account for the remainder, 280, roughly; so you have a split into four main categories there, which are roughly equal. Then you come to the Aerodromes Department, and you see that Aerodromes "A" Division, the first one, has a staff of 25; the second one, a staff of 39, the third, 63, the fourth, 21. The Director of Finance has a staff of 50. I am doing this rather deliberately to bring out the fact that the Director of Accounts and Supply has a staff of 196; half of the whole organisation of the Department, which indicates the extent to which the details of accounts and stores provisioning is really absorbing the energies of the majority of the staff there.

Mr. Howard.

1462. If, taking just one of those sub-compartments, I might return to the Division dealing with acquisition, that is an Under-Secretary, that is only 25?—25.

1463. What sort of rank would they be, and what sort of cost would that Sub-Department be by itself?—(Mr. Wilson.) The whole of that Assistant Secretary charge is not dealing with acquisition. There is, in fact, one Branch dealing with overall planning in that Division, put there for convenience of organisation, and that absorbs about a dozen of the people in the Branch.

1464. If I may follow that, presumably, then that Assistant Secretary has some one under him who is specifically charged with the responsibility for acquisition. Who would that be?—Under him, for acquisition, there are on paper three Branches; in fact, there are only two, each headed by a Principal, and each of those Principals has an Assistant Principal, and each of them has two Higher Executive Officers or Staff Officers, as they are called, and there is a Higher Clerical Officer and one or two Clerks.

1465. I understood that the actual work of the Airfield acquisition is carried out by the Air Ministry as agent for the Ministry of Civil Aviation, from a previous answer of Mr. Wilson's. Is that so?—That is so, Sir.

1466. Could you explain exactly what work these Principals and Assistant Principals and Higher Clerical Officers have to do then if the actual work of acquisition is carried out by the Air Ministry?—These people are first concerned, of course, with determining the land which has to be acquired. In the case of any particular

aerodrome, it is necessary to decide the boundaries, which means, of course, consultation with other parts of the organisation in order to settle exactly where the land boundaries shall be, to allow for the safe operation of the aerodrome, both as it is and as it may have to be in the future; so that they are concerned with collecting the information as to the boundaries. They are also concerned with clearing with other Departments, more particularly, of course, with the Ministry of Town and Country Planning, the difficulties that may arise in connection with the acquisition of particular pieces of land. That problem arises most acutely at the moment in connection with getting sites off aerodromes for radio apparatus of various sorts, marker beacons, and things of that sort. It is essential when the site has been found to make sure that it is not ear-marked for some other purpose, to make sure what objections there are from other interests to its use, agricultural objections, objections on planning grounds, objections on the ground of interference with projected road schemes, and things of that sort. All that work involves correspondence and discussion with other Government Departments. There is a good deal of similar discussion in connection with roads question, closures of roads running either across aerodromes or near the periphery of aerodromes. All that work of administrative clearance of these cases is done by this Branch before the specific proposal can be passed to the Air Ministry Lands Branch with the instructions: "Go and buy such and such land".

1467. Then the Air Ministry have no individuals who would be carrying out that work? The reason I ask that is because, as an individual, if I were purchasing, I would employ a Surveyor and expect him to do that work, and, if you employ the Air Ministry as your agent, why do they not, in fact, carry out that work?—(Sir Henry Self.) May I suggest that there is serious confusion of thought here? Mr. Wilson has been defining the work which is done by the principal. You are defining, I submit, the work that is done by the agent. We are quite anxious to use the Air Ministry as our agents to the utmost extent, that their organisation can work into one effort; but there is the function of the principal to decide how he is going to run his business, what he needs to run his business, how he is going to carry it out, and the details of his activities, and then say to his agent: "This is what I want to do. Now, will you, please, carry out the detailed survey? Get the land for me. Put up the buildings in accordance with the plan which I can approve, and then I will get going with my business." We are doing the principal's work, not the agent's work,



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1468. I accept that completely, and if you have one Principal to decide those questions, he still requires an Assistant Principal, a Higher Clerical Officer and an Executive Officer to assist him in making those decisions, does he?—If the extent to which other national interests come into the picture is any indication, I think the case is overwhelmingly demonstrated. You have to consult, as Mr. Wilson has pointed out, with the Ministry of Town and Country Planning, the Ministry of Health, the Ministry of Transport, the Ministry of Labour and the Ministry of Works; they nearly all come into these individual problems. You have to get all your local difficulties resolved with the particular people on the spot. You have to determine to what extent you are going to be obliged to re-house the local population before you can start any project.

Viscountess Davidson.

1469. If I may say so, surely this work was being done on just as big a scale during the war. The Air Ministry was having to deal with all those problems. I know it to my cost in the case of the aerodromes I have dealt with. Where are those people who were doing it during the war? Have they not been taken into your Department at all? Are they still in the Air Ministry?—If I may state my qualifications, I was Deputy Under-Secretary of State before the war and I had 21 years in the Air Ministry, so I speak with some back knowledge on the matter. Again, with respect, you are making the same confusion between principal and agent. The Lands Branch of the Air Ministry does the agent's work. It is true it carries out the detailed survey, but all the preparatory work leading up to that was done by the Air Member for Supply and Organisation. Work in the Finance Branch cleared all the detailed problems. We got Air Council approval for the plans; then they went to the Lands Branch for execution, for the Director-General of Works to put up the buildings. We use the Director-General of Works and the Lands Branch exactly as we would if we were in the Air Ministry. With regard to the point about what has happened to the people who were doing the principal's work in the Air Ministry, I suppose they are in the same position as everybody else; that they are re-shaping their organisation and their personnel to meet the post-war situation, and those people are being re-adjusted within their new organisation. Still, we are doing the principal's work that they did there. I can only say that I have tried very hard indeed to get staff from the Air Ministry, but they have not been able to spare any, with their many preoccupations and readjustments they have had to make with their own limited staff.

Chairman.

1470. I wonder if I could just put a few questions to round off this afternoon. In

the first place, does our ground organisation compare favourably with ground organisations in other countries?—I should like Sir Conrad to give his own independent opinion. My own judgment is that the performance of our international obligations is in every respect as good as that of any other country; indeed, I should think we might claim to stand out quite well in the comparative picture. So far as the internal services are concerned, I do not think we could make a like claim, compared, for example, with the intensity of the United States Domestic Air Line operation. (Sir Conrad Collier.) I think the Americans with their longer experience have brought their system to a high stage of efficiency and it may be some time before our own organisation achieves a similar efficiency. But, as regards our inheritance of war-time development of radio and radar aids and training of ground staff, I think we can look ahead with confidence provided we can maintain a high standard of training and organisation.

1471. On the staffing side, are there any current difficulties or are the requisite staff available?—I should say that the staff that we inherited from the past has the disadvantage of being very low paid, and therefore selected on the basis of low pay. Therefore, we have not, possibly, got the quality that we would otherwise have had, and the career system gave it too narrow a career, prevented that degree of flexibility in employment as between aerodrome and Ministry, or somewhere else, which broadens a man and brings him on. That is a state of affairs which somehow, in my opinion, we will have to avoid in the future if we are going to succeed. At the moment provided we can pay our new staff adequately, and difficulties of pay and difficulties, above all, of establishment, of giving a permanent career, or semi-permanent career, are not yet solved, once we have solved those difficulties, we have to prevent a state of affairs arising whereby we create a race of ministerial staff that never get out anywhere else, and however good they are now (and some first-class officers are coming in) they will be stale and useless, in my opinion, eight or nine years hence unless we have a scheme of flexibility with the Corporations and with our own aerodromes, with our own aerodrome staff and Divisional Headquarters staff that can be arranged by the parity of pay as between the various ranks, to make, for instance, the Divisional Operational Staff Officers under the Divisional Controller rank with and paid as a Deputy Director, which will ensure that your Deputy Director does not stop too long in the Ministry and that your man who comes from outside comes in with fresh knowledge and some idea of the practical job in the field. That we can overcome, but, in my opinion, we still lack contact

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with the flying operator. As I have said, the man on the ground is doing at least half the operation to-day, but he must be brought into contact with the flying side as well. Unless we can build up some system which will enable frequent exchange of staffs at all levels on the flying side, we shall, I think, suffer in the long run. We are getting over that in detail. I have now got a Mr. Hunt, of B.O.A.C. loaned as a Deputy Director of Operations. Even one appointment like that gives the team spirit, quite apart from giving him personal knowledge, I should say, that is essential to go on; so I should say it is a question of pay, a feeling of permanence in career, a carefully thought-out career system which will give people varied knowledge throughout the whole three spheres of activity in Civil Aviation, the aerodrome, the operating base, the aircraft and the Ministry. (Sir Henry Self.) I rather hoped that Sir Conrad would bring that out because I did not want you to suppose that our staff difficulties are by any means resolved; they are not; they are very acute, and it is only fair to Sir Conrad for me to say, quite definitely, that he has consistently and strongly represented the need for meeting these staff difficulties over the past 12 months. We think we have got the recruitment immediately on a basis adequate for the present, and we shall recruit in time for future needs. That still leaves us with these very difficult problems of providing a career, ensuring interchange and possible adjustment of pay scales to meet the case that is being advanced in these respects.

1472. One last question, and that is the grade of the Airport Superintendent. What sort of qualifications are required for that post?—(Mr. Wilson.) The pay of the Airport Superintendent will vary, of course, in grades according to the size of the airport, but the Estimates themselves show some figures. They show, for instance, under the heading of "Out-Stations", the Airport Superintendent London scale as £1,600, and going downwards to £1,500, then to £1,350,

and so on, down the scale. The qualifications required, of course, first of all, are operational and technical qualifications in the sense of a good working knowledge of modern radio aids to navigation, a good knowledge of telecommunication procedure, and so on—all that modern operational knowledge that a person who has been doing practical flying recently would have, together with administrative ability to enable a man to deal with the business and commercial side of his airport.

1473. Have there been any difficulties in getting Superintendents for the airfields?—So far, we have only appointed three Commandants: At London Airport, Northolt and Prestwick. We have recently had a Selection Board at which a number of candidates were interviewed from within the Ministry. Some of them were Air Traffic Control Officers; some of them were Aerodrome Managers who had come in over the last year or two, and we found that from that field we got a fairly good proportion of people who would be qualified for Superintendent jobs, and those appointments will be made in the course of a few weeks now. To the extent that we cannot meet our needs from that source, of course, we shall be recruiting by public advertisement.

Mr. Howard.

1474. Will they all have had actual experience in the air other than as passengers?—That will be the general rule, that they should have. There might be an occasional exception but, generally speaking, that would be so.

Chairman.] Thank you very much indeed. I apologise, on behalf of the Subcommittee, for fluctuating between the airfields and Headquarters, and also for the confusion about "divisions" but, in spite of those difficulties, I think we have made very good progress this afternoon and we are very much obliged to you for the information you have given us.

*The Witnesses withdrew.*

*Adjourned till Thursday, 5th June, at 10.30 a.m.*

12 June, 1947.] Air Marshal Sir JOHN H. D'ALBIAC, K.B.E., C.B., D.S.O., [Continued.  
Mr. R. C. PUGH, Air Vice Marshal Sir CONRAD COLLIER, K.C.B., C.B.E.,  
Mr. A. H. WILSON, C.B.E., and Mr. J. A. DAWSON, C.B.E., B.Sc.

THURSDAY, 12TH JUNE, 1947.

Members present:

Mr. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. Corlett.  
Mr. Albert Edward Davies.

Colonel James Hutchison.  
Sir Peter Macdonald.  
Major Niall Macpherson.

#### CIVIL AVIATION.

Air Marshal Sir JOHN H. D'ALBIAC, K.B.E., C.B., D.S.O., Commandant of London Airport; Mr. R. C. PUGH, Manager of London Airport; Air Vice Marshal Sir CONRAD COLLIER, K.C.B., C.B.E., Controller of Technical Services, Ministry of Civil Aviation; Mr. A. H. WILSON, C.B.E., Under Secretary (Aerodrome Administration); and Mr. J. A. DAWSON, C.B.E., B.Sc., Director of Works (Civil Aviation), Air Ministry, called in and examined.

*Chairman.*

1475. Gentlemen, before we begin this afternoon, I think the Sub-Committee would like me to record their appreciation of the courtesy and the assistance you gave us when we visited the London Airport last week. (Hear, hear.)

Sir John, we understand that you are the Commandant of the London Airport?—Yes.

1476. I wonder if you could tell the Sub-Committee, in the first place, when you were appointed?—I left the R.A.F. at the end of 1946 and joined the Ministry on the 20th January, 1947. I spent the first month or six weeks going round on a tour arranged by the Ministry, to introduce myself to the job. I went to Prestwick and Malvern, where wireless experimental work is carried out, and to Farnborough. I also spent a certain amount of time at the Ministry itself, arriving eventually at Heath Row about the end of February.

1477. Your duties are defined under Section 38 (2) of the Civil Aviation Act, but I wonder if you could tell us rather more graphically what they comprise?—Yes. I regard myself, at Heath Row, as the representative of the Ministry of Civil Aviation, and in the capacity, really, of the proprietor of the airport. The operating companies, and so on, are really comparable to tenants. As the proprietor, I have under my jurisdiction the following technical Heads: The Officer in charge of Air Traffic Control, the Briefing Officer, the Meteorological Officer, and the Head Telecommunications Officer. Each of those owe an allegiance to me as the Aerodrome Commandant, and also to their own respective departments at the Ministry; my position at Heath Row is really, I think, a sort of co-ordinator of all their efforts, to make sure that the machine runs smoothly and to make certain that the operating Companies get the best service possible to enable them to carry out their job safely and efficiently.

The operating Companies, as I say, are comparable to tenants, and as you are aware, they pay landing fees and rents, and in return they are given certain facilities which we, on the Ministry side, provide them, for instance, the meteorological service, the telecommunications, the air traffic control, and the briefing. In addition to those four technical Heads, there is the Airport Manager, who has occasionally been referred to as the "business Manager"; he really deals with all the "chores" of the airport. A very large proportion of my time is concerned on the domestic side, trying to make people happy and comfortable, largely due to the fact that we are operating under conditions which are very provisional and temporary, and it is rather living from hand to mouth until we enjoy the permanent buildings and a permanent airport.

1478. Mr. Pugh is the Manager of the airport?—Yes.

1479. When were you appointed, Mr. Pugh?—(Mr. Pugh.) I came to Heath Row on the 31st May, 1946. I came from Hurn with the operating Companies that did operate in this country, and Hurn, in those days, was the land plane terminal for the United Kingdom. Until Sir John was appointed, I had the job of running the airport, but one thing I did not have, which Sir John has, is the control over the air traffic control service, and the control of telecommunications and meteorological service.

1480. Are there any difficulties arising from this dual control, to which you have referred, Sir John. The Meteorological Officer, for instance, has a dual responsibility; he is responsible to you as the Commandant and also responsible through his own chain of control?—(Sir John d'Albiac.) In practice, none. It is a system which, in the service, one became accustomed to because there, particularly as regards the meteorological service, a similar sort of organisation exists whereby the Meteorological Officers owe a dual allegiance; in

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fact, I think, if I may say so, the system is rather a good one, because naturally, from my point of view, I do not want to be too much wrapped up in the technical detail of the work. My job is to ensure that what they do produce is efficient, and if one were responsible entirely for them, one would have to be very technically informed about everything they do; but as it is at present, any question which concerns the policy of their particular activities, is referred to me, and I am in on that very much; but as regards the detail of the work, they deal very largely on the other channel. Provided that I am kept fully informed of changes in policy and any activities that affect the general running of the whole airport, then I am quite satisfied. In practice, the system works extremely well.

1481. In running the airport, do you feel that you have sufficient autonomy, or have you to refer too many questions to a division?—We have not got a division yet, so I cannot answer that.

1482. Have you a sufficient measure of autonomy, for instance, in financial questions?—No. Perhaps it is my training, but I feel that I could do my job much better if I had more autonomy. Things happen so rapidly nowadays, and the ordinary governmental machine is so slow, that if one had more autonomy, one could give greater efficiency, but I think this is appreciated by the Ministry and that, in due course, one will have it.

*Major Niall Macpherson.*

1483. Do you think that would work in both ways, that autonomy would give you more efficiency and also more economy? Is there a danger, inasmuch as you have a technical service whose interest is to be as efficient as possible, and then, on the other hand, whose interest it is to see that it is as efficient as possible? You have two elements pushing towards the greatest efficiency without any element at all on the business side working for the greatest economy?—I think you can reconcile the two things. If one is extravagant, and so on, then, to my mind, one ought not to hold the job. I would like to put it this way, provided that your Commandants are selected properly anything they set out to do one should assume that it is for efficiency and for the good of the show. Provided that your Commandants are selected properly.

*Colonel James Hutchison.*

1484. May I put a question? I think, in the Army, we had a somewhat similar experience, and I would just like to see whether we are thinking along parallel lines. There a Commanding Officer had a certain measure of financial control, a very limited one, and as you climbed up the scale you got slightly more; it was really Treasury

control at the top. Now that made for two things, or at any rate the Treasury would contend that it made for economy, but it is quite certain that it did not always make for efficiency because one had to take such a very long time before one got authority to do anything. Is it the same sort of clamping down on economy that you are speaking about? Is it a financial control?—Yes. I think you have always got to have a limit because, obviously, there are things which costing beyond a certain amount of money, you could not decentralise; things which want a very great deal of consideration, which want looking at not only from your own local point of view, but from the broad point of view as regards other airports, and so on.

*Chairman.*

1485. Is it fair to say that, at the moment, the limit is so small that it handicaps you in your day-to-day administration?—Personally, I have not yet got a limit; it is under consideration; I have no financial powers; but the sum which they are suggesting, I think, is reasonable.

*Mr. Corlett.*

1486. You said there was no division, Sir John. With whom do you deal? Who does decide these things?—The various Branches at the Ministry of Civil Aviation.

1487. Not the Treasury?—No; I do not contact them at all.

1488. You are not clamped in any way by the Treasury?—No, but the Departments of the Ministry who decide upon these things deal with the financial side; I deal with them only on the departmental side.

*Major Niall Macpherson.*

1489. Let me get this quite clear, because I think it is frightfully important. Do I understand, Sir John, that the figure that is suggested which you have authority to spend is going to be sufficient to give you that degree of autonomy which will, in turn, allow you the full sense of responsibility for what you are doing?—I think the figure that is being discussed now, which will probably come along, will enable me to do an enormous number of things which, at present, I cannot do and which detract from efficiency. Obviously, the figure is not going to be so high that I can do everything I want, but it will alleviate my position very considerably.

1490. I think, if I may say so, you did not quite understand my previous question. What I meant was this: If you had not got sufficient autonomy that was an element adverse to economy as regards not having the autonomy of both sides; the technical side and the administrative side were both pushing two things without any financial responsibility?—Yes, I quite agree.

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*Chairman.*

1491. I think it would be helpful to the Sub-Committee if you could tell us what figures are being discussed?—The latest figure I have heard is £50 for one item; it is the last figure that I got from the Ministry.

*Mr. Corlett.*

1492. Have you been consulted on that figure, or has it been merely "thrown" at you?—No, I have not been consulted, but that was the figure that I heard was being discussed.

*Chairman.*

1493. How recent was that, Sir John?—Three weeks ago.

1494. You referred to the division not yet being created. When do you anticipate the division being set up?—I believe that they are held up from an accommodation point of view, chiefly. I have heard talk that they may function within the next two months. (Mr. Wilson.) May I interpose there, Mr. Chairman? The position is, as Sir John has said, that we are dependent, to some extent, on accommodation. There is a fair hope now that we shall get that accommodation within a month or two, and then we shall be in a position to build up the Divisional Controller's staff. The Divisional Controller has, in fact, been appointed, and he is making a tour of various places to educate himself in the civil aerodromes, so that as soon as accommodation and staff are found, he can begin to function as a division.

*Chairman.*

1495. Thank you very much. Can you say, Sir John, whether it causes you any administrative difficulties in having to contact Headquarters the whole time?—(Sir John d'Albiac.) No, I do not think it causes any difficulties, actually. Of course, the Ministry have got their difficulties the same as we have. There is quite an element of delay in getting things done, but I think that is rather to be expected.

1496. You expect that delay to be obviated when the division comes?—Yes, because then they can be constantly worrying about these things.

*Mr. Corlett.*

1497. I am not too sure that it will necessarily do away with delay. Is there going to be any doubt about the respective functions of yourself and the Divisional Officer?—I am pre-supposing, without any direction on this, that all our problems, our recommendations and suchlike, will be passed on to the division, and it will be up to them either to decide on them if their powers are sufficient, or else to pursue them at Ministry level. Of course, the existence of a division will relieve the Ministry of a large number of detailed things which,

they are occupied with at present. That is how I look at it, purely from my end of the stick.

*Mr. Barton.*

1498. To whom are you responsible at the moment, Sir John? Are you responsible to the Aerodrome Administration Division, to Mr. Wilson?—Yes. We come more under Mr. Wilson than anybody.

1499. And your contacts with the division are mainly on what points—personnel?—We have got no division yet, and so we have no contacts with them.

1500. I am talking about the Aerodrome Department, at the Ministry of Civil Aviation?—Yes; I suppose that 90 per cent. of our queries and matters we deal with now are concerning accommodation.

1501. Do you act as Liaison Officer between the service that is given to the operators and the Aerodrome Department at the Ministry?—In effect, yes, as far as Heath Row is concerned.

1502. To what extent are you consulted by the technical Heads of the four sections regarding personnel, preparation and purposes?—Any increase of establishment, any difficulties about the accommodation of their staff, any questions of disobedience over flying regulations or contraventions of that sort, any operating difficulties, most of which I can solve on the spot, are the sort of problems which the Heads of the technical services come to me about, and any matters which require co-ordination between one technical service and another.

1503. Do you find any conflict between, shall I say, the outside control of the Technical Officers and the Aerodrome Administration Department at the Ministry?—I do not, personally.

1504. Are there no difficulties, for instance, on the meteorological side, where there is a split affiliation between the Ministry of Civil Aviation and the Air Ministry itself?—No, none at all.

*Chairman.*

1505. If we could take an example, supposing there were a difference of opinion between Briefing and the Meteorological Department about accommodation; perhaps they each thought they should have particular accommodation: Who would decide that question?—I would decide it, in the first instance, on the spot. Then, if either of them were dissatisfied, and thought that my ruling was an unjust one, they are at perfect liberty to approach their Heads, who I presume, would fight it out on another level.

1506. I noticed you said you "presume"?—I have not yet had an example of that sort of thing, but that is the kind of channel which I think might be followed. In the first instance, they come to me and

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I settle it as fairly as I can, and then, as I say, if either of them is not satisfied, I am quite certain he would chase it up his other line; that is how I see it working, and I think probably that is the best solution.

1507. If we could turn to the establishment generally, are we correct in believing that, at present, the establishment consists of 300 industrial staff and 350 technical and other personnel?—Roughly, we have a strength of about 600.

*Sir Peter Macdonald.*

1508. Has your establishment been laid down and approved by the Ministry and the Treasury?—Yes.

*Colonel James Hutchison.*

1509. Is it 100 per cent. completed yet?—(Mr. Pugh.) Not 100 per cent., no. The technical services are still waiting for quite a few people. (Sir John d'Albiac.) The Telecommunications Establishment, of course, is greater than the strength because it is gradually building up; they are bringing in new channels and new radio aids every now and again, and naturally you build it up long after the establishment has been approved.

*Mr. A. E. Davies.*

1510. Are there any difficulties in recruiting staff for your Telecommunications Section, because it seemed to me, if I may say so, before Sir John replies, that some of the rates of pay were not very attractive?—There is a very real difficulty. I think the biggest difficulty is this question of accommodation. We have great difficulty at Heath Row in getting our staff accommodated, particularly the skilled staff. A lot of them have served during the war and are married, and in many cases they have left their wives in one part of the country, have come down to Heath Row, and taken on these jobs and are living apart from their families. For the moment, they have no prospect of getting their families down there, or of getting into a house and living a normal life. We have had quite a few cases of very excellent fellows who have come along and said: "We are frightfully keen on this job and we would like to stay, but we cannot solve this accommodation question and we are going elsewhere to get another job". It is a very real problem, and it gets worse as we expand.

1511. It is not a question of pay or salary; it is a question mainly of accommodation then?—That, I think, is the greatest difficulty. There are inequalities as regards pay, particularly on the air traffic control side, but the accommodation is the most important thing. Of course, these landlords round about, with

the limited amount of accommodation there is, charge pretty fierce prices for accommodation.

1512. Is your staff so limited as to make day-to-day work difficult, or have you sufficient to carry on efficiently?—We are skating on very thin ice, and if the situation does not improve and we expand as rapidly as we expect to expand, we might be seriously embarrassed, particularly on the telecommunications side; that is the side I am more alarmed about than any other side, because, as you know, and as you probably saw when you were down there, in the case of the teleprinter channels, if you reduce your staff these signals are going to be delayed and then you get into trouble. My Telecommunications Officer down there is very considerably concerned indeed about that.

*Major Niall Macpherson.*

1513. Have you any system of telephone priority in case your teleprinter service gets jammed up?—We have the normal operational priority. Anything to do with aircraft, has a prior right over anything else, but it is difficult to economise telecommunications; the service has got to keep pace with your growth of traffic, and if it does not then we run risks. It applies to every aspect of running civil aviation. If your telecommunications go, then you are up against it.

*Chairman.*

1514. What sort of establishment do the Corporations carry at the airport?—I would not like to say; I do not know what their figures are.

*Sir Peter Macdonald.*

1515. They have the same housing difficulty, I suppose, as you have?—It is not so acute with them because, with the Corporations, they have got more money to play with; their restrictions are not quite the same; they can go round and collect houses, and there is no argument about it. They have quite a number of hostels which they have taken up in the district. We are in rather an invidious position there, because they are rather better off in that respect.

*Chairman.*

1516. Where you have got people doing similar jobs or similar work for the Corporations, and for the Ministry, are there any agreements determining that the salaries shall be similar?—No. For instance, to take one case alone—the Police: B.O.A.C. have a force of security police operating alongside my M.C.A. Police, and they are paid a much higher rate than mine are; it is a great bone of contention, and most unfair.

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1517. Have you lost any of your men to the Corporations?—No; I do not think so, but it does not lend itself to very amicable working; there is jealousy, and quite rightly. It is a very difficult thing to laugh off, if they are doing identical jobs.

Colonel James Hutchison.

1518. I think, when we were down there, Sir Conrad Collier told me that you had the same thing arising with the teleprinter staff; that the Ministry, in fact, only recognise rates of pay for teleprinter personnel as though they were ordinary typists, whereas the Corporations and foreign services recognise them as being more highly skilled and pay them a higher rate of wages?—Yes.

1519. It does look as if there ought to be co-ordination?—Yes. The Air Traffic Control Officers, too, have a very strong grouse about this question of pay. They are doing their work most loyally, and it is a highly responsible job. It is a pity that they feel that their pay is bad compared with what they have been accustomed to, in the R.A.F., taking into consideration pensionable rights and so on; but they feel that there is a very grave difference in salaries compared to what they should have.

Mr. A. E. Davies.] May I interpolate a question here, Sir? We are most concerned (at least I am) to get the maximum of staff satisfaction. I do not think we can get very far without it. I wondered if Sir John would tell us a little more about what arrangements there are in being for staff negotiation? Does he know if there is any development amongst the staff divisions for collective representation on matters of this kind? Sir John has been good enough to give us instances of anomalies and discrepancies.

Chairman.

1520. I wonder, before you answer, Sir John, whether you could deal separately with two different questions? I know there is the National Civil Aviation Consultative Council on Conditions of Employment; that is the one question. But, apart from that, what machinery, if any, is there for consultation on questions of efficiency and such-like matters, apart from the straightforward staff negotiations?—(Mr. Wilson.) Of course, the consultations with the staff in the Civil Service are done through the Whitley Council machinery. There is a Whitley Council whose terms of reference are such that it can discuss both pay and conditions of service, and also matters of efficiency and suggestions from the staff can come up through the Whitley Council machinery. The organised labour on the airport is represented through the Industrial Whitley Council machinery and the other grades, of course, through the Non-Industrial Whitley Council machinery; so that we

have got the usual Civil Service channels of consultation with the staff on all questions. The question of differences between rates of pay, as between, on the one hand, the Ministry's employees and, on the other hand, the Corporations' employees, is a thing that cannot very readily be dealt with, except by taking away from the Corporations some of their autonomy of management. It is a very difficult problem, but it is most desirable that these Corporations running big socialised services should have an autonomy of management so that they can behave in every way as commercial enterprises; on the other hand, if you attempt to interfere with their freedom of management on small points of rates of pay and conditions of service, and so on, then they cease to have the freedom that would be available to commercial enterprises. That is a great dilemma which arises in this particular kind of set-up.

Major Niall Macpherson.

1521. Could you not equally meet that by increasing the autonomy of management of the other side, or is that, perhaps, too much to ask?—That may be, of course, but in settling the rates of pay in the Civil Service, the Civil Service has to be looked at as a whole. For instance, the rates of pay of our teleprinter operators must be co-ordinated with, perhaps, thousands of teleprinter operators in the General Post Office.

1522. Are their jobs exactly comparable?—They are very similar indeed; they may not be exactly comparable.

1523. The same responsibility?—Yes. I think one would say that there is the same responsibility because the mutilation of a commercial message going through the Post Office might be just as fatal in its effects as the mutilation of an operational message in connection with aircraft.

1524. Do they work under the same pressure?—Of course, I cannot speak for the G.P.O.; I just do not know. (Sir Conrad Collier.) Perhaps I might be allowed a word, Sir? Speaking as a past operator in Transport Command, where we were, to some extent, responsible in different parts of the world for the operation of aircraft which operated under our general arrangements, it is my experience that civil aviation cannot rely on normal civil channels; that the types of delay imposed on ordinary civil communications and priorities make them absolutely inadequate for the safety of civil aviation, and its efficiency; in effect, different standards are necessary.

Mr. Corlett.

1525. There is a difficulty in the camp itself. If we are going to have uniformity in the Civil Service, and Sir John cannot have uniformity with the Companies, he is never going to get people to come to stay. He says that these Companies can have a

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freer hand and can satisfy the people they want to employ. His people are turning things down because they cannot get the accommodation, but they have not the salary to pay for the accommodation. A man could not keep himself there and his wife, given everything else. You are being held up at every turn?—(Sir John d'Albiac.) I quite agree. It is quite true that there is this feeling where you get these Corporation employees sitting and working alongside our people; our people are envious of their conditions, and so on. I know particularly the problem of the police, and I am pretty certain that Mr. Pugh, the Airport Manager, knows of other instances.

Major Niall Macpherson.

1526. For example, do the Corporations give similar pension rights?—(Mr. Pugh.) Very good pension rights now.

1527. They do?—Yes. They have not got the Civil Service pension rights, but they have a superannuation scheme which is quite comparable. (Mr. Wilson.) It is a contributory scheme, of course.

Mr. Barton.

1528. But is there not a simpler approach to this problem? I may be entirely wrong here, but it appears to me that in certain instances there is a duplication of services. Would it not be possible, within the airport, for instance, for the Commandant of the airport to give the whole of the police service? Would not it be possible to give the whole of the telecommunications service; that is to say, that the operators can rely, presumably, on the service that could be given by the Telecommunications Department of the airport itself, and the same with the police?—(Sir John d'Albiac.) In theory, that might seem practicable, but in actual practice it is not quite so easy as that. You quote the question of the police. Actually, I have represented to the Ministry that we should take over all police work, but I believe the Corporations were allowed to have these Security Police largely on account of looking out for passengers' baggage, and for watching the security side in places abroad, where no M.C.A. establishments are set up. There, I suppose, they wanted these Security Police to safeguard the insurance aspect, and so on.

1529. Can I interpose a question there? What about the foreign operators who come into the port; do they rely on your police?—They rely on my police.

1530. To give the service that the Corporations themselves give?—Yes.

1531. That seems contradictory?—As far as Heath Row is concerned, I have represented to the Ministry that we should take over all the policing, and one of the arguments I used was this very one, on the unevenness of the pay and conditions.

1532. Cannot the same be applied to the telecommunications? Surely you can give the telecommunications service to the operators that they require? The foreign lines, presumably, have to rely on you for that service?—I think the Companies, in order to fulfil their responsibilities, and so on, will always need a certain number of telecommunications personnel. I think there are many things we do which they probably would not appreciate, if they were taken over by us; I do not know. (Mr. Wilson.) It might perhaps help to clarify the point if one mentions that, so far as passenger handling, baggage handling, and things of that sort are concerned, the foreign operators very largely use the British Corporations as their agents. The same thing applies in certain foreign countries in the reverse direction, so that the foreign operators do, to some extent, get the policing service from people there which the British Corporations may have.

Chairman.

1533. But they could get it equally well from the Ministry?—They could get it, up to a point, from the Ministry, but I think there is rather, perhaps, a domestic field in which, naturally, they want to safeguard their own property.

Mr. Barton.

1534. Who provides the policing service, for instance, for the customs' officials there?—The Ministry of Civil Aviation does that.

1535. What is the function of the operators' police, then?—I think it could best be expressed in this way, that they are employing certain people to watch their own property which they have on the airport by reason of their position as tenants. It is rather like the occupant of a flat, for instance, employing a caretaker. (Sir John d'Albiac.) A sort of house detective.

Major Niall Macpherson.] Could you compare it with the fact that at large railway stations you have railway police and ordinary police.

Mr. Barton.] That is the point; you have not.

Major Niall Macpherson.] There are railway police.

Mr. Barton.

1536. I would like to know where they are.—(Mr. Wilson.) The railways do, of course, have their own police forces.

1537. Of course they do.—But the analogy is not a complete one because, in the case of a railway company, the railway company is both the operator and the provider of the railway station. In the case of an airport you have the operator operating and using very valuable aircraft and having quite a lot of very valuable equipment on premises there, not their own, but



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are premises on which they are merely tenants and users.

Mr. Barton.] It is exactly the same on the railways. You have big firms with railway space within stations operating as private firms, and the security is given there by one police force, the railway police.

Chairman.] We may have a better parallel when a Bill at present before another place becomes an Act.

Colonel James Hutchison.

1538. I think what Sir John will have realised, what is really coursing through my mind and other people's minds, is that they feel there is some unnecessary duplication between the Corporations and the M.C.A. at the airport, and it was showing itself up in the police service; it may be showing itself up in the telecommunications service. Can you give us any other indication of where there is overlapping, whereby closer co-ordination would be an economy?—(Mr. Pugh.) Marshalling of aircraft.

Mr. Barton.

1539. Shall we take general portorage? Who deals with the internal portorage?—(Sir John d'Albiac.) We provide all the portorage.

1540. The operating Companies do not provide any portorage at all?—No. As the Airport Manager has said, there is the marshalling of aircraft. That is a curious sort of position, really, because you have got your apron where everything goes on in the way of passengers boarding aircraft and disembarking—that large concrete space in front of the passenger buildings. Aircraft are brought down on to the airport, in the first instance, and then the aircraft are directed to the apron where they have to be rather carefully marshalled, because with a limited space they have to be carefully sited in this parking area. Quite recently, we have taken over the responsibility for marshalling; we have a Marshalling Superintendent; and to start with we were very anxious to do not only the marshalling, which is the allotting of bays on this apron but also the waving in of aircraft; two men go out and wave, and the pilots come in and are turned round, and so on. At my last Companies' Managers meeting about a month ago, all the Companies with a united front attacked me and said that whilst they were quite happy for my people to do the allotting of bays, they insisted on their own engineers doing the waving in. Their grounds were that the engineers knew their pilots and signs, and so on; I countered that by saying: "But we get several aircraft in here which have not got engineers". Finally, they said: "Well, of course, unless our own engineers do our waving in, we

shall have difficulty with our insurance people". I do not know what the answer to that is. I said: "Right. I will have to represent the whole case to my Ministry and see what they decide about it". But the present divided control, at the moment, is not very satisfactory. That is just a case in point, where they are doing things which, I think, really should properly be dealt with by us.

Chairman.

1541. I think it would be convenient if we turned, because we are touching upon it, to the second line of enquiry. I wonder if I may ask three questions? First of all, as I asked before: Is there any machinery for staff consultation on efficiency questions or what is comprehensively, I believe, called "management"? Secondly, what machinery is there for consultation with the operators? Thirdly, what is the London Airport Committee?—First of all, the machinery for consultation with the staff, and so on, is this: The Airport Manager has his various foremen at a meeting once a week. I attended the last one, purely from an interest point of view. At that meeting he discusses with his foremen all points of interest; not only from his point of view, but they are at liberty to raise any points which they have themselves, suggestions to increase efficiency, or to improve conditions of work, and such like. It is a very frank and free discussion, and they get a grand opportunity of getting loads off their chests. That happens once a week.

The second question is: What is the machinery for consultation with operating Companies? I have a monthly meeting with the managers of all operating Companies, the C.R.E. representative is there and all my technical Heads, Telecommunications, Briefing, and so on. That happens once a month, and we take our coats off, metaphorically, and get down to it. I have a go at them and they have a go at me. We raise questions such as expedition of passing passengers through, questions of economy, and cutting down lights. This question of the marshalling, as I say, cropped up, and the meetings provide a grand opportunity, from my point of view and from the operating Companies' point of view, of putting our cards on the table. At these meetings I try to give the Company Managers a forecast of the various building programmes and such-like of which I have learned from the Ministry.

The third question I did not quite catch, Sir.

1542. The London Airport Committee: What is it?—I do not know. (Mr. Wilson.) I do not think there is any Committee that is called quite simply the London Airport Committee.

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1543. I saw a reference to it some days ago.—(Mr. Pugh.) Is not that the Union Committee, Mr. Chairman? I think it is the Union Committee which operates for the benefit of the Corporations; it has been set up by the Ministry. (Sir Conrad Collier.) Is it not the Ministerial Committee?—(Mr. Wilson.) There are, of course, Committees in the Ministry's Headquarters, dealing with various aspects of the London Airport. There is one called the London Airport Terminal Building Committee, for instance, which is attempting to get out a schedule of requirements for long-term building plans. There was an Advisory Layout Committee, which has now finished its work, which designed the runway pattern. There is another departmental Committee which meets very infrequently, which deals with general questions other than terminal buildings on the London Airport.

Mr. Corlett.] Are those Committees purely for the London Airport?—These particular ones are, yes.

1544. Are they full-time Committees?—No, they are not full-time Committees. The Terminal Building Committee, for instance, meets once a week for about half a day.

1545. They are doing other work, are they?—The members of the Committee are members of the Department who are doing other work.

Chairman.

1546. Does Sir John attend these meetings?—Not regularly, but he does on occasion. (Sir John d'Albiac.) There is another one which I have been attending; we started last week; that is the London Airport Fire Committee which has been designed to consider and decide fire arrangements for the ultimate layout and interim period as well.

1547. I would like to put a question to you arising from this discussion, Sir John, and also arising from the article in which it was alleged that there was a London Airport Committee. It was suggested then, and I would like your views about it, that Committees were developing so rapidly that active administrators, such as yourself, had little time to administer because of the obligations in attending so many Committees. What are your views about that allegation?—I quite agree. I have the greatest horror of Committees, but of course, with a thing like the job we are in at present, there is so much at stake, and to get everybody's views I suppose it is quicker to get them round a table than it is to write to everybody. With a project like the London Airport, which is eventually to cost goodness knows how many million pounds, you have to be certain before you do anything that you have the

right answer, or that the answer is as near right as you can possibly make it, and the only way of getting that answer is to have a number of experts round a table and see if you cannot get agreement about things. I have the greatest horror about Committees; they are the last thing that one wants. But take my own Committee at Heath Row, this operating Company one: Without that Committee meeting once a month I would not be able to keep in touch with the views of the Companies' Managers. One of the great things, really, is to get all these chaps round a table—Frenchmen, Americans and British, and so on, and let them sort things out while I am there. That Committee I think, is a most valuable one.

1548. What are the other Committees mentioned by Mr. Wilson—the London Terminal Airport Committee?—I have not been to that; I should imagine that is a very long-standing Committee. (Mr. Wilson.) Yes; that Committee has an important and a very difficult task. It is attempting to study the requirements in terms of floor space and functional relationships for the buildings which will ultimately be provided in this central area at the London Airport. To do that, of course, the Committee has had to consider a large number of involved problems; it has had to have considerable consultation with other government departments that were affected, such as the Customs department, the Health and emigration authorities; it has to bring in the operators, both the British operators and the leading foreign operators; so it has been sitting for some considerable time now and will go on sitting, I think, for some time so as to get the views of everybody interested and to assess the growth of traffic and the numbers of passengers that will be passing through the airport with a view to getting out the basic material for the design of terminal buildings.

Colonel James Hutchison.

1549. May I return to the question of duplication? I have not quite shot all my ammunition. We have heard about the Security Police, the Police Service, the Telecommunications Staff, and certain possibilities in marshalling. Is there anything in the repair side? Do you have any repair personnel at all belonging to the airport?—(Sir John d'Albiac.) No, none, except M.T. We have a small M.T. establishment.

1550. There would not be any duplication?—No.

Major Niall Macpherson.

1551. What about re-fuelling?—(Mr. Pugh.) Is that re-fuelling on the aerodrome?

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1552. Yes?—No, we do that; the Petroleum Board is under our jurisdiction.

Colonel James Hutchison.

1553. That flows through one channel, only?—Yes.

1554. Coming back, then, to the question of the Corporations paying higher rates of wages throughout. Whose business is it to settle the general run of wages? Is it the Corporations or is it the Civil Service?—(Mr. Wilson.) I think it is rather difficult to say there, because one would have to be quite sure that in making a comparison we were, in fact, comparing like with like; whether the obligations on the Corporations' staff are exactly the same as the obligations on the Civil Service staff. We have to be guided, in settling our rates of pay, by the general Treasury conditions which are laid down, which are common to given grades of labour throughout the Service, and they are related to the rates of pay outside the Civil Service.

Mr. A. E. Davies.

1555. Should not that ensure some uniformity? If people are doing comparable duties, and that is a yardstick, why do discrepancies arise?—It is a little difficult to see why there should be discrepancies because in the case of the Civil Service the rates are settled against a background of Trade Union negotiation and agreement, and similarly, of course, the Corporations' rates are negotiated rates and it is a little difficult to see why they should diverge, but the fact remains that they do tend to diverge; I do not think the divergence is great.

Colonel James Hutchison.

1556. That really means that the Corporations are paying higher rates than the agreed rates of wages in order to get the personnel they require?—Well, that may be so.

Mr. Corlett.

1557. But Sir John has said it is, and they have no difficulty in accommodating their people because they are able to go round (I think this was Sir John's word) "collecting" what they want?—(Sir John d'Albiac.) The sort of thing in which they score is this: They can go and take on a lodging and may not want to fill it straight away. If we take on a lodging we have got to fill it the same day.

1558. Then they have the advantage?—Definitely, they have.

1559. I am blurred, and I am sure we are all blurred, on this. Am I asking too much to be given a list of all the employees of the operating Companies and by yourselves so that we can make some sort of comparison and see what we are comparing? I

am absolutely blurred by it. I do not know where I am on this at all?—The only real one that I know about is, as I say, the police. You say "throughout all grades," Mr. Pugh?—(Mr. Pugh.) Yes, all grades are higher.

1560. Would it not be possible to avoid duplication entirely? Would there not be a line of demarcation?—(Sir John d'Albiac.) All the factors want taking into consideration. As Mr. Wilson says, it is no good just comparing the rates unless you compare the various factors which go with those rates.

1561. Seeing that we give a subsidy to the operating Companies, we are involved in both things?—It would create a much better feeling amongst my people, particularly, if there were a little more reconciliation between one side and the other.

1562. We want to help you because we see a difficulty?—(Mr. Wilson.) There is, of course, one other complication in this problem and that is that you do have, not only on the London Airport but on other aerodromes, foreign operators who can pay what they like, and we cannot control them, and the Corporations are in competition with those foreign operators, so you have a rather vicious set of circumstances there. I think that is a point worth bringing out, that sort of thing does exist.

Mr. Barton.

1563. To what extent are services given by foreign operators controlled by international agreement?—There are international agreements, but not on the rates of pay which the foreign operators can pay.

Major Niall Macpherson.

1564. Are all the staff of one nationality?—They tend to employ British people if they can get them, of course.

Mr. Barton.] I think it would be helpful to the Sub-Committee (I am not at all satisfied on this question of the duplication of services) if we could have a memorandum presented to the Sub-Committee which would show the services which are given by the Ministry, the services that are given by the British operating Corporations, and the services given by the foreign operators.

Colonel James Hutchison.

1565. And the services that the foreign operators occasionally provide for themselves?—Yes. (Sir Conrad Collier.) Could I speak on that side, Sir? Of course, all these operators operate all over the world and they build up systems of operations for themselves. The American system of operation is very different from our own. The American system of operation is based on people called "Despatchers," who have operational control over their own Com-

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panies' aircraft, and have even W.T. communication with their own aircraft, a system which we think very uneconomical and inefficient. It fills the ether with too many different frequencies, all of which are not fully employed. The extent and the whole of the training of the crews, the whole air staff instructions to crews, to use a service expression, is based upon this system of despatchers, and that implies a control of a certain amount of their own communications on the ground at stages where they land on their scheduled services.

I think it would be very difficult indeed to provide them with that sort of facility in England only, and it might lead to retaliation against us in other countries where we require facilities of another kind, say.

*Chairman.*

1566. If I might just interpose to make it clear, that is the service that they provide themselves for themselves?—Yes; so that that gives them, more or less, the right by international usage to have those operational terminals at their various stages which then they have to man. In the same way our own Corporations are solely responsible for their operations, for the flying operations. The Ministry of Civil Aviation is in no sense responsible for the flying operations. It provides services, but the actual training of the crews and the instruction of the crews is given through the British Corporations and other operators, and that does, I think, call for certain communications facilities for our own operators at bases. For instance, B.O.A.C. are asking to create their own operations room, so to speak, at London Airport. There is a very good reason for that, I think, in the present layout of civil aviation until such time, if ever, that the Ministry is given direct control for the operations. So it would be very difficult, as I see it, to insist on one complete staff, the Ministry of Civil Aviation providing singly all these staffs and services at an aerodrome.

*Major Niall Macpherson.*

1567. There is no reason, Sir Conrad, why even if that were all taken over in fact by the Ministry, it would immediately follow that there would be any economy of staff at all? They may all be fairly fully occupied. Are they?—I think they would be, and I think it would mean a radical re-organisation of international civil aviation, and for our own part, National Civil Aviation, if they were to seek any saving of personnel in that respect, and with that would come the functions of management so that that element would disappear—the compensating disadvantages, as some people would say.

*Mr. Corlett.*

1568. The Americans who are acting in an uneconomic way are going, apparently, to determine the standard for our own

operating Companies. We will follow them, and we shall also act in an uneconomic way?—I do not think that that is necessarily so. The operations room that I have mentioned, which B.O.A.C. are projecting, is really an operations centre for their world-wide operations, not just connected with their functions at the London Airport.

*Mr. Barton.*

1569. We could attain the desired end if there were international agreements on the operational system, could we not?—Yes; there is still the function of management, what you leave to your Corporation or operator, and what the Ministry expects as its own direct responsibility. With that division I think it would be very difficult to deprive operators of certain facilities at the airports.

*Colonel James Hutchison.]* I think it is going to be very difficult for us to arrive at a conclusion until we have had this statement. I think the idea that there should be a statement showing the services which overlap, or may overlap, is really the first step to take, and then, when one can put one's finger on the places where they overlap, we can get further evidence as to why it is not possible to avoid that overlap.

*Chairman.*

1570. I agree. Meanwhile, would it be correct to summarise it in this way, that Sir John, as Commandant, feels that he has staff difficulties because members of his staff compare themselves with the staff of the Corporations but, in turn, members of the staff of the Corporations compare themselves with members of the staff of other operators?—(Sir John d'Albiac.) I do not know whether they do, or not; I would not like to say that. (Mr. Pugh.) I think they do. I think B.O.A.C. and B.S.A.A. have a very hard row to farrow. They have to compete with American operators, and the flying game is a specialists' game. I think that is the reason. It may be possible to find ways and means of paying our various grades a little more. They may start on a basis which is covered by agreements, but they have bonuses and things which do hit it up somewhat.

*Major Niall Macpherson.*

1571. But as they are in competition outside this country as well, I suppose that is bound to have an effect upon the system in this country, even if they have to maintain a reserve in this country to send abroad?—It does have an effect on the Ministry in competition against them.

*Mr. A. E. Davies.*

1572. What I am exercised about, Sir, is this difference in status or payment between people engaged in different Corporations on similar work; it is similar work. There may be, as Sir Conrad has said, a

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technical case. I have no doubt there is a case, as he has submitted, for each of the Corporations to have their own staff to do a special job, but would it not be agreed that there are certain jobs which are going to be common in all the Corporations and which are measurable not only in the telecommunications section but in other departments, maintenance work and so on; comparable jobs. It would be desirable, would it not, to have some sort of equality? Otherwise, you are going to have the shifting of staff, or discontent between the Corporations, because they are constantly going to compare the inequalities. I have in mind, if I may say so, the four major railway companies in this country who run their own shows but who, on matters of staff, salaries and terms of employment, have an agreed basis for comparable duties. It seems to me desirable, does it not, that something of that sort should resolve itself as these things go?—(Sir Conrad Collier.) Without speaking against that principle with which I am in full agreement, as I am one of those most affected, the shortages on the telecommunications staff are the most vitally important and have led, and lead me to state, a certain amount of impossibility in maintaining my proper responsibilities in the operational sphere of telecommunications, because of the shortage of staff at the London Airport. I feel that no evidence that I have heard anywhere shows that the discrepancy with regard to pay is the main reason for our failure to recruit staff, but that the conditions which we are offering in regard to (a) accommodation, and (b) pay to our own staff are mainly responsible although some small influence would be attributed to the difference of pay. In discussing this problem as I have to do with my own directors frequently, and with other branches of the Ministry, the main factor that comes up is, as Sir John has said, firstly accommodation, and secondly the low pay M.C.A. is offering.

Mr. Corlett.

1573. I was hoping we might get a line of demarcation rather than try to solve the competition?—(Sir John d'Albiac) If I may butt in here, from the Heath Row end, I do support the view that it would be extremely difficult to have the Ministry running all common services of all descriptions for the Companies. In the end it would mean that the Corporations and Companies would really disappear, except by name. They must have their own drivers, obviously, because they must come under their own administrative and managerial arrangements. It would be quite impossible for us to provide drivers for all their vehicles; it would be top-heavy; but I do feel strongly that where we can

reconcile pay and conditions between British Corporations, British Companies and our own Ministry of Civil Aviation staff the more efficient we, and the Ministry, from the Heath Row point of view, will be.

Chairman.

1574. I wonder if we could go on to another question, that of accommodation? We have dealt with some of the aspects, but if we think of the user, is the present accommodation at Heath Row satisfactory?—(Mr. Wilson.) Might I interpose one remark, for the sake of clearing up a possible misconception on the subject we are just leaving? It seems it was suggested that there was really a difference of opinion as between one British Corporation and another in the matter of rates of pay, but there is in fact close consultation between the three Corporations in order to secure that amount of uniformity.

Chairman.

1575. You can assure the Sub-Committee that that, in fact, operates?—Yes, that does operate.

1576. I think Mr. Wilson has left no room for any doubt, if any doubt was there?—That is all I was endeavouring to do.

1577. Now, if we could turn to accommodation, is the present accommodation sufficient for the traffic at present using Heath Row?—(Sir John d'Albiac.) You refer to passenger accommodation?

1578. Yes.—No, by no means. It is a matter which causes me the gravest concern, and I know it similarly does the Ministry. The traffic that we are handling at Heath Row has out-grown the accommodation which we are operating with at present. The accommodation we are using is old war-time accommodation, which is most unsuitable for the job we are putting it to, and of course in size it is most inadequate. The huts have been altered to try and compete with the problem, and I think have been altered very ingeniously; but, nevertheless, the foundation upon which we had to start was so difficult that they are not good. What happens is that we are getting a large amount of traffic passing through the airport now. Provided the services are spaced throughout the 24 hours and arrive conveniently every quarter-of-an-hour or twenty minutes or so then no difficulty arises. The passengers walk sedately through the medical department, the emigration and the customs, and go out the other end, and on an average those formalities take about half-an-hour for the normal passenger load of, say, 20 to 24 passengers. Unfortunately, however, owing to the vagaries of wind and weather, we get several of these services concertining, and sometimes per-

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haps once a fortnight we get three or four large aircraft all arriving within 4 or 5 minutes of each other, and then we get congestion in the very limited passenger accommodation we have got. Once you start getting congestion, instead of your passengers taking an hour to get through they may take anything up to 1½ to 2 hours. Fortunately, that does not happen very often, but it does happen, due largely to the fact that we are obviously trying to take as many aircraft in there as we possibly can, foreign as well as our own, and we are operating under conditions which were not designed for an airport. We have plans for increasing the accommodation, and we are constantly scratching our heads, trying to see how we can make the machine work a bit better, but the accommodation is a very difficult problem.

1579. I think the Sub-Committee appreciated the use that had been made of the temporary accommodation. I think we were very struck by the steps that had been taken to make it as attractive as you could, but does it compare very favourably with similar airports in other countries?—I can only talk about the airport of Palestine, which is not comparable at all because the traffic there is negligible compared with what we have. Perhaps Sir Conrad can tell you about that. (Sir Conrad Collier.) I am afraid I have come to these airports on scheduled services, arriving in bulk. I have always had rather special treatment. Since I have joined the M.C.A., I cannot get away from the Ministry. (Mr. Wilson.) I think the real comparison is with airports where the Americans started a long while before we did, and have no accommodation yet, say Idlewild.

Mr. Barton.

1580. But this accommodation that we saw is provisional; it is improvised?—Absolutely.

1581. Will the accommodation in the permanent buildings be sufficient to deal with the contemplated traffic at the airport at its peak?—Yes; the Committee we have spoken of is attempting to match the design of the buildings with the capacity of the runways, so there will be a balance between the number of passengers and the amount of accommodation provided for them in the buildings.

1582. What I saw at Heath Row compares very favourably with the time you get through at one of our established ports?—(Sir John d'Albiac.) Yes. Of course, we are dealing with a very different type of element. For instance, if a person only takes 1¼ hours to come from Paris by air he gets very annoyed if he has to spend 1½ hours going through the customs. An hour or so, after spending a week in the "Queen Elizabeth," is not questioned. (Sir Conrad Collier.) That has a very large effect upon

the design of our aircraft. If we mean to go for very high speed, the high speed is nullified if we have delays at this end and people say: "What is the good of speed?"

Mr. Barton.

1583. On the other hand, you are getting an outside economic possibility, if you are going to speed up to that extent. You are going to have a tremendous amount of waste of space and personnel if you are going to tie it up to that degree of relativity?—(Sir John d'Albiac.) Yes; you have to try to get a happy balance, but the trouble is that you do get these peak periods where machines, and so on, arrive together and unless you have a large amount of wasted space, jams will occur. At Heath Row we deal with aircraft coming from North America, South America, and South Africa, when scheduled times are not so accurate as they are over the short distances. At Northolt I don't think they have the same difficulties, because their services are far shorter distances.

Chairman.

1584. Are they improving in regularity?—Personally, I would not like to say that. I suppose the day will come, eventually, when they will throttle down if they are too early or speed up if they are getting behind, rather like a train does; but, for the moment, that is not being done; in fact, we have had cases of aircraft arriving two hours before they were due. The alternative would have been to have kept flying round the sky for a couple of hours, and no-one wants to do that, so they come down slap in the middle of the peak period when other people are arriving; that is the difficulty.

Major Niall Macpherson.

1585. What is the proportion between the long-distance flights arriving at and taking off from Heath Row and short-distance ones? Could you say that, first of all, as far as foreign aircraft are concerned and, secondly, as far as British aircraft are concerned?—I would rather like to have notice of that question. Air France, I think, do six or seven services a day; S.A.B.E.N.A. do about the same. We have, roughly, about 100 movements a day; that is in and out. The day before yesterday was our peak day; that was 140; the average, I believe, is over 100 now. I think it would want rather careful analysis to give you any sort of figure.

1586. Would you say that the new buildings that are being set up are duly related to the capacity of the runways, and so forth, to receive aircraft?—That is the intention. I do not think the buildings have actually been designed yet; I think they are going out for tender, but that is the prin-

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ciple upon which we are working. The long-distance passengers do not get upset if they are kept there 40 minutes because they have probably had 12 or 14 hours already, and an extra one does not matter very much. The fellow who gets annoyed is the fellow who has started off from Paris 1½ hours ago and gets into a jam on arrival at the airport, one can quite readily understand it.

1587. Is the intention, then, to have two different systems, one for the short distance and the other for the long distance?—I am always hoping that, as far as Heath Row is concerned, I can put the Continental service through a different machine, but there again it means duplication of staff and all the rest of it. At the moment, we have not the extra buildings to do that, but we have in actual fact portioned off certain parts of our customs building for the Continental service, so that when the Continental service comes in the passengers can go straight into their particular part of the customs bay and are not held up. As the customs area is not very large it is difficult to divide it up, but we are trying that as an experiment.

*Chairman.*

1588. Have there been any difficulties in erecting the temporary hangars?—As far as I know, none at all. (Mr. Wilson.) There have been no difficulties other than the usual difficulties that labour is scarce and material takes time to get hold of.

1589. I gathered that they were transferred from another airfield?—They were, yes.

1590. Can you tell the Sub-Committee how the time of their erection at Heath Row compared with their erection during the war?—(Mr. Dawson.) If I may speak here, Sir, during the war, of course, we had all the labour that was necessary; the labour was concentrated on our Air Ministry work, or M.A.P. work in connection with these hangars, but now we have not got that preference and we cannot get the work done as quickly as we could at that time. Also, these hangars are much more complicated now, in that the new hangars have to be heated and, in order to conserve the heat, we have to line them and we have to put in annexes which are specially designed, a shed alongside a main hangar. There is a vast amount of additional work in connection with these hangars; they are re-erected and greatly extended and elaborated.

1591. Have these factors affected the time taken to construct them?—Very considerably. Also, as you may have seen, two of the hangars have been raised because they were not high enough to take the "Constellations." They have had to be raised and the doors have had to be lengthened,

and the main stanchions have had to be stooled up; that has involved a great deal of work and a great deal of fabrication of new steel work.

1592. When do you expect they will be in full use?—By the autumn. One of them, of course, is in full use now; the first of the B.O.A.C. hangars will be in use very shortly. The others by the autumn, and by winter we shall have the heating installations available. We have removed these heating installations from existing R.A.F. stations, otherwise, under present conditions, we could not have done it at all.

1593. Could they take the "Brabazon"?—No. The "Brabazon" is 47 feet high; these hangars are only 30 feet high.

1594. Will the new hangars take the "Brabazon"?—Yes.

1595. One final question. I do not think we chose a very good day to see what public response there has been to the enclosure. I wonder if you could tell us, Sir John, if the public are attending and taking an interest?—(Sir John d'Albiac.) Yes; I have got a list of our attendances since we opened it. We are extremely pleased. I think these figures might be of interest. We opened on the 1st June and, on the opening day, we had 3,029 visitors, 178 cars, and our cash receipts, realising that visitors only pay threepence and cars a shilling, for one day were: £46 15s. 3d. I will not go through each of the days in turn, but the total of the days, of which there are eleven days, is a total of 12,699 visitors, 1,258 cars and cash receipts, £221. To my mind that is just a start. We have got to do the thing properly. We have certain ideas which will keep the public interested. Entertainment. We have the B.29, the "Flying Fortress," today and tomorrow; we have sited it right alongside the spectators' enclosure so that they have to pay threepence to see it; also it is sited in such a way that it can be seen from the road, but not very well, so that they will come into the enclosure. These things may sound rather small and petty, but it does get the people into the airport instead of hanging about on the road; that is what we are after. Today we went and saw a demonstration of this Helicopter, a very excellent show, and I have arranged with the management of Westlands to let me have it on a Sunday afternoon. If we have it down there, and its arrival is well-advertised round the district, it will boost up the attendance no end. Those are the sorts of things which we are constantly studying. In fact, a situation has arisen which means that we have got to increase the size of the enclosure. That is going to be dealt with next week or so, but apart from the financial side of it, of course, it is doing a tremendous lot of good locally from the point of view

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Mr. A. H. WILSON, C.B.E., and Mr. J. A. DAWSON, C.B.E., B.Sc.

of popularising the existence of the airport, apart from civil aviation. As you can well imagine, the siting of the airport at Heath Row was not very popular with the local people. I get masses of letters from people complaining about the noise, and why cannot we stop flying, and all the rest of it, and this is all tending to give them a sort of sense of pride in the fact that Heath Row is there and that it belongs to them; so the Sub-Committee would like to have these figures they might be of interest, but the enclosure is undoubtedly a very popular thing.

1596. In this development, I assume you have the assistance of the Director of Amenities?—Undoubtedly. There is, perhaps, a small point I might mention. I have asked if I can possibly keep a small proportion of the takings, to plough back into the venture so that we can increase the attractiveness. For instance, we have an idea of having a uniformed band on a Sunday afternoon so that people can come out and listen to it. Those are the sorts of things I want to develop.

Mr. Corlett.

1597. A dog track?—We have one just across the road, and I think I would rather like to keep it there. But there are certain opportunities which want developing, and I am sincerely hoping that I shall get permission to keep back a proportion of the takings, fully accounted for of course, and

develop the thing. At present, we just have a number of tickets sent to us, and in return we have to send the appropriate amount of money back or the remaining tickets, which makes things a bit difficult when one has nothing to develop with, but it has immense possibilities both from the financial point of view, and from the education point of view.

Mr. Barton.

1598. Is this matter being taken into consideration in connection with the central buildings?—Yes; I think that is a result of our experiment. I think those results will help them very considerably in planning the size and scope of the spectators' side in the centre.

Mr. Corlett.

1599. You will have a restaurant and dance floor?—Eventually, yes. (Mr. Wilson.) A restaurant is a certainty.

Chairman.

1600. In view of the Debate we had in the House recently, I am rather afraid that ploughing back the profits might provoke the Sub-Committee. I think this will be a very convenient time to adjourn. May I say that we are extremely grateful to you for the assistance you have given us this afternoon, and may I say once again how much we appreciate the help you have given us in our enquiry?—(Sir John d'Albiac.) Thank you very much, Sir.

*The Witnesses withdrew.*

*Adjourned till Tuesday next at 11 o'clock.*

TUESDAY, 17TH JUNE, 1947.

Members Present:

Mr. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. Corlett.  
Viscountess Davidson.  
Mr. A. E. Davies.

Colonel James Hutchison.  
Sir Peter Macdonald.  
Major Niall Macpherson.

CIVIL AVIATION.

Sir HAROLD HARTLEY, K.C.V.O., C.B.E., M.C., F.R.S., Chairman, B.E.A.C., and Mr. GERARD d'ERLANGER, C.B.E., Managing Director, and Chairman designate, B.E.A.C., called in and examined.

*Chairman.*

1601. Sir Harold, we understand that you are the Chairman of B.E.A.C.?—(Sir Harold Hartley.) Yes, Sir.

1602. And Mr. d'Erlanger is the Managing-Director and Chairman designate?—Yes.

1603. Perhaps it would help the Sub-Committee if Mr. d'Erlanger would just describe, very briefly, what his functions are with B.E.A.C.?—(Mr. d'Erlanger.) My present functions, Mr. Chairman, are those commonly associated with the title of Managing-Director, that is to say, the day-



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[Continued.]

to-day running of the business; the selection of the staff to run the business, at any rate up to certain grades; those above certain grades are what are called Board appointments; recommendations to the Board on matters of expenditure, capital expenditure and revenue expenditure; the general, what you might call, discipline of the business and the commercial aspect of the business; that is to say, all our relations with the public, be they passengers or be they persons wishing to send freights; the general control of all the technical side from the point of view of operational efficiency and safety. I would say that, in broad outline, that covers my responsibilities.

1604. Thank you very much indeed. I am sure you can give us considerable assistance this morning. There is one matter which has been before the Sub-Committee upon which you might be able to help us. We understand that you submitted your programme in the prescribed form in January?—Yes.

1605. Can you tell the Sub-Committee when that programme was agreed between yourselves and the Ministry of Civil Aviation?—We finally submitted an agreed programme on 7th March, but we have to be careful in the use of the word "agreed," because owing to aircraft uncertainties and, in some measure, to aerodrome uncertainties, anything that is agreed to-day will probably have to be revised to-morrow. We are very much akin to a factory which has not got into production yet; we are still trying out; some of our work is still very much at the drawing-board stage, and its fruitfulness is not solely dependent on our own efforts; it is largely dependent upon the output of others, such as the aircraft manufacturers, those responsible for the provision of airports in this country and abroad; so that whatever programme we put in is our best exercise of judgment, or best guess, but we cannot really say it is an agreed final programme for twelve months.

1606. It is only tentatively agreed?—Yes.

1607. Are these the factors which have caused the delay in the finalisation of the programme?—That is so.

1608. They are the sole reasons, are they? There have not been any further factors contributing towards the delay?—I think the basic factor has been our desire to submit a programme and an estimate which was worth the paper it was written on. That being so, with our very complex network which involves a great deal of detail, frankly our staff (we only started business on the 1st August, 1946) has been very hardly tried, and I would like to give them full measure of praise; but they have been very hardly tried in creating a new organisation, getting the

standards and the customs and the procedures all laid down. These estimates have been an additional burden upon them, which they wanted to do properly. There have been these consequential delays in doing the job properly by the uncertainty I have just mentioned, of aircraft. For instance, when we submitted our final estimates, or provisional estimates, on 7th March, we did not, at that moment of time, know whether the "Viking," which is our main staple aircraft which we are looking forward to, was going to come back into service this summer at all—

Sir Peter Macdonald.

1609. What were you operating in the meantime?—We were operating "Dakotas," "J.U.52's," "D.H.89's" and "Avro 19's." We have eliminated the "Avro 19" and we want to eliminate the "J.U.52" this year and to consolidate our position on "Vikings," "Dakotas," and a limited number of "D.H.89's" for certain places where no bigger aircraft can operate.

Chairman.

1610. In your discussions with the Ministry, are the points of discussions questions of broad policy and difficulties arising from such points, or do you find that you are involved in detailed discussion?—Our discussions with the Ministry really take two forms. There are the broad discussions which take place with the Minister and his principal Officers on what you might call the constitutional relationship between the Ministry and ourselves. Then there are the much more detailed conversations that take place between the Ministry and ourselves in the context of the Ministry being the provider of the permanent way, the provider of airfield control, navigational control, airport facilities, and suchlike, and there, of course, we have a very great deal of daily intercourse with the Ministry.

1611. On that, are you prejudiced at all by any lack of certainty on the plans for airport development?—I would not say that we are really prejudiced; I think very shortly we shall be. But also, I gather, very shortly, those plans may be crystallised.

1612. To give you an example, for instance, the question of an airport in the north-east: In that case, are the difficulties difficulties of construction, preparing the airport, or are they difficulties arising from the fact that there is still no decision about what sort of facilities should be provided in the north-east?—As I say immediately, Sir, the absence of an airport in the north-east, and the absence of any major plans for such an airport, is not an embarrassment because we are already straining so much to do what is on our plate that an airport in the north-east

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[Continued.]

might be an embarrassment to us at this moment; next year the position may change very materially.

1613. It would be unfair to say that as an operating Company you are, at the moment, prejudiced by any delays there may be in airfield construction?—You said airfield plans, Sir—airfield construction. I would say that the whole of civil aviation in Europe, at any rate, is prejudiced by inadequate airports and inadequate accommodation on those airports.

1614. And that will become an increasing difficulty?—That will become an increasing difficulty, as we see it.

Mr. Barton.

1615. Can we be told what airports are available for operation in this country?—I could try, from memory, to list them, or would you rather I submitted a comprehensive list, because there are a great number of them.

1616. I thought probably they were limited to one or two, when you talk about lack of facilities in the north-east. Is it true to say that there is an entire lack of facilities in the north-east?—There are no airports at the moment which are up to civil standard in the north-east. There are a number of Air Force aerodromes which would need to be adapted in one way or another. Unfortunately, all those north-east airports were strategically placed away from cities.

1617. There is no comparable airport in a lesser degree to Northolt?—Not for convenience to a city centre.

Major Niall Macpherson.

1618. If you are going to be good enough to let us have this list, would you make it a kind of child's guide for us so that we could see what the state of the airfield is at present in relation to the type of aircraft that might use it, and what sort of aircraft you anticipate using on those aerodromes eventually? Could that be done?—I think so, Sir. I shall be in a slight difficulty. I can submit a list of the aerodromes we are using at the present time. The aerodromes we are due to use is the subject of review by the Chancellor himself at the moment, and I do not suppose I am at liberty to submit that projected list until the Chancellor has ruled upon it.

1619. In some cases, you may be able only to use an airfield for a "D.H.89," whereas later you may be able to use it for a "Viking"?—Yes.

1620. Just to that extent?—I will try to indicate that, Sir.

1621. The second question I was going to ask was: Do you envisage that the supply of 'planes is going to out-run, as it were, the supply of airfields very considerably?—On paper, yes.

1622. May I pursue that a little further? You say "on paper." What I was getting at was: Do you envisage the possibility of your having to take a delivery of 'planes which you would not be able to operate to the maximum capacity owing to the fact that you have not got the necessary airfields?—That is precisely the position we do envisage, but I hedged a bit by using the term "on paper" because we are always, unfortunately, disappointed in aircraft deliveries. (Sir Harold Hartley.) And we have cut down our orders.

Major Niall Macpherson.] You are hoping to be disappointed.

Sir Peter Macdonald.

1623. Have you settled on your types?—(Mr. d'Erlanger.) We have settled on our types. We have produced a 10-year plan which envisages certain new types for which we have, rightly or wrongly, declared ourselves on paper as to what we think we need to do our job properly.

Viscountess Davidson.

1624. But you are doubtful if, in your 10-year plan, your aerodromes are going to keep up with the aeroplanes?—What the working capacity of this country and Europe is likely to be, say in the five to 10-years period from now I do not know, but my own guess from now for the next five years is that conditions are going to be very stringent indeed.

Mr. Corlett.

1625. When you say you have cut down your orders, does that mean the cutting down on orders for permanent aircraft, or the provisional ones you use in the meantime? Which type are you cutting down?—It was the "Viking," actually.

1626. The permanent one?—Yes; but we also substituted part. The cut-down of the order was going to be replaced by another type of "Viking," virtually.

1627. But if you have cut down your permanent aircraft then you are not likely to have more aircraft than you have facilities for?—We have cut down modestly. If the manufacturers should produce according to schedule, next spring we shall have more aircraft.

Sir Peter Macdonald.

1628. How far has the new type got; is it past the drawing board stage?—The new type, the "V.C.2," which is the first real post-war type which we hope to acquire, is still at the drawing-board stage; a certain amount of the structure of the prototype has been built; it is hoped that it will fly early next year; possibly at the end of this year.

1629. But it will not be going into production?—I do not think it will be in production before 1951.

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[Continued.]

*Viscountess Davidson.*

1630. You have cut down, but you have those in view for the future?—Yes. We have cut down on the "Viking" programme that is the current "V.C.I."

*Colonel James Hutchison.*

1631. I wonder if Mr. d'Erlanger could tell me this, whether in those 10 years you have been in any way restricted to the exclusive use of British-built aircraft—it may be the problem does not arise in B.E.A.C., and it may be that the British aircraft you contemplate using is, in your view, the best?—I am afraid we have taken it for granted that we were to use British aircraft.

*Sir Peter Macdonald.*

1632. Is that not true of every new type of aircraft? It takes about seven years to be sure that a new type is operationally sound?—In the case of the "D.C.3", which has been in service for 10 or more years in America, there are still about 100 men employed in Douglas's drawing office bringing it up-to-date and modifying it; it is a continuous process.

*Viscountess Davidson.*

1633. All the time?—Yes.

*Colonel James Hutchison.*

1634. May I lead on from that, to ask whether the programme which has been submitted has been turned back on you by the Ministry of Civil Aviation because of a risk of exceeding the subsidy as envisaged under the Act to the various Corporations? We have heard, in the case of another Corporation, that the programme was sent back because it looked as though the subsidy allowable under the Act would be exceeded. Does that apply in the case of B.E.A.C.?—It does apply.

1635. The original programme was sent back?—The original programme was sent back, partly on those grounds and, I think, partly because the accounting officers of the Ministry did not agree with our rates of amortisation on certain features which affected the annual revenue.

*Major Niall Macpherson.*

1636. Following up that point, to what extent do you feel that the department is able to gauge as well as you can the rates of amortisation, you having experience of them?—Some of the larger items which are the subject of discussion involve accounting principles more than business efficiency. For instance, the rate at which the purchase price of some of the internal companies we took over should be amortised.

*Mr. Corlett.*

1637. Was there a considerable difference of amortisation between the Ministry and yourselves?—It still is not finally settled.

1638. You said it had been held up for that?—We are taking this view, rightly or wrongly: We do not like dead wood in our balance sheet and we want to have it out as quickly as possible when you are short of funds, do you choose this period to amortise your dead wood?

1639. Are you choosing a shorter or a longer period than the Ministry?—A shorter period.

1640. That is the issue?—Yes.

*Chairman.*

1641. In the Estimates, provision for a grant to the B.E.A.C. is made at £2½ million. By how much did you exceed that in your programme?—The original estimate, as submitted, was of the order of £3,900,000. Without altering the operating results virtually, by extending the periods of amortisation, and those sorts of items, by spreading the cost of initial training of aircrews, which is very heavy during the stocking-up period, we can, by such measures, bring down approximately to the figure allowed for in the Estimates placed before you.

1642. You can do that merely by altering your accounting principles?—Yes, without altering the mechanism of the business.

*Colonel James Hutchison.*

1643. You are being strictly conservative. I am on the conservative side. Then the Ministry, in fact, in your depreciation and amortisation allowances, may feel that you are depreciating over a shorter period than they think is necessary?—Yes. In my own business career, before the war, I always had a loathing of having dead wood in my balance sheet.

1644. Although this is a different subject, I would like to ask what the position of feeder services in Scotland is going to be? You have heard a good deal of complaint about there not being feeder services. Have you a programme? Can you tell us anything about what the programme is going to be?—I did not come prepared, Sir, to talk about individual services, but what we are certainly trying hard to do (and I do not think we have had sufficient credit for it) is: We are trying to give Scotland her fair share of our capacity, but one of the limiting factors on that class of service is the expense of operating small aircraft.

1645. I should have said feeder services in general, and there being complaints about not sufficient to link up with the other services, but you have answered that by saying that you are giving everybody what you can afford to give, and presumably they will be increased?—Yes.

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[Continued.]

Major Niall Macpherson.

1646. Can you expand upon the increase of expense in that respect?—I should like to, because it is one of the fundamental reasons why our estimates look so bad. To give an illustration, there is the "J.U.52," which it was thought, because it could be picked up in Germany for nothing, would be a nice gift to the country, a nice cheap thing to operate as to expense; in fact, to operate it it will not pay the variable operating costs which merely include petrol and oil, landing fees, crew costs and maintenance. You cannot cover that at 100 per cent. load factor.

Sir Peter Macdonald.

1647. Because you use Octane petrol?—It is because the aircraft is a very ancient design.

1648. It was originally used for bombs?—It was their first transport aircraft. They may have had at the back of their minds that it could be used as a bomber. It originally came out in 1932 or 1933; it is old-fashioned; it has got a much larger weight-carrying capacity than you can, in fact, put into it through shortage of cubic, which may well support your statement, Sir, that they had ideas of putting bombs in it.

1649. They did use them for bombs?—Yes.

1650. I have travelled in them; they are very hard to carry a pay load on?—They will not.

1651. The Swedes use them?—The "Anson" was in the same category; we have now abolished that. The "D.H.89" is also in the same category, but not quite so bad; it will at least pay its operating costs and standing charges, and make a contribution towards station costs.

Chairman.

1652. It would be fair to generalise by saying, would it, that your calls upon subsidy are heavy at the moment because you have to operate uneconomic planes?—Yes.

Major Niall Macpherson.

1653. As I suppose, in those outlandish Scottish places, you will almost certainly be operating small services, do you see any possibility of their being made to pay?—No, I cannot see it; but we have always regarded that as taking the rough with the smooth and as part of our obligation. If we could make good on the lucrative services, we should develop the "humane" services, as you might call them.

1654. Will you charge differential rates? Is your policy to charge differential rates in order to make the service pay?—I should like to charge a universal rate, over all, however illogical it might be.

Chairman.

1655. When do you think you will be in full commercial operation?—I would like two years, at least, and that will be largely dependent upon the facilities which we can secure by one means or another for doing the job properly.

1656. You think that perhaps two years is an optimistic estimate?—If we get adequate buildings and adequate facilities, I think in two years we should have a very different picture to present. Putting it in another way, our productivity at the moment, be it productivity in man-power or productivity in equipment, is appallingly low. It is due to a number of causes, but the two basic ones are (a), we are a new business in the prototype stage, and (b), people are trying to work under the most ridiculous conditions.

Major Niall Macpherson.

1657. When you say "full commercial operation", you are not relating that to the actual amount of services you are providing, but merely getting your business on a proper running footing. Is that right?—Getting the business on to a proper running footing; that is to say, every man in the right job and knowing his job and improving our productivity in every sense. As an illustration of that, obviously we have to spread our network as quickly as possible over Europe. Even if it is a question of only two services a week to this country and three to the other, we have to get the spread, but that is very uneconomic because you have a station at the other end which you have to maintain. Even if a nucleus staff were there to receive two services a week until we can get something like 7, 14 or 21 services a week to that station, that staff will not be productive. It is the same with our aircraft; until we can really get high utilisation from them they are not being productive, and it is going to take us at least two years, with a new type like the "Viking," to get any respectable form of utilisation.

Chairman.

1658. You mentioned one of your difficulties as being that of a new business. What steps are you taking to ensure that as you develop you develop with the utmost economy in the use of staff and man-power?—There are various devices you can use to try to solve that problem, which is basically the problem of management. You can have specialists on your staff who measure efficiency; you can call in outside specialists to measure efficiency, but I believe, fundamentally, there is only one answer to that problem and that is, to choose the right people.

Mr. A. E. Davies.

1659. Who does the choosing?—The choosing is done by a series of selection

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[Continued.]

boards, the composition of the selection board varying according to the specialist you are going to employ.

Sir Peter Macdonald.

1660. The selection board comes under the Ministry, does it? You have not your own selection board, have you?—We have our own selection boards.

1661. You do not operate with the other companies, do you, or is it entirely your own board?—They are entirely our own boards.

1662. Each company has its own board?—Yes; but our staff branches work closely together. If we see somebody whom we cannot immediately employ, who perhaps looks like a useful member of the community, we pass his name over to the other company and vice versa.

Chairman.

1663. You do not find the Corporations outbid one another in that respect?—No, we have a gentleman's agreement on that.

Mr. Corlett.

1664. You are an operating company; you want certain people to help you. Supposing the Ministry is the owner of the aerodrome and also provides those services, what line of demarcation is there between you as to what services you shall provide and what services the Ministry shall provide?—That is part of the day-to-day discussion which we have, with the discussion on the second aspect of our relationship with them whereby they provide the permanent way. If we do find an overlap we would go and discuss it with them as to whose job it really is.

1665. If there is an overlap, who settles it?—They, as the arbiters in the aerodrome, would be entitled to settle it.

Chairman.

1666. Have you had many such instances arising?—I can only recollect one, which was a question of porters.

1667. And that was settled satisfactorily?—That was settled satisfactorily.

1668. And expeditiously?—Yes.

1669. You mentioned a gentleman's agreement between the Corporations. Is there a similar agreement with the Ministry, or do you outbid the Ministry?—I am trying to recollect a conflict.

1670. We noticed, when we went down to Heath Row, for example, that there are police there who are employed both by the Ministry and by yourselves. We are not suggesting that there is duplication. You have police for your own purposes, but is there any agreement between you about the provisions made for the police?—In point of fact, B.E.A.C. do not employ any police, as such, and I could not answer for

B.O.A.C. in that context, but there could be a conflict; I am not going to suggest there could not be. I believe there has been one over telephone operators.

Colonel James Hutchison.] That is one of the cases we had in mind.

Chairman.] Yes.

Witness.] We rely very largely on the telephone. We have to try to provide an expeditious service, and we do want the highest class telephone operators we can get, and we have said that we are going to pay the best commercial rates to get them. I know the Ministry is not able to pay the best commercial rates to get operators; perhaps they do not need to. That can result in a good Ministry operator transferring to us, but she might transfer to Hoovers', down the road.

Sir Peter Macdonald.

1671. Who does all your bookings; do you do them yourself?—They are being done, at the moment, by B.O.A.C. on our behalf by joint arrangement. At present, we are trying to get enough accommodation to set up our own European bookings, because the thing is getting so big; it is growing in a phenomenal way. We are trying to get enough accommodation to set up a European booking centre.

Mr. A. E. Davies.

1672. Are you experiencing any difficulty in getting staff for the purpose?—There is one grade of staff that we are experiencing great difficulty in getting, and that is the skilled mechanic.

Chairman.

1673. On maintenance, have you taken any steps to consider with the other Corporations how you can pool your maintenance, or is that not practical?—We do, in fact, already pool certain things. For instance, all our engine overhauls are pooled because we happen to have common types, but if in the future B.O.A.C. go for pure jets and we go for turbo-jets, we may decide to go different ways on those different types.

1674. Are there any commercial difficulties in coming to a commercial agreement about joint arrangements?—No; there is the training, which is a joint venture.

Major Niall Macpherson.

1675. Do those cover skilled mechanics?—It has not, up to now, but we recently agreed to put our own mechanics into a joint school.

1676. Is that satisfactory, from the point of view of types?—I think we shall do basic training in the common school and then bring them out to do type training in the separate Corporations.

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[Continued.]

Colonel James Hutchison.

1677. How far do you use the Travel Organisations, people like Cook's, and so on?—On the Continental service we find that about 80 per cent. of our bookings come through the Travel Agents, that is because—at least I think it is because, of the difficulties of foreign travel. It is not just a question of getting a ticket; you have to get passports and visas, and be made aware of the currency regulations, the customs regulations and all these 101 things which ensnare the passenger. By preference, he goes to Agents who can sort out those things for him. Conversely, on the internal lines, we are finding about 80 per cent. of the bookings, which is rather what you would expect, are made direct. On the domestic lines they get a commission which is fixed by I.A.T.A.

Major Niall Macpherson.

1678. The commission is the same on internal and external?—Yes.

Chairman.

1683. From your business experience, do you find, or do you ensure, that your expenditure on such ancillary matters as entertainment, and so on, compares reasonably with other commercial undertakings?—I will try to answer the question broadly; it is impossible for one to answer in detail. We are more frugal than many commercial undertakings, that I know. Especially during these deficiency periods one is conscious the whole time of the fact that one is disbursing public money, but I would say that your bigger commercial enterprises, well-established ones, with surpluses, are much more generous in their scale of expenditure.

1684. Do you feel that the existence of the Parliamentary control and the fact that there are such Committees as the Estimates Committee is a brake on such expenditure?—I think so, inevitably, whilst we are in deficiency periods, anyway.

1685. But, on the other hand, can you say whether the Corporation feel their autonomy sufficiently strongly to undertake expenditure which they think necessary?—I think the drip of Parliamentary questions is, in the end, going to wear away people.

1686. If we could return to the question of mechanics, just one general question. Is this an over-all shortage of mechanics which reflects itself as a shortage in your particular case, or are there any special difficulties as to why you are finding you have a shortage?—We had six years of war, during which training for civil aviation was virtually stopped. That has been replaced by a very large expansion of another flying organisation, the Royal Air Force. The R.A.F. is inevitably throwing up considerable numbers of people who have maintained aircraft at the Air Force

standards and, unfortunately for us, these Air Force standards, not unnaturally, differ from those required for civil aviation. It is surprising how many of these people really require very considerable training to fit them for the high standards of civil operation, and how many of them, when they come face to face with passing examinations for licences, and such like, either fight shy of them, or fail. The training machinery of civil aviation is not yet in its stride. We have this temporary bottleneck at the moment, where no doubt the books of the Ministry of Labour contain hundreds and thousands of names with the name "Aero Fitter" or "Aero Rigger" against them, and they are not fit yet for civil aviation.

Sir Peter Macdonald.

1687. Is not that very largely due to the fact that you are operating so very many types? If you were confined to the Vickers' type for your operational purposes you would not require so many fitters, would you?—That has a bearing upon it, but there is always a great difference of standards between what is rightly acceptable in wartime for a military operation and what is acceptable in peacetime for a civil operation.

Major Niall Macpherson.

1688. Would it be true to say that the R.A.F., during peacetime, have retained the best of those people who were trained in the war?—I think they have tried to, and I think the hard-core of the maintenance personnel of the Air Force was the permanent mechanic of the Air Force making a career and who is staying with the R.A.F. now.

1689. There are civil maintenance units and they will be gradually reduced in numbers, and if it were true that for improving those civil maintenance units the Air Ministry had retained the best people, then it would mean that within two or three years a lot of these people would be released and available for your purposes. Do you envisage that possibility?—I think this is a temporary bottleneck which we shall get over.

Mr. A. E. Davies.

1690. What training facilities have you to provide for your own staff, for this rough stuff you are getting now, which is not quite so finished as you want it?—Up to date, our facilities have been very poor indeed because they are limited by accommodation very largely. We tried to get unit schools going at our stations; we had a reasonable measure of success in passing examinations, but we are going to try to pool in with B.O.A.C. and put it all in the joint school at Aldermaston.

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[Continued.]

1691. What methods are employed to recruit staff; are there public advertisements in the neighbourhood?—Public advertisements, the Ministry of Labour and Trade Union organisations.

Mr. Barton.

1692. Have you any student apprenticeship scheme?—No. That is one thing the industry has not tackled; it never did before the war, and it is about time we did tackle it.

Mr. A. E. Davies

1693. Are conditions sufficiently attractive? What tenor of employment is offered? Are they on week to week, or do they come to you for some period of time?—On paper, the industrial grades are rated by the hour and come to us, virtually, on what amounts to a week's notice. I, personally, believe in the long run this industry, and perhaps others, ought not to rate people by the hour at all, because we are in a permanent business; the only things that can upset it are strategical reasons, and when strategical factors come along everybody's livelihood is likely to be upset.

1694. Is the turnover much on the basis of hour to hour; do you get men coming and going?—I cannot give you a specific percentage on that, but I recently asked that question of our staff when I was assured that, by comparison with local industries, our turnover was good.

Major Niall Macpherson.

1695. Is it not the case that so far as the mechanics are concerned, a great many of them are working seven days with 1½ days' overtime, which would not make it very easy to employ them on a fixed rate rather than on an hourly rate?—The overtime has come down now a very great deal. We are averaging, at the moment, not more than four hours a week overtime.

*At the request of the Witness the remainder of the answer was not recorded.*

Major Niall Macpherson.

1701. Does that mean that in order to get the benefit of that pooling of mechanical staff you have to have the same types of aircraft running? Would it be possible to combine in that way with the French stations, for example, if they were operating from those bases only French aircraft?—Under the present requirement of the Air Registration Board, an aircraft has to be certified as fit to fly daily—a daily certificate of safety. That being so, if we might stop abroad, that aircraft has to be signed out by an engineer who has that type of aircraft on his licence, so that if we take a "Viking" to Paris, the Frenchmen have not got an engineer licensed for that; we would have to send our own man over there until such time as we could persuade the

Mr. Corlett.

1696. Have you any contact with the junior technical colleges with regard to this training of students? Have you made any approach at all to the educational establishments?—I personally have not, but I know that our staff people and our engineering people have.

1697. Will they not co-operate?—I think they are co-operating, but at the moment it is this gap. It is partly the change over from war to peace.

1698. In my own town we do it with our industries, and I do not see why you cannot do it in the same way?—Perhaps it is going to take a bit longer with our industry than with most industries. Most industries involve a measure of skill; they usually start on some repetition job. With us, we want almost from the word "Go," the skilled mechanic who can diagnose a fault and remedy it.

Viscountess Davidson.

1699. You really want the finished article?—You almost want the finished article from the word "Go." It is going to take time.

Chairman.] I think we have very cursorily surveyed your difficulties.

Major Niall Macpherson.

1700. I would like to enquire, regarding the maintenance abroad of foreign stations. Of course, this is one of the factors to which you have already referred, but to what extent does it operate? Do you need a complete team which could, for example, say, handle three services a day? Would you require it if you had the same type, if you only had one service every two days?—By and large, the answer is "Yes", but the team would vary from place to place.

French to send one of their engineers over here to get endorsement on his licence, or the French to fly the same type of aircraft. But you are quite right, Sir; unless you have a basically common fleet on the technical side, you have to have different personnel.

Mr. A. E. Davies.

1702. If I may ask one point on the staff before Mr. Barton puts his questions, is there any arrangement for staff consultation as yet; have you got so far as to listen to complaints and to clear ideas?—We have got two main structures towards that end; that is, of course, apart from day-to-day management. I consider it one of the biggest responsibilities. Of the day-to-day management is to hear complaints and clear suggestions and criticisms. Apart from that

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we have two main structures to meet the problem. One is the Joint Industrial Council for the industry which breaks down all through the organisation into panels and local panels; but it is only just beginning to work at the local level because it is only within the last 10 days that the machinery for local panels has been set up by agreement at the main Council. The other structure is a series of what we call efficiency committees, which are peculiar to B.E.A.C., which we have tried to set up, and which are, as it were, outside the normal trade organisation machinery. That structure is aimed at getting elected by the staff individuals on to the local panels and building up through the local panels to a central panel people who might be able to contribute intelligently towards a discussion of any aspect of efficiency without the individual necessarily being associated with one or other trade organisation; he might be associated with none; he or she might happen to be an intelligent person who would be a useful member of such a committee.

1703. And they are elected from a broad group, are they?—Yes.

*Mr. Corlett.*

1704. Who elects them?—The staff.

*Chairman.*

1705. In other words, they are not particular trade representatives?—We have tried to make them cover several grades so that you get the pilot with the traffic clerk, with the mechanic, with the driver, and with the telephone operator, all round the same table.

*Major Niall Macpherson.*

1706. Are all Trade Unions represented on the Joint Industrial Council?—I think there are 13 Unions represented on the Council. What other Unions there are, I do not know.

*Mr. Barton.]* My first question, Mr. Chairman, is as to whether the Corporation has absolute autonomy so far as choosing the particular type of aircraft they are going to operate is concerned; to what extent is there liaison in this matter with the Ministry of Civil Aviation; to what extent is there overlapping and, if so, what direct contact have you with the aircraft manufacturer?

*Chairman.*

1707. In other words, how are aircraft types determined?—The first direct question was the degree of autonomy we had in the selection of aircraft?

*Mr. Barton.*

1708. Yes?—So far, I would say that within the narrow limits of what is available, we have had complete autonomy. We have not tried to secure American aircraft.

It is possible that if we had tried to secure American aircraft other than the "Dakota," of course, we might have run into trouble, but so far we have not because we have restricted our requirements to British aircraft, and nobody has said: "You may not have this, that or the other."

1709. Do you go to the Ministry of Supply for assistance in deliveries, or do you go direct to the aircraft manufacturer?—The procedure, at the moment, is really a hang-over from wartime; it is being sorted out at present. It is a procedure really following military practice, whereby the Ministry of Supply is a self-constituted agent for procurement. By what right it has got itself into that position I do not know; it is there, and we are trying to extract ourselves from that position.

*Chairman.*

1710. If I could just get it clear, does that mean that you have put all your orders through the Ministry of Supply?—At the moment; but we are trying to extricate ourselves from that position, not being unmindful, at the same time, that the Ministry of Supply can be of material assistance.

*Mr. Corlett.*

1711. How could you relieve yourself of this obligation? You say that they have got themselves in that position. How have they got themselves into that position?—Before the Civil Aviation Act they implemented certain representatives of the Brabazon Committee and placed the orders. (*Sir Harold Hartley.*) They inherited the Ministry of Aircraft Production. During the war the M.A.P. took over the whole control of the aircraft industry; then the Ministry of Supply inherited that from the M.A.P. I think Mr. d'Erlanger would agree? (*Mr. d'Erlanger.*) Yes.

*Sir Harold Hartley.]* That is, historically, the sequence.

1712. "Inherited" rather interested me. Do you mean they took it, or was it a definite legacy? They inherited it?—Yes.

*Sir Peter Macdonald.]* The Ministry of Supply took over the M.A.P.

*Viscountess Davidson.]* Yes, more or less, after the war.

*Sir Peter Macdonald.*

1713. That means that you have not complete autonomy in placing your own orders and choosing the types of aircraft?—(*Mr. d'Erlanger.*) In choosing the types we have, but in placing the orders with the manufacturer we have not.

*Viscountess Davidson.*

1714. You are very anxious to short-circuit the Ministry, I should think?—We are very anxious to short-circuit the Ministry, bearing in mind that they have been



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extremely useful to us in certain aspects. (Sir *Harold Hartley*.) Also I think you must bear in mind the strategic importance of the aircraft industry, and the fact that the bulk, of the orders in normal years are going to be placed for military aircraft, and therefore there must be, I think, some form of co-ordination between civil orders and military orders which might in fact help us. It might be that we might have to place an order with a firm who might have the whole of their capacity taken up. It is not like ordering a thing that you are going to get in six months; but you have the study, and then you have the work leading up to the prototype; it goes over five or six years; and therefore it is not a question of a short order, the effect of which is felt for only a brief period. You have got to plan this over five or six years; so I think that the Sub-Committee ought to bear in mind the need for very close consultation and a degree of planning in the placing of orders, at the same time not taking away the responsibility of the Boards of the Corporations for the choice of the aircraft on which their whole efficiency really depends. I mean, the aircraft is really the determining factor in the commercial success of the Corporations. I think it is a very delicate situation. You have got, on the one hand, the Corporations with their immense interest in the choice of aircraft, and if you take that away from them they would simply say they could not carry the responsibility.

*Viscountess Davidson.*

1715. But, surely, there is all the difference between having to order everything directly through the Ministry of Supply and carrying on the very closest co-operation; obviously, you cannot go on ordering civil aeroplanes against military requirements, but it is quite different to say: "I cannot order a single thing without going through that Department"?—Yes.

*Chairman.*

1716. I think we all can see how comprehensive it is, and we can appreciate the desire of the Corporation to further its autonomy, but I wonder whether we could carry it a stage further in this way? Can you explain to the Sub-Committee how the new type of aircraft emerges, because that is obviously a question vital to the Corporation?—(Mr. *d'Erlanger*.) I can tell you how I would like to see it emerge, or shall I tell you what is happening now?

1717. Perhaps it would be best if you told us how you would like to see it emerge, and then go on to say what is happening at the present moment?—The first step is purely an internal one, as far as we are concerned, where we have to make economic guesses, looking into the future, as to the probabilities of public requirement, and try to interpret that into a shape which indicates frequencies of opera-

tion and the amount of people you want to transfer per unit of frequency. Having done that, that requirement then goes over to the technical staff who are not completely ignoramuses, and therefore are able to carry it a stage further, indicating a broad requirement, whether the aircraft will have 2, 4, 6 or 8 engines, whether it will have fixed under-carriage or a tractable under-carriage; whether it is commercially desirable for it to fly at 200, 300 or 400 miles an hour, and so on. We hope to get out a fairly comprehensive specification, which would then go to a selected number of manufacturers; we would invite them to submit schemes and prices; we would then agree with the Ministry of Supply that Firm A or Firm B may be chosen, because of their capacity, which Sir Harold has mentioned, and then we would place the order direct with the contractor. That would be the case covering what you might call an orthodox aeroplane; but if the aeroplane, or any part of it, were unorthodox, and they are getting more and more unorthodox, we would, I think, in the light of experience, go through the prototype stage. We do not order production aircraft, but we order a prototype first, make it fly, and really see whether it does work. It might want to go through the Hall Committee, and it is there that we feel the Ministry of Supply can be of the greatest help to us, that they should, in fact, place the order for the prototype, because there may be export interests involved and military requirements may have to be considered. That latter case, in my opinion, is going to become increasingly a standard case where you have to go through the prototype stage. There has been too much money in the past, not only in this country but in other countries, sunk on the gamble of going into production off the drawing-board, and I do not believe any country can afford it. (Sir *Harold Hartley*.) There is just one other point where the Ministry of Supply comes in, and that is where the information is not sufficient and definite, and fundamental research is required before you can get to the design stage. There is now the Hall Sub-Committee on Civil Aviation of the Aeronautical Research Council on which we are represented, so that we can foresee our unorthodox requirements and put them to that Committee and see whether there is the basic information or whether research is required. There, of course, the Ministry of Supply does come in, because they have the whole of the research facilities under them; they have Farnborough, Bedford, and Telecommunications Research Establishment at Malvern; so there again is another tie-up with the Ministry of Supply, where we are really dependent upon them for getting any fundamental research done that we require. I think that is another point. We want the benefit of the whole of their experimental

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staff and the availability of their resources. I think that is another point to remember in relation to the Ministry of Supply.

Sir Peter Macdonald.

1718. But you are not influenced by the Ministry of Supply in the type that you choose for your job?—You make up your mind as to what your requirements are for your European Service, for instance; you have chosen the Viking as the best machine for your work. You are not influenced by the Ministry of Supply as to whether you can have that type or not? You can go direct to the manufacturer and order?—(Mr. d'Erlanger.) But not in the case of the Viking, because the Viking is an inheritance again from war-time. It is what you might call the war-time procedure. The first application, as far as B.E.A.C. is concerned, in peace-time procedure is taking place in relation to the Viceroy, which is the V.C.2. There the Ministry of Supply, according to our application or specification, have placed an order for certain prototypes.

Colonel Hutchison.

1719. I wonder if Sir Harold can tell me (I am quite sure there are fundamental differences) what fundamental differences there exist in the treatment of aircraft which make it impossible to use the same method as is used in shipping where a ship-owner simply goes to a ship-builder and orders the ship he wants, and the Admiralty have their own Naval Architects to design and provide the warships they require. There is no equivalent in the Ministry of Supply. It may be that there is something which makes it impossible to treat aircraft in the same way?—(Sir Harold Hartley.) I have ordered a good many ships, Colonel.

1720. You never went through the Ministry of Supply, Sir Harold?—No; but I went to a builder who had an experimental tank, and you had the use of the experimental tank and the research that was involved. It is very much the case that Mr. d'Erlanger was putting to you for what you call the orthodox type. There is nothing unorthodox. It was a matter of comparatively small details, or the general engineering, the general lines of the ship, in which, of course, the tank was the decisive implement as an experimental facility. When you come to an aircraft on the conventional lines, on the orthodox type, I think that the procedure that Mr. d'Erlanger outlined is not very different from that which you follow in ordering a ship, except that you have the overriding question of the relation of the aircraft industry to the production of military aircraft. I think that is a very large factor, because the number of civil aircraft that will be required by the Corporations is comparatively small.

1721. That leads me to two or three things. Firstly, you remember that Mr. d'Erlanger was adumbrating to us what he would like to see in existence and not what in fact was in existence, so that we are on all fours with shipping there?—Yes. That is the procedure which we are negotiating, fresh procedure, and I think for the orthodox types you would agree, Mr. d'Erlanger? (Mr. d'Erlanger.) Yes.

Chairman.] I think probably it would help us more if Mr. d'Erlanger indicated in what respects the outline he has given us is not operating at the moment. If I could just add a word, I gather that, looking to the future, Mr. d'Erlanger believes that as far as orthodox types are concerned, there should be far more left to the discretion of the Corporations? As far as unorthodox types are concerned, on the other hand, there should be a closer liaison between all the interested parties, and then the Ministry of Supply should accept the responsibility of building the prototype according to the requirements indicated.

Viscountess Davidson.

1722. Not "discretion" exactly. Is that the word, quite, because I rather gathered you have your discretion, but the point is that you cannot give your orders direct?—At the moment.

Viscountess Davidson.] Then, I mean, is "discretion" quite the right word?

Mr. Corlett.

1723. I gather that you can choose your own type, but that you must place your order through the Ministry. Is that a severe restriction as long as you have complete freedom of choice?—The difficulty in answering that question absolutely specifically is that we have nothing in writing from anybody which tells us at the moment that we may not go straight to the manufacturer; but we have been discussing for many months now with the Ministry of Civil Aviation and Ministry of Supply this new procedure, and I think perhaps we have reached a "gentleman's" agreement not to try to barge our way into industry just at the moment whilst this new procedure is being hammered out. I think that is why you find the present situation.

1724. But does that answer the question of freedom of choice?—According to the Act, we have freedom of choice.

1725. It was only a matter of placing the order through the Ministry. I am asking, is that a severe restriction if you have freedom of choice?—It restricts what, I think, is a fundamental business, the relationship between customer and manufacturer. (Sir Harold Hartley.) The contractual relationship.

1726. There are advantages, I agree. You can raise one disadvantage or two in placing it through the Ministry of Supply, but there

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are certain advantages on the other side. On balance, is it a gain to put the order through the Ministry of Supply?—(Mr. d'Erlanger.) Naturally, I want the best of both worlds. I want to place the order direct, and have the Ministry. Whose money are we all spending?

1727. The ratepayers' money, of course?—Are we not competent to spend the ratepayers' money, or, if we are not, we should not be where we are.

1728. Why is this Sub-Committee investigating it?—I do not believe that you can convince yourself that my management is good or bad by imposing upon me automatically a rule that I have to go through the Ministry. That might make me very bad even though I were very good.

Mr. Corlett.] But there are, on the other hand, certain advantages in going to the Ministry. Like marriage itself, one has to take the disadvantages with the advantages.

Chairman.] I think we are getting on rather dangerous ground when we touch on the powers of this Sub-Committee and then go to marriage. I think the best thing we can do is to go to Mr. Barton and see whether he has any other points to raise.

Major Niall Macpherson.

1729. Before we actually go to Mr. Barton, I have not quite found out exactly how far and in what respects the present procedure falls short of the desiderata that Mr. d'Erlanger has indicated?—Because all the types which are at the moment as it were under production are the subject of Ministry of Supply orders which they placed before we were in existence. I am very glad of that; otherwise, we should not have any aircraft at all. Everything that is in current production is one of the types of the war-time Ministry of Supply order.

1730. Then there have been many modifications, have there not?—Modifications to existing types?

1731. Yes. Those go direct, or do they also pass through the Ministry of Supply?—Those are Ministry of Supply orders.

1732. Although you settle the modification in direct relationship with the manufacturer when you pass the order through the Ministry of Supply?—Yes.

Sir Peter Macdonald.

1733. Have you made up your mind now on your policy for the next five years, for instance, knowing your routes and what you have to meet in the way of operational work on the types you require?—We have got out a document which we call our "Master Plan" which extends over a period of ten years, planned at the outset naturally with the current types, and it sets out a series of transitions from the old types to the new types. It is based on

certain requirements: (a) that we think a type should be in service not less than five years to serve its purpose usefully; and (b) that we do not consider ourselves as an operator capable of introducing more than one fresh type in a period of twelve months. A good deal of work goes into the production of a new type, crew training and engineer training, stores, and so on. It is based on the fundamental requirement of trying to have as few types to operate as possible.

1734. And you would not be influenced in your long-term policy by the fact that such types are already on order?—The formulation of the plan is inevitably influenced by that, because that is in the alternative. That is why you find even J.U.52's in it and Avro 19's.

1735. Taking a long-term view of five or ten years, for instance?—You find nothing in it which is, as it were, conceived by the Ministry of Supply.

1736. There are certain aircraft on the stocks, as you know, and you are not told that you must use these types?—No.

Mr. Barton.

1737. That is just the point I am coming to. I have gathered from the replies that you have given to us that your autonomy at the moment is an autonomy that is being determined by circumstance. Will there come a time when the Ministry of Civil Aviation, through its power to approve your annual programme, will assert their right, for reasons which will be determined by them, to endeavour to influence you on the type of aircraft you will use against your better judgment?—I think, Sir, it is impossible for me to reply to what will be in the Minister's mind in the next year or two.

1738. Is it or is it not a fact that the Ministry of Civil Aviation have the last word so far as the approval of your yearly programme is concerned?—Yes.

Chairman.

1739. The Sub-Committee should also bear this in mind. Apart from the yearly plan, the three-yearly plan has to be submitted. Can we assume that this three-yearly plan has been agreed to?—We have been asked for our triennial programme, and it is supposed to be in by now; and, frankly, I cannot do it. We shall have to do it because the Act requires it, but I am trying to stall it off as long as I can so that some of the unknowns may become perhaps known.

Major Niall Macpherson.

1740. You have power to modify it under the Act?—Yes.

Chairman.

1741. But, apart from that, you wish to make it as final as you possibly can?—Yes; it is the basis of everything.

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[Continued.]

Colonel *James Hutchison*.

1742. I think Sir Harold Hartley wanted to say a word?—(Sir *Harold Hartley*.) I answered Colonel Hutchison's question so far as the orthodox type is concerned. There is a point that I would like to bring out as to the difference between ordering a ship and ordering one of these unorthodox types, because the design of aircraft is, after all, in a very fluid condition at the moment, and there are possibilities of very big developments. Now, those developments must rest on research. Some of that research will be carried out by the Ministry of Supply for military purposes. A great deal of the effort of research will be on the military side, and there will be a great deal of information which we should not know about, secret information; but in any development of an unorthodox type that information would undoubtedly become available to us. The cost of that fundamental research is so large that it can only be done on a national basis. That is the reason why I think, when we come to the unorthodox types, it is an entirely different problem from the question of ordering a ship.

Colonel *James Hutchison*.

1743. Yes, but to use the analogy again, of the Admiralty, you have several types of ships and the research is carried on by the Naval Design Department of the Admiralty, by Naval Architects, and they produce within the Admiralty the unorthodox type of ship. Is it not possible, then, that in the case of these fighting types of aircraft the Ministry of Supply could produce them?—Might I say there that I think you have an entirely different yardstick. I think that is one of the difficulties under which we are labouring at the moment, that during the war the yardstick by which the military aircraft is judged is by the last possible degree of performance, almost irrespective of cost or anything else. (Mr. *d'Erlanger*.) Might I interpose, to say that I think the basic difference in comparing the Admiralty procedure and the Air Force procedure, for a start, compared with when M.A.P. was created, which carved out of the Air Ministry the whole of the technicians, the same carve-out never took place with regard to ships in the Admiralty. (Sir *Harold Hartley*.) If I could just finish my point, you have the yardstick of the fighting aircraft where it is the last ounce of performance, whereas for our purpose it is the economy of the aircraft which determines its suitability. It has got to meet certain requirements, but within wide limits your choice is determined by economy and by ease of maintenance, which is entirely a different yardstick to that of the military type.

Colonel *James Hutchison*.

1744. Is it so, Sir Hartley, because economy is a thing that dominates the

thought of the commercial shipowner and the efficiency in submarines and in destroyers, and is the one which dominates the thoughts of the Admiralty in respect of that type of ship. I cannot see that there is a very great difference between the two analogies, the analogy between the Admiralty and the Air Force, but perhaps we might leave that for the moment. Can I put this question: How far do you think that the ordinary type of orthodox civil aircraft is going to be of value to the Air Force as a fighting machine? Are they interchangeable at all?—Only for transport purposes.

1745. Thank you very much. I do not think we will pursue that any further; we are much obliged to you for your opinion. There are just one or two other matters about which we would like to ask questions. One is this: Have you any yardstick to compare your operating costs with foreign operators? (Mr. *d'Erlanger*.) There is a statutory interchange of balance sheets and profit and loss accounts and, to some extent, detailed operating results required by P.I.C.A.O. and I.A.T.A., and we hope that by that means we shall be able to glean, at any rate, as much information as our competitors will be able to glean from us, so the degree of commercial disclosure in these public accounts submitted to these two bodies is going to be quite interesting to see.

Mr. *Corlett*.

1746. To find, you mean?—To find.

*Chairman*.

1747. It will be too early as yet?—It will be too early as yet, at this moment, to make useful comparisons. We have not, in fact, been in business a year yet. Insofar as we have been in business, we are still only really at the prototype stage.

Major *Niall Macpherson*.

1748. Does the exchange, such as it is at present, really enable you to arrive at a proper basis on which you can calculate the profit-ability of your flights?—It can give you some very good yardsticks to judge by, by comparative results, really.

1749. Has there been any sort of standard form introduced to which you have to adhere in order to provide a comparison of costs so as to calculate your costs?—P.I.C.A.O. and I.A.T.A. have laid down two, and in America the Air Transport Association has laid down also a standard specification for the manufacturer of an aircraft to adopt when he is, as it were, trying to sell his wares. He need not conform with the standard but if he does the operator knows what it means; it is standard classification of operating costs.

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Mr. Corlett.

1750. In addition to this comparison with foreign competitors, have you a yardstick for comparison with companies in this country?—The operations are so very different. We are virtually a suburban operator, and they are virtually a long-haul operator. It is like trying to compare the L.P.T.B. with the L.M.S. Railway.

1751. So that in no respect could you have a yardstick?—I would not say not for any item. There are all sorts of ancillary items, like catering and number of staff you have, and that sort of thing, which you could measure, but when you have the actual operation you would have to make so many reservations before you could get a useful comparison.

Chairman.

1752. Will these comparisons, adequate or inadequate, be the main incentive towards economy and efficiency?—They will be one of the big ones, but the task I have set myself and my own staff is to try to make our accounts square, and that is a big task.

1753. Particularly for the initial period?—Yes.

Major Niall Macpherson.

1754. How do you fix your fares?—The international fares are fixed by I.A.T.A., which is the International Air Transport Association, by agreement with all the other operators. In the fixing of domestic fares we are free from I.A.T.A., but it is laid down in the Act that we shall agree them with the Minister.

1755. On what basis has it been fixed; are you basing it on a notional cost, say, in 1950, or something like that?—We have not attempted, at the moment, to fix fares in the future.

1756. No. I mean, notional costs in 1950 and charging that fare now?—What is happening at the moment is that the cur-

rent fares are those which we inherited from the companies we took over. We decided that, for this year at any rate, we would not alter them substantially, except in one or two cases upwards, because we might drive away more business than we should get increased revenue from increased fares, having regard to the general embryo nature of the service we are offering to the public this year. We thought it would be psychologically a mistake, and we should lose more than we should gain.

Sir Peter Macdonald.

1757. Are you still operating priorities on your service?—There are a certain number on the Continental service, not internal. If I may just continue on the fare question, next year, as a sort of general approach to the problem, we think that the internal fare ought to match up with the external fare, so that is agreed by I.A.T.A. really, as a matter of accounting, internal and external. If you try to vary it upwards to cover your domestic costs you merely drive traffic away. It is illogical because your costs at home are inflated over your international costs by two very big factors. One is the very excessive landing fees which are charged us by the Ministry of Civil Aviation.

1758. If I might pursue that point a little further, it is obvious that as an operating Company you are very dependent upon the services provided by the Ministry?—Yes.

1759. By and large, are you satisfied with those services?—For the money he charges, I would say definitely not.

1760. What steps have you taken to secure what you would consider more reasonable charges?—We started discussing them when we first came into existence, in about April of last year, when these new landing fees first emerged.

Chairman.

1761. What success have you had in your protestations?—None. Words of sympathy.

*Further evidence, given by Mr. d'Erlanger as to the landing fees charged, at the request of Sir Harold Hartley was not recorded.*

Chairman.

1762. May I ask you, in general terms, what are the reasons given by the Ministry for the charges which you consider excessive?—(Mr. d'Erlanger.) They have tried (and they are to be congratulated upon this, probably) to say that airports shall be self-supporting.

1763. Regardless of the volume of traffic?—No; I do not think they have tried to say that they must be self-supporting

this year; they have tried to say they must be self-supporting as quickly as possible.

1764. Meanwhile, do they charge other countries the same landing fees—America, for instance?—Yes, they pay the same landing fees.

Mr. Corlett.

1765. Have America or France protested?—I do not know that they have protested, but it does not hit them in the same way because they only do one landing here

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M.C., F.R.S., and Mr. GERARD d'ERLANGER, C.B.E.

[Continued.]

whereas, on our domestic routes, we do two landings. The second factor is that we pay petrol duty on domestic operations. We do not pay petrol duty on external operations; we get the excise draw-back. Those are two very big factors.

*Chairman.*

1766. Just two final matters. We have had evidence about the functions of the Corporations, and we understand that, as yet, these functions have not been defined. Are you prejudiced in any way by that lack of definition?—I do not think so, Sir.

1767. No difficulties arise?—No.

1768. Finally, I wonder if you could indicate to the Sub-Committee, your record as far as safety is concerned?—I dislike talking about records of safety, on the grounds of superstition if not anything else; but, in fact, since we have been in operation, which is only a short time after all, since August last, we have not killed a passenger; we injured a few in an accident in Oslo, which was the subject of an Inquiry, and we had a minor accident in the Isle of Man a fortnight ago, in which some people received some minor injuries.

*Chairman.*] In view of the good deal of publicity there has been recently, we are very pleased to hear that.

Major *Niall Macpherson.*] Might I ask if Mr. d'Erlanger would be prepared to give us a few more figures on the two factors that he has been talking about, which we have excluded from the record, but it might be possible to circulate to the Sub-Committee confidential figures on that without having them in the record at all. Would it be possible for him to show how the petrol duty affects him, and what is the relationship to total costs?

*Chairman.*

1769. If Mr. d'Erlanger could let us have a memorandum on both those points they would be very helpful to the Sub-Committee, and in doing so we would leave it entirely to you to indicate any items which you consider to be confidential. Certainly such a memorandum would not be published without consulting you?—Right, Sir.

Sir *Peter Macdonald.*

1770. Could I ask for the establishment of personnel? Has the establishment been approved yet?—It does not need to be approved; it is within our own control.

Sir *Peter Macdonald.*] Could we have that?

*Chairman.*] If you have no objection to our having it?

Mr. *Corlett.*

1771. Could we have it broken down?—(Sir *Harold Hartley.*) Do you want the detailed establishment, Sir?

Mr. *Corlett.*] The global figure; and I would like it broken down.

Major *Niall Macpherson.*] What would be extremely useful to the Sub-Committee would be to show what types of personnel are employed in their airports abroad and in this country?

*Chairman.*

1772. We do not want to trouble you unduly. Perhaps the best thing would be to leave it to you, and then if there is further information required we will indicate what it is?—Is that information we could give you without it necessarily being published?

*Chairman.*] Certainly. As I have said with regard to the first two memoranda, none of this information will be published without consulting you.

Viscountess *Davidson.*] And if very much marked "Confidential," we impart nothing.

*Chairman.*] Yes.

Sir *Peter Macdonald.*

1773. Would it be possible to give an idea of the costs of the service you have in regard to the number of personnel and the number of machines you are operating?—(Mr. *d'Erlanger.*) I would like to put in a plea with regard to yardsticks, because I have so often heard the yardstick used: The number of employees per aircraft, which is quite meaningless. There is only one yardstick which is applied to any business if they are producing (and we are producing), namely, capacity ton miles, or passenger miles. The fact that we may be using 10, 20 or 50 seaters to do it has a bearing but it is not a fundamental bearing, and therefore I think the danger to be avoided is this measure of efficiency by the number of aircraft.

Major *Niall Macpherson.*] It would be useful to the Sub-Committee, none the less, to have the figures.

*Chairman.*] In considering those figures we will pay attention to the caution you have given us.

On behalf of the Sub-Committee, may I thank you very much indeed for the way in which you have given evidence before us this morning; it has been very helpful to us. I am afraid we have not only been dealing with unorthodox types, but you have been asked some unorthodox questions. However, the replies we have had will considerably help us in our enquiries. Thank you very much.

*The Witnesses withdrew.*

[Adjourned till Thursday next, at 4 p.m.]

THURSDAY, 19TH JUNE, 1947.

Members present:

MR. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. Corlett:  
Mr. Howard.

Colonel James Hutchison.  
Sir Peter Macdonald.  
Major Niall Macpherson.

CIVIL AVIATION.

Mr. J. W. BOOTH, Chairman, B.S.A.A.C., called in and examined.

*Chairman.*

1774. Mr. Booth, we understand that you are the Chairman of the new British South American Airways Corporation?—Yes, that is right.

1775. I think it would help the Sub-Committee if you could indicate generally what air services you are providing at the moment, and your relationship with the former Company which, I believe, ran our services to South America?—Shall I deal with the first point first, Sir?

1776. If you would.—We are to-day running (and it is not quite the same as in the figures the Permanent Secretary gave you) six services a week out of the United Kingdom and corresponding ones back. There are four on the South Atlantic route, that is to say for Brazil and on; one service a week goes to Rio; two services a week go to Buenos Aires; one goes to Santiago, Chile, on the West Coast via Buenos Aires. Then we have the Caribbean services from London, Azores, Bermuda, Nassau and Jamaica once a week, and once a week through the Caribbean, through Jamaica to Barranquilla, Lima, and to Santiago again.

1777. Thank you very much. What is your relationship to the Company?—Our relationship with the Company is that the B.S.A.A. Ltd. was originally formed by five shipping companies and the shares were bought by B.O.A.C., and so, for a time, B.O.A.C. was the holding Company and we were a subsidiary; but we operated entirely separately, the same organisation that we have got now, and then, when B.S.A.A.C. was formed on the 1st August of last year, B.S.A.A.C. bought the shares in B.S.A.A. Ltd. from B.O.A.C. The present position is that both the Corporation and the Limited Company are in existence. The Limited Company is still in existence because our right to fly to and through Brazil is in the name of the Limited Liability Company, and we are, as quickly as we can, winding up all the Limited Company's activities and transferring them to the Corporation, but both are now in existence and both are functioning. For instance, most of the assets have been transferred to the Corporation, but in Brazil, particularly, and in some of the other countries we still function as a limited Company.

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1778. That will continue, obviously, until these inter-Governmental agreements are revised?—As far as Brazil is concerned, the agreement has been negotiated but has not been ratified by Brazil yet, and until it is ratified the Corporation cannot take over.

*Major Niall Macpherson.*

1779. There has, I think, been difficulty over this from the point of view of Brazilian regulations. Could Mr. Booth assure us that those have all been cleared up now?—What sort of difficulties?

1780. I understood there were difficulties about a Company entirely owned by foreign Governments operating in Brazil?—Not operating; that is rather a different point; that is referring to having ownership in a local airline Company in Brazil. That arose through the German infiltration before the war, and then their forming local Companies which were subsidiaries of Lufthansa, and were instruments of propaganda and, possibly, worse. It is not only Brazil. Quite a number of other South American Companies, too, will not allow a State-owned airline to own shares in an airline operating internal services; it is only internal services in the individual countries. There are no difficulties about a foreign airline being State-owned, and running through Brazil, or Venezuela, or any of these other countries.

*Mr. Corlett.*

1781. You said that the Corporation had been formed, but the Limited Company were still in existence?—Yes; it is owned by the Corporation so, in fact, it is the same thing.

1782. It is merely a matter of accountancy?—That is all it is.

*Sir Peter Macdonald.*

1783. You have a working agreement with the Brazilian Government, I gather?—We have a permit.

1784. That was with the Limited Company?—Yes, because the Corporation was not in existence when we started to fly; in fact, the whole thing is settled, except that the bi-lateral agreement has to be ratified by the democratic Parliament which they now have in Brazil; they are very busy, and have not got round to it yet. That is all.

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Mr. J. W. BOOTH.

[Continued.]

*Chairman.*

1785. If we may turn to the programme you are required to submit under the Civil Aviation Act of 1946, can you tell the Sub-Committee whether you have submitted your programme in the prescribed form and also whether that programme has yet been agreed with the Ministry?—Yes; the 1946-47 one has been submitted.

1786. Has it been cleared and agreed?—Yes. Of course, the services which are envisaged in the programme demand the delivery of aircraft on certain dates, and I am afraid we are not getting delivery on those dates, which will, of course, affect the programme.

1787. Further to that, is there agreement upon the amount of the subsidy to meet the excess expenditure over income?—The answer to that is very simply "Yes" and "No"; there is no subsidy because the estimates show no shortage.

1788. If we could say a "grant" and not a "subsidy"?—There is not a grant.

1788A. We gather that you require a grant to meet the excess of expenditure over revenue of a quarter-of-a-million?—I think those figures were put in before our estimates were submitted?

1789. Yes?—In fact, our estimates show a surplus.

1790. I am sure the Sub-Committee is very glad to hear that?—Whether that surplus will, in fact, materialise in view of the late delivery of aircraft, of course is another matter.

*Mr. Corlett.*

1791. Do you order your aircraft through the Ministry of Supply?—The whole question of ordering is, at the present time, under discussion. The "Tudor" aircraft, of which we are awaiting delivery, were, of course, ordered by the Ministry of Aircraft Production, later Ministry of Supply, during the war before we were in existence.

1792. You are completely free to choose what aircraft you like, but you must order through the Ministry of Supply. Is that correct?—Not quite.

*Mr. Corlett.*] At the present moment, you are free to order what you like, as long as the Ministry of Supply and the Ministry of Civil Aviation agree with you. At the present moment, any orders must go through them?

*Chairman.*

1793. Is there agreement, at the moment, about your requirements and the types you require?—I think there is agreement, at the moment, as to what we require, but there is no agreement as to the method of ordering. I think you are aware that it is under discussion.

1794. What is your point of view about ordering?—There is only one satisfactory way, from our point of view, and that is

that the ordering should be done by the Corporation which is responsible for flying the aircraft and making sure that it gets the right machines at the right time and at the right price.

*Mr. Corlett.*

1795. You do not want any interference at all from the Ministry of Supply?—We do not want any interference. The present system results in the hamstringing of the Corporation and gives complete control to the Ministry of Supply. It is accordingly impossible to get the right machines at the right price at the right time. The Ministry of Supply, of course, has got all the research machine at its disposal, and it can help us a very great deal, but the final decisions, we feel, should be ours.

1796. If the Ministry of Supply can help you in certain directions, as you say, they can, might not that be part of the price you pay for that help—that you must order through them?—I would sooner do without their help on those terms.

*Major Niall Macpherson.*

1797. You said the right machines, at the right time, at the right place. I think the Sub-Committee will realise that all those three factors affect the success of your enterprise from a commercial point of view, but could you say a little more about the right time? To what extent, if you were doing as you would like to do and ordering direct, do you think that you would be able to improve this question of time, bearing in mind the commitments of manufacturers?—The great question always is, particularly on a brand-new type like the jet-propelled machines, how soon has the development programme of the manufacturer got to the position when the purchaser is ready to burn his boats and say: "O.K., we are now ready to place an order". There might well be a difference of opinion between the Ministry of Supply, the Ministry of Civil Aviation and the operator. We feel that we should have the last word; that is all.

1798. In other words, to come down to brass tacks, you think the trip to East Africa was unnecessary before you placed your orders for the "Tudors"?—But the "Tudors" were ordered long before the trip to East Africa.

1799. But that affected the time, at any rate, did it not?—It certainly did, perhaps without justification.

*Chairman.*

1800. In this matter, are you looking ahead, or do you feel, even at the present time, that you are prejudiced by this arrangement?—There are two situations: The wartime programme, of which we are now getting delivery, and we have got the future aircraft which should now be being ordered, and the present uncertainty and lack of decision is causing delay, undoubtedly.



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Mr. J. W. BOOTH.

[Continued.]

1801. Where does the lack of decision lie?—I think that is really more for the Ministry of Civil Aviation and Ministry of Supply to say; but there have been these discussions going on between the Government Departments concerned and the Corporations for a very long time.

1802. Is it fair to summarise it in this way, that as far as the Corporation is concerned you have got definite views, but you have not got any definite agreement yet?—We have not agreement with those views.

Major Niall Macpherson.

1803. Could I press this question regarding the "Tudor" a little further? Do I understand that you actually have placed the orders for the "Tudors", but that you were satisfied that the type as it then was before the further tests were carried out was adequate for your requirements, and that the type as it then was would have satisfied the Air Registration Board also?—It is a little bit complicated, because there are "Tudor I", "Tudor II", "Tudor III" and "Tudor IV". The type that went out to East Africa was the "Tudor I". The types we are interested in are the "IV" and "V". The "Tudor IV" is a "Tudor I" with six-foot longer fuselage, to our requirements, because we have not got the same range to compete with on the South Atlantic route as the B.O.A.C. have on the North Atlantic route, so we wanted extra space. The "Tudor IV" is slightly different from the "Tudor I".

1804. How many passengers do you carry?—We carry 32 passengers in the "Tudor IV" as against 12 in the "Tudor I". The point is that the "Tudor I", as I understand it, had got a certificate of airworthiness before it went on this trip to East Africa.

1805. Was your "Tudor IV" order held up because of the fact that the "Tudor I" was not manufactured?—No. The "Tudor IV" were ordered in 1943-44, so it did not affect the manufacture; it only raised certain points of controllability and power at these high-altitude aerodromes, which might have affected putting the "Tudor IV" into service had they been, at that time, ready to go into service, but they were not completed so it did not, in fact, delay the manufacture.

1806. Has it not delayed delivery at all?—I would not say it has not delayed delivery because there may be a certain amount of effort which has had to be put back into "Tudor I", which might otherwise have gone into the "Tudor IV".

Sir Peter Macdonald.

1807. What has happened to the "Tudor II's" and "Tudor III's"?—As a matter of fact, there are really two aircraft, the "Tudor I" and "Tudor II"; all the others are variants of the "Tudor I" and

"Tudor II". The "Tudor IV" is a "Tudor I"; the "Tudor V" is a "Tudor II". The only difference there is in regard to its internal arrangements as we want them which are different for our requirements from those of B.O.A.C.

Colonel James Hutchison.

1808. May I ask a point about the existing aircraft you are using? I gather they are mostly the "Lancastrians", "Lancasters" and "Yorks"?—If I might point it out, there is an unfortunate misprint in the Ministry of Civil Aviation paper. It says 8 "Lancasters"; it ought to be 3; it is a typographical error.

1809. It is on that fleet that you estimate during the year for which you have been submitting estimates?—With the "Tudors" according to the estimates starting in May.

1810. How many "Tudors" would there be; would there be a complete "Tudor" fleet?—No; we are estimating for four "Tudor IV's" and six "Tudor V's".

1811. I take it that your results will be very different if you do not get your "Tudors"?—It depends upon the date at which we get them. The real reason why the results would be very adversely affected is that we have been building up our staff of aircrews ready for these extra aircraft to come along, and our overhead expenses will be very little affected whether they come along or not, whereas our revenue-earning capacity is very much less if we have not got the aircraft.

1812. No variations of the "Lancasters" and "Yorks" will ever become commercial propositions in perpetuity?—No, not in perpetuity, but up to the 31st March, 1947, I should be very disappointed if we do not come out on the right side.

Major Niall Macpherson.

1813. Does that mean that the "Lancastrians" and "Yorks" will be dispensed with as you get the "Tudors"?—The "Lancastrians", probably. We hope that we may find employment for the "Yorks" in the development of the services.

Sir Peter Macdonald.

1814. May I ask upon what basis you acquired these aircraft?—The "Yorks" or the "Lancastrians"?

1815. Both. Did you buy them outright?—We bought the "Lancasters". The "Yorks" and "Lancastrians" are on hire.

1816. On what basis?—So much a year.

1817. Do you mind saying how much?—I think that is a little tricky because that ought to come from the Ministry of Civil Aviation end, ought it not?

Chairman.

1818. If you feel that, I do not think we should press the matter here.—Frankly, the basis upon which we have negotiated

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Mr. J. W. Booth.

— [Continued.]

with them was that we were perfectly ready to pay hire on the basis of what the aircraft were worth as commercial aeroplanes.

Mr. Corlett.

1819. You are hiring them from the Ministry?—From the Ministry of Civil Aviation.

1820. If you hire them from the Ministry, there is no test as to whether the figure you are paying is a commercial figure, is there?—If you take a comparison with a "York" or a "Constellation", but frankly, it is based pretty well on the cost, and the only test is the time over which you write off depreciation.

1821. That is the point I want to get at.—I cannot give you a figure on a "York" because I do not think it has been finally agreed yet; I think we are still arguing the point.

1822. How can you figure or estimate whether or not you make a profit or a loss on your working, if you do not know what the cost of your aircraft is?—The answer to that, of course, is that we have assumed a certain figure; that is why I do not want to throw too many figures around, because it may be that the figure we have used for our own estimates is not the same as the figure we are pressing the Ministry of Civil Aviation to accept. I think we have covered our estimates on that.

Major Niall Macpherson.

1823. Have you got a hard-and-fast figure yet on which you hire these aircraft?—For the "Lancastrians", yes, the "Yorks", No, simply because the "Yorks" came along later and we have had more time to argue the toss over the "Lancastrians".

Chairman.

1824. I gather, in spite of there being an absence of agreement, you must have a figure on which you base your estimates?—Yes.

Major Niall Macpherson.

1825. So what it means, too, from the point of the Ministry, is that they have to take the loss. You hire at a commercial figure, and if that does not coincide with the proper figure depreciation in relation to the original order, in that case the loss does not fall upon you; it falls elsewhere?—Possibly. Equally, of course, a lot of these aircraft were ordered as part of the war programme, and if they had not been taken up by civil aviation somebody would have had to pay some money to break them up.

Mr. Corlett.

1826. That is why I believe there is some form of subsidy in this matter.—I do not think so, because I do not think the terms we have got them on are better than

anyone else could have got them on. We do not know the first cost, actually; we only have an idea; we know what we think they are worth.

Major Niall Macpherson.

1827. May I ask what you normally treat as the correct period in which to write off an aircraft? Does it vary with different types?—Five years is the normal sort of book figure; 20 per cent. per annum on the aircraft.

Sir Peter Macdonald.

1828. As I understand, you got a nominal figure?—It is not nominal by any means.

1829. Is the "York" a commercial proposition as a transport aircraft, from your point of view?—Supposing we had not been State-owned, if we had been a Company like these charter companies—I do not know on what terms they get them from the Ministry; I do not think we get any better terms than the charter companies; I do not know the price at which they buy them, but I suspect it is directly related, for instance, to the hire that we pay.

Mr. Corlett.

1830. You would consider the question of hiring versus buying?—We bought the "Lancasters" because we came to the conclusion that it would be cheaper to buy them.

1831. But as to the others?—No.

1832. In the case of the "Yorks", it would pay you better to hire them?—We think so, and admittedly they are an interim type; they are not as good aircraft as the ones that are coming along like the American types and the new British ones. The "Lancastrians" are even more interim than the "Yorks".

1833. You buy the one and hire the other?—We bought the "Lancasters".

Mr. Corlett.] I am sorry.

Chairman.

1834. I gather there has been no question of the purchase of foreign aircraft?—No; we have not considered the purchase of foreign aircraft, because the British ones seem to be able to do the job more economically.

Colonel James Hutchison.

1835. Mr. Booth said a moment ago that there was the question of the American and British types coming along to satisfy your requirements?—Yes.

1836. Is the American type really a live proposition? You were precluded from using it even if you wanted to, were you not?—Yes. In our opinion, the "Tudor IV" is a better aircraft, for our purpose anyway.

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Mr. J. W. BOOTH.

[Continued.]

*Sir Peter Macdonald.*

1837. When you get delivery of it?—Yes.

*Mr. Corlett.*

1838. You have an opinion about the American aircraft, of course. You do not think you have made a bad bargain about the "Tudor IV", do you?—No.

*Chairman.*

1839. If we now turn to another subject, are you prejudiced at all by the apparent lack of decision regarding airports in this country?—No, because we only use the one—the London Airport.

1840. As far as you are concerned, that is satisfactory? You are not prejudiced in any way?—We do not want any other airport. I do not say that the conditions at the London Airport are entirely satisfactory, but that is another matter.

1841. Are the conditions prejudicing your services at the moment?—There is a lack of adequate hangar accommodation, and that makes one's operations more expensive, but it does not prejudice the operations.

1842. Are you satisfied that the requisite conditions are being provided as quickly as we can reasonably expect?—I think so; they are doing their best. Of course, we would like to see hangars, and the like, given first priority, but I understand some people want houses.

*Mr. Corlett.*

1843. How do you get a line of demarcation between the services you provide and the services provided by the airport? We have had the question of police before us. Do you provide your own police?—No. We provide, in our own hangars, watchmen for our own property.

*Sir Peter Macdonald.*

1844. You have your own servicing crews?—Yes.

*Mr. Corlett.*

1845. You do not think there is any danger of any overlapping, of their providing a service which could provide, or both of you providing the same service and one standing idle?—No. The functions are quite separate, in fact.

1846. You are, of course, using their aerodrome?—We pay them for the use of the landings.

1847. And, for that, they provide certain services?—Yes.

1848. I only wondered if there was any overlapping?—No.

*Major Niall Macpherson.*

1849. Do you actually lease the hangars?—Yes.

1850. Would you say how the lack of hangar accommodation makes your services more expensive?—We have to do most of our maintenance work at another aerodrome, and that means that we have "dead" flying. The final plan is that there should be adequate hangar accommodation at the London Airport for the aircraft using that port.

*Colonel James Hutchison.*

1851. How are you placed at the South American end for aerodrome accommodation, servicing and space?—The aerodromes vary. Facilities are a little inadequate at the moment, but it is really the same sort of story, that they are gradually being built up. Our main overseas bases, if I can give them that glorified name, are Montevideo and Jamaica. At Jamaica we have a perfectly adequate hangar, and at Montevideo we will have, if we have not got it now. At the beginning of April, it was nearly ready.

1852. At Montevideo you have to deal with the Uruguayan Government, and at Jamaica it is the Ministry of Civil Aviation?—No; it is the Director of Civil Aviation for the Jamaican Government.

*Major Niall Macpherson.*

1853. Does not the Montevideo base involve a little "dead" flying too?—From a geographical point of view, yes; from every other point of view, no.

*Chairman.*

1854. Returning to your functions, Mr. Booth, we gather that the functions of the Corporation are not yet definite. Can you give the Sub-Committee the reasons why no definition has yet been reached?—I should have thought that really the answer to that one was the gentleman who framed, and passed, the Civil Aviation Act of 1946, because it was left vague there.

1855. Have there been discussions between you and the Ministry?—I do not think there have been any practical difficulties.

*Mr. Corlett.*

1856. Is the vagueness an advantage?—It has not hurt us yet, and I think the point was that it was felt particularly an advantage when the Act was being passed.

1857. But you said there had been no practical difficulties? Can you envisage any?—I think we are building up a sort of case law, as to how the thing will work.

1858. It might be the best way?—It might be. It is working perfectly well now, and there is very good feeling on both sides. We do not fight the Ministry of Civil Aviation; we get on very well with them as individuals.

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Mr. J. W. BOOTH.

[Continued.]

Major Niall Macpherson.

1859. You are satisfied as to your powers under Section 2 of the Act, are you?—Yes. I do not think that has caused any trouble or embarrassment yet; it is working all right now.

Chairman.

1860. There have been no questions about you acting within or without your powers?—No.

Mr. Corlett.

1861. As far as the Corporation are concerned, they have no objection to remaining in the present fluid position?—Not at the present time. The way it is working is quite satisfactory to us now.

Major Niall Macpherson.

1862. Arising out of that, may I put a question about directions that you get from the Minister. Have you had many; I know they are going to be published?—We have not had any directions yet.

1863. You are just going your own sweet way?—All our programmes are, of course, agreed by the Minister and, so far, the initiative has come from us and has received the Minister's approval.

Mr. Corlett.

1864. The initiative always does come from you, does it?—It could come from the Minister under his powers of giving a direction.

1865. But, so far, there has been no case?—No.

Colonel James Hutchison.

1866. I see that the Ministry of Civil Aviation have an Assistant Civil Attaché and four Clerical Assistants in the Argentine, and they have a Civil Air Attaché in Central America and two Clerical staff. Do those seem to be well-placed, from your point of view?—I do not know where the Central American one is, anyway, but the Argentine, yes; the Argentine have bought quite a lot of British aircraft.

1867. But I imagine that man is there to help civil aviation, and it would be one of his duties, as Civil Air Attaché?—Does he, in fact, exist yet; I do not think he does.

1868. I have just got him on paper here. It seems he ought to be based on Montevideo from your point of view, if your main base is there?—Our main difficulties are elsewhere.

Chairman.

1869. If we could turn to your organisation, we realise that this must be in the very early stages of development. Can you tell the Sub-Committee whether you are taking any special steps to ensure the greatest economy in this development?—I hope so.

1870. Are you taking any special steps?—I do not quite know what you mean by "special steps". Every step you take is taken with the object of securing the utmost economy, compatible with safety and efficiency.

1871. Regarding the establishment, have you had any enquiries from within the Corporation or from without the Corporation to determine if you have got unnecessary overlapping or duplication of function?—The Corporations between them do co-operate as far as possible, to avoid duplication. That is not to say that at one place you may not find both Corporations in existence at the same time; but where that is so, you probably find that there are very good reasons for it. For instance, at Bermuda, B.O.A.C. operate there and so do we; they operate with flying boats at one end of the Island and we operate with land 'planes twenty miles away.

1872. At London Airport, have you taken steps, in conjunction with the other Corporations, to ensure that there is no such duplication of function?—Of course, B.O.A.C. is the only other one that uses London Airport. We each have our organisation there. If we put them all under the same uniform, there would not be any less bodies there.

1873. You have enquired into that to ensure that there is as complete an integration as you can get?—We know that their staff is fully employed and their organisation is bigger than ours. It is not such a small unit that it cannot give full employment to the bodies that they have got.

1874. What about maintenance; do you do your own maintenance?—Yes; that is an absolute prime requisite. We are responsible for the condition of those aircraft. If somebody else were doing the work we should not know whether it was right or wrong. The foreign airlines who use the London Airport, and have their own traffic handled by B.O.A.C., have their own staff of engineers.

1874A. Is that because you are operating different types?—No; but though you are operating the same types, they are not identical aircraft; there are different modification standards as between one "York" and another, and one "Constellation" and another.

1875. Am I right in assuming that it is largely because you have got direct responsibility for the aircraft?—Yes. I do not know of any economy that would be affected by doing otherwise.

1876. Because your staff, as you emphasise, is, in fact, fully employed?—Yes.

1877. Have you had any difficulties in getting the maintenance staff you require?—A certain amount of difficulty; it is one

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[Continued.]

of the bottlenecks,—licensed engineers. It has never become critical, but it is one of the things we have to watch all the time.

Mr. Corlett.

1878. Can you accommodate your staff in hostels or houses?—The housing problem is a very serious one out there, not only for the large population that has come in for the airport, but also for the local inhabitants. We are doing what we can to help. We have bought a house there which we are converting into a hostel for about fifty men.

1879. You must be competing with other people. I was wondering what particular inducements you are able to offer to get these people to come; are there any?—You mean, the trained personnel?

1880. Yes.—The wage scales are the same between all three Corporations; they are all agreed through the National Joint Council.

Mr. Barton.

1881. Where is your maintenance done?—Our maintenance is done at Langley, which is three miles away from Heath Row, at the far end of the by-pass road there; it is actually a Hawker aerodrome, a Ministry of Supply hangar, which we hire from the Ministry of Supply.

1882. Is it quite satisfactory?—The hangar is all right, but the trouble is that it is a grass aerodrome and bad weather is apt to cause difficulty; we cannot get the aircraft in or out; that is why we want to get into Heath Row.

Major Niall Macpherson.

1883. Have you ever had difficulty with your maintenance staff?—What sort of difficulty?

1884. From the point of view of organisation, or the point of view of labour relations?—I do not quite know what this has got to do with the estimates. I do not want to get involved in a long story, but most of our men at Langley are members of the Aeronautical Engineers' Association, which is a Union not affiliated to the Trade Union Congress, and that causes potential difficulties.

1885. I merely raised the question from the point of view of wages. That does not affect the common basis at all?—No.

1886. The national negotiating Council is part of that altogether?—Yes, the wage scales are absolutely standardised.

Mr. Corlett.

1887. Have you any training scheme for your men at all?—At the moment we have a rather embryo one, but an apprenticeship scheme for the three Corporation is in the throes of being organised.

1888. It does seem that the three Corporations do work together to a certain extent?—Yes, indeed.

1889. I was only wondering whether it would be possible for them to work more together. You say no, they go their way; you go yours?—The real criterion is if economy and efficiency are going to be helped by working together.

Chairman.

1890. Have you anything corresponding to efficiency committees?—Under the National Joint Council, which was formed a few months ago, the new organisation only starts on the 1st July so that all the old committees, which were build up piecemeal, came to an end and local committees, under the Council, start on the 1st July.

1891. Will they deal with, or will some of the local Councils deal with, broad questions of efficiency?—Undoubtedly. We must get, and have been in the past getting, the help of the people working on maintenance, engineers, and the rest towards efficiency. We have had it in the past, and I see no reason why it should not continue in the future.

1892. It has worked satisfactorily, has it?—Yes.

Major Niall Macpherson.

1893. For the training of pilots, are you intending to have a joint organisation there?—We have a different system of training from the other two Corporations. The other two Corporations have got their joint training organisation, but we are not parties to it because we feel we can achieve the same results with a less complex organisation.

Chairman.

1894. How does the present size of your staff compare with the size it will attain when you anticipate being in full operation?—We ought to be pretty close to the top because we have our air crews building up; we have been recruiting engineers, traffic staff, and so on to be ready and trained for the time when the presently envisaged programme is in full swing, so that I hope it will not grow very materially above what it is now.

1895. So that you are in a very good position to estimate your operational costs?—We can estimate our costs, we believe, with considerable reliability; of course the revenue side is more guesswork.

Colonel James Hutchison.

1896. On the revenue side I wonder whether you can tell us what sort of percentage of full pay load you have been carrying during the last six months?—Our business is mostly seasonal. At the moment we are carrying about 100 per cent. for homewards and 60 or 70 per cent. for outwards; but in the winter months you get a big drop, because people do not like this part of the world in mid-winter, and also

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[Continued.]

there is a certain psychological feeling against flying in mid-winter, so we get a seasonal drop.

1897. What is the position with regard to mails?—We carry the mails. We have no exclusive contract. We carry what mails are sent to us at agreed prices.

Major Niall Macpherson.

1898. At the same prices as competing air lines?—The Post Office pays the same rate to everybody; it is one rate for all.

Chairman.

1899. Are you in a position to say how your operating costs compare with similar services provided by other operating companies?—No, because I have not seen their figures.

1900. I thought there was machinery, at least, to indicate the figures?—We have not been in existence a year yet. You mean, the cost per flying hour on different types of aeroplanes?

1901. Yes.—We have not had sufficient time to get those out as a record of actual facts as opposed to estimates and short-term figures, but those will all be coming out when our annual returns are made.

Mr. Barton.

1902. How is our rate structure built up?—Is it built up in consultation with other lines?—When we started operations on the 1st August last year we were the only air line flying the South Atlantic. We were therefore able to start on a pretty simple basis by agreeing what we were going to charge with the Ministry and getting their approval. We estimated to balance the budget. Since then, of course, I think there are six other air lines flying the South Atlantic and all the rates are fixed through the International Air Transport Association.

Major Niall Macpherson.

1903. Are they all the same?—Do they all come into line with you in that respect?—No. There have been minor adjustments, but we were not far out. There have been slight adjustments, but, basically, the rate structure is the same as it was.

1904. Would you say that the reason why you require so much less subsidy, or indeed, no subsidy, as compared with the other Corporations is largely due to the selection of aeroplanes? To what do you attribute your success?—We have not proved it yet.

1905. How far has the right selection of aeroplanes and how far has the fact that the airfields were available through the Americans, and so forth, played a role in allowing you to operate without a subsidy?—That is very hard to say.

1906. I wonder if you could give an indication of the various airfields that you cover, and say to what extent they are

satisfactory to you?—There are a number of unsatisfactory aerodromes from various points of view that we use.

1907. Why are you particularly lucky in aerodromes?—We do not pay for the cost of these aerodromes. I do not know quite how that came into it.

1908. You use an economic aircraft as is the case, I understand, in the Far East?—Owing to the inability to take the weight of this aircraft? We are lucky to that extent, but we have not put any heavy aircraft on yet; we have not had the opportunity to be caught by it.

Chairman.

1909. Surely at the moment you are in the position to operate aircraft which are economic propositions?—It depends upon what you mean by "economic propositions." We do not regard the "Lancastrian" as an economical proposition; nor is the "York," in comparison with "Tudors," "Constellations" or "Sky-masters." One advantage that we did have was that we were first in the field in the South Atlantic, and we were able to build up a certain amount of goodwill and get a certain amount of flying experiences before any of our competitors came along, but that happy day is long past now.

Major Niall Macpherson.

1910. Has competition affected your receipts at all?—Undoubtedly. We have got Swedish Air Lines, K.L.M., Air France, Iberia, the Spanish National Line, Panair do Brasil, F.A.M.A., Argentine, and ourselves all now operating, with two or three more coming along shortly.

1911. Without a comparable expansion in demand?—Without a comparable expansion in demand, but the demand may build up with the services, to some extent.

1912. What is the ratio on which you base your estimate?—Load factor 60 per cent.

Chairman.

1913. You anticipate that you can hold that?—I do not know.

Colonel James Hutchison.

1914. That is a fair question for the Estimates Committee, surely?—As a matter of fact, quite definitely, we do not anticipate holding the load factor which was taken in giving these figures to the Ministry of Civil Aviation. The reason for that is that our business is not steady throughout the year. It has a peak in the Spring and the Summer and a falling off in the Autumn and Winter. If we get all our new aircraft this Autumn we shall have all the disadvantages of the cost of them through the Winter, and we shall not have been getting the revenue from

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[Continued.]

them in the peak period, so that should reduce our average load factor over the year.

Sir Peter Macdonald.

1915. There is not much likelihood of your getting them this Autumn, is there?—I have every hope that we shall put our first "Tudor" into service by August unless some new and unexpected snag comes along to bite us.

Colonel James Hutchison.

1916. What is our longest "hop" on this service?—The longest "hop" is from The Azores to Bermuda which is about 2,000 nautical miles.

1917. Is that the reason why the "Tudor" is more suitable to you than it is to the other North Transatlantic flights?—Yes, because the North Atlantic west-bound crossing in the Winter with very heavy strong head winds means that you require a still air range of a very large order.

Chairman.

1918. What is your safety record?—We have, I regret to state, had two accidents. I have no idea of the reason for one of them. The Inspector of Accidents put it down to the pilot's error; but we can find nothing in the records to show that it was the pilot's error; we believe it was a mechanical breakdown of some sort. Then we had a forced landing at Dakar a couple of months ago which is still *sub judice*, so I had better not say anything about it.

Mr. Corlett.

1919. You said you would not train your own pilots?—I did not say we did not train them.

1920. I am sorry?—I said that we did not want to go in for the scheme which is being used by the other two Corporations.

1921. I took that to mean that you are prepared to take your pilots from some other source?—We train them ourselves; we have a separate training scheme.

Major Niall Macpherson.

1922. You do the initial training as well?—We do not do the initial training. We do not take on people who have not got in several hundred flying hours before they come to us. The same position applies to B.O.A.C. If you read the B.O.A.C. advertisements, they require 800 flying hours.

Mr. Corlett.

1923. But you are not taking the finished article?—No. It is most unusual to find anyone out of the R.A.F. whom you could consider a finished article as a civil air line pilot.

1924. Is your system of training as efficient from your point of view as that of the other Corporations? You have had two accidents.—Yes. All I can say on that is that our standards or our requirements are higher.

1925. Than the other Corporations?—Yes.

Chairman.

1926. How many lives were lost in the two accidents?—About 30.

Major Niall Macpherson.

1927. Before we leave the question of pilots, have you found that the inducements you offer to pilots by way of salary, pension, and the rest, are sufficient to keep them there, or do they tend to go away to the service of other countries?—I only know of one man who has left us to go to the service of another country. We have a number of seconded men still from the R.A.F., and some of them go back for permanent commissions when they get the opportunity, but that, of course, is a different matter.

Sir Peter Macdonald.

1928. You are able to give them a long-term contract now, are you?—When they join us as members of our staff and are not seconded from the R.A.F., of course they come as permanent members of the staff. They do not have any specific contract; they just become established members of the staff.

1929. I understand that a good deal of difficulty in getting personnel just after the war from the R.A.F. was the fact that B.O.A.C. would not give anything over a six-months' contract to these people; the idea was that in time they would be able to give them such contracts?—We have had no request for a contract; they are just members of the staff.

1930. On a weekly basis?—On annual salary.

Major Niall Macpherson.

1931. How long can they go on for, up to what age?—The normal retiring age is 45, but it does not necessarily mean retiring from aviation.

1932. You still have jobs for them?—We hope we will have jobs for as many of them as wish to continue with us.

1933. There is a fair prospect of that? The pilots themselves are in a position to judge of their prospects. Is that the position?—I hope so. We encourage them to take an interest in the airline business generally, and not merely to become engine drivers, so that when they do stop flying they will know more than the mere flying.

Mr. Howard.

1934. On the financial side, I want to ask about this non-seasonable period. I take it you have to maintain a regular

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Mr. J. W. Booth.

[Continued.]

scheduled service airline; in fact, you will probably have to run at a loss, but you have to give the public a regular service?—Yes; of course, you have to give the public service so far as letters are concerned. If you do not keep up a reasonable frequency for the mails, they might as well go by sea.

Major *Niall Macpherson*.

1935. Would it be a practical proposition to have an entirely different programme, or time-table, for the winter and summer, and a different kind of aircraft which would give you a larger freight-carrying capacity and a smaller passenger-carrying capacity during the winter?—If you had different aircraft during the summer and winter it would multiply your maintenance problem, and you would not be able to get the same utilisation out of them but, of course, one can, if there is more freight and less passengers, always take a few seats out, particularly if you have your accommodation not all in one cabin but in several.

1936. You can do that?—You can remove seats; we do with the "Yorks" occasionally. If we have extra freight we use the forward cabin for freight, and not for passengers.

Sir *Peter Macdonald*.

1937. Have you an subsidiary companies?—Of course we have got British South American Airways Limited.

1938. Is not British West Indian Airways a subsidiary of yours?—No, not yet. The future of the British West Indian Airways is still the subject of discussion, but we have no interest in them at the moment.

1939. Are you using them as a feeder service?—We use them, as we use any other airline which connects with ours as a feeder, but we have no financial or managerial tie with them.

1940. Was it not proposed that you were to take them over eventually?—The future of British West Indian Airways is being considered, but what will come out of it I could not say.

1941. Is the Ministry of Civil Aviation carrying out the negotiations, or are you?—We all three come into it. They could force the issue if they had something they wanted us to do that we did not want to do, by giving a direction, but it has not got anywhere near that yet.

Mr. *Howard*.

1942. I understand that the mail services are going to be based very largely on the "Tudor IV's" when you get them?—The "Tudor IV" is specifically intended for the Caribbean service because it is a longer-range aircraft than the "Tudor V", and the Azores and Bermuda hop of 2,000 nautical miles is a more difficult stage than the 1,600 miles from the West Coast of Africa to the East Coast of Brazil.

1943. What I wanted to get at was this: Assuming that, have they got the necessary aerodromes and maintenance facilities for the new aircraft when they come into operation?—The necessary aerodromes, yes.

1944. Will it create any expensive maintenance problems for you?—We normally do all our maintenance in England, anyway; it is only what you might call servicing down the line.

1945. I am trying to check the expense of this Corporation against the others, who have told us: "We could do so much better here if only we had X type of aircraft." We have X type of aircraft here, but we cannot use them.—I think there is no doubt that we are better off on that. B.E.A.C. are very badly off because the aerodromes will not compete with the aircraft.

1946. But do you see any snags which will involve large capital expenditure in the near future in that way?—For aerodromes?

1947. Aerodromes, either on new maintenance arrangements or for new types?—Of course, the aerodromes are really outside our province.

1948. Except that you need them?—Except that we need them, but our normal procedure is to do all our maintenance at home; it is only servicing which goes down the line, so that we have no very heavy commitments, except possibly somewhere in the Caribbean area, if we are going to branch out there, and run our main services with connections on to various places. We have one aircraft based on Kingston now, and we may have more later on.

1949. You would have to make it a sort of Clapham Junction?—Yes.

Colonel *James Hutchison*.

1950. The "Tudor IV" and the "Tudor V" are going to be virtually the only machines you will have?—And the "Yorks". The "Yorks" will still be useful for this "Clapham Junction" business, and also possibly we might use them as extras for the other services in the busy season. We hope to find use for a number of "Yorks"; it is the "Lancastrians" which will be going out.

1951. You will be able to narrow the type of aircraft you are using very considerably, compared with B.O.A.C.?—But we are a very much smaller Corporation.

*Chairman*.

1952. With regard to your relationship with the Ministry of Civil Aviation, have you had any difficulty, for instance, regarding staff where you employ staff doing similar work to the Ministry?—We have had no difficulty, no.

1953. Has there been any competition between yourselves and the Ministry?—Not that I know of.



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[Continued.]

1954. Do you know whether the salaries or rates of pay correspond, or whether you are in a more advantageous position?—I do not know what the Ministry salary scales are. As far as the people who are covered by Trade Union Agreements are concerned that is all straightforward, and most of the other employees are covered by salary scales which are agreed between the three Corporations, so there is no real competition there on the wage business, but, frankly, I do not know what the Ministry pay so I could not say.

1955. So far as the Corporations are concerned, you have got your negotiating machinery and that determines the conditions.—Yes.

Major Niall Macpherson.

1956. You have not got any teleprinter service, have you?—We have teleprinters between the London Airport and the town office, and so on.

Chairman.

1957. I think Mr. Booth, as you yourself have indicated, we have perhaps occasionally run outside the strict purview of an Estimates Committee, but we are much obliged

to you for the replies you have given us, notwithstanding, and I assure you that you have given us considerable assistance this afternoon.—May I just say one thing about training, Sir? I do not want to leave a false impression. We train our aircrews from the time we get them until the time they go out on command, and they have to have qualifications which, as I say, we think are higher than those demanded by any other airline. The fundamental difference is that we do not set up a specific school where they go to school for a period. We have classes, and we do as much of the flying training as we can on the route, putting the junior officers on as supernumeraries.

Mr. Corlett.

1958. I put my question very clumsily. I was in doubt as to your answer, Mr. Booth.—That is why I thought it might be a good plan if I told you what we did do. I did not want to leave a false impression. The point is that they are trained, and the fact that they do not go to a specific school for so many months does not mean that they do not get as good, and we think better, training than they get with the other Corporations.

The Witness withdrew.

[Adjourned till Tuesday next, at 11 o'clock.]

TUESDAY, 24TH JUNE, 1947.

Members present:

MR. FREDERICK WILLEY (Chairman).

Mr. Corlett.  
Viscountess Davidson.  
Mr. Albert Edward Davies.  
Mr. Howard.  
Colonel James Hutchison.

Mr. Kirby.  
Sir Peter Macdonald.  
Major Niall Macpherson.  
Mr. John R. Thomas.

CIVIL AVIATION.

Mr. E. C. KITTS, Assistant Secretary, Works Finance, Mr. A. L. M. CARY, Principal (Air Staff Secretariat), Mr. S. P. PETERS, Principal Scientific Officer, Meteorological Office, and Mr. J. A. DAWSON, C.B.E., Director of Works (Civil Aviation), Air Ministry; Mr. H. HARVEY, Principal, General Finance; Mr. A. H. WILSON, C.B.E., Under Secretary (Aerodrome Administration), Mr. T. PARIS, Director of Finance (Ground), and Captain V. A. M. HUNT, Deputy Director of Operations (Co-ordination), Ministry of Civil Aviation,\* called in and examined:

Chairman.

1959. Gentlemen, as you will probably be aware, we are looking into the Estimates of the Ministry of Civil Aviation, and we understand that the Air Ministry acts, as it were, as an agent for the Ministry of Civil Aviation in certain respects?—(Mr. Kitts.) It is the agent department for the execution of works for the Ministry of Civil Aviation.

1960. I think, perhaps, it would help the Sub-Committee best if you were to explain just what is meant by this: We are informed that the Directorate of Works (Civil Aviation) is accommodated at

the Ministry of Civil Aviation, but forms part of the organisation of the Directorate-General of Works at the Air Ministry, which undertakes works services on an agency basis?—I think I can explain it in this way: The Ministry of Civil Aviation have no works department. The Air Ministry Director-General of Works carries out all works services for the Ministry of Civil Aviation; he "beds out" in the Ministry of Civil Aviation a few of his staff who deal with administrative matters, settlement of policy, and advice to the Minister of Civil Aviation as to what it is he needs. The executive branches in

24 June, 1947.] Mr. E. C. KITTS, Mr. A. L. M. CARY, [Continued:  
Mr. S. P. PETERS, Mr. J. A. DAWSON, C.B.E., Mr. H. HARVEY,  
Mr. A. H. WILSON, C.B.E., Mr. T. PARIS, and Captain V. A. M. HUNT.

the undertaking of the works are really the Air Ministry works areas; they are the regional offices in the provinces or overseas, or wherever the works are to be undertaken, and the policy having been decided by the Ministry of Civil Aviation on the advice of the Air Ministry "bedded out" Directorate of Works, instructions are then given to the Air Ministry Director of Works to do the job, and he then carries it through as if it were an Air Ministry undertaking; he advises his local regions as to what is required of them; he places a contract and carries the work through; he arranges for the supervision on the site; arranges for drawings; contract details; and so on.

1961. Is the position shortly this, that some executive staff have been transferred from the Air Ministry to the Ministry of Civil Aviation; they then give general directions on what they require, and all the administrative and technical work is carried out by the Air Ministry?—Yes. I should say that all the administrative work in deciding what it is that is needed for civil aviation purposes is in the Ministry of Civil Aviation; the subsequent executive work is in the Air Ministry.

1962. I am sorry. I was not using the words "executive" and "administrative" in the Civil Service sense. I appreciate the point you have in mind.—I am afraid my explanation was a little confusing.

1963. But the broad policy decision is taken in the Ministry of Civil Aviation and then the carrying out of that policy is the responsibility of the Air Ministry?—Yes; the policy decision is wholly for the Ministry of Civil Aviation; the Air Ministry only give advice; the undertaking of the work and the carrying of it through is for the Air Ministry.

Colonel James Hutchison.

1964. Policy on what; just over what area of policy?—I thought we were talking only about works; the construction of the airfield and buildings for the airfield, airfield lightings; anything connected with works.

Chairman.

1965. That is a continuing process, in the sense that at the airfields that are already in operation and controlled by the Ministry of Civil Aviation, you still have a resident staff from the Air Ministry?—There is a resident staff which is Air Ministry staff.

1966. Responsible for all the works required on the airport?—Yes. There are exceptions to this, in that certain airfields which are purely civil aviation—take Croydon, as an instance—the staff there is wholly in the pay of the Ministry of Civil Aviation. Their appointments, so far as

their works staff were concerned, I think, originally were made by the Air Ministry, but they are now wholly on the Ministry of Civil Aviation votes.

1967. Is it anticipated that in the future, as the aerodromes are completed, they will then become the complete responsibility of the Ministry of Civil Aviation?—No. I imagine that for some years to come the works service will remain with the Air Ministry, and I should imagine that if there is any transfer away from the Air Ministry it would be to the Ministry of Works rather than to the Ministry of Civil Aviation. The setting up of so many works directorates for work throughout the service is generally deprecated; the tendency will be towards centralisation.

1968. Is there any particular virtue in the resident staff being under the Air Ministry rather than under the Ministry of Civil Aviation?—The merit of it, I think, is interchangeability of staff, particularly for overseas works. You must have staff for overseas; the locals are quite incapable of dealing with it; you cannot keep men abroad indefinitely; they must have periods at home, and continuous training, and it is far better, I think, to range them right over the Air Ministry organisation.

1969. There are no difficulties, are there, in having at the airport staff who are responsible to, as it were, an absent Ministry?—No. You have the same position, really, in the R.A.F. stations; you have staff that are answerable solely to the Commanding Officer of the station; you have staff at the airport answerable completely to the Controller; then you have works staff who are answerable to a Superintending Engineer some distance away.

Mr. John R. Thomas.

1970. May I ask how they charge out those services to the Ministry of Civil Aviation; is it on cost or cost-plus basis?—The charge is made by adding departmental expenses to the work that we do for the other departments. It is common practice throughout the service departments. We do agency works for the Admiralty and the War Office; the War Office do works for us. We do works for the Ministry of Supply as well as for the Ministry of Civil Aviation, and it is the practice there to add a percentage to the capital cost of the works done.

1971. Could we have some indication (I am not asking for exact figures) as to what that is, in order, I suggest, that we could see the comparative cost independently? If we take the cost of a particular work, what percentage is added on to cover the departmental expenses? I am not asking for exact information, but generally?

24 June, 1947.] Mr. E. C. KITTS, Mr. A. L. M. CARY, [Continued.  
Mr. S. P. PETERS, Mr. J. A. DAWSON, C.B.E., Mr. H. HARVEY,  
Mr. A. H. WILSON, C.B.E., Mr. T. PARIS, and Captain V. A. M. HUNT.

—The percentage is 15 per cent; that is a standard figure that is applied throughout the service departments.

1972. I gather from that, then, that it would be impossible for the Ministry of Civil Aviation to run a separate Directorate of Works anything like so economically as it can do now, by utilising the Directorate of Works at the Air Ministry?—I would not have thought that there was any question of operating a separate organisation so cheaply as under the present system.

Mr. Kirby.

1973. Anyway, I take it that this 15 per cent. is not in the nature of profit; it is merely to cover your overhead and general administration expenses?—Yes, the rate was fixed by a Committee set up round about 1925, 1926 or 1927; it was the Ramsay Committee, and it examined costs of various services, overhead costs that could be attributed to them, and agreed that the fair uniform rate to be applied to all agency services for the future should be 15 per cent.

Colonel James Hutchison.

1974. May I ask a question on that, Mr. Chairman? When the original estimate is made for a certain work, I presume the 15 per cent. is added at that stage?—Yes.

1975. As the cost of carrying out that work goes up the 15 per cent. automatically goes up with it. It is a straightforward cost plus basis?—Yes. So far as relations with the Ministry of Civil Aviation are concerned, it would be. We are doing the thing on the cost plus basis; we recover our costs with our 15 per cent. added.

Mr. Kirby.

1976. But that comes back to my question: What do you call "costs"? I was looking upon it as the cost of the actual work on the site, and that was 15 per cent. added in order to cover the overheads and supervision of headquarters in London, and that sort of thing?—Yes, but the 15 per cent. is added to the cost of the contractors' works; that is the main item of cost. If we issue stores we should add that to the contractors' cost and add the 15 per cent., but the main item is the contractor's bill. To that we add 15 per cent. in claiming from the Ministry of Civil Aviation; that is covering the costs of our headquarters staff; regional staff, the cost of plant that we issue to the job, transport that we use in the conveyance of personnel and stores here and there, travelling expenses of staff, and so much contribution towards pensions, and all sorts of items.

Colonel James Hutchison.

1977. Is the contractor's basis of quoting a cost plus basis, too?—No.

1978. He gives you a fixed figure?—Yes.

1979. Is there a sliding clause in this contract?—I think I am right in saying that all contracts at the moment have that variation clause covering rises in standard rates of pay and rises or falls in certain commodities.

Chairman.

1980. Can you indicate, roughly, the size of your staff engaged on Ministry of Civil Aviation work?—It is possible to give you the size of the staff that is "bedded out" in the Ministry of Civil Aviation, but to give an indication of the proportion of the staff in the rest of the Air Ministry and in the works areas that is employed under the Ministry of Civil Aviation would be quite impossible. I certainly could not hazard a guess; I think it could be got by approaching each works area and getting its opinion. I think we can make a shot and say which particular works areas are seriously affected, but any figure that I could produce would be a wild guess.

1981. I wondered whether they mainly consisted of staff resident at the airports, or not?—No. Drawing office staff, for example, surveyors' staff at headquarters, and then there are, of course, our own Contracts Branches solely in the Air Ministry dealing with works services: the Finance Branches, although most of the finance work is done in the Ministry of Civil Aviation. I could not make a guess at it.

Mr. Kirby.

1982. Anyway, on that point, would it not vary very greatly from time to time according to what works were needed in any area?—Yes, most decidedly.

Chairman.

1983. If we could ask two further questions, the first is: Is there any special difficulty in the way of this work being done by the Ministry of Works?—Special difficulty? No, —except so far as airfield construction is concerned. It was certainly the opinion of a Select Committee of the House, round about 1941, that it was desirable, if not essential, that all airfield work should be centred in the one department, but so far as buildings are concerned, I imagine that for some years to come buildings may be the principal interest of civil aviation in this country. I would not have thought that the Air Ministry would claim any special rights or benefits in the interests of that work.

1984. Secondly, if we turn to your specialist work and technical work, the Sub-Committee understands that you act as

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agent for the principal—the Ministry of Civil Aviation, and carry out all the surveys and architectural work. Turning to that, have you got a staff specially assigned to that work?—Only those administrative staffs that are “bedded out” in the Ministry of Civil Aviation can be said to be assigned specifically to that work; the rest is spread as it falls either in a particular area or throughout the Air Ministry. They are not specialists.

Mr. John R. Thomas.

1985. Is it not a fact that the staff so “bedded out” are chiefly maintenance?—So far as headquarters are concerned, no; they are not maintenance staff at all. They are what I would call technical advisers, advising as to what are the future requirements.

1986. I meant at the aerodromes?—At the aerodromes, yes.

Chairman.

1987. I think there is a confusion here; I would like to clarify this, if I may. Is this the position, Mr. Kitts, that your staff “bedded out” are only technical staff to advise the Ministry of Civil Aviation in coming to their decisions?—To advise the Ministry of Civil Aviation in coming to decisions, yes.

1988. When the decisions are taken, then the responsibility for carrying out all the technical work is that of the Air Ministry?—Yes, that is right. (Mr. Dawson.) I think, if I may speak there, this Directorate, which is so-called “bedded out” in the Ministry of Civil Aviation, acts in a way as an integral part of the Ministry, advising them on all their works projects and advising them on their estimates so that administratively they will be satisfied that the estimate is satisfactory before it goes to the Treasury. When the work has been approved, then my Directorate makes arrangements with the appropriate sections of the Directorate-General as a whole, for the carrying out of the work; it issues instructions to the Design Branch; it issues instructions to the Contracts Branch; it issues instructions to the areas for them to executive work; indeed, it relieves the Director-General of the direct burden. Working under his general directions it, nevertheless arranges for the execution of works, and controls it during its execution, pays visits to the sites, and supervises the work. In that way it operates, indeed, exactly in the same way as the Director-General himself does at the Air Ministry.

1989. I would like to make it quite clear. What disturbs the Sub-Committee a little is that it would appear that two Ministries are doing one job?—Of course that is entirely wrong.

1990. If I can clear up that point. What you are saying in your answers, Mr. Dawson, is surely that the Ministries are contributing to the performance of one job?—No. The Ministry of Civil Aviation lays down what it requires; the Air Ministry, through me, gives effect to their policy.

1991. That is the very point I am making. We are not endeavouring to indicate any point of view at all. We just want to get it clear in the minds of the Sub-Committee. The Ministry of Civil Aviation are responsible for policy; the Air Ministry carry it out; but to enable the Ministry of Civil Aviation to come to the right policy, as you say, you “bed out” officials with the Ministry. I would like to go on from that. It would appear to the Sub-Committee that, on the question of airfields, airfields in general must be integrated; the strategic factor will affect the siting of civil airfields?—(Mr. Kitts.) Yes, that is feasible.

1992. What machinery is there for having an integrated policy regarding the siting of airfields in general?—(Mr. Cary.) If I may answer that question, Sir, there is a Cabinet Committee to cover this subject. Our Ministry carry out high-level integration under its aegis, and before committing themselves to any considerable programme of airfield lay-out the M.C.A. consult us, and a joint paper is then put in to the Committee. One has been submitted on the airfields for the United Kingdom, and that has been dove-tailed with the strategic plans for the defence of Great Britain prepared by the Air Staff. There is very close collaboration, therefore, on the strategic aspects and also overseas along the trunk routes.

1993. In other words, what is required from the Ministry of Civil Aviation is an indication of their requirements for civil air traffic?—Yes. In formulating those requirements they have, of course, really three masters. They have their own responsibility to His Majesty's Government to provide British Civil Aviation with proper backing; they have their international obligation to P.I.C.A.O. to provide certain international facilities both at home and along the Imperial routes at the moment, and, thirdly, they have an obligation to the Air Ministry to see that their plans are consonant with Imperial Defence. When the plan is agreed, then the responsibility for carrying it out is entirely that of the Air Ministry; the physical responsibility for carrying it out is that of the Air Ministry.

Mr. Corlett.

1994. You seem to have a Ministry of Civil Aviation whose policy is decided by the Air Ministry on the advice of the Air Ministry?—No. (Mr. Dawson.) On technical

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aspects, how can the work be carried out; its estimated cost and so forth?—(Mr. Cary.) Is it not the position that in deciding this policy the technical factor looms very large? The Ministry of Civil Aviation would have to provide, if they were going to try to formulate their policy themselves, a pool of technical staff with considerable experience. In fact, the Air Ministry already possesses such a pool in the shape of the Directorate-General of Works, and in the interests of national economy as a whole we have made available the resources of the Directorate-General to assist the Minister of Civil Aviation in reaching his policy decisions; and, for administrative convenience, we have located a certain portion of the Directorate-General of Works in the building. Would you not agree, Mr. Dawson?—(Mr. Dawson.) Yes. (Mr. Cary.) It is a matter of geographical convenience as much as anything else.

*Chairman.*

1995. Just to make one point quite clear, when it comes to the technical work performed by the Air Ministry, it is not given to a special staff; it is given generally; you have not got a staff allocated to work for and on behalf of the Ministry of Civil Aviation?—No. On the contracts side it becomes part and parcel of the overall programme for that year.

1996. Are there no special considerations operating regarding the construction of civil airports that make it necessary to have specialised staff at the Air Ministry?—No. (Mr. Kitts.) Certainly not.

*Mr. Howard.*

1997. A question I want to ask is: Are there any technical requirements of the Ministry of Civil Aviation which the Air Ministry are not able to supply?—(Mr. Dawson.) None at all.

1998. Then, so far as we can see, it should be unnecessary for the Ministry of Civil Aviation to have any technical staff at all?—(Mr. Kitts.) It has not any technical works staff; they are all Air Ministry technical works staff. The fact that they are in the Ministry of Civil Aviation is just a matter of convenience; they are housed there because of their contacts; the people who come to them for advice are there.

*Viscountess Davidson.*

1999. They have no technical staff at all?—We are dealing now with technical works staff. Mr. Dawson, who is Director of Works (Civil Aviation) is an Air Ministry employee and not a Ministry of Civil Aviation employee. (Mr. Cary.) Were you thinking of the point as to whether in the

future the Ministry of Civil Aviation will ever require to build up a separate technical staff of their own?

*Mr. Howard.*] No. I was trying to get the view of what is necessary at the present time and compare that view with what is actually happening at the present moment.

*Mr. Corlett.*

2000. I have the same problem in mind as to where the technical staff is. I want to be quite certain that there is no duplication?—(Mr. Dawson.) The Ministry of Civil Aviation have not any technical works staff.

*Chairman.*

2001. If we take Heath Row as an example, when it comes to the design of Heath Row, is it carried out by the Air Ministry?—Yes. (Mr. Kitts.) Yes; all the design work in the preparation of the airfield at Heath Row was carried out by the Air Ministry.

2002. You are entirely responsible for it? You can say to the Ministry of Civil Aviation: "We know quite well that this is a designated airport; we know what is required, and we are going ahead with the plans"?—No; it is put to the Ministry of Civil Aviation that this is our recommendation as to what should be provided.

*Colonel James Hutchison.*

2003. But they having once agreed, you are responsible for the carrying out of the work?—Yes.

*Mr. Kirby.*

2004. Do they ever quibble about your recommendations and try to pin you down to some other design?—(Mr. Dawson.) It is a matter for mutual agreement, really.

*Chairman.*

2005. But they really indicate to you: "These are our needs which we require to be satisfied; we expect certain craft will be using this airport; we want it to be a first-class international airport". You say: "Very well. We will prepare designs and submit them to you"?—In civil aviation there are many outside interests concerned; there are customs, immigration, health and the Corporations; they have got to be consulted through the Policy Branches of the Ministry of Civil Aviation to ensure that their requirements are being satisfied and that we are obtaining the most efficient results.

*Sir Peter Macdonald.*

2006. Is it not true to say that if the Ministry of Civil Aviation wanted to build a new airport (Heath Row was built as a military airport) in the future they would employ an aerodrome architect in the first place?—They would employ my department.

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Of course, we are, in a measure, aerodrome architects; we have been planning aerodromes; it is our job to plan aerodromes; and they would entrust the task to the Director-General of Works.

2007. They might also consult a civil architect outside, might they not?—If they thought it necessary; but I think there is a consensus of agreement that the knowledge of airfield construction is very largely concentrated in the Director-General of Works of the Air Ministry because, after all, he has got the longest experience; it is he who constructed the whole of the aerodromes for the R.A.F. during the war, as he was constructing them before the war; he has the greatest knowledge of this new form of airfield construction which has developed since the war to take these heavy loads. I think it is not really too much to say that he possesses the greatest specialised knowledge in this country of that subject.

2008. But he has been building military aerodromes and the Ministry of Civil Aviation may consider that they want a different layout for civil purposes?—When it comes to layout, of course there is particularly one division in the Ministry of Civil Aviation which is concerned with layouts, from the flying and operational point of view, which gives us the necessary guidance in the matter. It is not a works problem to say that a runway shall be in a certain direction (that is a flying point), and to say how long the runway shall be, and to say how wide it shall be; but we say how strong it shall be and how it shall be drained, and how it shall be constructed.

2009. That means that the Ministry of Civil Aviation will have some technical staff?—For planning from the operational point of view, but not from the purely works point of view—more from a flying point of view.

*Chairman.*

2010. Perhaps I made a mistake in choosing Heath Row as an example. We will not specify the area, but let us take, as an example, an area in which a new airport is going to be built under the agreed plan for the air development of the country. What happens? It has been agreed at policy level that there shall be an airport in a particular area: What steps are taken to translate that into actuality?—The Ministry of Civil Aviation will select the appropriate site or sites and, having done that, they will ask the Works Directorate to prepare a survey to enable some idea of the difficulties involved on the ground to be obtained. When that works survey has been prepared, and the report submitted, then the Ministry of Civil Aviation will consider it; but it is their responsibility to negotiate with, or to consult the local authorities. There may be, for instance, as there are frequently in these days, under

some of these sites, coal, and that must enter into negotiations in connection with coal.

2011. Just pausing for a moment there, supposing it was an Air Ministry aerodrome, who would carry out those negotiations?—The Policy Branches of the Air Ministry. Then there are overhead electric systems which may have to be removed; there are roads which may have to be diverted; the works plan shows that these roads have got to be diverted; but the negotiations with the authorities concerned is a matter for Ministry of Civil Aviation policy. We report on the facts and what is necessary, but we do not arrange to clear the difficulties in the way of carrying out our programme.

2012. But you, in fact, have the staff in the Ministry to carry out the work equally as well as the works side of it?—Yes; that is not quite for me to answer, that is done by the Ministry of Civil Aviation. We are purely concerned with the technical aspects; the aspects of the works administration, an engineering organisation, and we are only concerned with engineering or the architectural aspect, of course.

*Mr. Howard.*

2013. May I follow that, Mr. Chairman? My recollection is that on a previous occasion we were informed that so far as acquisition for aerodrome purposes was concerned the Air Ministry acted as the agent for the Ministry of Civil Aviation?—(Mr. Kitts.) Yes, that is true. Our Lands Branch purchases land, or hires land for the Ministry of Civil Aviation, just as it does for the Air Ministry, and just as it has been doing for the Ministry of Supply; that is, the Ministry of Aircraft Production side of the Ministry of Supply.

2014. Insofar as that acquisition may involve negotiations with local authorities, with owners of minerals under the ground, am I to understand that that work is not carried out by the Air Ministry, but by the Ministry of Civil Aviation?—No. The acquisition of the land, and that is the point, is carried out by the Air Ministry.

2015. Everything to do with it?—Everything to do with it. Once it has been decided, by the Ministry of Civil Aviation, that it requires that land the Air Ministry acquires it.

*Viscountess Davidson.*

2016. Exactly as they did during the war? The Lands Branch carries on the same work as they did during the war for the Air Ministry?—Yes. The Lands Branch that acquired the land during the war for the R.A.F. is acquiring land now for the Air Ministry and for the Ministry of Civil Aviation.

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Sir Peter Macdonald.

2017. The Ministry of Civil Aviation have no Lands Branch of their own?—No; it would surely be uneconomical to have started an entirely new Lands Branch?

Mr. Howard.

2018. So that once the Ministry of Civil Aviation have decided to acquire, and have got approval to the acquisition of certain land for the purpose of a civil aerodrome, once the policy has been decided, the whole of the carrying out and the implementing of that policy is undertaken by the Lands Branch of the Air Ministry?—That is so. It is being considered whether, because of the overloading on the Air Ministry Staff, the acquisition of land which has not been occupied by the R.A.F.—lands in which the Air Ministry Lands Branch has not hitherto been concerned—might not equally well be turned over to the Inland Revenue District Valuer to acquire. If the Inland Revenue District Valuer's Department have staff for the job, it is possible that they will be asked to undertake the acquisition of new airfield sites.

Viscountess Davidson.

2019. What acquisitioning have they done before?—They purchase for the Ministry of Supply other than the Ministry of Aircraft Production side, and for a number of civil departments, and of course for local authorities. Most of the local authority purchases, I believe, are effected at least on the advice of the District Valuer.

Colonel James Hutchison.] May I ask what the scope of this is? I understand, from an earlier observation, that, on the whole, the chief direction in which the Directorate of Works will be employed in the future will be rather in buildings, apart from the principal airfield of Heath Row. Is that so? Do you visualise the acquisition of much more land for the purpose of airfields? Do you visualise much more in the way of runway construction for civil aviation, or are you taking over mainly existing airfields, apart from Heath Row?—(Mr. Dawson.) The programme visualises very considerable extensions of that kind. There is a project for a new aerodrome in the Newcastle area because there is not any aerodrome suitably located vis-a-vis Newcastle. Many other aerodromes, including Ringway, Speke, Prestwick, Renfrew and Turnhouse have got to be extended. There will be considerable runway works to be done and, in addition, with the possibility of aircraft loading going up and, observing that the runways existing at these sites were constructed during the war under war-time conditions and, may not be capable of standing up to continuous and heavy wear

by civil types of aircraft, it may be necessary to over-slab or to reconstruct the existing runways in due course.

2020. I do not believe that it would be a waste of time, to return to this cost plus basis, Mr. Chairman. In commerce, there are two systems of cost plus used just now, and I would like to be clear which, in fact, applies when you ask for tenders from contractors to carry out the work as you have indicated. The first system is that, having arrived at the estimate of their labour and materials, they then add an agreed percentage to that total to cover overheads and to cover profit, and that agreed percentage, irrespective of the increase that may come about in labour and materials, is fixed as a figure which remains constant. The other way is that the percentage which they are allowed to add, in fact, rises as the cost of wages rises, or the cost of material rises. There has been a good deal of criticism of the second method because there is absolutely no incentive to get on with the work. On the contrary, with the first method there is every incentive to get on with the work. I wonder if Mr. Dawson could say which, if either, of those systems is used in farming out a contract to a contractor?—(Mr. Dawson.) If I may go back a little bit, to the beginning of the war, my Director-General set his face absolutely against the cost plus system. Even under war conditions we, as an Air Ministry, did not adopt it; we had had experience of it in the previous war; we knew what an iniquitous thing it was and, therefore, we did not adopt it. We did, however, adopt what is known as the target cost system, in which the profit is fixed, a management fee so to speak, and if the contractor carries out the work more cheaply he gets a larger profit than if he expended more money. If he expends more money he loses some of his percentage; but none of these systems has been applied for many years in the Air Ministry, and none of them is applied in any circumstances to Ministry of Civil Aviation works. All works are carried out on a lump sum quotation, or a scheduled price quotation, in which the contractor quotes the price for which he is prepared to carry out the work and is paid accordingly.

2021. Irrespective of any rises in wages, or materials?—There are such clauses for rises in wages, but that does not affect the validity of his tender for the work based on the basic price which he has been notified are applicable at that time. For instance, in the case of gravel, ballast for concrete, it may be stated that he has got to quote on the assumption that ballast will be obtainable at 10s. a cubic yard. If the price of ballast goes up through a general rise in prices to 15s. a cubic yard, then that is provided for in the settlement

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of his final bill. Similarly, he is informed that the wages are 2s. 3d. for a carpenter, and so much for other trades, and if these wages go up then he is not required to take the risk; he is paid the additional cost of that rise in wages.

2022. That is perfectly clear to me, but what still is not clear is if both those items which you have indicated go up, does his percentage, which constitutes his overheads and profits, go up also?—Are you not there, Sir, confusing the issue? Mr. Kitts was talking about overheads in respect of the department.

2023. I am coming to that later. I was thinking of the contractor: whether you have a good system, with the contractor, of getting the work done as cheaply as possible, and whether there is an incentive on the contractor to get the work finished?—Yes.

2024. If you tell me that there are these sliding clauses which allow labour and material to rise in the final price you pay, does his profit also rise, or the percentage which is allowed for overheads and profit also to the contractor also rise?—His profit is fixed in the rates which he quotes against the items in the bill.

Mr. Kirby.

2025. Just one other thing with regard to that. I take it that this variation clause provides for falling prices?—Yes.

Mr. John R. Thomas.

2026. I would just like to ask one question as regards the tenders. I understand, of course, that you invite tenders from separate contractors and so forth. There has been a tendency, of course, for contractors' tenders to be very closely related to one another. The reason for it we are all aware of. I am wondering whether there is any machinery at the Directorate of Works which enables it to discover whether these prices of a fixed tender are genuine, or otherwise?—I should say, Sir, that the point really does not arise, because there is a very wide variation in prices today—very considerable indeed. I do not know if you are suggesting that there might be collusion?

2027. I am not suggesting it; I know there has been collusion. I am wondering whether the Ministry have the machinery adequate to off-set any such collusion on the part of a contractor or a number of contractors?—Mr. Kitts might talk on that better than I can, because the Contracts Directorate would be responsible for doing that; that is not part of the Works Directorate. The Directorate which lets the contract is an administrative department of the Air Ministry. (Mr. Kitts.) I think we may put it this way: If there were evidence that the

tenders were faked and we imagined that they were all on the same basis, I think all tenders would be declined. The evidence that the tenders are reasonable is that you have a comparison between the estimate for work which was prepared by your Surveyor before you went to tender, and you have the result of tender. It is not so simple a matter as it looks, to compare the financial result of the job with the tendering, but it can be worked out. You can arrive at the knowledge that the estimates are reasonable, or that the tenders are outrageous.

2028. In other words, you test the tender as to its reasonableness, irrespective of the various tenders received?—Yes; you have a yardstick for measuring.

Chairman.

2029. Before we leave this aspect of your co-operation with the Ministry of Civil Aviation, may I turn to a point which has been mentioned, namely, the question of the terminal buildings? I take it, from what has been said, that the responsibility for the design and erection of the buildings will be that of the Air Ministry?—(Mr. Dawson.) There we have an exception. It has been decided by the Ministry of Civil Aviation that the permanent terminal buildings at the London Airport will be offered to open competition between architects, either in this country or in the Empire, but the Ministry of Civil Aviation will state their requirements and will invite competition; that work will not be undertaken by the Air Ministry.

2030. Have we not got a division of responsibility now on the airport; the construction of the aircraft buildings will be the responsibility of the Ministry of Civil Aviation, and the responsibility for the design and construction of the rest of the airport will be that of the Air Ministry?—It is not quite that. For other work the Ministry of Civil Aviation entrusts the responsibility to the Air Ministry. In respect of the permanent terminal buildings it will entrust it to an outside architect. The outside architect will be responsible for giving effect to the Ministry of Civil Aviation's requirements, in the same way as the Air Ministry does for other works.

Viscountess Davidson.

2031. And that outside architect will employ whom he likes; it is going to be quite independent of you once it is approved of?—That is so. There will be an intermingling of responsibility because certain ground works will probably be the Air Ministry's responsibility. The apron surrounding the area will be the Air Ministry's responsibility, but the actual structure of the permanent buildings will be the responsibility of an outside architect.



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*Chairman.*

2032. Do you know whether this division will operate regarding the new airports to be constructed?—That is a point for the Ministry of Civil Aviation representatives to speak to. There has been no suggestion of it. It has been done in the case of the London Airport because it is considered to be a building of the greatest importance. It will be the first building that visitors from overseas will see, and it is considered that it should be designed by the best designers that can be found in the Country or in the Empire. That, I think, is the particular reason in the case of the London Airport, but I am not advised that it is likely to apply to any of the others.

*Major Niall Macpherson.*

2033. It was emphasised to us at an earlier stage that one of the great difficulties with which civil aviation had to contend was the layout of buildings on the aerodromes; that they were taken over from the Air Ministry; and were dispersed with a view to suitability for operation by the Air Ministry. It seems to me, therefore, that the kind of experience that the Works Department have had in his matter is, might I say, diametrically opposed to the kind of experience that civil aviation expects to gain? I wonder if Mr. Kitts could say one or two words about that, and about his assessment of the competence of his own department to fit in with the Ministry of Civil Aviation requirements, say at Hurn, for example, and other places where buildings specially suitable for civil aviation, as opposed to buildings for the use of the Air Ministry, have to be erected?—(Mr. Kitts.) Of course, the reason that our buildings at R.A.F. airports during the war were dispersed was because the Air Ministry Works Director was asked to disperse them; it was a requirement of the Air Staff that we should have not more than 400 men in a holding.

*Mr. Howard.*

2034. For security reasons?—Yes, absolutely for security reasons; they had to be dispersed at 100, 200 or 300 yards so the Air Ministry had no choice but to put packets of small buildings round the airfields. At permanent stations before the war it built its barracks in permanent construction, its messes and so on, in a complete holding; it built up a small community there which would be the equivalent, I think, of the civil aviation buildings that you will require at an airport. I am quite certain that the Air Ministry Works Directorate is quite competent to build what it is asked to build. (Mr. Cary.) Mr. Dawson did say in evidence that the Ministry of Civil Aviation already had a section concentrating on lay-out

sections. The responsibility of the Air Ministry is confined to the actual construction work, and so their experience in lay-out is not really relevant. It is their experience in the works problems that I think, as Mr. Dawson has said, is adequate.

*Colonel James Hutchison.*

2035. We have heard how these contractors finally submit their contracts. You told us that there was an addition of 15 per cent. which, I think, the Works Branch claim from the Ministry of Civil Aviation for the work they are doing?—(Mr. Kitts.) That is so.

2036. On what figure does that 15 per cent. play?—Does it play on the original cost or tender of the best contractor, or does it play upon the final figure as submitted by him?—It is assessed on the actual cost which is incurred by the Air Ministry in meeting the contractor's bills and its own bills in the purchase of stores, should it purchase its own stores.

*Mr. Howard.*

2037. May I supplement that by taking a specific hypothetical case which was mentioned of gravel which has gone up 50 per cent. in cases? The original tender allows for £100 worth of gravel. As a result of increase in cost it takes £150 worth of gravel. Does the commission or agency fee charged by the Ministry come to £15 or £22 10s.?—It would become £22 10s. The Air Ministry would claim for its overheads £22 10s. instead of £15.

*Chairman.*

2038. If we may leave that aspect of your co-operation with the Ministry of Civil Aviation and turn to another, we understand that owing to the small size of this country and the absolutely essential nature of uniform air traffic control in the same air space, it has been agreed that a unified control service staffed as appropriate by the R.A.F., the Royal Navy and civilian operators, will be put into effect in this country?—(Mr. Cary.) That is correct.

2039. How will that affect the Air Ministry?—To some extent we shall be the gainers. We shall provide less control staff and organisation, because it will be more economical than three separate organisations. To some extent, it will complicate our problems because we have already to train R.A.F. operators in civil procedures. Obviously, if you are controlling a single-seater aircraft you must have a simplified method which will not be applicable to a large four-engine passenger liner. The new International Regulations do make provision for a small aircraft, but in certain respects their control procedures differ from Service procedures. We do not think the

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civil control procedures are ideal for service purposes, but we are accepting them in the interests of smooth working with our own and international civil aviation and because this country is very small. If we are operating an entirely separate control procedure in this country, difficulties might easily arise in congested areas.

2040. I gather that you do not anticipate any difficulties from your point of view?—No difficulties that will not be superable. There will be certain staff difficulties; there always are; but I am quite confident that they can be overcome. The system is already working, and the first experience we have had with it has been very encouraging.

2041. To go on from that to some of the technical services, we are aware that the meteorological services are provided entirely by the Air Ministry?—Yes. The Meteorological Service is, of course, a national service, and it is important to remember that it provides information not only for the air but for very important ground users and sea users and, insofar as the Meteorological Service provides general information about the weather, there is no question of recovering the costs; that is its job in the national organisation. Insofar, however, as it provides specific services which are not a national requirement for either the Ministry of Civil Aviation or for the War Office, or something of that kind, we do effect recovery, and you will find in the Estimates that there are large elements of recovery in the Meteorological Office Vote which represent specific services not required as part of the general national function of the Meteorological Office.

2042. In the Estimates of the Ministry of Civil Aviation, there is a Vote of £237,500 which is an increase of £172,500. Perhaps Mr. Peters could indicate to the Sub-Committee the reasons for this increase?—(Mr. Peters.) The figure that you quote is one that I am not quite familiar with—the £237,500. Is that from the Air Estimates?

2043. From the Civil Aviation Estimates?—Perhaps I should explain that I am not really a financial expert. I am here rather to answer questions on meteorological organisation. The figure I was given was £180,000. (Mr. Paris.) The £237,500 is made up of two items; one of £180,000 and another of £57,500. The £180,000 is the United Kingdom one. (Mr. Peters.) The £180,000 is the United Kingdom one and the other one is the overseas figure. The £180,000 is made up of the cost of administering, on behalf of the Ministry of Civil Aviation, 18 Meteorological Stations in the United Kingdom, which are maintained purely for civil aviation and not for any other purpose. There

are about three or four stations where we have a Meteorological Office largely for the purpose of providing meteorological information for civil aviation, for which we should in any case require a Meteorological Office for other purposes as part of the general network, and they have been excluded; so that the total of £180,000 is in respect of those 18 stations which are maintained entirely for the purpose of providing a service for civil aviation in the United Kingdom. As far as the overseas stations are concerned, there are six stations in the West Indies, in Trinidad, Bermuda, Barbados, Grenada, Jamaica and Bahamas, at which it is considered that the meteorological services for civil aviation are such as represent about 75 per cent. of the total cost of running the stations and, therefore, that proportion of the total cost of running the stations has been charged to the Ministry of Civil Aviation, making up that figure of £57,000.

2044. Do we understand that outside the stations which are exclusively engaged on work for the Ministry of Civil Aviation you provide the services free?—Yes.

2045. As far as the Ministry of Civil Aviation is concerned?—Yes.

Mr. Howard.

2046. For the purposes of record, could Mr. Peters give one example of the type of work which would be carried out at one of these special 18 civil aviation stations, which would not be required for the general purposes of his Department?—Perhaps the best example we might take is the London Airport. It is true that in the case of all these 18 stations the major work at these stations is designed exclusively for providing meteorological information required by civil aircraft. If there were no civil aviation operations at that station, the station would not be required to be contributing in any way to the meteorological organisation for the other purposes or the other commitments which the Meteorological Office, in general, has to meet.

2047. I accept that; but could Mr. Peters specify one particular form of work, or query, or job, that they might be required to carry out for civil aviation purposes?—The main job which has to be carried out is almost exclusively the provision of meteorological protection of aircraft in flight, or the meteorological protection of aviation; perhaps I should not say "in flight". That organisation is threefold in character. It is the provision of meteorological advice to the Aircraft Commander before the departure of the aircraft; provision of information to the Aircraft Commander during flight; and the collection from the Aircraft Commander at the termination of a flight, of information

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regarding the meteorological conditions which he has experienced during the flight. For the first of those commitments, which is the major one, information provided prior to departure, it is necessary to construct meteorological charts covering the area over which the aircraft is going to fly. Those charts are prepared at most airports, at any rate in the large airports, where there is almost a 24-hour distribution of aircraft departures. The charts are prepared at six, or sometimes at three, or even one-hourly intervals as a routine section of the work of the station. I do not know whether you wish me to go into the details of the organisation, which is rather an elaborate organisation, which go to the making of such a chart?

2048. No. Would it be wrong for an intellectual man to suggest that it is information of a detailed character applicable to particular areas by which you have to get at the civil aviation purposes, which you will not require for your general meteorological services?—That is, only to a limited extent, true. Quite clearly, the information which you put on that chart at that particular station you put on largely for the purpose of providing meteorological service for that aircraft, but the information is required and is available at the headquarters of the Meteorological Forecasting Organisation for other purposes. There is none of it which is laid on as far as that basic chart is concerned, particularly for the provision of meteorological information at an individual airport; in other words, all the information that goes on the chart at the London Airport is available at the London Airport from the central organisation at Dunstable, or elsewhere, and is available in other places.

2049. While the collection of this information is not necessary for general meteorological purposes, once it has been collected it will be of value for those general purposes?—No. It is true that it is available for general meteorological purposes, undoubtedly.

*Chairman.*

2050. As far as the financial side goes, the Ministry of Civil Aviation bears the cost of the 18 stations; there is no offset for services provided to the meteorological section?—No.

2051. There is no offset. The simplest way to strike a balance is to put the costs of the 18 stations against the Ministry of Civil Aviation, and must bear the cost of the general services yourself?—That is the position. The share we get from the 18 stations is just good measure.

*Colonel James Hutchison.*

2052. I take it that Mr. Peters is satisfied that there is no staff and no personnel either belonging to the Corporations, or to the

Ministry of Civil Aviation, who are in any way concerned with meteorological questions; there is no duplication of any kind whatever between the Air Ministry, the Ministry of Civil Aviation, or the Civil Corporations?—No, not as far as I am aware.

2053. They have no officials concerned with it?—They are not concerned in an official capacity. It would not be true to say that there are no employees of a Corporation who are not concerned with meteorology because, obviously, in the case of the Corporations' operations, there are officers of the Company who have certain responsibilities as regards advising the Commander; they are required to have a certain amount of meteorological knowledge; they act in a sort of liaison capacity between the Meteorologist and the Aircraft Commander.

2054. Would it not be possible for the Aircraft Commander to get exactly the same advice from the meteorological service?—That, I think, is a question for the Companies to answer, Sir. The position, in that respect, varies between British and American Companies. The American Companies place a great deal more responsibility on their Operations Officer from the meteorological point of view than the British Companies do. Perhaps I may have misled you. I would like to correct any misapprehension there may be. As far as the British operating Companies are concerned, these responsibilities assigned to the Operations Officers are in no sense mandatory on the Flight Commander, by no means. The Aircraft Commander in a British operating Company takes the final decision as to whether he takes off, and if he takes off by which route he flies, or at what height he flies.

2055. I am not really concerned with the American Companies, but so far as the British Companies are concerned, I wanted to be satisfied that there is not somebody doing the job for the Aircraft Commander which, in fact, the Aircraft Commander could have done for him by the staff you have already got?—No. I think you can be quite assured that that is the case. (Capt. Hunt.) The aircraft commander interprets the meteorological forecast himself. He forms his own opinion as to whether he is going to fly but the inflight supervisors of B.O.A.C. are there in order to assist and advise and to watch the progress of the flight after he has started.

2056. They have a bigger role than the original meteorological role?—Yes; they are not pure Meteorologists in any sense whatsoever.

*Chairman.*

2057. Do any difficulties arise from the fact that the Meteorological Station at the Airport is under the operational control of

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the Airport Commandant?—(Mr. Peters.) It is not under the operational control of the Airport Commandant; it is under the technical and operational control of the Meteorological Office. The only respect in which the meteorological staff at the Airport comes under the control of the Airport Commander is in respect of general questions of the discipline of the staff, ensuring that the meteorological staff adhere to the general regulations of the station which may be laid down by the Airport Commander. As regards technical and operational matters, they have no responsibility to the Airport Commander in any way.

2058. Supposing there were a case as to the question of the inadequacy of the service, how would that be brought to the notice of the Meteorological Branch, and who would determine whether effective action were taken?—Any complaint would, in the first instance, reach the Airport Commander, if we consider the formal rather than the informal case, from the local representative of the operating Company, the Company's operating Manager stationed at the airport. The normal procedure, in that case, would be for the Airport Commander to discuss the matter with the local Chief or Senior Meteorological Officer, particularly if it were only a minor question. If satisfaction could be obtained, if the Airport Commander were satisfied with the result of that discussion, that would terminate the matter. He would, if he did not receive satisfaction, or, alternatively if the matter were a major one, refer it to the Ministry of Civil Aviation, who would pass the facts of the case to the Meteorological Office for administrative action at the Meteorological Office Headquarters, who would take action with the Senior Meteorological Officer, and conjointly with the Ministry of Civil Aviation, reporting subsequently what action had been taken. In the minor cases of information which the Meteorological Office require, they would merely be informed of what had taken place from the routine reports from their Meteorological Officer at the airport.

Mr. John R. Thomas.

2059. Could we have some reason and cause for the increase of the present estimates over the previous year?—(Mr. Cary.) I have had a note on that. The answer is that last year we had not finished the negotiation of the basis of financial adjustment, and the Vote for the last year would, I think, have been considerably greater if that negotiation had been completed in time for the Estimates; that is to say, during the initial growth of civil aviation after the war the Meteorological organisation was provided free and for nothing, and

no adjustment was made; it was in existence, and the facilities were there. Then we had to reach a working agreement with civil aviation as to how the costs were to be divided, and that agreement was not signed in time for last year's Estimates.

Chairman.

2060. It means that this year's Estimate is, in part, retrospective?—(Mr. Harvey.) It is not retrospective; it is the current year's cost, but last year's Estimate did not reflect any expenditure which we were bearing.

2061. Last year's Estimate was inadequate?—Quite.

2062. We can regard the present Estimate as being more of a standard Estimate?—Yes.

Major Niall Macpherson.

2063. On the chart with which we were supplied, there is a gentleman called,—or it is not a gentleman, but part of the Branch acting as liaison with the Meteorological Office, coming under the control of technical offices. Is there any officer at the Ministry of Civil Aviation answering to that position?—(Mr. Cary.) I would prefer that the Ministry of Civil Aviation should speak to that, but I think I am right in saying there is, and it is largely concerned with our international obligations. (Mr. Wilson.) I think the position is that someone in the Ministry of Civil Aviation who knows what services are going to be operated, and under what conditions, has to say what sort of meteorological facilities are required. The Meteorological Office cannot produce the facilities without knowing what they are serving. That is where that liaison comes in; that man is not a Meteorologist in the sense that such people are employed in the Meteorological Office. He is an operational person dealing with the operations of civil aviation, and saying what meteorological facilities are wanted.

2064. May I ask one more question? Mr. Peters mentioned five stations abroad, I think, all in the West Indies. Are there other comparable stations in other parts of the world, where there are Ministry of Civil Aviation responsibilities in regard to airports?—(Mr. Peters.) Yes; there are stations in West Africa, where the situation is rather similar. (Mr. Cary.) It is only in areas from which the R.A.F. have, more or less, withdrawn that it has been increasingly urgent for the Ministry of Civil Aviation to provide meteorological services of this kind, but all along the two main Imperial Trunk routes there are these joint user stations at which we have come to an agreement with the Ministry of Civil Aviation. We had the stations at the end

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of the war, have continued to operate them, and are making them available to the Ministry of Civil Aviation on a sharing basis. We are in the process of making a joint user plan under which those meteorological facilities will be shared and, to some extent, we hope that the local governments will contribute. We stand to gain something from it, but these negotiations have not been finished yet because the urgency is less.

2065. In future estimates there may be a charge made against civil aviation representing their share?—Yes; it is highly probable, but as and when additional civil staffs are provided on the routes, they will be maintained and administered by the Meteorological Office unless we eventually get the local governments to do it.

*Chairman.*

2066. That means, from a financial point of view, that the Ministry of Civil Aviation is still fortunate in that you have not yet reached agreement?—Yes.

2067. If we may turn to another question, that of ground training organisation, I do not know whether you can assist the Sub-Committee, but I think we can assume that during the war the Air Ministry must have had a vast organisation for ground training?—Yes.

2068. Now that the demands of civil aviation will be increasing, what steps have you taken, or are you taking, to assist the Ministry of Civil Aviation?—That is a difficult question to answer in general terms. In so far as technical courses are concerned, we do help to the best of our ability. We train Control Officers and special staffs, but as far as the ordinary day-to-day maintenance is concerned that is the responsibility of the Corporations, and they have their own training schools. We helped them in setting up those training schools with staff and with equipment, but we are not now responsible in any way for the training of those maintenance staffs. I think the fairest general statement I can give you is that we are prepared, where it is economical, to offer use of the Air Ministry organisation, but in other respects we wait until we are asked and the Corporations, having got their training schools going, have not found it necessary to call upon us for further assistance.

2069. You cannot say whether, or not, the training is sufficiently different to justify separate training schools?—I should not like to answer that one off-hand. There are certainly differences, and of course civil types are becoming increasingly divergent from service types, and the tendency will be for the training to get more and more different. There is also the point that with the progress of demobilisation, the R.A.F. training machine, particularly in the technical trades, is appallingly over-loaded, and at this juncture it would be extremely incon-

venient for us to accept any commitment, even if it were economical and sensible for us to do so.

2070. During this transitory period you have offered civil aviation all the assistance available?—I think that is a fair statement, but they have really taken advantage of it only in the case of specialised trades in which the provision of alternative training facilities would be impracticable.

*Chairman.*] I think we have exhausted our questions this morning.

Colonel *James Hutchison.*] Not quite, Mr. Chairman, if you will let me put one further question.

*Chairman.*] Certainly.

Colonel *James Hutchison.*

2071. It is a completely new question, and it may be that none of these gentlemen is armed with the answer, but how far does the Ministry of Supply intervene in the design of aircraft for the Air Ministry, or do the Air Ministry design their own; do they have a department for designing their own requirements for aircraft and then do they go direct?—I can give you the organisation only in the most general terms. In the Air Ministry we have an Assistant Chief of Air Staff (Technical Requirements), and his job is to produce the specifications of aircraft in terms of performance. He will say: "We need a new bomber with such-and-such characteristics or specification." That is then passed over to the Ministry of Supply in the form of a technical requirement and they, through their channels, get tenders from firms and get designs from firms. They are then discussed with the Air Ministry and the Ministry of Supply, and the Ministry of Supply accept responsibility, when the design has been approved, for seeing production through. Of course, we have the closest relations with the Ministry of Supply. One member of the Air Council is in the Ministry of Supply, the Controller of Supplies (Air). It is really a joint effort with the requirements on the Air Ministry side, and the production on the Ministry of Supply side.

2072. I think it would help if I were to indicate the line of thought I have been trying to pursue. I think some of us have been wondering as to whether the Ministry of Supply is, in fact, justified or unjustified, in intervening between either the Corporations and the producers or the Air Ministry and the producers. I used the other day the analogy of the Admiralty who have, in fact, their own designing staff and Naval Architects, who produce the requirements of the Admiralty and then the Admiralty places the contracts direct with the ship-builders. Arguing from that analogy, I was trying to discover whether, in fact, the Ministry of Supply is an extra cog in the wheel of your getting the requirements which you have designed and asked for?—

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I would very much prefer, Sir, to leave that question, if you do not mind, until we have an expert present who has practical experience of the working. I think I can say that if, for the sake of argument, we were to assume that the organisation in the Ministry of Supply which looks after aircraft production were to be disbanded and its functions distributed amongst the other Ministries, not only would a considerable increase in the staff be necessary at both the Air Ministry and the Ministry of Civil Aviation, but there would have to be a very strong co-ordinating body set up between those two Ministries which would perform a function now being carried out by the Ministry of Supply. One of the difficulties is that aircraft production in this country is too small for the demands being made upon it, in the sphere of skilled labour, and one of the Ministry of Supply's main jobs is balancing programmes and making sure that the requirements of the Ministry of Civil Aviation and the Air Ministry are met.

2073. I can see that someone would have to intervene to balance the priority?—Yes.

2074. Are the aircraft required by the Ministry of Civil Aviation and the Air Ministry in any way interchangeable at the present time? As I see it, they are just as separated as destroyers and cargo ships?—That is perfectly true, so far as the finished product is concerned; but unfortunately, they do make demands on the same kinds of technical skill; that is to say, a factory that is capable of producing a civil aircraft is also capable, after it has been re-jigged and re-tooled, of producing military aircraft, and vice versa.

2075. Of course, shipyards are in the same position; they can produce either destroyers or cargo ships?—Yes; but I think it is fair to say that the shipbuilding capacity of the country is probably greater in proportion than the present demands on the aircraft capacity.

Mr. Corlett.

2076. Mr. Dawson was speaking about the necessity of getting the very best permanent buildings on the airport for people who landed here and that the design would be put out to competition?—(Mr. Dawson.) Yes.

2077. Is it also correct to say that the construction will be put out to competition?—I imagine that the position would be that the constructing architect would get qualified surveyors to prepare the bill of quantities, and he would invite tenders; but I really do not know whether on his specification and bill of quantities the Ministry of Civil Aviation, through the Air Ministry, may invite tenders. He

will, at any rate, say what is to be provided; he will provide the specification and the bill, and he will certainly supervise the work.

2078. What I was wondering was why cannot the Air Ministry just construct the building?—A building of that kind will not be a finished design when it commences; the genius, you might say, of the architect who has been selected will be applied right throughout the construction. No building of that kind is finalised at the beginning. It will be modified and improved as the ideas of the architect develop in relation to the project.

2079. But, even so, surely the Air Ministry could construct the building or keep in touch with the architect?—It may be so, but that is not for me to decide; that would be outside my scope altogether; it will be for the Ministry of Civil Aviation to decide how that should be done.

2080. I only raised the point because I understood that you did all the other construction?—That is so.

2081. I was puzzled as to why you should go outside for this one particular job?—Say it is a local authority: they give most of their work to the borough surveyor, but when they construct a new civic centre they invite an eminent architect to design that centre; he lets the contract and supervises the work; it is his child from beginning to end. Otherwise, he would not be responsible if another authority intervened in executing it. He is competent to see that his design is carried out satisfactorily, and I think he would insist on keeping that responsibility.

2082. But in every other respect you use your own architects?—That is so.

2083. You have never gone outside for an architect?—No.

2084. And your argument is: If we are going outside for an architect, it is his child and he shall build it?—That is so.

Colonel James Hutchison.

2085. Is not the basis of the architect's remuneration a percentage on the contract and is it not the normal custom of the architectural profession?—Yes. As I have indicated, that is the normal custom. The matter of percentages or costs can be adjusted in some other fashion, but that is how it is normally done; he is paid on the value of the project.

Chairman.] I am going to resist the temptation to open out any further line of enquiry. I thank you very much for assisting us this morning. We have sent down one or two loose balls, but I thank you very much for treating them with restraint.

The Witnesses withdrew.

[Adjourned till Thursday next, at 4 o'clock.]

THURSDAY, 26TH JUNE, 1947.

Members present:

Mr. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. Corlett.  
Viscountess Davidson.

Mr. Howard.  
Colonel James Hutchison.  
Sir Peter Macdonald.

Mr. E. WOODFORD, Liaison Officer, Ministry of Supply, in attendance.

CIVIL AVIATION.

Mr. E. L. PICKLES, C.B., O.B.E., Under Secretary (Contracts), Mr. F. C. MUSGRAVE, C.B., Under Secretary (Air), and Mr. N. V. MEERES, Assistant Secretary, Ministry of Supply; Mr. G. S. DUNNETT, Under Secretary (Air Services), Mr. R. H. WALMSLEY, Director of Aircraft Requirements, and Mr. T. PARIS, Director of Finance (Ground), Ministry of Civil Aviation, called in and examined.

*Chairman.*

2086. Mr. Pickles, we understand that you are an Under-Secretary (Contracts), Ministry of Supply?—Yes.

2087. I wonder if you could just briefly explain to the Sub-Committee what your responsibilities are as affecting Civil Aviation?—(Mr. Pickles.) The responsibility of the Director of Contracts is to place contracts with firms to produce aircraft which are required by the Department, that is, the Ministry of Supply. Whether these aeroplanes are for themselves or for another "customer" Department such as the Ministry of Civil Aviation does not affect the duties of the Director of Contracts or the Under-Secretary (Contracts). He looks at the demand, and it is his function to fulfil it. Briefly, that is his function.

2088. Thank you very much. Mr. Musgrave is Under-Secretary (Air)?—Mr. Musgrave.) Yes.

2089. Perhaps you would in a similar way indicate your responsibilities regarding Civil Aviation?—As Under-Secretary (Air) I am in charge of what is known as the Air Division of the Ministry of Supply, and the responsibilities of that Division are all policy, secretariat, administrative and finance duties arising on Air matters. That, of course, embraces those duties so far as they affect Civil Aviation as well as the duties so far as they affect the Service side of aviation.

*Mr. Barton.*

2090. Is it limited to aircraft then?—My functions are, yes, and aero-engines and all that goes into an aircraft.

2091. What about materials that are wanted for aerodromes that come within the purview of the Ministry of Supply?—So far as civil aviation is concerned, the Ministry of Supply has little or nothing to do with the provision of aerodromes. The only aerodromes with which I, as an Officer

of the Ministry of Supply, am concerned are the aerodromes at contractors' works and at experimental stations for the testing of aircraft.

*Chairman.*

2092. As you will realise, the Sub-Committee is looking into the Estimates of the Ministry of Civil Aviation?—Yes.

2093. If we turn to those Estimates, under Sub-head F, Civil Aircraft and Associated Equipment, we find payments in respect of Research and Development and Production, £9 millions. It is on page 159. To that there is a footnote: "This figure includes an appropriate share of the research and development expenditure incurred by the Ministry of Supply in connection with civil aircraft to be purchased from them by the Ministry of Civil Aviation during 1947-48 but excludes expenditure to be incurred by the Ministry of Supply during 1947-48 on research and development relating to civil aircraft which will not be delivered in that year". I wonder whether you could expand that somewhat for the benefit of the Sub-Committee?—Yes. The Ministry of Supply is responsible for aeronautical development and for furthering the science of aeronautics. As such, it spends a large sum of money on general aeronautical research and on the development of particular types of aeroplanes, both civil and military. When the Ministry supplies to Civil Aviation aircraft, it adds to the cost of those aircraft a sum representing an appropriate share of the cost of development. In short, it amortises the development over the probable total field of supply.

*Colonel James Hutchison.*

2094. Would it be pertinent to ask, at this stage, what the basis is for that extra charge? How is it arrived at? It is very complicated, I have no doubt?—Civil aviation is a comparatively new subject, and I should not like to say that we have got

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 Mr. R. H. WALMSLEY, and Mr. T. PARIS.

[Continued.]

all the principles worked out at this point of time down to the last logical detail; in fact, tripartite discussions are now going on between ourselves, the Treasury and the Ministry of Civil Aviation on the principles that should govern the calculation of the charge which we pass on to civil aviation. In the meantime, our provisional arrangements are to calculate roughly on this basis: We endeavour to ascertain, or estimate, the total numbers of a particular type that are likely to be sold; we estimate the cost of developing that type; and those two factors enable us to arrive at a sum per aircraft which would be the appropriate sum to charge in respect of those numbers of aircraft which the civil aircraft Corporations take.

2095. I would like to go a little further. That sum, when it is fixed and when you have a basis for assessing it, will presumably make your particular activity self-supporting. That is the intention, is it?—If our estimates are correct.

2096. There is no intention to have a hidden grant in it towards reducing the cost of civil aircraft, or getting civil aviation to subsidise unnecessary expenditure?—There may very well be cases in which that rule will have to be modified, exceptional cases, where the cost of development is out of all proportion to the immediate benefit to the Corporations, and where the element in the cost of furthering the science of aviation is relatively high.

*Chairman.*

2097. May I take that a stage further? We understand that future orders for aircraft are going to be placed direct by the Corporations?—No, Sir, not all orders, so far as I know.

2098. We want you to inform the Subcommittee. Perhaps you could tell us which orders will be placed direct by the Corporations?—It is a very difficult question to answer because the matter, at the moment, is a controversial one between the various parties concerned, and a decision has not yet been reached.

2099. Does it turn upon the question with which we are dealing, namely, the cost of development in research?—Not solely, though the questions are interrelated.

2100. The reason I asked was this, and I would like your observations upon it. Is it the intention that the cost of research and initial development shall fall upon the Ministry, or that it should be borne by the operator as part of the costs of the aircraft?—So far, as we have the principles thrashed out at the moment, it is the intention in normal cases that the cost of developing a particular type of aircraft, that is to say the cost of the prototype or

prototypes ordered to that end, shall be passed on to the users of that aircraft, who will include the Corporations; they may include foreign or other outside sales by the manufacturer, in which case we would look to him for a share of his receipts representing the return for our expenditure on development.

*Sir Peter Macdonald*

2101. May I ask whether, in the case of a new type that has reached the prototype stage, you would bear the cost up to then?—Yes.

2102. If the prototype does not prove to be up to requirements, or the requirements of the Corporations, or for some other reason it is not put into use, who bears the cost then?—At the present moment, the Ministry of Supply bear the cost, but that is one of the points on which these tripartite discussions are taking place. We really have not finally decided whether it would be right and proper for a sum, in that sort of case, to remain as a charge to the Ministry.

*Mr. Corlett.*

2103. What are the arguments against the operators purchasing their machines direct?—That is a very big question, and if I may I would prefer, with your permission, to answer it the other way round, viz.: what are the advantages of the Ministry of Supply ordering.

2104. Yes.—I will have to ask you to bear with me for some little while, if I may, to deal with that adequately. First of all, I would like to refer to the history of the matter. You will no doubt remember that just before the war a Committee, under the chairmanship of Lord Cadman, enquired into the state of civil aviation, and, among other things, it recommended that Government should play a more direct part in the development and production of civil aeroplanes. It pointed out, I think, that on the military side of the Air Ministry there was a large body of scientific knowledge and ability directed towards the development and perfection of military machines, and there was no corresponding effort on the civil side. In consequence of that criticism by Lord Cadman's Committee, the Air Ministry set up an office—I forget its exact title, but the function of the office was to deal with the development and production of civil aircraft. He became a counterpart of the Director of Technical Development on the military side. As a consequence of that, the civil aviation side of the Air Ministry before the war placed contracts for prototype machines, and for production machines; the case in question was a "Fairey" design. The war came, and the "Fairey" project died; all the effort on the side of civil aviation



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had to be dropped. It was not until about 1944 that the state of the war permitted the Ministry of Aircraft Production, as that side of the Air Ministry had then become, to take up again the question of civil aviation, and we naturally took it up where it had been left in 1939. So that the fact that we order prototype and production aircraft flows historically from the recommendations of the Cadman Committee.

But there are other reasons for this system other than the mere historical one. The Ministry has on its staff a corpus of technical knowledge, which ranges over the whole field of aviation, civil and military, and can, in consequence, bring to bear on the problems that are met with in the development of civil aircraft the knowledge which it has gained on the other side of its activities, and *vice versa*. Moreover, it has a definite responsibility for the improvement of the science or art of aeronautics, and for that purpose it cannot be divorced from the job of placing orders for the aircraft. Then there is another reason, and I think this answers a point which the Chairman put to me just now, namely, the financial aspect of it. Undoubtedly, the cost of developing new aircraft in the present day is very high indeed, and it is extremely doubtful whether it would be within the financial ability of the firms in the aircraft industry to risk those large sums, at any rate, in the case of aircraft of any size. I exempt from those remarks small aircraft. It is also doubtful whether it would be within the resources of the Corporations to have those large sums at risk. So that the expedient is adopted at the moment of the Government, in the person of the Minister of Supply, placing prototype orders and bearing initially the financial risk which, if the thing is successful, as I have said earlier, is passed on to the users of the aeroplanes.

Then the Sub-Committee, I think, will be aware of the various experimental and testing establishments which are run by the Ministry of Supply; the Royal Air Establishment at Farnborough, the National Gas Turbine Establishment, and so on, which contribute in a very large measure to the success of a new type of aircraft; they are used extensively by the design firms, and of course by ourselves.

Then there is another reason which necessitates the participation of the Ministry of Supply in ordering. There is, I would not say a shortage of design capacity, but we are now passing through such a period of rapid technical advance that new requirements are straining the resources of the industry to their utmost, and of course the design resources of all the firms in the industry are not necessarily equal; Firm A may be better than Firm B. The Ministry of Supply, therefore, occupies the central position of allocating

those resources, and at a later stage production resources, between the various claimants on those resources. Without its performing this function there would be a risk that the Navy, the R.A.F., and the civil aircraft Corporations would all be clamouring for their work to be placed with one or two firms who were the best. We proceed not as dictators but by consultation between all the user departments and allocate resources usually by agreement. Civil aviation, of course, benefits very much from that system, because even in peace the volume of orders on the military side exceeds the volume of orders on the civil side, and as far as one can see, are always likely to.

Then, as a Ministry, we have a general responsibility for furthering exports, which makes it desirable, if not essential, that we should place the initial contracts on civil aircraft which are likely to be exported, but that is, perhaps, a reason of not very great weight. We believe, too, that by central buying we achieve economy both in money and in staff. Many of these civil types are required by the R.A.F. as well; the "Viking", for example; and it would not be, we think, to anybody's interest that there should be competitive buying between the Ministry of Supply acting for the R.A.F. and the Corporations acting on their own account. We think there is economy in staff because we have to maintain a contract staff, a production progressing and inspection staff, all of which would not be relatively smaller if we did not do the work for civil aviation that we do at the moment. There are indications that the Americans are beginning to think that the British have something in this. The American aircraft operators, American designers and constructors are all going into the red. The enormous costs of developing aircraft, and the comparatively small sales, are making it a very serious risk to develop, as a private venture, a large aircraft, and the Americans are finding that. We believe that if we retain this system, and if the Americans do not alter theirs, and if our design firms produce the goods, given the time that is necessary to do it, the position which we now occupy vis-à-vis the Americans will be completely reversed at some time in the future, say, not earlier than five years, and not later than ten years.

Chairman.

2105. Thank you very much. There is one point I would like to raise because it is not at all clear to me. I can see the argument for the utmost co-ordination in carrying out this work, but I do not quite understand the phrase "the harm of competitive buying". The R.A.F. and the Corporations were mentioned as an illustration of "the harm of competitive buying." To put it shortly, why, if we accept

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the necessity for this machinery, should the Corporations still not be able to buy direct from the manufacturer?—If I may illustrate my phrase “competitive buying”, which was perhaps not too well expressed, I think I would draw an illustration, at the moment, from the car industry. If we were allowed to, two of us could go to a manufacturing firm and outbid each other for a car, because the demand is exceeding the supply, and that might have been so in the case of aircraft.

As regards your second point, that there seems to be no reason why the Corporations should not place their orders direct, I am rather inclined to agree that once an aircraft has got out of the development stage, and the technical resources of the Ministry are no longer necessary, the case for Ministry buying is much weaker. We confess that. Indeed, at that stage, it rests simply on the consideration as to whether we could buy more cheaply, and with greater economy of staff; but there would always be the need to allocate production resources in the national interest. At one stage it is in the national interest that civil aviation should come first; at another, military aircraft, and so on; and that could not be left to “black-market” buying, so to speak.

Mr. Corlett.

2106. Arising out of that long and very clear answer, for which I am personally very much obliged, how far can we infer that, because you are undertaking all this work in regard to prototypes, the operating companies are paying a less commercial price than they should pay for the finished article? How far is there a concealed subsidy in the price they are paying for the machine?—There is no direct concealed subsidy. The argument becomes almost metaphysical, but you might say that the expenditure which the Ministry is incurring on fundamental research, on new metals to take an example, does represent an advantage which civil aviation gets for nothing in common with all branches of aviation.

Chairman.

2107. Including the production industry itself?—Yes.

Mr. Corlett.

2108. At one stage you said you passed on, I think the phrase was, some financial consideration?—We pass on the cost of developing *ad hoc* a new prototype aircraft for civil operation or for civil use.

2109. That would mean that there could not be a concealed subsidy?—Not on that; assuming our estimates of the numbers to be sold are right.

Colonel James Hutchison.

2110. It will be a very difficult thing to calculate?—We leave it as late as possible, but the firms naturally say to us: “Tell us at an early stage, because if every time we have a foreign enquiry we have to come back to you and ask you, our business will be hampered.”

2111. What happens in the case of a loading of that kind on an aircraft which does not call for any development by you? Take an aircraft like the de Havilland production, which no doubt they bring out from drawing board to production themselves?—Yes; all aircraft are brought out from drawing board to production by the aircraft firm. We do not do the actual designing, but the cost is paid for in one form or another.

2112. I do not follow that. If I were to set about making a small aircraft and did not consult you people at all about it, and finally got the materials which allow me to make it, would I be expected to contribute anything of this loading towards the expenses of general research?—No, but in the case of the sort of machines which the Corporations are ordering for their routes, they are very large in size and very expensive indeed to develop.

Sir Peter Macdonald.

2113. Is it not a fact that before the war the manufacturers did their own research very generally and bore the cost of their own prototype?—I think, if I might, I would like to ask Mr. Pickles to answer that because his experience goes back so much further than mine. (Mr. Pickles.) In general, before the war, the prototypes would be ordered by the Air Ministry and paid for by them. I remember quite well certain de Havilland types—the “Flamingo”, the “Albatross”, and so on, which were civil transport types, which were paid for by the Ministry. It is true that certain private ventures were made by the industry both on civil and military types, but they were relatively rare compared with the prototypes produced at the cost of the Ministry.

Mr. Howard.

2114. May I get this clear? Cost to the Ministry: Do I understand that the Ministry instructed whatever firm it was to produce the necessary drawings for the particular type of machine and paid the wages of the draughtsman and the salaries of the people who actually drew up those plans?—(Mr. Musgrave.) No. The Ministry would place a contract with a particular firm to produce a prototype aircraft, which in the process would involve the drawing work. That contract might be on one basis or another. It would not be direct payment of the wages.

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2115. What I want to get at is this: The prototype would presumably be preceded by a certain amount of research work and planning. You would not order a prototype without some drawings, and a good deal of advance work being done?—The normal procedure at the present moment is this: Things have been rather exceptional over the last few years: but nowadays if we received from the Corporations a requirement for an aeroplane to do a particular job, we should then put that requirement out to a range of firms in the industry, five or six, and ask them for tender designs. Those designs would come in and would represent a very real measure of technical competition.

2116. If that stage has got to be done it has got to be done in every case before you get the prototype?—It is not necessary to be done. You can nominate a firm and tell them to do the prototype to the specification.

2117. But the physical work of producing the machine has to be done?—Yes, the project work.

2118. Was that paid for by the Ministry before the war?—(Mr. Pickles.) Not separately.

2119. In fact, the Ministry did not bear the full cost of building the prototype?—Let me tell you the system. Those drawing office staffs and experimental people in the firm were in the general overheads of the firm; that is, they were charged against a central fund in the firm; what they called their "overheads". These are recovered by the firm as a percentage charge on all the direct labour in the firm. Assuming the firm is going on year after year, its overhead expenditure is recovered in the prices of the products that they are then selling. There may be a lag, and there often is a lag, between the expenditure and its recovery, but, in general, the Air Ministry worked on the system that the overheads for any particular year were so-and-so, the productive labour in that year was so-and-so, and the ratio was charged in the price of the aeroplanes.

2120. Am I to understand, then, from that, that if a particular firm could show to the Ministry that they had incurred certain costs in the preparation of plans and prototypes, at their request, the Ministry would automatically allow that firm to add on to their actual production costs all those initial costs and would pay the full overheads and profit on it?—It would depend whether the Ministry were the sole customer of the firm. The Ministry would only take that cost in so far as it used the products of the firm. If there was somebody else buying the products of the firm, they equally would pay their proportion of those costs. That is the normal commercial arrangement.

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Mr. Howard.] I am not totally unaware of normal commercial arrangements. I was trying to get at a more definite explanation or enlargement of the definite statement that prior to the war the Air Ministry paid the full cost of this work.

Colonel James Hutchison.

2121. If I may, I would like to go back to what both Mr. Pickles and Mr. Musgrave have said, because it seems to me to be a question of such tremendous importance. I know he has told me that it is under discussion just now, but I would like to know how they would propose to deal with these two completely opposed circumstances. Suppose you spent on research and development a very large sum of money on an aircraft that finally is not sold at all. I am reducing this to absurdity in order to make the case clear. I wonder how you would deal with that? Would it be loaded on to some subsequent aircraft? How would you deal with a "winner" like the "Constellation"? You cannot possibly say, at the beginning, whether the Americans, the Australians, or others, are going to come in and buy that in very large numbers. It is the prime order of importance, because when the aircraft manufacturing industry is trying to sell its British "Constellations" to Australia, France and elsewhere, the amount it is being asked to load on to the initial cost of that aircraft is of tremendous importance. How would you deal with those two extreme circumstances?—(Mr. Musgrave.) In the case of the highly successful type—

2122. You will not know whether it is highly successful until perhaps a year or two later?—No, but we assume that it is going to be a success technically; in other words, that it will fly and come up to technical specification. We assess the likelihood of the market, leaving it as late as it is possible to do it. By that means we might assume, say, that 200 of them are going to be sold, and on the basis of 200 being sold a certain sum would be attached to the cost of each aeroplane to represent the amortisation of the development. If more than 200 were sold, the Ministry would make a profit.

2123. Yes; but by the same token it would make it far more difficult to sell more than the 200?—If we are reasonable in our approach to this matter we are not going to prejudice the chances of foreign sales of these aircraft. On the other hand, if we are unreasonably light, or unreasonably tender in our assessment of it, then I should imagine that another Committee of this House will ask us why.

Mr. Howard.

2124. Is it not possible that the Treasury might have to say something on the assessment?—Yes; the Treasury would wish to see it, I think.

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Mr. Corlett.

2125. I am not clear on the point of who bears the cost of the prototype, and I do feel we ought to be clear about that, if we possibly can?—I am afraid I did not answer the question about the case of the failure. I must do so. At the present moment (and this is one of the subjects which is under discussion) no charge is being made by the Ministry of Supply for a prototype which fails on technical grounds, that is a "flop", or that will not fly, or will not come up to specification. That is a bad case, as you said, Sir, and it might or might not be offset by the good cases where we make a profit; but I should imagine that, on balance, it is likely to be completely offset. I think you have to bear this fact in mind when considering that, that aviation is in its infancy and the large amount which we are now spending in order to get greater knowledge in this new and important field is, in some respects, a capital expenditure for posterity. It would not be fair to load either on to our present export trade or on to the present Corporations the full cost of failures. We are going through a stage, as you will be aware, of a change in the nature of power plants, and one cannot expect to have 100 per cent. success.

Chairman.

2126. Is this the position, briefly, that we have got a relatively new industry possibly embarking upon an expansionist phase in relation to civil aviation; that the risks inherent in the new industry are being borne by the Government or by the State, but that the industry still remains in ordinary private hands?—Mr. Pickles should, perhaps, answer that question rather than I but the whole of the cost, and all the risks, are not borne by the State.

Mr. Corlett.] That is what I am trying to get at.

Chairman.

2127. I am not saying that by way of criticism, because the national interest must ensure that we have the widest experimentation at this stage?—It is the objective of the Contracts Directorate, I think, to try to get each firm to bear a reasonable proportion of the risk. Is not that so, Mr. Pickles?—(Mr. Pickles.) On any particular type we attempt to get the contractor for the prototype to bear some part of the risk. If he does that, so much the better; our risk is correspondingly reduced. Nevertheless, in so far as we do pay for pre-production costs and expenditure, we should recover that amount over the sales of the aeroplane. It may be that only one half of the pre-

production costs are borne by the Ministry, and the other half by the contractor, and in the sales each would recover his half.

2128. If I may, I was going to ask: Is that not surely the main justification for the rather exceptional relationship you have explained to the Committee—that because of this partnership the Ministry of Supply feels that it should have some over-all control over the purchase of aircraft?—(Mr. Musgrave.) Yes. I think there is a lot in that. We should certainly not be content to be in a position whereby we merely paid out the money and had no say in what was going on.

Mr. Barton.] I wonder if Mr. Musgrave could take a specific instance? Can we take the "Brabazon I"? Can he tell us what arrangements have been come to between the Ministry and the Bristol Aeroplane Company regarding its development; have any conclusions yet been reached as to its ultimate success, and what is the intention of the Ministry to recover its development costs on that particular aircraft?

Colonel James Hutchison.

2129. And, may I add, the sums of money at stake, if you will allow me. That is what we are dealing with?—Yes. No decision has yet been taken on the extent to which the cost of developing the "Brabazon I" will be passed on to the Corporations who use it.

Mr. Barton.

2130. What is the arrangement with the Bristol Aeroplane Company? Surely there is some tentative arrangement between the Ministry and the Company regarding the development of the aircraft?—We have placed a contract with the Bristol Aeroplane Company for two prototypes of this new and adventurous machine. That is the position as between the Bristol Aeroplane Company and ourselves; they are under contract with us to build an aeroplane of this size, this range and this capacity.

2131. On what terms?—(Mr. Pickles.) Perhaps I may say that this is the position. We are, in fact, paying for those two aeroplanes, and it will represent a very large amount of money before they are finished and flown.

Colonel James Hutchison.

2132. Have you any estimate of that cost?—I have not, in front of me. I think perhaps Mr. Musgrave may have an estimate of it.

2133. Even a rough one?—It would run into £2,000,000 or £3,000,000. Now, according to the contract conditions we arrange as follows: The contractor shall not sell otherwise than for the purposes of the Government any articles to the said design or grant any licence to manufacture articles of the

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said design without first agreeing with the Ministry the sum or sums (if any) which should reasonably be paid to the authority by the contractor in respect to such sale or grant having regard, *inter alia*, to the amounts paid or payable to the contractor under this contract. In other words, he cannot make it for anybody else; that is, he cannot go into the open market and sell "Brabazon I's" without first coming to us and agreeing with us what would be a proper loading to the price for the expenditure which we have incurred. It is obvious at this stage that it would be improper for us even to waste the time to consider what that amount should be. This is a far-reaching project. In five years' time it may be a live issue. Other people may want it, and various people may be putting orders with the Bristol Aeroplane Company for it; but, before they can sell, they have to come to the Ministry and arrange what sum should be added to the price which they would otherwise charge in order to give some contribution, whatever is then decided as being proper, to cover the large expenditure on the design that we have incurred.

Mr. Barton.

2134. That applies right throughout the production and tests of the aircraft, does it? I understand, for instance, that it will be necessary, at least, to build special runways for testing the aircraft. Is that all included in the agreement, if there is such an agreement, between the Ministry and the Company? To what extent are the Ministry financing research in ancillary services, special safety devices and things like that? Can we be told that?—(Mr. Musgrave.) So far as the runway is concerned, that is being constructed at Government expense.

Chairman.

2135. By the Ministry of Civil Aviation?—No, Sir; by the Ministry of Supply, actually.

Mr. Barton.

2136. On a special aerodrome?—No; on an aerodrome of which we shall take ownership of the runway. We will charge the Bristol Aeroplane Company a rent or make appropriate adjustments in our financial relationships with them. I am afraid I have not at my finger tips the actual details of the terms, but I could get them for you. So far as ancillary experiments are concerned, the same principles, I think, will apply as Mr. Pickles enunciated in the case of the aeroplane itself. If we place, and indeed we are placing experimental contracts to try out various devices that are being put into this new aeroplane, they will all form part of the total cost of development of the "Brabazon I", and so will influence the figure which will eventu-

ally be charged to the Bristol Aeroplane Company if and when they sell the aircraft to other people.

2137. Has there been any consultation between the Minister, the Bristol Aeroplane Company and the Corporations; that is, the B.O.A.C., or the British European Airways, or the British South American Airways, as to the likelihood of that type of aeroplane being suitable for their purposes?—Yes. The aeroplane was, of course, built to a specification or to a requirement laid down by the Committee over which Lord Brabazon presided, and that Committee existed really to try to look into the future and get work started on new types of aircraft before the post-war set-up of civil aviation had been formulated. If we had waited until the post-war arrangements for running civil aviation had been set up before we started to order our aeroplanes, we would have been even later than we are now, because an aeroplane of this size takes 6 to 7 years from the date on which it is first conceived to the date on which it goes into service.

Chairman.

2138. On the assumption that it is successful, have you any orders from the Corporations?—Yes. We know their requirements, but it is not yet necessary or appropriate to place orders on their behalf.

Mr. Corlett.

2139. This brings me back to my original question. I think we are all covering good ground. I want to get at who is actually bearing the cost of this prototype. How far are you securing that the operating Corporations bear their quota vis-à-vis the Ministry? It seems to be very difficult to get right down to it?—Initially, the Ministry is carrying the full cost. Some part of that cost, not necessarily all, will be passed on to the Corporations, and an arrangement will be made with the Bristol Aeroplane Company that if they sell "Brabazon I's" to other customers, the Dutch or the French, or somebody like that, they will pay over to the Ministry of Supply a sum in return for our expenditure on the prototypes. In some ways it is a bad example because it is the extreme example of high cost. A more normal case would be something like the "Viceroy", the new Vickers' machine, which does not cost such astronomical figures to develop and for which the requirements will be more than the mere handful that are likely of this large machine. We may find that in the case of the "Brabazon I" it would be crippling to pass on the full cost to the Corporations. That is an issue which remains to be settled and it is quite open. If it is decided that we do not pass on the full cost, the justification will be that for that expenditure we have

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two things: (1) an aeroplane which the B.O.A.C. will fly on the routes, and (2) an enormous advance in the knowledge of aeronautics.

Colonel *James Hutchison*.

2140. It is a most important question. For example, to take the £2,000,000 to £3,000,000 which Mr. Pickles mentioned, I do not want to pin him down to that figure; it is just an example. If you sell 10 "Brabazon I's" you have to load it with £300,000 per machine. If you sell 100, you load it with £30,000; and, presumably, both Corporations flying the aircraft would be at less of a profit or at more of a loss by virtue of its being loaded with £300,000 instead of £30,000. I wonder if we can know what happened in the case of the "Viking"? What sort of loading happened there? Have you recovered your cost, do you know?—(Mr. *Meeres*.) Well, Sir, in the case of the "Viking", the Department ordered two prototypes, and a third one was constructed by Vickers at their own expense, so that they bore a share in the risk of developing the type. The estimated cost of the two prototypes ordered by the Department was £220,000, and the production programmes showed that 275 "Vikings" were being produced for the R.A.F., for British European Airways, and for private sale by Vickers, so the Department spread £220,000 over 275 aircraft.

2141. Exactly spread it?—It did in that case, yes.

2142. Now, what will happen regarding the sale of further "Vikings"? Will they have to bear approximately £1,000 of loading, in which case you start making a profit?—I should modify my statement by saying that in the case of private sales it was agreed that since Vickers had borne the cost of one prototype themselves, the loading would only apply to the aircraft sold to the Corporations.

Mr. *Barton*.

2143. The "Vikings" went out of service for some time because of technical faults, did they not?—(Mr. *Musgrave*.) Yes.

2144. Who has borne the cost of that?—I am afraid I do not know, Sir?—(Mr. *Meeres*.) That, I think, Sir, is more a question for the Ministry of Civil Aviation, because we had delivered something like 27 "Vikings" at the time when they were grounded because of the de-icing trouble. We recover the cost of those aircraft from the Ministry of Civil Aviation who, in turn, make arrangements with British European Airways as to the terms on which the Corporation operates them.

*Chairman*.

2145. This is obviously a question of vital importance to the Industry. Is there any machinery for broad consultation with the Industry on such questions we have been discussing?—(Mr. *Musgrave*.) The financial questions?

2146. Yes; the question of loading and selling?—(Mr. *Pickles*.) There is the Society of British Aircraft Constructors with whom the Department has been in touch on this matter and who did, in fact, agree with the Department the clause for general contract conditions which I have read out to you. That is one part of the clause. The other parts of the clause do not really affect the question here; they deal with the free right of the Government to use an invention by any other firm which it wishes to make this aeroplane. That is not quite the question which we are here discussing. I only read out the last part of the clause which defines the payments to be made to the Department in the event of the Company manufacturing other than to Government order.

2147. Does this collective consultation extend to general decisions about aircraft development? I ask that because, obviously, a decision such as that with regard to the "Brabazon I" and the other decisions which have been taken following the Brabazon Committee affect the Industry as a whole?—(Mr. *Musgrave*.) The Industry are in contractual relationship with us, and their Society discusses points of general interest with us such as the nature of a particular clause. There is continuous technical consultation between the design teams of the various firms in the Industry and our own technicians and the people at the Royal Aeronautical Establishment at Farnborough. It is a continuous process; it is a continuous partnership, and joined in it to an increasing degree are the representatives of the Corporations. We would like to see their representatives joined to a far greater degree. We would like them to participate to the same extent as our other user customers participate, the Royal Air Force and the Royal Navy.

2148. Is that hope expressed by way of criticism that they have not co-operated as fully as you think they might have?—I would not like to criticise the Corporations. We would like to have more Corporation experience at our immediate command in the Ministry. We should like to have men who fly their aeroplanes there for a period working with us and in our Technical Branches, but we recognise that the Corporations, who are only just setting up, are having enormous man-power difficulties of their own, and there may be very good reasons why that has not happened.

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[Continued.]

2149. It would appear on the face of it that in shaping their requirements they should be very much up-to-date in their knowledge of aircraft development, because their view of their requirements, must be related to developments that have taken place?—How true that remark is can be illustrated, I think, from the military side where in these days of great advance a new specification is not prepared solely by the R.A.F. It is prepared after joint consultation between our scientific people and the users; the users saying: "Now, can we do this?" The technicians saying: "You cannot go quite so far as that; you will have to be content with this." Out of that give and take of knowledge there emerges a specification or a requirement which will test the design industry to the utmost, but will not present them with an impossible problem, and the same sort of thing is happening in increasing degree in civil aviation.

Mr. Howard.

2150. May I follow up the question of the loading in the case of the "Viking," because it seems to me to have a very direct bearing upon the Estimates of the Ministry of Civil Aviation into which we are enquiring. They have to provide and approve the programmes of the Corporations. As I understand it, in this particular case (it may not be so in all cases) the effect of the loading will be that the cost of a machine bought by these Corporations may be higher than the cost of an exactly similar machine sold to a competing Corporation, possibly, outside this country?—So many factors will be taken into account in fixing those two sets of prices that it is impossible, I think, to generalise.

2151. I appreciate that.—Vickers may charge a very much higher price if they see a wealthy American coming along and wanting to buy a "Viking" than the "cut" price which our contracts provide for getting the aeroplanes.

2152. If the costs have been loaded in such a way that you seek to recover the bulk of them from the machines that are supplied to the Corporation, if those machines are, in fact, supplied, the Company producing them is, I understand, at liberty to produce and sell as many more as they can get orders for. If they have got all their initial overhead costs already covered, surely, they can sell at a lower price. Admittedly, the machine will be gradually getting obsolescent and out of date?—They have their own development to amortise in the price which they charge in their private sales to outsiders.

2153. And that is not allowed for at all in the loading factor in the machines

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ordered for one of the Corporations?—(Mr. Pickles.) I do not quite grasp the question. Perhaps we are thinking of words in different connotations?

2154. May I try to put it a little more clearly? As I understood the answer from Mr. Musgrave's colleague in trying to apportion the development charges of these machines you have agreed that a higher proportion of the development charges should be placed on the orders made by our Corporations than on private orders which the Company producing the machines might secure elsewhere?—(Mr. Meeres.) It was not quite that, Sir, because we took the cost of the two prototypes and, if you remember, we divided it by the total number in production, which was 275. That figure of 275 was the aggregate of orders for the R.A.F., orders for the civil Corporation, and orders that the firm had on hand privately. We arrived at a figure of something like £800 per machine. Then a decision was taken to load that figure on the cost of aircraft supplied to B.E.A., but not to load it on the cost of aircraft supplied privately, because Vickers had contributed to the development cost and had their own prototype costs to recover. I may say, in answer to the point that was made, that after the £800 has been added on to the costs of the B.E.A. machine, it is still very much cheaper than the cost of a "Viking" supplied to a private customer.

Mr. Howard.] That is because the other customer is at present prepared to pay that higher price.

Sir Peter Macdonald.

2155. Is not that largely due to the fact that the initial cost of producing a prototype is the tooling-up of the job? Vickers are given an order for a "V.C.I." for instance. Originally, they say "How many of them are you going to order?" They have to tool-up the factory for the original production, and the cost is going to vary largely, dependent on future production and the number of orders. For instance, if you order 10 "V.C.I's", they are going to cost very much more than if you ordered 250, because they can get a line of production. Is that not so?—(Mr. Meeres.) Certainly.

Colonel James Hutchison.

2156. Rather a different question, but arising from something that Mr. Musgrave said, I think. He spoke about two lots of designer teams, one in the Ministry's and one in the manufacturer's pay. Is there a third set of designer teams? Are there any designers at all on the staff of the Corporations?—(Mr. Musgrave.)—If I said that, Sir, I spoke incorrectly. The technical staff of the Ministry of Supply ought not to be described as "designer teams". As "technical scientific staff",

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Mr. E. L. PICKLES, C.B., O.B.E.,

[Continued.]

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yes; skilled in aeronautics; but they do not actually design; they do not design aircraft direct. To go to the main part of your question, there are, as far as I know, no designers employed by the Corporations, though they will have their technicians and engineers, of course.

2157. Are you satisfied that there is not overlapping in this matter; are men not being paid in two places and, perhaps, in three, where it is unnecessary?—I have no evidence of that at all. I should say, rather that on balance, the present system economises in that way.

*Chairman.*

2158. Is the position that aeronautical research is concentrated in the Ministry?—Yes.

2159. And that is made available to Industry?—The results of it are made available to the Industry.

2160. Regarding research, is there any overlapping; has the Ministry of Civil Aviation, for instance, any research staff?—If they have, it is on the operational side, which is a different subject; trying to find out data on what happens when you operate the aircraft as distinct from technical data on the construction of the aircraft. I believe they are setting up or expanding their operational research activities and that we are lending scientists to help them.

2161. Would there be any advantage in having the whole research, operational or otherwise, concentrated; are they so interdependent that they should be together?—That raises a lot of difficult questions. There has got to be a dividing line somewhere, and probably the best dividing line is to put the aeronautical and the aerodynamics research in the Ministry of Supply, research into the operational use of aircraft and the problems that arise in connection with it in the Ministry of Civil Aviation. There is some case for bringing the two together because there is a certain amount of interdependence I agree, but I think that is probably as good a dividing line as you could find.

2162. I think the danger that may be in the minds of the Sub-Committee is that the Corporations are responsible for operations. We understand that they have made provision for research. To me it appears on the face of it that there is a serious danger of overlapping if the Ministry of Civil Aviation come along with their research department?—You must not ask me, Sir, whether there is any overlapping between the Corporations and the Ministry of Civil Aviation. I am not competent to answer that.

2163. On the questions we have been discussing this afternoon you have mentioned your relations with the Corporations; they largely turn upon questions of research?—Yes.

*Mr. Howard.*

2164. They are direct relations, are they? The Corporations are at liberty to deal direct with the Ministry of Supply?—Yes.

2165. They do not have to go through the Ministry of Civil Aviation?—No.

*Mr. Corlett.*

2166. You have described very clearly the necessity of loading the machines which are bought by the operating companies. Supposing the machines are hired?—(Mr. Meeres.) If they are hired, the process is carried out by the Ministry of Civil Aviation. The arrangements are that the Ministry of Supply are formally producing the aircraft for the Ministry of Civil Aviation, and that is why provision is made in the Estimates for recovery, for appropriations in aid. Every time we deliver an aircraft, although we deliver it physically to a Corporation, we send the bill in to the Ministry of Civil Aviation; it is then for them to decide whether they sell the aircraft to the Corporation or hire it.

2167. You have described the method of loading when they buy. We do not know whether the method is similar when they hire?—The loading goes on to the bill addressed to the Ministry of Civil Aviation.

2168. So that if a Company were to come along and say: "We are carrying on without any subsidy", it might be possible to argue: "Well, you are getting your machines too cheaply"?—(Mr. Musgrave.) If they were getting them at less than cost or less than an economic commercial rate of hire, yes. That is outside my province, I am afraid.

*Mr. Barton.*

2169. This is very interesting, but I would like to have the true picture of it. Do I understand that the Corporations purchase direct from the aircraft manufacturers? They pay to the aircraft manufacturer for the machine less the loading charge that is put on by the Ministry of Supply as a development charge?—No. The Corporations do not buy direct from the manufacturer. The Ministry of Supply place the orders.

*Chairman.*

2170. Before we leave that, for clarity, I want, if I may, to put to you a sentence or two from the memorandum by the Financial Secretary to the Treasury on the Estimates. There appears to be a misunderstanding upon this. He says:



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'in dealing with Sub-head F'—which I referred to in opening (he is dealing with the point that the Estimates under this Sub-head show a decrease of rather more than six million) that "This decrease is mainly due to the decision that settlement in respect of future orders for aircraft, aircraft spares, etc., for the three Corporations will be made by the Corporations direct and not by the Ministry". I gather that that is misleading, in view of the evidence we have heard this afternoon?—Did it say "aircraft spares", Sir?

2171. It is "future orders for aircraft, aircraft spares, etc."—(Mr. *Dunnett*.) Could I explain that from the Ministry of Civil Aviation side, Sir? That refers to the change that was made from the arrangement in force since the war, that the Ministry of Civil Aviation bought the aircraft from the Ministry of Supply and re-sold them to the Corporations; the sums, therefore, pass through the Ministry of Civil Aviation Vote. This year the Ministry of Civil Aviation has been cut out and the Corporations are to purchase direct from the Ministry of Supply.

Mr. *Barton*.

2172. My question is correct, then, is it, that the only charge now that goes through the Ministry of Civil Aviation is the charge representing the development factor in the total cost as in the case of the "Viking", £800. That is what I understand from the evidence. I want to be quite clear about it?—(Mr. *Meeres*.) There is a change in the system coming about. My remarks before were describing the existing system, but it was laid down last September by the Prime Minister that the future procedure for ordering new types of aircraft should be that the Department would order them; the Ministry of Supply would order them, as agents for the Corporation. When that system was introduced it was decided that the Corporations could, therefore, pay the Ministry of Supply direct; in fact, in some contracts arrangements have been made for the Corporations to pay the firm direct.—(Mr. *Musgrave*.) It would be really a matter of paying machinery; the contract being placed by us.

Sir *Peter Macdonald*.

2173. On the question of hiring, quite a number of machines have been hired by one or more Corporations. From whom are they hired?—(Mr. *Meeres*.) All those come under the existing system, and therefore are hired by the Ministry of Civil Aviation.

2174. They are bought by you; the machines belong to the Ministry of Supply?—(Mr. *Musgrave*.) No. We pass them to the Ministry of Civil Aviation.

2175. They are passed over to the Ministry of Civil Aviation who, in turn, hire them out to the Corporations. Is that the procedure?—Yes.

2176. You have nothing to say as to what charges are made for hire; you have nothing at all to do with it?—(Mr. *Meeres*.) No.

Mr. *Howard*.

2177. May I put it in another way? Are there any hiring arrangements as between the Ministry of Civil Aviation and the Ministry of Supply?—No.

2178. Any hiring arrangements would come lower down the scale, but as between the two Ministries it would be a straightforward sale?—(Mr. *Musgrave*.) A transfer of funds.

Mr. *Barton*.

2179. If we have finished with aircraft, I want to know what function the Ministry performs now in the supply of equipment for aerodrome control, operational control such as Radar and all the necessary impedimenta; is it bought by the Ministry of Civil Aviation from the manufacturers, or is the Ministry of Supply brought into it?—I do not know that it is possible to generalise on that.

2180. Who is carrying out research work on operational control? It seems to me it is bound up with the industry generally?—I think it is bound up more with the operational side than with the aircraft side, which is the side we represent this afternoon.

2181. We cannot be told, then, who is responsible for purchasing equipment for operational control?—We can certainly give you a list of the purchasing authorities for all the main types which, I imagine, is what you would like; but I am afraid I should have to have notice of that; I could not answer it offhand.

Mr. *Howard*.

2182. May I ask one question on an entirely different point which you touched on some time ago, with regard to the question of competitive buying. Mr. *Musgrave* advanced some very cogent reasons as to why it was considered that the avoidance of competitive buying in certain directions was desirable. What I want to ask is: Is there any competitive departmental buying as between one Government department and another now?—Not in the aircraft field.

2183. The Admiralty, for instance?—We buy the Admiralty's aircraft for them and develop them for them. All aeronautical development, production and buying is centralised in the Ministry of Supply. Perhaps I might be allowed to add, Sir, that the Admiralty and Air Ministry are very

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strongly of the opinion that the present practice should continue of the Ministry buying for the Corporations so that all users of aircraft go through one source, in the interests of economy and fairness as between the users.

Mr. Howard.] The object of my question was not to criticise but to make certain that the principle was being carried out throughout.

Colonel James Hutchison.

2184. I have one question, of a different nature, which perhaps I might put. Mr. Pickles mentioned quite early on in our discussion this afternoon the question of aerodromes at contractors' works for which the Ministry of Supply take certain responsibilities and carry out certain duties, and make certain payments. Could he tell us a little bit more about what those responsibilities are, and whether the contractor in any way contributes towards this aerodrome, or runway, construction?—(Mr. Pickles.) I think it was Mr. Musgrave who referred to aerodromes at contractors' works.

2185. I am sorry.—He was saying that in the case of the "Brabazon I" the aerodrome to be used by that machine belonged to the Ministry and they would raise a charge for the use of it by the Bristol Aeroplane Company.

2186. Would that charge be a lump sum, and would it correspond to the cost of production spread over a number of machines, or how would it be treated? It is very much the same question as the other one, I suppose?—(Mr. Musgrave.) I am afraid I have not the details in my head of the contract between the Bristol Aeroplane Company and the department for the use of the runway, so I can only answer in general terms. The cost of the work we have done on it would be a factor

in determining the amount that was paid by the Bristol Aeroplane Company to ourselves, whether it be spread over aircraft per year or per aircraft landing, or however, in actual fact, it may have been negotiated.

2187. You really stand in the position of financiers for the Bristol Aeroplane Company, in respect to the cost of constructing the necessary runway?—Yes, and landlords as well.

Chairman.

2188. Have you constructed the runways yourselves, or have the Air Ministry constructed them?—The Air Ministry are doing it for us as our agents, they being experts in that sort of thing.

2189. I have only one more question. It really arises from the questions we asked about research. I think we can assume that there is still a shortage of scientific and technical men. Has the Ministry of Supply taken any steps to remedy that shortage?—The Ministry of Supply has reduced the size of its technical staff since the end of the war by a very substantial percentage—an embarrassingly substantial percentage I may say, in view of the increased duties that are being placed on us, not only in this field but in other fields, and we, like everybody else in the country, have been feeling acutely the shortage of technicians and technical staff.

2190. Have your redundant personnel been absorbed by the industry?—They have been absorbed in a thousand-and-one ways; by industry, by Universities, and everywhere where scientific people are employed.

Chairman.

2191. Thank you very much indeed. I am afraid we have covered a very wide and interesting field this afternoon. We are much obliged to you for the assistance you have given us.—Thank you, Sir.

The witnesses withdrew.

[Adjourned till Monday next, at 2.30 p.m. at Prestwick.]

MONDAY, 30TH JUNE, 1947.

Members present:

Mr. FRÉDERICK WILLEY (Chairman).

Mr. Barton.  
Mr. Corlett.  
Viscountess Davidson.

Colonel James Hutchison.  
Sir Peter Macdonald.  
Major Niall Macpherson.

Group Captain J. A. MACDONALD, C.B.E., A.F.C., Aerodrome Commandant, called in and examined,

Chairman.

2192. Group Captain Macdonald, we know that you are the Commandant in

charge of the Airport. Before we proceed to take any evidence, on behalf of the Sub-Committee we thank you, together

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[Continued.]

with your Officials, very much for the courtesy and assistance which you have afforded us this afternoon. We have had a very interesting day and you have been extremely helpful to us. There are a few general questions that we would like to ask for the purposes of the record. In the first place, can you tell us what the establishment is on the Airport?—Owing to the Redbrae Establishment, I do not think I can give you the figures in detail. I can give you what I have got. I can tell you the establishment of my own personal staff here on the Airport, of course. I can tell you how many Clerical Officers and Typists I have got.

2193. Just generally, if you could give us the overall figure—industrial, technical and other staff?—I am afraid I have not got these figures handy. I can total up the industrial figures and give them to you. I have about 200 industrial staff who compose the Fire Brigade, the Duty Crew, the Cleaners and the Transport Section.

Viscountess Davidson.

2194. That is nothing to do with the Hotel side at all, is it?—Nothing to do with the Hotel side. That is the industrial staff I have. Then I have a staff of my own here consisting of 8 clerks and 2 typists, one foreman, with an assistant, and two labourers.

Chairman.

2195. Can you give us any guide as to the establishment that Scottish Aviation Limited have on the Airport?—No; but when I say I have 200 industrial staff looking after the aircraft, fire services, and so forth, these are Scottish Aviation employees.

2196. What is the relation between the Ministry and Scottish Aviation regarding the services afforded?—Scottish Aviation Limited act as the Ministry's contractors, the Ministry's agents.

2197. Does that mean, broadly speaking, that, apart from the technical staff, the bulk of the establishment is employed by Scottish Aviation Limited?—That is so. Apart from the technical staff, the bulk

of the other staff are employees of Scottish Aviation Limited.

2198. Policing, marshalling, and so on, is done by Scottish Aviation Limited for and on behalf of the Ministry?—Yes.

2199. Your control over that staff will be indirect?—My control is indirect.

2200. Do any difficulties arise from that division?—No greater difficulties than one would expect from any divided control system.

Major Niall Macpherson.

2201. You have no more difficulties than arise from your control of the meteorological services; there, again, it is an indirect control?—Yes; it is indirect, but, of course, in fact, it is much more direct. The Meteorological Officer looks to me for guidance in all his services and all that he wants done. But with the Scottish Aviation employees, they are, of course, under their own foreman, under their own manager, so to speak, and I have to issue my directives and instructions through the Scottish Aviation Manager. I cannot go up to a Scottish Aviation employee and say: "Pick up that barrow," or do something like that. I would not do that. I would be most careful to approach their employees through the proper channel.

2202. But within those limits it works well, does it?—Within those limits it works very well.

Chairman.

2203. You mentioned the Fire Service. Supposing a question arose of improving the co-operation between the Airport Fire Service and the National Fire Service, how would that be arranged?—I would give a direction. The Fire Service look to me to give them direction as to their employment generally.

2204. Would the channel of communication be through Scottish Aviation Limited?—It would, yes. One must always observe these channels. If you are going to ask me on that administrative side, I would like to have my Manager here. Would you mind?

Chairman.] Certainly.

Mr. C. S. APPLEBY, Airport Manager, called in.

Sir Peter Macdonald.

2205. Have you any fixed establishment laid down and approved, so far?—(Group Captain Macdonald.) Yes, I have a fixed establishment laid down by the Ministry for all Departments: The Fire Section, Duty Crew, Cleaners, Police, Flying Control, Signals; every Branch has its proper establishment.

2206. Is it up to strength now?—Yes; we are up to strength now. There is no difficulty about getting labour.

2207. You are not over-strength, are you?—No. I could not speak for the Signals Section; but I do not think in any case we are over-strength. If you can provide accommodation, there is no trouble about getting labour at the Airport. I find that accommodation is the outstanding difficulty.

Viscountess Davidson.

2208. Accommodation is as difficult here as elsewhere?—Accommodation here is very difficult, because this is a holiday centre

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and Mr. C. S. APPLEBY.

and the Glasgow people come down here any time after Easter, and the landladies' prices go up, and the young Ministry employee with £4 10s. od. or £5 a week just cannot cope with the landladies in Ayr and Prestwick, and we just have to do something for them.

2209. Have you hostels or anything like that?—Yes; we have a W.A.A.F. Camp, which was previously an American hospital, and the wards which were the hospital wards we have turned into dormitories for the girls; each ward has its bedroom and everything at the end of the ward. At the present moment we have nearly 100 girls in the hostel, and I should think we have at least that number of single men as well, either in the hotel annexe or in the ex-Airmen's huts. Married people with families, of course, constitute quite a different problem. I have allowed about 12 families to what you might call orderly squat in huts, but with the help of the Ministry I have received Treasury approval to convert sufficient huts to accommodate 70 families; the Treasury have kindly approved of the scheme; the drawings are out, and I am hoping that the contract will be let certainly this month of July and, with any luck, will be started before the Winter, and then we would move 70 families into the Airport area.

*Major Niall Macpherson.*

2210. And these might be meteorological personnel or anybody?—Yes; but they would be Airport employees; Government employees not Scottish Aviation employees.

2211. And that applies to the 100 girls you have already mentioned?—Yes; and perhaps an odd Customs girl as well. As a matter of fact, one or two girls of the Operating Companies, who are ex-W.A.A.F. girls, have come to me and said: "Do you mind if I go into the hostel, though I do not work for B.O.A.C.?" and I have let them go into the hostel.

*Chairman.*

2212. When we were across at Redbrae I think some of us at least gained the impression that it would be better if some of the staff were accommodated over here. Is that your view, as Commandant?—I hope you realised that although Redbrae has some of the Airport Services, like the weather service, apart from that we would not care whether Redbrae was one or 50 miles away.

*Colonel James Hutchison.*

2213. But if might be useful for the record to chronicle what we have been told, namely, that certain of the Foreign Services have complained of the distance; there is an international obligation on which they found their complaint?—Yes.

*Chairman.*

2214. That certain services should be provided on the Airport?—That is true, I am afraid.

*Viscountess Davidson.*

2215. Which Services particularly?—The Weather Services.

2216. The Services that you cannot get here?—Here we can only give local weather, national weather; but the weather in the North or South Atlantic we can only give in the forecasting room at Redbrae and it necessitates the Air Crews going over there for briefing.

2217. Do the same Officers do that?—In the first place, the Company's business offices are on this side, and on a dark night, Pilots and Navigators disappear in a truck to Redbrae; out they go there, and the Company loses touch with them for 20 minutes or half-an-hour. The Pilots and Navigators disappear over to Redbrae in a truck, and this transport has got to be provided by the Company. They are over at Redbrae; they get wet on a wet night, or cold, and the Company lose touch with them and say: "We cannot tell you when the aeroplane is going because the Pilots are over at Redbrae being briefed." Then they come back from Redbrae and say: "We do not like the look of the weather, and we are not going for an hour or so." The Company say that if the briefing were done on the Airport side the Company would know all the time.

*Chairman.*

2218. Would that mean transferring any equipment over here?—I think it would mean transferring it, because the men cannot work on their forecasting system unless their messages are coming in all the time.

2219. Would that mean providing very much additional accommodation?—No, I do not think so. It would mean providing something twice the size of this room sufficient for the forecasters to work in.

2220. Is there such accommodation available?—No; I am afraid it is not available.

2221. It would mean providing it?—Yes.

*Mr. Barton.*

2222. Do the Meteorological Section use the teleprinter system where possible?—Yes, and part of the teleprinter system would have to come over here.

2223. Is the teleprinter system common both to the Meteorological Service and to the General Signals?—Yes; but part of the Meteorological teleprinter service is specialised; it does nothing but meteorological

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messages. The teleprinter system goes right through to London Airport and the Dunstable Head Meteorological Office in England and through to Shannon, so we deal with nothing but Meteorology. The Meteorological Officer would have to speak on that.

2224. Would it not be more convenient altogether to have the whole of your Signals and Meteorological Service over here?—No, it would not, because some of these Wireless Operators are in touch with Stockholm, the Azores, and other places sending wireless messages about the arrival and departure of aircraft. I do not want them on the Airport. My function on the Airport is to try to keep the aeroplanes coming and going smoothly and to look after the passengers.

2225. They have no Airport function at all?—No, not a distinct Airport function; not a specialised Airport function; they are for general aviation purposes.

*Sir Peter Macdonald.*

2226. As I understand from looking at that teleprinter room, there would be no difficulty in transferring them over here?—No; because the switchboards are there.

*Mr. Barton.*

2227. Are there peculiar natural advantages for having that service near Prestwick?—The Redbrae Service?

2228. Yes.—No; it just grew up during the war.

*Colonel James Hutchison.*

2229. It was dispersed?—During the war they built up this Trans-Atlantic ferry service to get over the Lease-Lend aircraft, and secondly, to bring the American Expeditionary Force over here, and Redbrae grew up as part of that Trans-Atlantic Ferry Service.

2230. So that, apart from the Meteorological Service, you do not care if the rest are here?—No. All my wireless services are in the Flying Control Tower.

*Major Niall Macpherson.*

2231. Would you not say, if it were not there, that it would have to be at some place on the West Coast comparable?—Yes, it would.

*Chairman.*

2232. From the figures you have given us, it is clear that the traffic has increased considerably of recent months? Can you say whether the accommodation and the amenities offered to the passengers are adequate?—No, I think the accommodation for transit passengers at Prestwick is not good.

*Mr. Barton.*

2233. May I put it this way? Do you have any strong complaints from either our own Corporations or from foreign Operators?—We do get complaints, yes.

2234. Because of the accommodation?—Yes.

*Viscountess Davidson.*

2235. In the way of comparisons with other places abroad?—(Mr. Appleby.) It is really lack of space.

*Colonel James Hutchison.*

2236. We have heard that the Air Commandant is submitting plans for extensions to the transit hall, cinema, outgoing Customs sheds and so on?—(Group Captain Macdonald.) Yes. I will show you what we propose to do in the transit waiting-room. We propose to do that. (Producing a plan.) Here is the transit waiting-room. It consists essentially of a large waiting-room, half of which can be made into a little cinema place. It consists of a nursery for women and children, with accommodation, a first-aid room; two shower-baths, and two places for gentlemen's accommodation there.

2237. On those plans you are consulting the Corporations and Companies to see if they meet their view?—Yes; this will go forward on the express views of the Companies.

*Chairman.*

2238. How often do you consult the Companies?—I have a monthly meeting with them. The next meeting is on Thursday. My policy is to meet the Companies on a very frank basis. In the first few months I was not sure of myself; but now that I have settled down, my Manager and I meet the Company on a frank basis once a month. Perhaps that is a little too frequently, but we are doing it at the moment.

2239. On consultation, do you know whether there is any machinery for consultation with the local authorities in the district?—I am sent for by the County Clerks and people, and the Planning Committee. I am sent for by the Ayrshire County Council Planning Committee.

2240. So that they can be fully cognisant of the developments of the Airport?—Yes; and the Prestwick Town Council are kept cognisant, but there have not been any developments at the Airport since we took it over from the R.A.F., except that a few huts have been added.

2241. But they have an opportunity of putting their views forward?—Yes. I was with the Ayr Council Planning Committee last week.

*Major Niall Macpherson.*

2242. Are you satisfied that they are prepared to wait for the decisions necessary with regard to the extension of this runway before taking any action that might compromise the decisions?—Yes; they are very co-operative because they want the Airport to develop.

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and Mr. C. S. APPELBY.

[Continued.]

*Chairman.*] I am afraid, after a very sketchy review, we will have to adjourn because of our next engagement, but we might have an opportunity, perhaps, tomorrow, of asking further questions about Prestwick, if Members of the Sub-Committee feel that they would like to do so.

*Sir Peter Macdonald.*

2243. With regard to the question of getting the briefing room people over here, have you got accommodation that you

could adapt for that purpose? It would have to be built I suppose?—Yes.

*Sir Peter Macdonald.*] I think the Trans-Atlantic Airlines will insist upon it eventually, and I think it is a thing they really ought to insist upon.

*Chairman.*

2244. Thank you very much, Group Captain. If there should be anything further, perhaps we could resume again to-morrow?—If you please, Sir.

*The witnesses withdrew.*

[Adjourned till to-morrow at nine a.m.]

TUESDAY, 1ST JULY, 1947.

Members present:

MR. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Mr. Corlett.  
Viscountess Davidson.

Colonel James Hutchison.  
Sir Peter Macdonald.  
Major Niall Macpherson.

PRESTWICK AIRPORT.

Mr. A. H. WILSON, C.B.E., Under Secretary, Aerodromes Administration; Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Director of Civil Air Operations; Air Commodore J. G. MURRAY, Controller, Scottish Division; Group Captain J. A. MACDONALD, C.B.E., A.F.C., Aerodrome Commandant; Mr. T. PARIS, Director of Finance (Ground); and Mr. H. W. BUICK, Superintending Engineer, Directorate of Works, Air Ministry, called in and examined.

*Chairman.*

2245. Air Commodore Murray, we are much obliged to you for the assistance you have given us this morning. We understand that you are the Controller of the Scottish Division of the Ministry?—(Air Commodore *Murray*.) Yes.

2246. Can you tell the Sub-Committee when you were first appointed?—My actual date of appointment was the 1st February, but I did not come here finally then, although I came to pay some visits. There was a good deal of work to do in London on policy discussions.

2247. You were previously with the Ministry?—For about 15 months.

2248. What was your experience with the Ministry?—When I went there I was Director of Operational Services, but in the expansion of the Ministry that got split up into a number of other Directorates, and I finally became Director of Control and Navigation. As Director of Operational Services I had control of the Aerodromes Branch which subsequently became a Division, a number of Divisions in actual fact. I also had in my Directorate branches dealing with International Rules and Regulations; Navigation which included examination for Pilots' and Navigators' licences; Air

Traffic Control; the Minister's Communication Flight; Operational Planning and Organisation; and so forth.

2249. Do you know when the Ministry obtained these present Divisional Headquarters?—This Headquarters was requisitioned in 1939; that is an approximate date; I am not quite in on the detail. At that time it was requisitioned in connection with a Radio School which was running on the Airport over here, and I think they housed a large number of pupils here and had some lecture and examination rooms here. At some point during the war it came under the control of the United States Army Air Force and then, I think, became an Officers' Club. It is still requisitioned under the Air Ministry and is in the process of being bought now.

*Mr. Barton.*

2250. In process of being bought?—Yes. I would not like to be too definite on the figures, but there is a good deal of constructional work and a great many huts and Macadam roads put down, and I understand that it would be just as expensive to take those away as it would be to buy the place. It is ideal for our purpose.

1 July, 1947.]

Mr. A. H. WILSON, C.B.E.,  
Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

[Continued.]

*Chairman.*

2251. Will you take over the huts or will they be used for other purposes?—The contract is very nearly let now for them to be converted into married quarters for the staff, chiefly on the Airport. That was how the scheme started before the Airport was set up. It is exceedingly difficult to get married quarters.

*Viscountess Davidson.*

2252. How many do they expect to house?—There are 62 married quarters.

2253. One hut per person?—Yes and some of the huts will be converted into flats.

*Mr. Barton.*

2254. Is that entirely apart from the scheme mentioned to us yesterday by Group Captain Macdonald?—It probably was the same one.

*Chairman.*

2255. That is to provide accommodation for the staff of the Ministry generally, not necessarily Divisional Control?—Just at the moment there are no Divisional Control staff down on the list at all.

2256. What is your present establishment?—That is a slightly difficult question to answer. I believe there have been some changes since I left the Ministry. It is, approximately, between 60 and 70, including all the typists.

*Viscountess Davidson.*

2257. That is going to be your staff?—Yes.

2258. How many have you at the moment?—Approximately, 20 to 30. The clerical staff up here are very easy to get and very good; but with the more senior technical staff it is a very different matter. It is no good putting senior Officers in the senior posts unless they are experienced, and that means robbing the Ministry which is extremely hard pressed on international and Empire routes and Colonial arrangements.

*Colonel James Hutchison.*

2259. Are you going to find such a bottleneck that you will not be able to function properly in technical staff?—No. I think the difficulty is about to be resolved; it is under very active discussion with the Ministry now.

*Viscountess Davidson.*

2260. How?—Recruitment action is being taken now.

2261. What are you going to do about housing them if those people come up here?—It is quite easy to deal with the single ones at the moment; there is an annexe to the Airport Hotel.

2262. Have they room for your people there, too?—Yes, they have, up to a certain number.

*Colonel James Hutchison.*

2263. I am a little puzzled still about this supply of technicians. If there is going to be an overall shortage, where is the nursery for training these men on? Is there an examination scheme?—The nursery really is the Ministry itself, coupled with the source of supply that one gets from the Air Force, Fleet Air Arm, and civil aviation generally, and the senior posts filled by transfer from the Ministry of Officers in appropriate grades, or promotion in the Ministry to those grades, and the vacancies which are left behind are filled by recruitment.

*Chairman.*

2264. How many of your present staff have you transferred from the Ministry?—Other than Control and Signals, which were here when I came up in Officer grades, you mean?

2265. Yes.—About 5 or 6.

2266. Are there any disadvantages in being here rather than at Edinburgh?—I do not think so, really. The Scottish Office is in Edinburgh, as you know, and I liaise very closely with them; there is a line being put into me from the Scottish Office which will be very adequate. They also make an office in Edinburgh available for me.

*Major Niall Macpherson.*

2267. Is that the Home Department of the Scottish Office?—Yes, for liaison purposes.

*Chairman.*

2268. How often do you find that you have to go across to Edinburgh?—I had intended going over approximately once a week when I get going. There is also a body called the Scottish Aerodromes Board in Scotland; I am the Chairman of that Board and one of my staff is Secretary. It may be convenient, and I think it probably will, for that Board to meet in Edinburgh. I would then make the office over there available as an office for the Board. At the moment, in addition to myself, there are four members appointed, and there would be two additional ones who would be members of my staff.

*Viscountess Davidson.*

2269. Are they to advise you?—Yes, they really are to advise, and to bring in the Scottish angle to the technical discussions.

2270. They are voluntary, are they?—Yes; they are invited by the Minister to serve and they do so. The difference

1 July, 1947.] Mr. A. H. WILSON, C.B.E., [Continued.  
 Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
 Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

between the Board and the Advisory Council is that the Board is the executive body, and when it is sitting the members are, in effect, part-time Civil Servants.

2271. But, then, they are paid, are they not?—No, they are not paid. I imagine they will get subsistence allowance or travelling expenses.

2272. And the Advisory Board are voluntary, too?—Yes.

2273. They are all on, more or less, the same kind of work, only on a different level?—There is a clear line of demarcation. There is one thing that has got to be made more clear than it is at the moment. The Advisory Council is a British European Airways body. They are supposed to advise B.E.A. and the Minister what services they consider ought to be run in Scotland to develop it and to get the best out of its resources, not only internally but externally, on world routes.

Major Niall Macpherson.

2274. It is a sort of "Consumers' Council"?—Yes; and to add and develop an operational background to it. The Aerodromes Board is a body which discusses the policy and directs the implementation of it on matters connected with aerodromes which are required for the operation of B.E.A. services.

Chairman.

2275. Within its terms of reference the Aerodromes Board can take operative decisions affecting Scotland?—Yes.

Major Niall Macpherson.

2276. Do they cover the facilities on aerodromes as well as the runways, and all the rest of it?—They do not go into matters of detail like tele-communications, but they discuss the Airport sizes, grades, works services, and so forth, and buildings, to handle passengers.

2277. And catering?—Yes.

Colonel James Hutchison.

2278. Your presence on the Aerodromes Board shows that there is a definite technical knowledge there. Is there anybody with technical knowledge on the Advisory Council, do you know?—I am not quite sure that I could answer that question. There is, I think, incidentally, some technical knowledge; people like Mr. Primrose, from Perth, who was interested in aviation before; but I do not think the Advisory Council are supposed to have technical knowledge. (Mr. Wilson.) They are not supposed to have technical knowledge; it is purely fortuitous if they have.

Chairman.

2279. What is your association with the Advisory Council?—(Air Commodore Murray.) It is very close indeed. Sir

Patrick Dollan, who is Chairman of the Advisory Council and a member of the Aerodromes Board, provides the official overlap between the two. In addition to that, I go and sit in quite a number of Advisory Council meetings. Naturally, in discussing the availability and lay-out of aerodromes, one has to have some regard to the services which are going to use them, and, conversely, the Advisory Council when discussing potential services must have some information as to whether the facilities are likely to be available.

Sir Peter Macdonald.

2280. Do the Advisory Council deal with external as well as internal services?—Yes. I understand that is in their terms of reference, which are wide; they advise as to the air services which should be run and the facilities which should be available.

2281. But what contact have they got with B.O.A.C., who are responsible for external services, for example?—That is not quite within my sphere. (Mr. Wilson.) May I, perhaps, say something on that? The majority of the services with which Scotland is concerned, of course, will be Continental services rather than long-distance services, so their interest is much more with B.E.A.C. than it is with B.O.A.C.

Colonel James Hutchison.

2282. But they must have a very big interest in the B.O.A.C. Airlines?—As regards Trans-Atlantic Services from Prestwick, they have an interest in B.O.A.C., but they are not an adviser to B.O.A.C., they are an adviser to B.E.A.C., and if they want to raise questions about B.O.A.C., and what B.O.A.C. should do, they must put them to the Minister, and they can do that because they have a right of access to the Minister.

Sir Peter Macdonald.

2283. Have they not some liaison to short-circuit this reference to the Ministry in London? Should they not have some liaison with B.O.A.C. for external services as far as Scotland is concerned?—They were not set up as being a body in relation to B.O.A.C. at all. The conception of this body was to give a Corporation that was primarily interested in the internal services in Scotland and the connections of Scotland with Europe, the benefit of Scottish opinion and views on what it should provide and how it should operate, so that it was set up against the background of European and internal operations. It is only incidental that it has got this rather wider range interest, because Prestwick happens to be in Scotland and happens to be a Trans-Atlantic transit point.



1 July, 1947.]

Mr. A. H. WILSON, C.B.E.,  
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[Continued.]

Colonel *James Hutchison*.] I should have thought it was only satisfying two-thirds of its functions if, in fact, it advises on certain European external airlines and has no power to advise on Trans-Atlantic lines.

Major *Niall Macpherson*.

2284. Am I right in thinking that B.O.A.C. does not, in fact, exist in Scotland at all, and that B.E.A.C. represents them there?—Yes. There is no B.O.A.C. headquarters in Scotland; B.O.A.C. merely pass through Prestwick and B.O.A.C. movements through Prestwick are not very many. A great deal of Atlantic traffic through Prestwick is foreign.

Colonel *James Hutchison*.

2285. Would it not be advisable to have somebody with a thorough knowledge of technical services who are going to advise on operational services or on the lines that are desirable and necessary?—They are only advising on traffic aspects—as to whether they think an air service ought to run, not how it ought to be run.

Major *Niall Macpherson*.

2286. Is there anybody who has had any connection with any operation side of any transport undertaking?—(Air Commodore *Murray*.) There is Lord Selkirk who is a Director of Scottish Aviation; he is a member of the Advisory Council.

*Chairman*.

2287. If we could turn to the Division, of what does it consist? How many airfields are there in Scotland which are controlled by the Ministry?—Just at the moment there are 13 and a possible 14th, I think I am right in saying. There are various places which are about to be brought in to use, such as Sollas and Errol; for Dundee and Perth, which are not quite functioning yet.

2288. There are 13 or 14 at the moment, and several other being brought within the control of the Ministry?—Yes.

Major *Niall Macpherson*.

2289. Have you had an opportunity of visiting them all?—I have visited all but two; I have not visited Sunburgh in the Shetlands or Port Ellen on Islay, over here.

*Chairman*.

2290. Have all the 13 or 14 airfields Commandants?—No; there is only one airport Commandant in Scotland, and that is the one on Prestwick. The others have, as yet, only got Airport Managers, with control of signals staff working separately. That situation is about to be remedied; there have been promotion boards in London.

*Viscountess Davidson*.

2291. You think they should have Commandants?—Yes, very definitely. I do not think it could possibly work satisfactorily in any other way.

2292. You must have somebody in complete authority?—In complete control, yes. In the smaller airfields, what happens at the moment is that several of them are bunched together and put under one. Just as to how they will be bunched together under the Airport Commandants when they come I am not quite sure yet.

2293. Could you have an Airport Commandant with three airports under him?—Yes, quite easily if they are small ones he just flies there and the administration is centralised.

2294. He would be in a very responsible position?—Yes.

*Mr. Corlett*.

2295. You do not anticipate a Commandant for each of these airports?—No; some of them would not justify it at all.

*Chairman*.

2296. What is your present establishment outside divisional headquarters?—I could not answer that question. I have not taken the airports over at all yet; you mean, on all the airports in Scotland?

2297. Yes?—I could not answer that.

2298. I was just trying to get a picture of the size of the personnel responsible to these divisional headquarters?—Yes; I do not think we have a figure for that.

*Viscountess Davidson*.

2299. You have no approximate idea?—I would not like to put forward a figure here. It is one that could very easily be produced. It would be a guess if I gave you any figure. (*Mr. Wilson*.) I should have thought it would be about 1,000 to 1,200 bodies all told, including Prestwick; it is rather a guess. (*Air Commodore Murray*.) It could not be much more at the moment. (*Mr. Wilson*.) You have about 500 or 600 at Prestwick? (*Air Commodore Murray*.) Yes; I suppose that is a pretty good guess.

*Chairman*.

2300. The difficulty, at the moment, is that these divisional headquarters are really not yet operative?—No; we have not taken the airports over yet; we are really only getting the staff machinery in position now.

2301. When do you anticipate being in operation as divisional headquarters?—That again is in the nature of a guess, and I am in the hands of the availability of staff situation; it would be something in the nature of three weeks or a month; I might get enough staff to do something then.

1 July, 1947.] Mr. A. H. WILSON, C.B.E., [Continued.  
 Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
 Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

Mr. Barton.

2302. Can we get this clear, Mr. Chairman? You are including, in that figure, the staff at Prestwick Airport. Five hundred was the figure mentioned. We were told yesterday that that staff, or the bulk of it, was actually Scottish Aviation staff. Do I understand that under the Divisional Controller will come the staff actually employed by Scottish Aviation Limited?—Yes, some of them do. There is a very complex situation in Prestwick. The Ministry, while having designated the field as a State-owned airfield, have not yet cleared up the situation that exists there financially. There are certain adjustments which are in process of being made now. When that happens there are a number of domestic services which are now run by Scottish Aviation Limited which will be taken over, and probably a great many of the staff will transfer quite voluntarily; they will probably be invited to, but it will not, naturally, control the staff of a private undertaking on an airport.

2303. Giving rise to a very peculiar situation is this, and I want to understand it at any rate. You are Divisional Controller, and ultimately have direct responsibility to the Ministry?—Yes.

2304. And it appears to me that it may be all right, but you are going to have the disadvantage of dual control at your chief airport?—I am not quite sure how you would see that, as a matter of fact.

2305. We took evidence on this yesterday from Group Captain Macdonald, and apparently his supervision of the staff at Prestwick (correct me if I have got a wrong impression) is that his orders must be given through the Scottish Aviation supervisor, whoever he may be. Assuming he has a directive to give regarding portorage, he sees something going wrong and something that might be improved, shall we say, in the handling of passengers' baggage. Instead of his being able to rectify it on the spot and saying to the Foreman: "This will not do," he just has to go, apparently to a Scottish Aviation Manager or Supervisor to tell him to tell the other fellow what to do?—That is a situation which exists at the moment, but that is one of the facets of the background of this unsatisfactory position that has to be cleared up, and it can only be cleared up when the Ministry have made their financial adjustment and have compensated Scottish Aviation Limited for taking over the field.

Chairman.

2306. Do you know what progress has been made in clearing it up?—(Mr. Paris.) I think I might speak to that, Sir. First of all, I should make it clear that the staff we are concerned with are non-technical staff; people like the fire brigade, which you saw

last night, the duty crew, the traffic superintendents, the chargehands, operators of the re-fuellers and loaders, male and female, the maintenance staff such as terminal building cleaners, sanitary men, boilermen, window cleaners, gardeners and the mechanical transport staff. The Ministry has intimated to Scottish Aviation Limited that it is our intention ultimately to take them over.

2307. Do you know when that intimation was given?—On the 10th March of this year, in writing. I think Scottish Aviation Limited had some prior knowledge that that was our intention. At or about the same time as we reached agreement, subsequently confirmed by a letter from the Ministry, that the Ministry would stipulate the numbers of staff to be employed by Scottish Aviation, and the rates of pay, and Scottish Aviation have not yet dissented from that proposition and are, so far as I am aware, operating it, consulting us on numbers and on rates of pay, conforming to the Ministry's rates of pay at aerodromes; they did not some time back, but the whole object of this arrangement was to make ultimate transition to the Ministry a simple matter not causing any heart-burning or difficulty.

Mr. Corlett.

2308. You said that you had no difficulty in regard to staff at this place?—(Air Commodore Murray.) That remark related to grades like shorthand-typists, we have had no difficulty at all, so far, up here.

2309. They are Civil Service rates of pay?—Yes.

2310. How do they compare with Glasgow rates of pay in commercial houses?—It appears to me from the cases I have had brought to my notice that they compare quite favourably.

Chairman.

2311. When you say that there is no difficulty, you mean there is no difficulty in recruiting staff locally?—Yes. If we wanted some shorthand-typists, we would merely go to the Ministry of Labour and we get a list to choose from. As you know, down south the position is very much the other way.

Mr. Corlett.

2312. I was thinking of lack of accommodation?—They are locally recruited; they live at home at Troon, Ayr and Kilmarnock, and so forth.

Viscountess Davidson.

2313. There are a lot of girls who have been in the Forces who are very glad to get work near home?—Yes; and against a Government background with a certain amount of communal life which they have got accustomed to in the Forces.

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Mr. A. H. WILSON, C.B.E.,  
 Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
 Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

[Continued.]

Major Niall Macpherson.

2314. May I revert to the question of Scottish Aviation, the salaries to be paid and the strength be determined. How is Scottish Aviation remunerated for its services at the present time in providing these services?—(Mr. Paris.) They are to be remunerated by a management fee.

Sir Peter Macdonald.

2315. Under contract?—Under contract. There is a contract which has been the subject of discussion and negotiation for some considerable time now.

Chairman.

2316. Again, if I may interpose, the position at the moment is that these services are being provided under a gentleman's agreement?—Yes, that is so.

2317. There is no contract determined yet?—No binding contract. We have been making payments on account to Scottish Aviation on what appear to be mutually agreed terms.

Major Niall Macpherson.

2318. Could we get this quite clear? Are they providing the services and running the show for their own profit or are they acting purely as your agents on a management fee only? If there is any loss on the exploitation of the airfield will they bear that loss or does the Ministry bear it?—The Ministry will bear any over-all loss in operating the aerodrome. This is simply a proposed contract with Scottish Aviation to supply a labour force, remunerated by a management fee, the amount of which has not yet been agreed.

Chairman.

2319. In other words, it corresponds to the arrangements made by the Ministry of Works, for example; the management fee is determined as an over-all fee, or a percentage fee on the services provided?—It is in some way comparable with the percentage addition made by the Air Ministry for works services.

Colonel James Hutchinson.

2320. Would it be on a percentage basis?—Not necessarily. We have asked Scottish Aviation Limited to make a suggestion as to what should be a suitable fee. We are aware that this fee will require to cover a sum of actual additional overhead expenditure, such as office staff, so that we are not yet in a position to form our own ideas as to what net remuneration would be involved in any particular sum suggested as a management fee, and we have asked Scottish Aviation Limited to give us a considered statement of their claim for a management fee.

Chairman.

2321. But the remuneration is directly related to the services provided, and in no way related to the Profit and Loss

Account of the airport as a whole?—That is right.

Major Niall Macpherson.

2322. That is the arrangement that is to be maintained because I think you said in March you gave notice that you would take these over; that is, the sense in which you are taking them over, that Scottish Aviation Limited continue to run them on a management fee. Is that the position for the future?—That is the present position, and the intimation in March was simply an intimation that these arrangements would not continue forever and would be eventually terminated when we were in a position to take over all the labour services on the aerodrome.

Viscountess Davidson.

2323. Then eventually you will cut out Scottish Aviation altogether?—Yes.

Sir Peter Macdonald.

2324. They understand that position, do they?—Yes.

Chairman.

2325. Why are you not in that position at the moment?—(Air Commodore Murray.) Not in a position of having taken them over?

2326. Yes?—The background to the whole thing is very much larger than just these particular services. There is a great deal of financial adjustment to be made. For example, over the six years of the war, Scottish Aviation Limited acquired on loan a great deal of Government equipment, and so forth; they carried out Government contracts, and there was a great deal of that sort of thing going on, all of which has to be cleared. The Air Ministry came into that, for instance. There is the question of the amount of compensation (if any; I do not know) which is due to Scottish Aviation Limited. When the war started this was a grass field with an office and hangar in the corner. They trained Volunteer Reserve Pilots. During six years of war a great deal of money was expended by the Government in putting down runways and so forth. When it comes down to the very large scale financial re-adjustment, there is a great deal to be done, and not until that is done can we really say we have taken over the airfield. All the other things follow on.

2327. In other words, it is the opinion of the Ministry that the question of services cannot be determined until the general question of settlement is determined?—Yes; it would be a little heavy handed to step in and clear up the twigs before the branches were cleared.

Mr. Corlett.

2328. So it is not merely a question of being paid an agent's fee?—(Mr. Paris.) Might I say, as the Divisional Controller has

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Mr. A. H. WILSON, C.B.E.,

[Continued.

Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

said, that here at Prestwick between Scottish Aviation Limited and the Government, Air Ministry, Ministry of Supply and latterly the Ministry of Civil Aviation, there has been a very close inter-linking and co-operative working on the aerodrome, and it has only been during the past few months that it has been possible to start tidying up the formal legal and financial aspects of this arrangement which had its origin in wartime conditions. The first and most obvious step was to analyse and ascertain the facts and split up the various activities into self-contained departments which could be capable of separate negotiation. That stage is now practically completed. I agree with you, Sir, when you said that the opinion of the Ministry was that the fee, or the labour force supplied by Scottish Aviation Limited, could not be settled until other things were settled. That was equally the opinion of Scottish Aviation Limited, and at the moment, as I have already said, we have asked Scottish Aviation Limited to suggest what would, in their opinion, be a reasonable management fee. To that we have only had an interim reply saying that they would like to know what rent we propose to charge them for the hotel. That seems to us irrelevant and may seem so to Scottish Aviation Limited, but it is perhaps just an illustration of how we have had to break down the problem into self-contained sections.

2329. When you said the analysis had been completed, has it been completed to the satisfaction of both parties?—Broadly, yes.

2330. So there is no dispute about the facts, whatever they may be?—I do not think there are any material differences on facts, no.

2331. So that you have now a basis for negotiation?—Yes.

Major Niall Macpherson.

2332. I still cannot quite understand this. I should have thought that if Scottish Aviation Limited are running the hotel and getting a management fee, which includes the running of the hotel, the rent that they were going to pay for the hotel was extremely relevant?—There may be a little overlapping in that some of the staff that we have specified are there doing work in the hotel, but that was not our intention. We wished to keep the two separate, and it seems to be merely a matter of accounting apportionment.

Colonel James Hutchinson.] What is clear, Mr. Chairman, is that something should be got on with.

Chairman.] Yes.

Sir Peter Macdonald.

2333. It boils down to a question of policy. It is not yet decided what the

future functions of Prestwick are to be, and what part it is to play in this role of civil aviation?—(Mr. Wilson.) In one sense, of course, the taking over of Prestwick by the State is not yet agreed, in the sense that the Government has not yet announced its programme of aerodromes of which Prestwick is a part.

Viscountess Davidson.] There is this point, that until you get it right at the top you cannot quite go down to the bottom.

Mr. Corlett.

2334. I cannot understand what Scottish Aviation Limited is doing. I cannot understand how you can fix anything while there are so many difficulties in the way. What are you paying at the moment? What relationship is there?—Payments on account. (Mr. Paris.) First of all, the Air Ministry are paying on account of the requisition of the property. They are paying requisition rental. That rental has not been formally agreed, I believe.

2335. That is what I want to get at.—That, of course, is not a direct responsibility of the Ministry of Civil Aviation.

Chairman.

2336. Do the Ministry of Civil Aviation run an account with the Air Ministry?—They do.

2337. There is no difficulty in determining the matter as between the Air Ministry and the Ministry of Civil Aviation?—No.

Mr. Barton.

2338. How does Scottish Aviation Limited come to be pressing the Ministry as to what rent they should be paying for what, apparently, is their own property?—(Air Commodore Murray.) The Hotel is not their property. (Mr. Wilson.) The hotel was purchased by the State during the war, together with about 14 acres around it. (Air Commodore Murray.) From a private owner, a Mrs. Scott, who was quite distinct from Scottish Aviation at that time. Scottish Aviation were put in to manage it.

Viscountess Davidson.

2339. That is why Scottish Aviation asked what they were to pay for the use of the hotel, because it belonged to you?—Yes.

Major Niall Macpherson.

2340. Could we clear this up so as not to get a wrong impression? Am I right in thinking that Scottish Aviation did build up on an agency basis these various services: that they have had the management of them throughout, and that they are responsible for their present state of efficiency or inefficiency as the case may be, and, secondly, are you generally satisfied with those services?—That is a question which has a very local side within

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Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Air Commodore J. G. MURRAY,  
Group Captain J. A. MACDONALD, C.B.E., A.F.C., Mr. T. PARIS, and Mr. H. W. BUICK.

Prestwick. With regard to any satisfaction in connection with the details of the services, I think I would like to hear what Group Captain Macdonald has to say; he is waiting outside. (Mr. Wilson.) Perhaps I could say a word on your main point, Sir, and that is, during the war when the Air Ministry began to develop this place, Scottish Aviation Limited were the owners and the Air Ministry made a contract with Scottish Aviation to provide a large number of services on the aerodrome including these services which Scottish Aviation are still carrying on; so that Scottish Aviation provided for the Air Ministry during the war things like motor transport, fire and rescue organisations, certain re-fuelling services, and they also provided certain services in connection with the overhaul or modification of aircraft; some work, I think, in connection with aircraft which had come across the Atlantic; they did that originally for the Air Ministry and then, subsequently, for the Ministry of Civil Aviation. All that sort of thing was done by Scottish Aviation for the Air Ministry from an early stage in the war, under a contract which, I think, was on the basis of cost plus a management fee; I know there was a management fee in it. That contract, of course, went on until such time as the Ministry of Civil Aviation began to take the aerodrome over, which was, in theory, on the 1st January, 1946; in practice, the actual take-over was a bit later. These contracts which we are attempting to make, not for running the airport but for running certain specific services such as motor transport, fire and rescue, and so on, are really a continuance of bits of those Air Ministry contracts into our present peace-time conditions as a transition between the Air Ministry whole-hog type of management contract, and what we shall eventually have, direct operation by the Ministry of Civil Aviation without the intervention of the Company.

Chairman.

2341. To seize a plank in this sea of confusion, are we correct in saying that one of the major elements in the continuation of the uncertainty is the lack of decision regard the future of Prestwick?—That is one of the elements.

Sir Peter Macdonald.] It is a very important element.

Chairman.

2342. That is the major element in continuing the uncertainty?—Yes, it is.

Major Niall Macpherson.

2343. Is it not already designated as an International Airport?—Yes. Of course, that definition could be withdrawn if it were decided that we could not have Prestwick.

Chairman.

2344. But until a decision is announced that is a continuing element of uncertainty which makes the parties reluctant to come to a final agreement?—Yes; technically that is so.

Mr. Barton.

2345. And this uncertainty does not exist at the other 13 aerodromes?—It does not exist at them all some of them happen to be State-owned.

Major Niall Macpherson.

2346. In view of the very categorical assurances given by the Minister on the subject of Prestwick, I fail to see where the uncertainty lies?—It is only a technical uncertainty.

Viscountess Davidson.

2347. How long will the uncertainty go on?—A week or two, we hope, now. The real difficulty is that these management contracts cannot be very easily separated off, from the negotiating point of view, from the major questions of compensation for what has happened in the past. The whole thing is tied in together. At the time when we are getting towards the stage of being able to negotiate and study the compensation for what has been done during the war, we cannot rush in and take this bit of work and that bit of work from Scottish Aviation Limited. It is going to create considerable difficulties in the negotiation, and the services must, of course, be carried on. It is better to get these major questions of compensation tidied up first; they are largely Air Ministry and Ministry of Supply questions, leaving these services on an agency basis for the time being; then when the big thing is swept out of the way, we can come in and clear up these little things.

Colonel James Hutchison.

2348. You have really three Ministries that you have to co-ordinate there and finally adjust their views with Scottish Aviation Limited?—Yes. (Air Commodore Murray.) And the figures are very large, too, naturally.

Chairman.

2349. Meanwhile, is the efficiency of the aerodrome being impaired in any way?—That was the purpose of my remark when I said it would be a little heavy handed to attempt to change anything at the moment. While realising that it is unsatisfactory, it is the lesser of two evils just for the moment, until we get the big question cleared up.

Mr. Barton.

2350. Could we just have this cleared up by Mr. Wilson with regard to the point that Sir Peter Macdonald put? Is

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it a fact that there is any uncertainty that Prestwick will be taken over as a Ministry of Civil Aviation Airport?—(Mr. Wilson.) There is no real uncertainty. There is just the formal point that the Government has not yet said: You have authority to acquire Prestwick; but that is because Prestwick is part of a programme. That does not make any difference, however, because the Minister has personally announced that Prestwick is going to be an international Airport and has been designated as an international Airport, so you have Ministerial approval, so to speak, on account.

2351. The trouble is its ultimate operational place in the scheme; not that it will not become a Ministry of Civil Aviation Airport?—It certainly will become a Ministry of Civil Aviation Airport, and its operational role is foreseen as far as anything can be foreseen at this moment. The part that is a little uncertain in its future is how far it can be developed in relation to the modern very large types of aircraft. That does depend, of course, on engineering considerations as well as other things.

Chairman.

2352. Has a survey been carried out to determine this?—The operational survey has been done, and a certain amount of works survey has been done, and we are even awaiting data regarding minerals under the site, because coal workings may have a considerable effect on runway strengths.

Mr. Corlett.

2353. May I repeat my original request? Could we have the terms upon which Scottish Aviation Limited act as an agent?—The precise terms, with figures?

2354. Yes; the services and the demands?—The figures are not finally settled because, as Mr. Paris said earlier, we are still discussing with Scottish Aviation Limited the exact basis on which these services shall be carried out. At the moment what is happening is that Scottish Aviation is paying the staff for these specific services.

Chairman.

2355. To cut it short, Mr. Wilson, is this the general position, that, by and large, all the services are provided by Scottish Aviation, all the works services and non-technical services?—All the non-technical services except works maintenance, which is being done by the Air Ministry.

2356. Can we put it this way: The non-technical services which at Heath Row are provided by the Ministry of Civil Aviation, at Prestwick are provided by Scottish Aviation?—Broadly speaking, that is true.

Mr. Barton.

2357. And they are provided as a service. For instance, portage is supplied by Scottish Aviation as a service; not such a number of porters?—The numbers are agreed with us now under this new arrangement, and the rates of pay.

Mr. Corlett.

2358. I still feel that I ought to press my question. I hope you will forgive me for being so insistent. Is it not possible for us to know what services are being given and what they are receiving for those services?—(Group Captain Macdonald.) I could give you a list of half-a-dozen items which cover the services which are being provided. They are motor transport on the aerodrome; fire and rescue services, the baggage porters; re-fuelling of aircraft; heat, light and water; the manning of the private telephone exchange, and there are a few other very minor items on top of those which I need not specify, in the shape of works services.

Mr. Corlett.] We have a yardstick; either Heath Row or Scottish Aviation or Scottish Aviation for Heath Row.

Viscountess Davidson.] How much they cost, you mean?

Mr. Corlett.] Yes.

Chairman.

2359. Perhaps we could put it in another way. What is your estimate for the cost of the services you have enumerated for the current year?—(Air Commodore Murray.) I do not know whether Mr. Paris could give you that figure? (Mr. Paris.) We estimate the cost at about £45,000. What we have done is to give to Scottish Aviation Limited a list by categories and description of the staff which we would regard as the maximum to perform the services required here, with the wages which we would pay, according to our scale. Scottish Aviation Limited have not dissented from that statement.

2360. If we could break it down a stage further—of the £45,000 how much is accounted for by management fees?—I am sorry, Sir. This is exclusive of the management fee which, as I said, earlier, we do not know. We have asked Scottish Aviation Limited.

2361. Have you made an estimate for the management fee? It need not be given to the Sub-Committee, but have you made an estimate?—No.

Major Niall Macpherson.

2362. What was the Air Ministry paying for similar services during the war?—For a very much larger range of functions and duties performed by Scottish Aviation their management fee, I believe, was £10,000 a year.

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[Continued.]

2363. Could I ask this, because I think it is important from the point of view of the future of the services. Did I understand you to say that you had sent to Scottish Aviation a list of those services that had to be supplied and the staff required to supply them?—Yes.

2364. Did that list originate with you; was it your appreciation, or was it based on the Scottish Aviation determination of what requirements were?—It originated first from joint discussions here as to how much of the Air Ministry type of service contract was to be continued in the Civil Aviation set-up. That was agreed in principle. The Ministry then attempted a first draft of a service contract which has been going backwards and forwards between Scottish Aviation Limited and the Ministry, and is now, to all intents and purposes, agreed, except for the management fee clause.

*Chairman.*

2365. Do you know whether the Air Ministry management fee of £10,000 was a lump sum fee or whether it was a percentage fee on the services provided?—A lump sum fee.

*Mr. Corlett.*

2366. Do forgive me for insisting, but the reason I am pressing it is this: Group Captain Macdonald has no say in regard to this at all; he merely has to take the set-up, so that if that set-up is one merely determined by Scottish Aviation without a clear analysis of the position, there seems to be no reason why they should not continue as they want to continue and get a management fee for it?—(Mr. Wilson.) Of course, Scottish Aviation Limited are agents; they are doing this under contract and, if the Ministry are not satisfied with the service that is being provided or the numbers of staff that are being provided on the organisation, they can ask their agents to amend the arrangement.

*Viscountess Davidson.*

2367. You have a complete check over them, in fact, have you not?—We know exactly what is going on.

2368. The only trouble is that you are taking so long to come to agreement as to what is to be finally done, and they must carry on until you have all that settled. As the Cabinet has not yet settled it there has been great delay; you cannot change your existing scheme until you are absolutely ready to take it over and until you have settled financially with them?—That is so.

*Viscountess Davidson.]* But you have complete control over them, although the Commandant may find himself in an awkward position of saying: "I cannot tell Mr. Smith to do that without seeing you."

*Mr. Corlett.]* All I am asking for are the details of the scheme you are carrying on.

*Colonel James Hutchison.*

2369. It might be described as a mutual arrangement carrying on on a gentleman's agreement?—That is the position.

*Chairman.*

2370. There must be a duplication of work, at any rate, at Commandant's level?—(Air Commodore Murray.) I do not think so, actually, on the Commandant's level. There are of course very senior staff in Scottish Aviation Limited.

2371. I meant the Commandant and the Commandant's staff?—I would not quite be prepared to answer that as I have not yet taken over though my immediate reaction really is that there is probably not any duplication of any seriousness at all in any way. You mean, that there would be Ministry staff and Scottish Aviation staff there, which might be pruned a bit when the integration takes place?

2372. Yes?—That is probably quite true, but the Scottish Aviation rather senior staff are not only doing the airport side of the work; they have a private business over there.

*Major Niall Macpherson.*

2373. I would like to challenge that, if I may. I doubt if there is any duplication at all. I should think you would probably find that the supervision that has to be exercised at high headquarters will remain exactly the same as is exercised at the present time?—That was my first reaction to the question.

*Mr. Barton.*

2374. Will it? Let us take the airport as we find it. There is Group Captain Macdonald, who is the Airport Commandant. We are told that Scottish Aviation are, in fact, managers under an agency agreement. That being so, what function does the Airport Manager perform?—(Mr. Wilson.) Scottish Aviation Limited are not managing the airport under an agreement. They are running certain services under an agreement.

2375. Can we approach it from another point, then? I have told you what Group Captain Macdonald told us about his contact with the actual services provided by Scottish Aviation. Scottish Aviation, apparently, as the Air Commodore has said, have, I believe, I will not call them Executive Officers, but Officers at a fairly high level, supervising. What contact has the Airport Manager with these people, and what is his function?—(Air Commodore Murray.) Could I put it like this? While appreciating your angle, I will come back to it in a moment. The Senior Administrative

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Officers of Scottish Aviation Limited would not be necessarily there at all for the carrying out of the services which were required in the running of the airport, and they are chiefly against the background of the rather bigger private Company carrying out its other activities. The Airport Commandant, on the other hand, has not only got their services to supervise; he has also the operational side of the airport to deal with, telecommunications, control staff and so forth.

*Chairman.*

2376. Take the fire services, for example: The Commandant is responsible for the efficiency of those services so he has to watch those services to assure himself that they are efficient. If he finds that there is some point which needs improvement then he has to make representations, presumably, to an official of Scottish Aviation. Then Scottish Aviation will report back to the Commandant. It may be that a question affecting the National Fire Service arises, in which case the Commandant will then deal with the National Fire Service, so whether or not there is a duplication of officials there would appear to be a duplication of work?—In the case you quote, Sir, if the fire services were not considered to be satisfactory by the Airport Commandant, and they were not being run by Scottish Aviation Limited, and so they came under the Airport Manager, the Airport Commandant would send for the Airport Manager and say he did not consider the fire services satisfactory. Instead of having to whistle up his Airport Manager he goes to Scottish Aviation and says: "This service is not satisfactory".

2377. I want to make it quite clear that there is no suggestion from the Sub-Committee that the fire services are in any way inefficient; they struck us as being very efficient.—I had not that in mind.

*Major Niall Macpherson.*] Could I just ask this? Surely, in any case, even supposing the same thing occurred with the meteorological services, supposing there was a query about what some particular employee in the meteorological services had done; again, the Airport Commandant would go to the head of the meteorological service and not deal direct with the particular individual concerned. I cannot see that there is any difference at all; that is the point I am trying to make.

*Mr. Barton.*] There is this difference. That is the general set-up right throughout the service. It is the same at Heath Row and at Northolt. Neither at Heath Row nor at Northolt have you got this set-up where somebody else acts as the agent in giving the airport services.

*Viscountess Davidson.*] It does not mean that there is any duplication at the present moment; in fact, you may find that

they may run it more efficiently than you may run it at present.

*Colonel James Hutchison.*

2378. At Prestwick you have on the airport a large range of buildings doing other work which might conceivably be able to be integrated, in matters like the fire services, to the benefit of both. That is really the particular position here?—Yes.

*Mr. Corlett.*] But that brings me back to the point I keep dealing with. Scottish Aviation Limited intrigues me. You have an organisation not only acting as agents for you but also acting as a private company, doing things for itself. Are you certain that the work is fairly distributed, and so on?

*Chairman.*] I think we are all transgressing. It is a field for argument.

*Sir Peter Macdonald.*] That would be within the contract.

*Mr. Corlett.*] That is why I want to see it.

*Sir Peter Macdonald.*] As civil aviation develops and aerodromes open up, there will always be ancillary services which it may pay the Air Ministry or the Ministry of Civil Aviation to contract out. I think catering, for instance, will be one. That is a thing that civil aviation will understand better than a firm like Lyons', or whoever it may be, and that will be run as it is at Heath Row and Northolt. With regard to transport, again, it may pay them to contract with a local firm of contractors to run the transport services, because they never know from day to day how much they will require. If they have a local firm operating buses, and so forth, they may find it pays them to contract that out and have a call upon them at any time. I was in the Air Force during the war, and we always had to do that sort of thing.

*Chairman.*] I am still afraid that we are getting beyond fact-finding, into argument. I suggest that unless any Member has a question outstanding on the facts of the position, we may go on to divisional organisation.

*Mr. Corlett.*] Might I ask if we can have those facts that I have been repeatedly asking for, Mr. Chairman?

*Chairman.*

2379. We will have an opportunity of taking further evidence from the Ministry of Civil Aviation; we might seek them then. I think we have gone as far as we can this morning. If we could turn to Divisional Organisation, we appreciate that you are just in the process of evolution, but between yourselves and the Ministry have the terms of your responsibility been defined?—(Air Commodore Murray.)



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Generally, yes; and in particular terms I think I am right in saying that it is in a very advanced state, on paper. (Mr. Wilson.) It is likely to reach the Divisional Controller in the course of a week or so.

2380. How has it been defined in general terms?—(Air Commodore Murray.) When I say defined in general terms, I mean defined to me because of my close knowledge of the working of the Ministry and the discussions in which I took part when the Divisional set-up was being considered, and I know that, in effect, I am the Ministry's representative here, and the Ministry propose to decentralise to me certain working functions in order to control the Scottish Airports, and act as a buffer between the Airport and the Ministry of Civil Aviation much as the R.A.F. Command does to the Air Ministry.

2381. Which functions will be decentralised?—There are four main branches of staff: Operations, Control, Tele-communications and Administration. The latter will cover things like Finance Accounts and Works Services, and the administrative matters connected with the day-to-day running of all the Airports in Scotland.

Sir Peter Macdonald.

2382. May I ask whether you are going to be responsible for the issuing of civil licences up here?—We are going to be actually responsible for issuing them up here ultimately. (Mr. Wilson.) Yes. That is a matter which is rather subject to study. We should like to be able to issue personnel licences in Scotland, if we could; but there is the difficulty, that the personnel licences are connected with the man's personal record which must be kept in our office, because if a man walks into the office in Scotland and says he wants to renew his pilot's licence, the Scottish Divisional Office will not necessarily have his file with his particulars on it if he last renewed his licence in London. That is purely an organisation problem which has to be studied; but if we can overcome that difficulty then it should be possible to decentralise some of the personnel licensing. The aerodrome licensing is much easier, and we shall be able to decentralise the licensing of aerodromes.

2383. The licensing of pilots is a matter of no greater difficulty than the issuing of car licences?—It is rather different, if I may say so, because the aeronautical licence depends upon a greater number of factors than the issue of a car licence. A car licence is a pure licence; it merely says that Mr. So and So may drive and, if he has had a licence before, that is all that is necessary to know to issue the new licence. In the case of the pilot's or navigator's licence, it has to be known that the man is medically fit. In the case of a

commercial pilot, he has to pass a special medical board to very high standards, and his past flying experience has to be taken into account.

2384. That would all be on his certificate, would it not?—It is not, in fact, all on his certificate; it is all in various rather bulky documents which are kept available at the Central Licensing Branch in London very readily. It is rather a difficult problem to decentralise that information. If it can be done, it is a thing we have very much in our minds.

Viscountess Davidson.

2385. It would not be very difficult to send it in to that Central Licensing Board and have it O.K.'d by them?—It would be quite possible to do it that way, but it would mean that the man could not get his licence over the counter; he would have to wait. That is a much easier system. It is much easier to do that than to try to set up a system by which a pilot could walk into an office and get his licence over the counter.

2386. You have to have a central place, and he has to wait a few days?—Yes.

Mr. Corlett.

2387. In order to satisfy our Scottish people, who are so insistent on having as much say as possible, the tendency will be to decentralise everything it possibly can?—That is the intention.

Sir Peter Macdonald.

2388. If a civil licence holder wants a route you will be able to route him and brief him?—Yes.

Mr. Corlett.

2389. This is really going to be a regional office, with as many powers as possible?—Yes.

Major Niall Macpherson.

2390. May I put a supplementary question? What are the delimitations between operations and control?—(Air Commodore Murray.) Control is a very highly specialised subject the staff of which lays down and carries out things like control regulations. They lay down the bounds of the area control, the approach control, and so forth; implement the procedure which has been standardised by I.C.A.O., and the control of the staff which run the control towers on the aerodrome, and so forth. Perhaps Air Commodore Chamberlain would like to answer with regard to operations?—(Air Commodore Chamberlain.) Mr. Chairman, perhaps it will be easier if I may explain my functions now as Director of Civil Air Operations. I am responsible for the co-ordination of meteorology, navigation, air traffic control and telecommunications, to see that the Ministry provides a

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firm policy for safe air navigation, primarily in the United Kingdom. I am also responsible for seeing that there are regulations, both national and international, which give what we want; that is to say I either go or send somebody to an international meeting, usually I.C.A.O., where we try to put over British policy and to influence the making of these International regulations. The Americans by "operations" imply very much the control by the Airline Company. In Great Britain and the Empire and on the continent of Europe, "operations" mean the safe conduct of the aircraft in the air and while moving on the airfield and tarmac. I say that, because members may pick up I.C.A.O. documents, or American documents, and be confused between the two meanings of "operations."

2391. In "operations" in the international sphere there is a sharp difference of opinion?—(Air Commodore Murray.) Yes. What we are concerned with is the Ministry's interpretation.

2392. And until that difference is resolved there is bound to be some duplication?—(Air Commodore Chamberlain.) There can be some confusion.

Colonel James Hutchison.

2393. In the I.C.A.O. use of the word "operations", does the British or the American view prevail?—I would say the struggle still goes on.

2394. So we are in doubt when we see the word "operations" in an I.C.A.O. document?—Yes, internationally. In the U.K. I claim there is no confusion. The simple meaning of "operations" as far as safe air transport is concerned, is exactly the same as that used by the R.A.F. in its air transport operations; the purpose of the operations may obviously be very different. Therefore, my functions are the co-ordination of control, the meteorological service, navigation and telecommunications. It is particularly important to co-ordinate all these matters in respect of briefing before flight.

Chairman.

2395. What is the relationship of divisional control to Redbrae?—There you have put your finger on another complication which exists at the moment. The signals organisation of continental control have grown up here in this locality against the Prestwick background and for convenience they have depended on Prestwick for their administration, and so forth. When I take over I will divorce that from Prestwick entirely and it will become a Divisional Signals Organisation, and Trans-Atlantic Control will come directly under my control at Prestwick here.

2396. They will become part of your establishment?—Yes. There is also a big

control set-up in Inverness, which is about to be integrated. It is really run by the R.A.F. at the moment; that also comes into the divisional set-up here.

Major Niall Macpherson.

2397. That makes it, I suppose, doubly necessary to divorce the briefing side of the meteorological services and put it on the airfield and get it away from Redbrae?—When we take over?

2398. Yes?—It would not be really necessary, for the reason that we had taken it over; we could still make arrangements which would allow the present practice to continue. I agree, however, that it would be more convenient to have on the airfield side the meteorological section of the briefing service, which would include the necessity for having on duty there a forecaster.

Viscountess Davidson.

2399. Will you not have to do that?—Yes; I think that is a thing that we are quite well satisfied about.

2400. It is obviously part of the aerodrome make-up?—Yes; but there can be no question of moving the entire meteorological set-up.

Chairman.

2401. Would it be possible, and would it be advantageous, to remove the staff from Redbrae and accommodate them in this building?—We could not get them in, actually, to start with. The meteorological staff did you say, Sir?

2402. Yes?—We could not get them in; we have no room for their equipment.

Viscountess Davidson.

2403. There would be no point in it, really because they are all right where they are?—Yes; they are in the right place in relation to transatlantic control. It is just a question of briefing on the airport.

Sir Peter Macdonald.

2404. That applies to all airports?—Yes. (Air Commodore Chamberlain.) With regard to the meteorological section, its facilities must be available on the aerodromes and in the area controls. My experience, which cover such area controls as Karachi, Cairo and Malta, shows that, if you do not have adequate meteorological services in these area controls, you are going to run into very serious trouble. There should be no question whatever of depriving the area control of its meteorological services. Equally, meteorological briefing facilities are required on aerodromes.

2405. The section should remain, but the facilities should be made available in the aerodrome?—Yes.

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*Chairman.*

2406. In connection with divisional responsibility, you said you act as a buffer, Air Commodore Murray. Does that mean that all communications from the airfield will come through Divisional headquarters, and vice versa?—(Air Commodore Murray.) Yes. Perhaps I could just amplify that slightly by saying that the object of having divisional headquarters is that I reduce the correspondence with the Ministry to an absolute minimum.

2407. Your intention will be that only general broad questions will go beyond here?—Yes.

*Major Niall Macpherson.*

2408. Could we deal with the aerodromes situation, the question of the development of existing aerodromes, the opening of fresh aerodromes, and so forth? Are you in a position, at the moment, to say anything about those subjects?—From the policy angle?

2409. Yes?—I think probably, on the question of policy, it will be better if Mr. Wilson answered that.

2410. I was wondering if you, as being the Divisional Officer in Scotland, were in a position to add anything to what might be said by Mr. Wilson?—I am fairly well in the picture as to what the proposals are, but I know they are very complicated by discussions on manpower, and so on, in London. (Mr. Wilson.) That is true, of course. Air-Commodore Murray is kept in touch with the planning of what aerodromes are taken over. Again, this hangs on the Government announcement on the aerodrome programme. When it is announced, it will presumably include a certain number of aerodromes in Scotland, of which names will be mentioned. There are other things in the programme which will not be announced at the outset because the likelihood is that any announcement will be piecemeal, step by step—what we can do now. There will be other things we are thinking about, which are things we cannot do for five years, so that the aerodromes will go on expanding as the traffic demands show themselves. In all thinking and planning the Divisional Controller is clearly kept in step. It is a two-way indication because he will be suggesting to us places where he thinks aerodromes may be needed, just as on the air services side B.E.A.C., prodded along in the case of Scotland by the Scottish Advisory Council, will be saying where they would like to run services and where they would like to see aerodromes. All that comes together in the planning mechanism in order to produce an addition to the initial aerodrome programme.

2411. I was really trying to get at where the initiative really lay. Air-Commodore Murray has already said that the links be-

tween the Advisory Council and the Aerodromes Board were himself and Sir Patrick Dolan. Obviously, with regard to any representations or recommendations that have to be made for services for Scotland from Scotland and through Scotland, the initiative must come from those two Boards more or less acting conjointly. I was wondering to what extent they did act conjointly, and make joint representations with regard to services and airfields?—(Air-Commodore Murray.) If you had been taking this evidence in a year's time, when we had been working, I could have answered that question. They are satisfactory at the moment. The Scottish Aerodromes Board has only just been formed and has met once; the Advisory Council has been functioning for some time, but when the Scottish Aerodromes Board gets going there will, in addition, be the personal dove-tailing in which is effected by Sir Patrick and myself between the two, by official representations between the two and the Minutes will probably be exchanged, and there will certainly be correspondence between the two in relation to matters which crop up under discussion and, if necessary, the two can sit in joint session.

*Chairman.*

2412. If we look to the future may we assume that the formulation of plans for Scotland will be the Divisional Controller's responsibility?—Yes. The Ministry will probably, I imagine, look to me here to give them guidance on what ought to be done in Scotland against the general Government policy background. The divisional staff here is, of course, the machinery for carrying out all this work after it has been discussed by the Board.

2413. You mentioned the not unimportant subject of finance. We have been informed that the financial powers of the Divisional Controller may have to be rather restricted initially. Can you tell us how far your powers will be restricted?—I cannot tell you that at the moment, but I can tell you that the position is that my powers have not actually been given to me in detail in writing yet, but I have asked that they shall approximate to those that are given to the C.-in-C. of an R.A.F. Command at the moment. At present, that is £300 for new services, and I believe that something of that nature is about to come to me in detail. (Mr. Wilson.) That is, broadly, the position. The lines on which we are thinking, and we shall probably put out, will be £300 for new work at divisional level, and up to perhaps £2,000 for maintenance work, and of course a certain number of minor contract services such as cleaning services, sweeping, windows, chimneys, and all that sort of thing.

2414. From your experience, do you think that will be adequate?—(Air Commodore Murray.) I think it will, at the

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moment. I would like to qualify that by saying that later on, when I have been here a little longer, I shall see how it works out. I am sure we can get a great deal done and speed things up considerably.

Colonel James Hutchison.

2415. With regard to new aerodromes, you said that once an aerodrome policy had been approved from London you would be left to arrange for and superintend the carrying on of all the work necessary to turn that aerodrome into a standard which would be required?—That is so. If the standard were approved, and the expenditure had been agreed, the progressing of the work and the getting of the airport into commission would be my responsibility.

2416. It would be completely delegated to you at that stage?—Completely delegated, subject to inspection by the Ministry's officials from time to time, of course, but it would be my responsibility to progress the whole of the work. I hope that one of my staff will be a Superintending Engineer. I have the use of two Superintending Engineers in this area who are jointly for the Air Ministry and the Ministry of Civil Aviation.

2417. In the construction of buildings or runways, would you place contracts direct, or would it be done by the Air Ministry?—(Mr. Wilson.) That would be done by the Air Ministry; they are the Works department and, therefore, they are the contracting department.

2418. As in the south?—Yes.

Chairman.

2419. Within the division, what will be the financial powers of the Airport Commandant?—(Air Commodore Murray.) I believe that is also under discussion. (Mr. Wilson.) Yes. (Mr. Paris.) I think the position there may be that there will be no general answer as the aerodromes vary very much in size and location. The principle is clear, that we do not want urgently necessary expenditure to be held up just over a formality. Provided that we can have accounting safeguards and *post facto* arrangements for ensuring that headquarters know how much money we have spent in all, the utmost discretion must be allowed to the man on the spot who can keep things going.

Mr. Barton.

2420. Is this programme going to be conditioned by defence considerations?—(Mr. Wilson.) The technical programmes will be related to defence considerations.

2421. I am not thinking about the geographical position of them; I am thinking about the construction and maintenance.

Is it intended, for instance, that the Air Ministry shall, for all time, carry out that service for civil aviation, or is it the intention to develop a separate department within the Ministry itself?—The principle of the Air Ministry doing runway works was settled some years ago, I am not very sure whether at Ministerial level or not, but it was settled departmentally, and the Treasury concurred that the Air Ministry should do all runway construction works for any Government department, whether it be the Ministry of Supply or the Air Ministry itself; the Ministry of Civil Aviation was not then formed, but they fell in with that. The idea behind that is that one department shall have all the expertise associated with this particular kind of civil engineering. It is really only a variant of the generally accepted principle in the Government service that departments do not do their own works and buildings arrangements. A normal civil department, such as the Ministry of Labour, for instance, will get its buildings from the Ministry of Works. In the same way as they go to the Ministry of Works we go to the Air Ministry for these aerodrome jobs, because the Air Ministry, unlike the Ministry of Works, have the expertise in aerodrome construction, technical building construction, and so on.

Mr. Barton.] I am satisfied, thank you.

Chairman.

2422. If we now turn to the question of financial control, are we correct in assuming that if the Airport Commandant wanted to exercise some powers outside his control, then the Divisional Office will have powers to act provided it is within the scope of divisional powers?—(Air Commodore Murray.) That is so, yes.

2423. It would only go to headquarters if it were beyond the scope of the powers allowed to the division?—That is so.

Mr. Corlett.

2424. Have we discussed what financial powers the Airport Commandant should have?—That was just referred to a moment ago. The answer was that they are under discussion, and they are not going to be standardised and made rigid, but they will have some regard to the size of the airport and functions of the airport, and so forth.

Major Niall Macpherson.

2425. One general question: Does the Divisional Controller, that is yourself, reckon that he is the representative of the Minister in Scotland?—(Air Commodore Murray.) I regard myself as representative rather of the Permanent Secretary; Minister, if you like. Shall I put it this way? I am the Ministry's representative in Scotland.

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2426. There is a big difference there?—I would say that I am probably the Ministry's representative, and if I had been asked to relate myself to an individual I should relate myself more to the Permanent Secretary.

*Chairman.*

2427. May I thank you very much for the helpful way you have given us an outline of the responsibilities of the divisional organisation within the Ministry?—Thank you very much, Sir.

*Colonel James Hutchison.*

2428. Have any complaints come to you by foreign airlines as to the inadequacy of anything from your point of view? The only one thing we have heard is that question of meteorological briefing. Is there anything else?—I have not taken the airport over yet, and they would not normally do so. There has been, I understand, one representation by K.L.M. to the Airport Commandant which related, I think, to the handling of passengers, or some facility on the airport, but that has been resolved and they are satisfied now.

*Chairman.*

2429. Group Captain Macdonald, we apologise for troubling you again, but we only had a short session last night and some Members of the Sub-Committee feel that there are further matters which they would like to ask you about. In the first place, we noticed the public enclosure. Can you tell the Sub-Committee whether that is much used and whether there is much public interest in Prestwick?—(Group Captain Macdonald.) There is a great deal of public interest in Prestwick, which is portrayed by the use of the hotel and the precincts of the hotel, especially at weekends and holiday periods.

2430. Is there an increasing interest in civil aviation?—It is an increasing interest; I should say that this Summer already thousands of people (and I mean thousands) have visited the airport to see their friends off, to meet their friends on arrival, and to witness what is going on. Unfortunately, from the revenue point of view, visitors have access to what is going on through the hotel; in fact, they have a better view of what is going on from the hotel than from the public enclosure, and it is a Scottish trait, I suppose. Anyway, they come into the hotel where they know they are certain of getting refreshments, where there is a snack-bar and so forth, and they have a much closer view of what is going on from the hotel than they have in the enclosure.

2431. The hotel is open to visitors apart from travellers?—I am afraid it is, yes. At the same time we have not reached the peak holiday period yet; the peak holiday

period, in Scotland, is in the middle of July, and we have not tapped, as yet, these resources properly. One thing to remember is that a lot of the people from the Glasgow industrial areas visiting this part at the week-end are attracted by the sea-side. The airport will have to make itself attractive to bring them in because the sea is quite close, with its bathing pool attractions, and so forth.

*Viscountess Davidson.*

2432. Do you think that ultimately the hotel ought to be left for the people using the airport alone and not for visitors, or do you always visualise it having to be open to visitors?—Prestwick is a very peculiar place. I should say that, speaking generally, the best thing to do, in theory, would be to isolate the hotel for air passengers and make the other public accommodation attractive enough to bring in the public, as distinct from the air travellers, if you could do that, but we cannot do that at Prestwick at the moment; we cannot isolate the hotel.

*Chairman.*

2433. What measure of control have you over the use of the hotel?—None whatsoever.

*Major Niall Macpherson.*

2434. It is a service that is provided primarily for the benefit of air travellers?—Yes.

*Viscountess Davidson.*

2435. What would you do if the rush on the hotel was so large that you could not cope with your air travel people? Would it not put those running the hotel in a very difficult position if they had to turn away the public?—It would, indeed. We could put the public in the enclosure.

2436. If the Manager said: "We are getting over-crowded", you could stop them at the gate?—Yes; we do that on Sunday afternoon, if it is crowded in the hotel. We admit them and direct them. We say: "Are you travelling by air?" If they say: "We are just here to see things", they would then be directed to the public enclosure, if the traffic through the hotel is over-crowded.

*Chairman.*

2437. In carrying out your duties as Commandant, do you find any practical difficulties arising from the fact that the meteorological staff are also under the Air Ministry?—Oh, no; there are no practical or technical difficulties at all. The only difficulties were brought to your notice yesterday.

2438. Do you find any practical difficulties arising from the fact that a good deal of the personnel on the airfield are

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employees of Scottish Aviation?—The practical difficulties are remarkably small, provided that one observes the proper channels for that sort of thing, and remember these are not employees of the Ministry but employees of a private firm.

Colonel James Hutchison.

2439. There is not a very great deal of delay. When you make representations to Scottish Aviation about something, it is dealt with promptly?—Yes, it is dealt with promptly.

Sir Peter Macdonald.

2440. They have a responsible representative on the airport all the time, with whom you can contact?—Yes, that is true.

Major Niall Macpherson.

2441. How do you settle the strength of the staff? Do you do that in consultation with Scottish Aviation?—Yes; Scottish Aviation would make representations to me, and I would decide on whether they should be put up to the Ministry or not. I always put them to the Ministry with my remarks and recommendations.

2442. Since you came here, have the staffs been increased or decreased?—The staffs have been increased.

2443. I take it that they have not been increased in the case of the fire service and rescue crews?—No.

2444. But in the portage, hotel service, and so forth; it is only in those cases that they have been increased, is it?—Yes, slightly increased.

Mr. Barton.] On whose suggestion, on your suggestion or on Scottish Aviation's suggestion?

Chairman.

2445. Or the headquarters of the Ministry?—Mutually, I think. The representation probably comes from the Company. The operating Company probably complains that their aircraft are being delayed or that their baggage is not being cleared quickly enough.

Viscountess Davidson.

2446. The point is that the Company are responsible for doing definite jobs for you. If they cannot do them properly, they have to increase their staff, having first communicated with the Ministry?—Yes; it is divided control.

Mr. Corlett.

2447. You suggest to them that they should increase their staff?—It comes from the other side.

Sir Peter Macdonald.

2448. A certain service is required to be carried out efficiently, and if the staff is not there to carry it out, efficiently, representations are made to that effect. The Company say: "We have not sufficient staff to do it; we will have to increase them"—That is so, yes.

Chairman.

2449. Have you received many complaints from operating Companies about the inadequacy of staff?—Yes; I should say that complaints from the operating Companies are fairly regular.

2450. As you say, it is a consequence of those complaints?—Yes. Complaints from operating Companies are always fairly general; it is a healthy sign. If the operating Companies do not complain, one gets suspicious that there is something wrong; but the operating Companies know that these services are not directly under the Ministry's direct control.

Viscountess Davidson.

2451. And they appreciate that?—Yes; they appreciate it. I do not think they particularly like it.

Chairman.

2452. Do you find that you have got sufficient financial powers to carry on with your work?—I have practically no financial powers at all.

2453. Do you feel that you need financial powers to carry out the day-to-day administration?—I do, yes. I think a much greater measure of freedom should be granted to the Airport Commandant.

Colonel James Hutchison.

2454. Because of the delay in the getting of authority?—Because of the inevitable delay.

2455. Can you give us any sort of idea of that delay?—It took nine months to get work started on that Outgoing Customs building.

Chairman.] Have you any other similar examples?

Mr. Barton.

2456. What expenditure are you allowed?—£5 on any one service.

Sir Peter Macdonald.

2457. You have no entertainment allowance?—I have no allowances of any description.

Major Niall Macpherson.

2458. Are you suggesting that you should have some powers, or would it, at any rate, have been desirable to have had powers to set up that Outgoing Customs building?—No. The Outgoing Customs building first

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of all necessitates a decision on policy; it necessitates financial approval at Ministry level; the whole thing needs approval at Ministry level.

Viscountess Davidson.

2459. Could you give an instance where, if you had had a little more latitude, you could have made improvements?—There are cases of things like fire services where the security and the safety of the Airport could be improved by a minor service such as a fire hydrant. I could not approve putting in a fire hydrant.

Chairman.

2460. Or a static water tank?—No.

Mr. Corlett.

2461. If some distinguished foreigners are coming along from the States, you have to entertain them out of your own pocket?—Well, I am Scotch, you know! I have no entertainment allowance. I have no allowance of any description.

Viscountess Davidson.

2462. In a case of that kind could you draw on anybody up here?—No. (Mr. Wilson.) The Airport Commandant could, of course, with approval, entertain, and be repaid.

2463. What does "with approval" mean?—He has no allowance on which he can draw of his own initiative, but supposing a party of distinguished visitors were coming here, he would get authority to give certain entertainment to them, and he would then send in his bills.

2464. Will not the regional organisation help a very great deal there?—If there is a regional organisation will it be necessary for the Commandant of the Airport to get permission for that kind of thing through the regional organisation?—We are hoping that that will be possible. It will be probably fairly tightly controlled, because entertainment is one of the things that has to be tightly controlled.

Mr. Barton.

2465. That limitation would not be imposed on an ordinary maintenance job, would it?—(Group Captain Macdonald.) Yes.

2466. Supposing you had a water tank burst and it cost £25 to replace it, would the water have to run?—(Mr. Wilson.) That would be maintenance, of course. (Air Commodore Murray.) The Works Department comes in there; there is a Clerk of Works for maintenance.

Chairman.

2467. He is an official of the Air Ministry?—Yes.

Viscountess Davidson.

2468. He could act at once?—Yes. (Mr. Buick.) Up to a limit of £2,000 on maintenance on one service.

2469. You mean that he could go right ahead up to £2,000?—But he works within an allocation of funds. An allocation of funds is made to Superintending Engineers on each airfield on which they can do works services, and they can spend within that amount of money on maintenance.

Chairman.

2470. What authority has the Commandant over the Clerk of Works?—Within the financial limits that are imposed by the Ministry of Civil Aviation, of course he can ask for anything. Minor services under £10 each can be charged to maintenance; that is the financial arrangement; so that if the Airport Commandant wants any small service costing under £10, he can ask the Clerk of Works to carry it out.

Viscountess Davidson.

2471. Does that work?—(Group Captain Macdonald.) I said £5. I made a mistake there; it is £10. That works. I keep a book, and on a minor service like a water tap or pane of glass I enter it in my book; the Clerk of Works has a duplicate book, and carries out these small maintenance jobs.

2472. It is new things that you are worried about?—Yes; any new service.

2473. Any new service costing over £10 you cannot do without referring to him?—No. If the item is over £10 I have to get a statement of cost and, if necessary, a drawing to show what is actually required. The drawing and the estimate of cost I send forward with my remarks as to the urgency and necessity for the works service, and that goes to the Aerodromes Division at the Ministry.

Chairman.

2474. And down the chain of control in the Air Ministry to the Clerk of Works at the Airport?—Yes. If it is approved by the Aerodromes Division and gets financial approval, then it is passed to the Works Department; the Works Department issue their authority to the Superintending Engineer who is located at Newcastle; he delegates it down to the Section Engineer who lives in Glasgow, and the Section Engineer in Glasgow tells the Clerk of Works to do that particular job.

2475. In practice and from your experience have you found any undue delay through that chain of control?—Yes. I think the delay is far too great. (Mr. Buick.) Might I explain there that actually the Air Ministry do not strictly come in it, because unless there is a new

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about to be let the arrangement is that there is a Director of Works seconded by the Air Ministry to the Ministry of Civil Aviation, who sits with his staff in the Ministry of Civil Aviation building, and that Director of Works has direct control over the Superintending Engineers of the Works areas in so far as Ministry of Civil Aviation services are concerned. In other words, providing the Ministry of Civil Aviation approve the service financially and ask the Director of Works, Civil Aviation, to carry it out, it requires no reference by him to the Air Ministry; he merely instructs the Superintending Engineer whose administrative powers are alike between the Air Ministry and the Ministry of Civil Aviation. The Superintending Engineer has a certain area of control; it is a geographical area, and within that area he controls all the works services on the airfields in that area, irrespective of whether they are Air Ministry airfields or Ministry of Civil Aviation airfields. In some cases, by mutual arrangement, certain Admiralty airfields are involved. He does Admiralty services for certain units which may be on R.A.F. or Ministry of Civil Aviation airfields. He is sub-divided into section offices which control two or three airfields, the difference being that the Section Officer is merely an executive officer, whereas the Superintending Engineer also has an accounting staff, and he accounts for all the expenditure which has been delegated to him. There is rather a difference in function between the Works area and the Section. The Section is merely an executive unit which carries out the work. The Area Headquarters also has a lands staff, and they control the land administration, collection of rents, and various other things for the Air Ministry.

Major *Niall Macpherson*.

2476. So far as the channels through which all this rigmarole has to go, you do confirm what Group Captain Macdonald has said; it does seem that it has to go through the whole line?—Yes; that is correct. It should not, of course, occasion any unreasonable delay, because as soon as a service has been approved by the Ministry of Civil Aviation from a financial point of view, and providing all the drawings and all the information are available, it is then sent direct to the Superintending Engineer who should then pass it immediately on to the Section Officer who should instruct the Clerk of Works to carry out the work.

Mr. *Corlett*.

2477. But if the central body has agreed to it at the request of the Commandant, why must it go through these various channels afterwards when it has already been agreed at the centre?—Because the

Superintending Engineer, the works authority, may have to take certain action. In some cases he may even have to take local contract action. The Clerk of Works has no direct labour staff to do new work; he has direct maintenance staff, but all new work under £2,500 is done under the maintenance contract, and the Clerk of Works raises a works order on the maintenance contractor which has to be passed by the Section Officer who is the nearest man who can pass the works order on to the station contractor.

Sir *Peter Macdonald*.

2478. May I ask Mr. Wilson if Air Commodore Murray is to have on his Divisional staff a representative of the Aerodromes Department of your Ministry?—(Mr. *Wilson*.) Not specifically, because the Divisional Controller himself and a good deal of his staff do themselves represent the Aerodromes Department. He does not need a special representative of the Aerodromes Department; he will do work for the Aerodromes Department, and so will his staff, his administrative and executive staff, in the region. He will have on his staff or seconded to his staff a works engineer, and when that set-up is complete, then some of this procedure will be short-circuited in the case of works within the Divisional Controller's financial limits.

2479. Will representations be made to that effect, that there will be a works engineer here?—Yes.

2480. And that these representations, certainly on a lower scale, should not have to go to the Air Ministry and Ministry of Civil Aviation?—It has been agreed that there shall be a works representative on the Divisional Controller's staff with certain powers, and it is the intention that anything within the Divisional Controller's powers will short-circuit some of these stages which you have heard about in the case of the present procedure.

Viscountess *Davidson*.

2481. It will help that, but the point really comes up as to whether a Commandant of an Aerodrome should be allowed to go a little further than £10 if we are to have quick and efficient results on the aerodromes?—Yes. (Mr. *Paris*.) Might I speak to that from the point of view of Headquarters' finance? I should say that the powers possessed locally of doing maintenance work on any project that will not cost more than £2,000 is a very valuable delegation which meets a very great deal of recurring difficulty when we are taking over rather dilapidated aerodromes. The inclusion under the description now of maintenance work not exceeding £10 is a safety-valve which allows a lot of urgent small jobs to be done. At Headquarters we realise that



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at current prices that is perhaps due for revision, and I am suggesting that it should be increased to £50. As for the rest, further delegation to Airport Commandants and to Divisional Headquarters is very much in our minds as has been indicated by our evidence, but there are two points I think which I might mention which are really well illustrated at Prestwick in regard to delegating authority for expenditure on new works. There are two possible dangers. The first is that where the aerodromes are requisitioned, as so many of them are, we must be careful that capital expenditure is not going to be abortive, for this reason, that the land tenure is precarious, and that a policy decision might be taken which would result in a particular aerodrome or part of it being given up after capital expenditure had been incurred. The second point is that where the aerodrome in its present lay-out is not regarded as entirely satisfactory, and probably policy decisions are still pending as to the nature, extent and location of the changes in the development of the aerodrome, runway patterns, terminal buildings and the like, these are often influenced by considerations much wider than the local ones on the aerodrome, and there is at the present time need for caution in deciding upon new capital work to see that it does fit in with all the considerations governing the long-term development of the aerodrome.

*Chairman.*

2482. When was it suggested that the amount should be increased to £50?—We have been reviewing financial powers generally in relation to the divisional organisation, and it was in that connection within the past three or four months, I should say.

2483. Have the Commandants been consulted about what should be an adequate allowance?—Yes. As has been said, there have not been many Aerodrome Commandants, but as soon as they have been appointed and settled in and got to grips with their own local problems they have been consulted.

2484. Then you have the advantage of their experience?—Yes.

*Colonel James Hutchison.*

2485. Would Mr. Paris agree that there might be introduced an intermediate step, that is to say that over a certain figure the Divisional Controller might be vested with powers to pass on, or to allow the Airport Commandant to make the expenditure without it having to go to the Ministry. He is not in the chain at the moment?—He will be; he is not at the moment. When we say that the Divisional Controller will have financial powers, it is, in effect, saying that these will be available to meet the needs and views of the local Commandant,

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*Chairman.*

2486. If we may pass to another matter, Group Captain Macdonald, can you tell us whether there is now machinery at the airport for staff consultation on questions of efficiency of management?—(Group Captain Macdonald.) Ministry of Civil Aviation staff?

2487. Ministry of Civil Aviation or Scottish Aviation—either or both?—No. The way I run the administration side to get people's views is this: Once a month I have a meeting at which we discuss the current work on the airport within the framework of the contract between the Ministry and Scottish Aviation, and so forth. At that meeting I also take in the operational side of the airport, the flying control side and the signals side.

2488. It is a joint meeting?—It is a joint meeting. I have only had one meeting so far, but once a month I shall have a meeting with these operating Companies. The operating Companies prepare the agenda for the meeting themselves. They have a B.O.A.C. man as the Secretary, and he takes the notes. I then meet the operating Companies, and we discuss the running of the airport vis-à-vis the operating Companies.

2489. Who represented Scottish Aviation at the first of the monthly meetings?—At all these meetings they have one man. The Assistant Secretary of the Company either attends these meetings or appoints someone to attend for him, but at no meeting to discuss the work of the airport, either in connection with the operating Companies or our own functions, are Scottish Aviation not represented; I never hold a meeting about airport management without them being there.

*Mr. Barton.*

2490. Are these meetings all consultative meetings at executive level?—Yes.

2491. If I understood the Chairman aright, he was thinking of consultation at lower levels—working conditions, and so on?—Consultation at lower levels, as far as I am concerned, has, so far, been on welfare only in regard to social activities and a club which is the centre of the social activities.

*Chairman.*

2492. Is there a social committee representing all personnel?—Yes. There is a small Social Welfare Committee which centres round a small social club, which I have brought into existence, so that the Ministry of Civil Aviation employees and actually the operating Companies' employees as well have come to have a common meeting place as distinct from Scottish Aviation buildings, which have been expanded to include refreshments, and is also to have a licence.

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Mr. Corlett.

2493. Is that open to Scottish Aviation employees, too?—No. The Scottish Aviation employees have their own workers' club, their own employees' club, which is licensed, and very well fitted out, but the Ministry of Civil Aviation have nothing equivalent to that. They now, however, have their own little social club with their reading room, and a small refreshment place, and they now will have it licensed. The staff have a representative on it. That is purely social welfare, and I hope it will be expanded next winter. For example, we are taking over a tennis court, and I hope, next winter, to have football teams.

2494. There is no Trade Union contact at all, as such?—Yes. The Radio Operators at Redbrae are affiliated to a Trade Union which includes all radio men.

2495. In their dealings with you, I was meaning, with regard to anything connected with the Ministry of Civil Aviation?—Yes.

2496. You have not a Whitley Council, have you?—Yes.

2497. But, of course, that only deals with strictly industrial questions and Trade Union matters?—Yes.

Major Niall Macpherson.

2498. Have the operating Companies any technical maintenance staff here?—Very small, yes; for example, both the American Oversea Airlines and Trans-Canada have a small technical staff here, sufficient to do minor repairs to engines, but not to change engines. If they wanted to change an engine they would ask Scottish Aviation to do it for them.

2499. Have B.E.A.C. got that, too?—No.

2500. So that if any B.E.A.C. 'plane landed here, how could minor repairs on it be carried out?—Very minor repairs, changing sparking plugs, and things like that, can be done.

2501. Who would do that?—They have sufficient for that.

2502. Is that B.O.A.C. or B.E.A.C. personnel?—They are combined here.

2503. Actually employed by B.E.A.C., I suppose?—Yes.

Chairman.

2504. If it was a bigger job I take it they would go to Scottish Aviation?—They would go to their own maintenance, I think.

Major Niall Macpherson.

2505. May I ask a question about transport to Prestwick? How is that organised by the operating Companies here, and what part do you have to play in the organisation of transport bringing passengers to and from the airport?—That is entirely the responsibility of the Companies. The Ministry of Civil Aviation have no responsibility about bringing passengers to the airport, or taking them away. The Companies have their own transport, their own 'buses in many cases.

2506. Could you just tell us where they do operate to normally? How is it organised? Is it from Glasgow?—For example, K.L.M., the Dutch Company, run a 'bus service to Glasgow for their passengers. That is one example. I think B.O.A.C. run a 'bus service to Glasgow; I would not be quite sure about that, but these Companies have all means and methods of getting the passengers to Glasgow, or to Kilmarnock, to catch a train if they want to.

Chairman.

2507. It is no part of your duty in any case to provide them?—No.

Major Niall Macpherson.

2508. Regarding the statistics that you have been good enough to give us with regard to passengers embarked or disembarked at Prestwick, does it mean that they were actually embarking or disembarking, or does it also include passengers in transit?—No; the transit passengers are over the page.

Major Niall Macpherson.] I am sorry.

Chairman.] I am afraid we have to push ahead, Group Captain Macdonald. If there are no further questions, may I thank you very much again for helping the Subcommittee in their Inquiry.

Witness.] Thank you, Sir.

*The Witnesses withdrew.*

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Mr. D. F. McINTYRE, Mr. J. TAYLOR, and  
Mr. J. B. ERSKINE.

[Continued.]

Mr. D. F. McINTYRE, Managing Director; Mr. J. TAYLOR, Commercial Manager, Scottish Air Lines; and Mr. J. B. ERSKINE, Commercial Manager, Scottish Aviation Factories, called in and examined.

*Chairman.*

2509. Perhaps it would be helpful to the Sub-Committee, Mr. McIntyre, if you explained your position, and that of your colleagues Mr. Taylor and Mr. Erskine regarding civil aviation?—(Mr. McIntyre.) I had no idea what you wanted to ask us, Mr. Chairman, so I have brought with me Mr. Erskine, who is the Commercial Manager of our factory side, and Mr. Taylor, who is Commercial Manager of our Airline side. Between the three of us we can answer individually, I think, any questions about our Company's activities.

2510. Scottish Aviation Limited covers all these activities, does it?—Yes; it covers both airport services, the factories which handle aircraft manufacture, conversion and overhaul, and our own Scottish Airlines.

2511. I think, perhaps, it would be most helpful if you explained to us your interest in Prestwick Airport, past and present?—Our interest "past and present", is as owners of Prestwick Airport.

2512. Since when have you owned it?—Since 1935.

2513. That is since its inception?—Yes. At the outset, in 1935, the possibility of a war was staring us in the face and we were anxious to establish civil aviation in Scotland as a means of employment. At the same time the Company's aerodrome served the dual purpose of preparing for war as the Company undertook the first stage of the training of R.A.F. personnel as Pilots. At that time Britain was rather short of money as usual and the initial training of pilots for the Air Force was given out to private contractors (who invariably consisted of Reserve Air Force Officers) in order to achieve a rapid expansion of the Air Force at not too great a cost to any one annual budget. We started a Company on that basis and capitalised the purchase and construction of the airport, and all buildings and aircraft necessary to run a training school.

2514. That was a contract with the Air Ministry?—Yes, in 1935, and it grew and grew, until, just prior to the beginning of the war, we were by far the largest civil training contractors in the country.

*Colonel James Hutchison.*

2515. All that growth was your own?—All our own, but of course under an Air Ministry contract. At the same time, we started up our factory side, and we continued on that basis right through until

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July, 1941; the whole organisation of Prestwick Airport being entirely that of the Company.

*Chairman.*

2516. Before the war, was the Airport used as an airport, apart from training?—No; it was only for training. Training and airport work do not mix. At that time we would be landing anything up to eleven aircraft every minute at the peak periods; there was no space for any other flying activities. Then, on the outbreak of war, all Officers in the Company were mobilised but held static to continue the training and, in our case, to continue our factory operation as well. It was not until September, 1941, that the Airport was requisitioned by the Air Ministry, and the Air Ministry then brought in a normal R.A.F. station headquarters, but, at the same time, the Air Ministry contracted the Company to carry out all the services it had previously carried out—everything to do with the Airport.

2517. So that the Airport itself was requisitioned, but you remained under contract to the Air Ministry to provide all the ancillary services?—After September, 1941, yes.

*Viscountess Davidson.*

2518. Including the hotel?—Including everything.

2519. Therefore, the man who runs the hotel today was under you then?—Yes.

2520. You did the whole thing?—It was a natural sequence of events. Pre-war the pupils that we were training as Pilots for short-service commissions in the R.A.F. came from all over the world, and we always felt it would be hard on these youngsters if they were to go into a British Air Force Officers' Mess without some knowledge of mess life, and therefore we provided an officers' mess and ran it on a non-profit basis. When the change came along we persuaded the R.A.F. to allow us to continue to operate the mess on a non-profit basis, and that system ran right throughout the whole war and gave satisfaction to many thousands of passengers.

*Chairman.*

2521. Had you complete autonomy regarding the services provided?—Yes, entirely. We had to make the Terminal Mess a success.

2522. In return, you were paid for those services a fee for management?—Yes; we were paid a straight management fee regardless of the volume and type of services provided.

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Mr. D. F. McINTYRE, Mr. J. TAYLOR, and  
Mr. J. B. ERSKINE.

[Continued.]

Major *Niall Macpherson*.

2523. How did they control the expenditure?—The expenditure was controlled very simply. We employed a certain establishment of people and we agreed that establishment with the Air Ministry, and the wages which would be paid.

2524. You worked on R.A.F. rations?—Yes, for part of the time we drew rations.

2525. You were paid your outgoings?—Yes.

2526. Apart from that you got the management fee which, as you say, did not fluctuate with the volume of the services provided?—The management fee, from our point of view, did not make the slightest bit of difference; it went straight back again in E.P.T., but it allowed the Air Ministry to have all their requirements at Prestwick Airport met in a most economical fashion and avoided the colossal duplication which would otherwise have resulted from the R.A.F., the Americans, ourselves, and others, all providing identical services.

2527. You provided the services on your own initiative, subject, I imagine, to enquiry as to whether the services were adequate or not. Representations might be made to you on those grounds?—Once a month the Air Ministry Representative, in the form of the R.A.F. Station Commander, signed a certificate saying that the services provided had been satisfactory during that month.

2528. Until when did that agreement continue?—It continued right through until December, 1945, when the Ministry of Civil Aviation assumed the position of landlord.

2529. What happened then?—As soon as that took place we had a gradual break-up of the system; each individual department of the Ministry of Civil Aviation and the Works and Buildings Department gradually started to take away little bits as and when they could, and we have been gradually passing over all our practical services to the Ministry of Civil Aviation and Air Ministry Works and Buildings. Of course, the duplication which we avoided during the war has now been introduced.

2530. Which little bits were taken back?—I will give you an example. Probably the simplest one would be to take the upkeep and repair of the airport and its buildings which we carried out under this management contract during the war. Of course, our Company has to include every conceivable department of the building trade for the building, maintenance and repair work in connection with the Company's own activities. Our civil engineering section, therefore, did all the airport and building repair and runway upkeep. They have now been duplicated by Air Ministry Works and Building Department staff, including a Clerk of Works, a

Station Engineer, a Clerk of Works' Assistant, three Foremen of trades, and some 80 odd people.

Colonel *James Hutchison*.

2531. Is it your contention, then, that that is costing very much more than it did before, and than it need cost now?—Yes. Probably there are very good reasons for it. Standardisation may be a good reason for it. In cost, it is at least double.

*Chairman*.

2532. When did the Air Ministry take over that work?—Almost immediately the Ministry of Civil Aviation came into the picture.

2533. What sort of consultation was there with you before that step was taken?—Practically none at all. When they assumed the position of landlord we, more or less, had no say in the matter. We did put out a mild protest saying that we thought the extra expense and duplication should, if possible, be avoided.

Viscountess *Davidson*.

2534. You offered to carry on in the same way but they did not wish it?—Yes. You can understand how each section had been built up, and was doing all the work for them.

*Chairman*.

2535. Did they take over any of your staff?—To a very minor extent. All the good people, naturally, stayed with us; the "dregs" went away, which is always the way. There is one other factor I would like to mention at this point, and that is the housing problem which we have as badly as any other area in the country. An established Company naturally employs local residents, people who live in their own houses. When new Empires are being built up they bring in all their own people from other parts of the country, and you have an enormous housing problem; for instance, accommodation intended for the use of airline passengers has, to a great extent, been absorbed by the new staff of the Ministry of Civil Aviation.

2536. What happened when they took over that service; did they negotiate with you at all about your management expenses in providing that particular service, or was it just taken away from you?—They were just taken away from us; we could not do anything about it. It was very disappointing in a way. We did all the services which they took over bit by bit.

2537. Perhaps you could continue the history with the other bits which have been taken over?—Almost everything has gone now, either to Ministry of Civil Aviation or A.M. Works and Buildings Department, except the duty crew which meets all the aircraft, handles the

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[Continued.]

machines, etc., and the fire brigade; these are about the only two things left now. Transport, which we used to provide for everyone has gradually been broken up.

2538. What is the position of the hotel?—The position of the hotel is entirely unknown; our position in the whole matter is unknown now. We are in the position of having no landlord's or tenant's agreement of any kind; we do not know where we are; we do not know what tenure we can offer to highly skilled staff such as aircraft designers and others in aircraft manufacture.

Mr. Corlett.

2539. When they took these services from you, did they alter the management fee at all?—No. The Ministry of Civil Aviation tried to negotiate a new management agreement which we drafted for them; it seemed quite satisfactory and included the hotel, as that is the key point of so many of these airport services. Since December, 1945, they have never yet been able to agree the inclusion of the hotel in a management agreement.

Sir Peter Macdonald.

2540. In the meantime, they have bought the hotel?—We do not know what the present position is.

Sir Peter Macdonald.] They say they have bought it.

Mr. Corlett.

2541. They pay the same management fee although they have taken over certain services from you?—There is no management fee. At the moment we are being paid certain sums to account of a management agreement, which does not exist.

Viscountess Davidson.

2542. Your actual management fee, that you used to get when you ran the whole show, has come to an end?—Yes.

2543. That was quite satisfactory. As long as you were running the whole thing you got your management fee, and you knew where you were. Since 1945 it is left in the air, and you have something on account?—Theoretically, when you assume the position of landlord, you have first purchased the property and arrived at a tenancy agreement. The Ministry of Civil Aviation are not yet in a position to purchase.

Colonel James Hutchison.

2544. Who maintains the buildings?—That is one of our biggest problems. We assumed that the Ministry of Civil Aviation would do landlord's repairs. We have been arguing that point for over a year now with them, and were recently referred back to the Ministry of Supply with whom we had a definite agreement. We presumed that the Ministry of Supply would deal

with the matter. However, the Ministry of Supply said that it was not their business, and they referred us back once more to the Ministry of Civil Aviation. In the meantime, unless we do repairs to the factory buildings, which have been outstanding since 1944, the factory will cease to function next winter, people will be thrown out of work, and a very valuable export trade will go.

Chairman.

2545. To get this quite clear, the position regarding the hotel is that you do not know who owns the hotel?—The hotel, as it stands at the moment, with about forty bedrooms, and what used to be a very big dining room and lounge room, is owned by our Company still; it is requisitioned, of course. What we call the Orangefield Hotel building was purchased by M.A.P. and the section which joins our accommodation to the old Orangefield hotel building was built by the Ministry of Aircraft Production.

Colonel James Hutchison.

2546. Tripartite?—Yes.

Chairman.

2547. But there is no clear tenancy agreement about the part that is let?—No.

Viscountess Davidson.

2548. Have you never been able to get down to a real round-the-table conference with the people on this?—No; it has been quite impossible.

2549. They will not do it?—I do not think they have been to the Treasury, or are in a position to do it.

Mr. Barton.

2550. In order to understand the position more clearly, are you receiving a compensation fee under the requisition?—That has not been agreed either.

2551. You have received no compensation at all?—Our initial requisitioning, in September, 1941, has not yet been agreed. We have received one or two sums to account. (Mr. Taylor.) Three times we have had a lump sum on account towards compensation rental, which has not yet been agreed. I think we have had about £19,000 altogether, speaking from memory.

2552. From 1941?—Yes.

2553. £19,000 for the hotel only?—No; for all the Company's property, the aerodrome and certain buildings, and the part of the hotel which belongs to us.

Major Niall Macpherson.

2554. Did you retain ownership of your own factory and do you still own it?—(Mr. McIntyre.) Yes; but of course it is still requisitioned.

2555. And leased back to you?—No, we do not know that.

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[Continued.]

*Chairman.*

2556. It is requisitioned by the Ministry of Supply?—Yes. As you know, during the war, no company was allowed to spend private capital on expansion for war purposes, and everything that took place was at Government expense, much to our regret. We would have preferred to put our own money into these developments but, as it was, we had no say in the matter.

*Major Niall Macpherson.*

2557. Supposing the aerodrome were taken over as a designated aerodrome, would they have powers to take over your factory as well?—Presumably, yes.

*Colonel James Hutchison.*

2558. Tell us something about the factory; you mentioned something about the export side. Is the indefinite position interfering with that? I suppose it is?—Yes. A lot of our buildings are falling about our ears. We got through last winter with a great deal of luck and no one was injured; no one had bits of roof fall upon them, but the buildings will not stand up to another winter without extensive repairs.

*Chairman.*

2559. The difficulty there being that you do not know who are liable for repairs?—That is so.

*Major Niall Macpherson.*

2560. Are these your own buildings, or part of M.A.P.?—Both.

2561. Your own buildings, even though they were requisitioned, you yourselves were still able to retain?—Yes.

2562. But it is the M.A.P. buildings that there is a doubt about?—There is about £100,000 worth of repairs required right away on these buildings. Our attitude is that it is no longer our responsibility. They are now requisitioned by the Ministry of Civil Aviation, the Air Ministry and M.A.P. combined. Presumably, at some time the Airport will be acquired by one or the other. If we spend £100,000 on these buildings it would be another £100,000 down the drain, as far as we are concerned, but we are being forced to accept that responsibility.

*Chairman.*

2563. You are going to carry out the repairs, and negotiate afterwards?—Having failed in our request to the Ministry of Civil Aviation to do so as landlords of the property, we feel morally obliged to undertake these repairs ourselves.

*Sir Peter Macdonald.*

2564. All requisitioning comes to an end in March next year, does it not?—As far as we can find out it can go on forever.

*Viscountess Davidson.*

2565. Can it?—One can read the various laws in many ways but I think, in actual fact, that they can keep anything they want.

*Chairman.*

2566. If we could turn to the Airport, what happened in December, 1945?—I am uncertain as to whether our management agreement for the upkeep of the Airport and all the buildings has ceased, continues, or what. (Mr. Taylor.) It ceased in March, 1946. (Mr. McIntyre.) And has not been renewed. (Mr. Taylor.) There is this draft contract with the Ministry of Civil Aviation which has never been signed, and which lays down the limited service we have to carry out. It provides for a management fee of blank pounds.

*Viscountess Davidson.*

2567. Where is that; who has got it in hand now?—The Ministry of Civil Aviation; it has never been signed.

*Mr. Barton.*

2568. Has your Company spent any money in development of the Airport?—(Mr. McIntyre.) Yes, vast sums.

2569. Vast sums on behalf of the Ministry?—No; I mean altogether.

2570. I am talking about the wartime development of the airfield. I understand (correct me if I am wrong) that it was entirely a grass airfield when the Air Ministry took it over when it was requisitioned?—M.A.P. put in our main runway before the Air Ministry came in. M.A.P. worked in a different way to all other Ministries. They employed their contractors every time; the contractor prepared the plans and the contractor carried them out; M.A.P. contractors employed the builders, and all the rest of it; The present Airport buildings and the main runway were done by M.A.P. to our design before the Air Ministry came into the picture at all.

2571. So that the actual development of the airport up to its present standard has been undertaken at Government expense?—Well, you could say a large part of it. In round figures, it is roughly this: When the war came along and, as I have said, capital had to be expended by the Government, they expended just over £2 millions. Of that you could take probably about £300,000 as being used to day for airport purposes; the remainder went in the usual way that money goes during a war, in all sorts of hastily conceived ideas despite our protests. It was our opinion the whole way through that the money could have been planned to served the joint purpose equally well of war and peace.

*Sir Peter Macdonald.*

2572. It was Lend-Lease money was it?—About three-quarters of the Government's

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money spent on the airport has no connection with the airport's present purposes.

Major Niall Macpherson.

2573. But surely it is quite clear that the airport had been developed to a sufficient extent before the war to enable all these training operations to be carried out, and could you say to what extent it had been developed in such a manner as would be suitable for operation by civil aviation after the war?—Everything except runways. At that time we were operating ourselves 120 aircraft, from single to four-engine aircraft; that is a lot of aeroplanes which requires a lot of facilities and so on.

2574. Were the runways indispensable?—No. We started Trans-Atlantic services without runways. We started them on a grass surface, and eventually Lord Beaverbrook persuaded the Supply Board to spend money on the main runway. At that time a 2,200 yard runway, 100 yards wide, was considered absolutely excessive, and there was great difficulty in getting it through the Supply Board at that time.

Mr. Barton.

2575. Does any of the technical equipment here belong to you?—Yes, enough to operate and maintain 120 aircraft.

2576. Is some of it in existence now?—Yes, all of it.

Chairman.

2577. If we could return to the point when the airfield became a civil airport. At that moment, what services were you providing on the airfield?—All practical services except airport control and Trans-Atlantic radio services.

2578. And you continued to provide those services?—Everything, except the two I have mentioned. These were operated by the R.A.F. All the direction finding radio stations were operated by us, and we had all our own radio operators throughout the war.

Viscountess Davidson.

2579. And they were very good too?—We had very few accidents.

Chairman.

2580. And they have now been taken over by the Ministry of Civil Aviation?—Yes; they did absorb quite a number of our radio operators.

Colonel James Hutchison.

2581. What was your peak traffic during the war and how does it compare with the traffic coming in and going out of the airport just now?—I have not the actual figures at the moment, but I should think that for probably every one aircraft handled to-day we should have been handling 50 during the war. (A document was handed to the Witness). This would appear to show 54 North Atlantic flights a month; we were doing 54 a day during the war.

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Mr. Barton.

2582. Was that a ferry service, or a passenger service?—That is all types; we had as many as 13 regular passenger services a day between here and Washington, in both directions.

Chairman.

2583. Can you tell us how the technical side of the establishment on the airfield compares to-day with that which was operated during the war?—The technical side? You mean, the radio aid side?

2584. Yes.—That, I think, is every bit as good today as it was during the war.

2585. And as far as the establishment goes, how does it compare with the wartime establishment?—I do not know actually what the establishment is here, at the moment.

Viscountess Davidson.

2586. I suppose, if you ran everything during that period of war, you could tell us what it cost?—I could tell you exactly what it cost.

2587. To run the aerodrome with this number? We should like to ask for those figures—We could tell you exactly what it would cost to run this airport today in total.

2588. Could you tell us what it cost during those war years?—This is purely from memory. During the war it cost us, roughly, about £200,000 a year to operate this airport.

Colonel James Hutchison.] I think, in order to get a straight comparison, we ought to have the personnel that was necessary, because wages have risen.

Chairman.

2589. I was coming to that point. If we could take it by stages, perhaps we could separate the technical from the industrial personnel?—I am trying to do that, at the moment. When I said that it cost £200,000 a year to operate this airport, that referred purely to the airport side. Something over £100,000 of that was attributed to the American use of the airport, because there were far more American aircraft coming through than British. At September 1941, by which time the Trans-Atlantic Service had been running for eight months (we had a couple of Fighter Squadrons at that period of the war, the Airport side, radio stations and everything else), we used 300 men, 100 women, and about 50 boys; that covered everything, including the training of 1,500 R.A.F. pupils.

Colonel James Hutchison.

2590. Is that a straight comparison with today? You are not taking personnel in, or leaving personnel out, in those figures who are present or absent today?—At that time I should think we were doing at least

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[Continued.]

50 times what is being done today. This building, for instance, Adamton, had 360 radio pupils in it, all being housed, fed and trained. There must have been about 2,000 service personnel all being fed and housed at Prestwick at that time.

*Chairman.*

2591. You did not own this building, did you?—No, but we requisitioned this building when war broke out, and in 48 hours we had 360 pupils in it being trained by us, and another three requisitioned properties just like it.

*Colonel James Hutchison.*

2592. Is it inevitable that they should have as many as they have at present, or could they, in your opinion, be cut down with their existing services, or with any services it is likely that they will be operating from here in the near future?—I can only express an opinion from the business angle, and I do not know how many they have got. From what I can see, I should think there are somewhere about 500 at the moment. From a business point of view, where you have a management team in existence at the airport and operating under a management contract, you would cut down tremendously; you would probably be down to 100 people.

2593. With regard to the services that you are still providing, how do you determine what the strengths of those services should be?—We estimated it and argued it out with the Ministry. There is so little left now that it does not matter very much, but taking a service such as that of the duty crew, we suggest that, say, 20 men are required for the work; they say 10 men are required; and we eventually arrive at a suitable establishment and agree wages rates.

2594. Does that go for the hotel services as well?—No; the hotel is entirely our own responsibility.

*Mr. Corlett.*

2595. I did not quite catch what you said. Did you say that 500 could be brought down to 100?—Yes; that is how I imagine it would work out.

2596. 500 could become 100; that is your statement?—That is what I would normally expect.

*Viscountess Davidson.*

2597. From your own past experience of what takes place at an airport like this?—Yes.

*Mr. Barton.*

2598. But are the 500 here now?—I do not know. I am trying to visualise the present position. I do not know very much about what the Ministry of Civil Aviation staff are doing. As far as I know, it is airport control and radio aids. That is the manning of the control tower, and the radio services at Redbrae.

*Major Niall Macpherson.*

2599. But does not that lead into a much wider field? Are they not doing things which are not immediately connected with the airport?—They are manning a certain number of radio stations, and there are important meteorological services to be carried out.

*Colonel James Hutchison.*

2600. That 500 does not include any of the individuals who are providing the services which you provide?—No.

*Chairman.*

2601. What has happened regarding the industrial employees on the Prestwick airport. First of all, how many are you employing?—At the moment, we are down to something over 2,000 now.

*Chairman.]* I am sorry; I have not made myself clear; I mean, on the airport itself.

*Sir Peter Macdonald.*

2602. Under contract with the Ministry of Civil Aviation?—192.—(Mr. Taylor.) That is purely on airport transport, maintenance, cleaners, boilermen, duty crew and fire brigade.

*Chairman.]*

2603. As far as that figure is concerned, is there any yardstick to compare it with the position during the war?—Yes, quite easily.—(Mr. McIntyre.) We had 83 on duty crew during the war; we have now 74; it is not much down.—(Mr. Erskine.) The R.A.F. used to do a certain amount of that work during the war, and of course it is now wholly done by civilian employees.—(Mr. Taylor.) A direct comparison is 434 to 192. Aircraft maintenance was a big commitment during the war.—(Mr. McIntyre.) We maintained every single aircraft, British or American, which came through here.—(Mr. Taylor.) And also the maintenance of all buildings.

*Viscountess Davidson.*

2604. None of which is done now, so that you had 434 people doing the whole of that work?—Yes.

*Chairman.*

2605. Perhaps we could break it down by taking the maintenance men out of the 434?—Yes, that brings it down to 297. We were maintaining about 250 vehicles and now there are only about 50 to 100, I think. (Mr. McIntyre.) I think one could put that very briefly. There is no doubt at all that the operation of this airport by a management contract arrangement with an existing company which was using its management team in any case, would be many times cheaper both in man-power and money than by operating it as the Ministry of Civil Aviation propose to do now. On the other hand, they may have very strong reasons for standardisation which would be upset by a management contract arrangement.



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[Continued.]

2606. If we take the figure of 192, how is it arrived at?—32 firemen, for instance.

2607. Was that the agreement between yourselves and the Ministry?—(Mr. Taylor.) In actual fact, we had to tell them, more or less, what staff we required to run the services that were wanted at the beginning of April, 1946. Since then there have been some minor adjustments. The duty crew has been increased because the services have increased and the others have remained practically static. In some cases we advise them that less people are required and have done that several times.

2608. Have the numbers been reduced in consequence?—Yes; transport was a case where the number was reduced. Say, for a couple of months, we found that our staff was not being fully utilised, then we would go to the Ministry and say: "We can reduce our numbers by two or three" and have the figure reduced.

2609. As far as the industrial staff is concerned, the position is that you are really the operative factor. You determine what is necessary and you expect that to be agreed?—Yes; we negotiate with the Ministry on that basis.

Colonel James Hutchison.

2610. With regard to the maintenance of aircraft coming in during the war, did you carry out any maintenance for American and British aircraft?—(Mr. McIntyre.) We carried out the maintenance on all the aircraft right up until towards the end of the war when the Americans established their own facilities for what they called field maintenance. The major work they passed over to us. We advised the Air Ministry about that, and they put it against the Lease/Lend figures.

2611. Did that include the "Constellations"?—The "Constellations" did not arrive until just after the war.

Mr. Corlett.

2612. Do you still do maintenance?—We maintain practically every aircraft that passes through the airport now.

Sir Peter Macdonald.

2613. They have contracts with you, I suppose?—Yes. During the war it was done on a pool basis. We now have our own contract with each air line.

2614. One of our difficulties with regard to "Constellations" on the Trans-Atlantic service is that they have to fly to Montreal from New York, which is costing the Corporation concerned a considerable sum of money. Would it be feasible to do that maintenance on this side?—Yes. They can come to us and ask for the "Constellations" to be overhauled, like any other company could do, and we would be happy to do it.

Major Niall Macpherson.

2615. When you say you do a complete overhaul, how often do you have to do that?—That comes round each year. For instance, we are now overhauling the aircraft of the Belgian Air Transport Command. We do our own, and that of any Company who have not got the facilities to do it themselves.

2616. But with the operating companies which are using Prestwick just now, you have contracts for the complete overhaul as well as the transit maintenance?—Complete overhaul is always a separate order. The Dutch, for instance, have established their own complete overhaul capacity at Amsterdam and we may do the passing-through maintenance. Southern Ireland may be unable to do its own complete overhauls and might pass it to us.

2617. You say, "We may do the passing-through maintenance". Do you, in fact, do the transit overhaul for quite a number of companies?—All the companies operating through here.

Colonel James Hutchison.

2618. And some of the "Constellations"?—Yes, "Constellations" and all others. As you can imagine, there is no more experienced engineering team in this country. During the war they had to take every aircraft; new aircraft from America, of recent construction; all had to be serviced and passed safe for flight by our engineers, and there were thousands of aircraft. You can imagine how experienced they were by the time the war finished. We had certainly the most experienced team in this country in all matters concerned with air transport.

2619. We came up in one of your aircraft yesterday. You must, therefore, have a charter contract with B.E.A.?—B.E.A. charter us to operate twice daily in both directions, from Renfrew to London, and Prestwick to London. Previously we used to do several other services for them as well, but our charter to B.E.A. ceases on 15th August. The air service you travelled up in was one of our aircraft under charter to B.E.A.C.

2620. What is the basis of charter between you and B.E.A.?—It is not one which we like. They pay us 6s. a mile for every mile we fly for them. The kind of charter we like gives us some incentive and interest in passenger traffic, etc.

Chairman.

2621. It is not related to the traffic carried?—Not at all. Our other charters are based on a minimum number of passengers guaranteed which does not quite cover the cost of operation, and then so much for the passengers beyond the minimum; that is how we worked for Air France, and the same for Iceland Airways.

1 July, 1947.]

Mr. D. F. McINTYRE, Mr. J. TAYLOR, and  
Mr. J. B. ERSKINE.

[Continued.]

*Sir Peter Macdonald.*

2622. Are you still working for Air France?—No. They took over in the summer.

*Mr. Barton.*

2623. I imagine that Scottish Airlines are merely operated by Scottish Aviation Limited; it is the same Company, but it uses the name Scottish Airlines?—Quite a good example of the other form of charter arrangement is the case of Iceland Airways; we have just finished a year's operation for them; they have had a margin of profit, in one year's operation, of £35,000. We have also made a profit, that is within the existing air fares, on a very difficult route with indifferent traffic.

*Major Niall Macpherson.*

2624. You have not got the charter now for the Prestwick or Renfrew-Belfast run?—No; B.E.A. have now taken that over themselves, although most days we are asked to help them out. (Mr. Taylor.) We were asked this morning to operate five services for them.

*Chairman.*

2625. When your charter agreement runs out with B.E.A., I take it you will be reduced to a day-to-day traffic?—(Mr. McIntyre.) No. As opportunity in Britain dries up, we have to go abroad. We will be transferring a good deal of our airline capacity and technical capacity to foreign countries, I imagine, by September this year, to Belgium, Luxembourg, Iceland, India and elsewhere.

2626. How many aeroplanes have you?—We have 8 of the 21-passenger type, and a further seven on the way through our factories, and 5 4-engine "Liberators."

*Sir Peter Macdonald.*

2627. Have you converted all these yourselves?—Yes, and we have pretty well provided many of the European airline fleets.

*Colonel James Hutchison.*

2628. Have you converted any Ju's into "Jupiters"?—No.

2629. Can you tell us the cost of converting a "Dakota"?—The cost to the customer, or the cost to us?

2630. You had better give us the cost to the customer?—The cost to the customer is, in the case of full luxury conversion, somewhere, about £12,000. (Mr. Erskine.) Including the overhaul, which is about £3,000.

2631. That is to say, the type of machine we came up in yesterday?—About £12,000.

2632. From the wartime model?—Yes; that is, of course, with a new lease of life.

*Viscountess Davidson.*

2633. And a new inside, too?—Yes.

*Colonel James Hutchison.*

2634. Could you give an indication of what you would do a "Jupiter" for?—(Mr. McIntyre.) We could certainly estimate it, yes, but I do not think we would care to tackle it.

*Sir Peter Macdonald.*

2635. And not run it afterwards, anyway. You might convert it without taking it on your strength?—We could not operate it profitably.

*Colonel James Hutchison.*

2636. I know that certain figures for converting Ju's into "Jupiters" have been given elsewhere?—For instance, taking our standard model of the Douglas aircraft, you could hardly tell the difference between it and the luxury one which you came up in. That comes out at £5,600 plus the overhaul.

2637. For a Ju?—No; that is for a 21-passenger "Dakota."

2638. What is the difference between the £12,000 and £5,600?—A standard conversion (some people do not want the full luxury conversion) is £5,600. The luxury conversion, which you came up in yesterday, is £8,500. Then you invariably have an overhaul cost on top of the conversion cost which may be anything up to £3,000.

*Viscountess Davidson.*

2639. So it is really about £8,500 for the one to £12,000 for the other?—Yes.

*Colonel James Hutchison.*

2640. That is a 21-seater, and a "Jupiter" is a 12-seater?—Yes; and, of course, seats themselves are expensive; seats cost about £38 each.

*Chairman.*] I do not think we can go further into these technicalities. Have the Members of the Sub-Committee any further questions to ask?

*Major Niall Macpherson.*

2641. Is the Ministry of Civil Aviation in any way concerned with either the prices you fix, or the amounts you receive for charter purposes?—No, not in any way; it is a normal commercial transaction between one company and another.

*Viscountess Davidson.*

2642. May I ask whether it is possible for the witnesses to let us have the figures of the expense of running this aerodrome for the three or four years when you were running it full strength, with the number of personnel that you were employing?—Yes. We can give you that figure quite easily for any one of the war years.

1 July, 1947.]

Mr. D. F. McINTYRE, Mr. J. TAYLOR, and  
Mr. J. B. ERSKINE.

[Continued.]

2643. I would like to have them for three years. It was in 1941 that you started?—1941 to 1945.

2644. Would it be asking too much?—Could we have those figures from 1941 to 1945?—Certainly.

2645. And alongside them your personnel, and approximately the number of aeroplanes you were dealing with?—Yes.

2646. Just a rough statement?—There would be an awful lot of other factors as well, such as all those attached to 2,000

R.A.F. personnel and a couple of thousand Americans.

2647. But it would be useful to have the figures, just to give us a line?—Yes. We can do that very easily for you, Lady Davidson.

*Chairman.*

2648. Thank you, Mr. McIntyre. Before you go, may we thank you very much for coming forward and giving your evidence before us?—We welcome it. We have been interested in this place most of our lives.

*The Witnesses withdrew.*

[Adjourned till Tuesday next, at 11 a.m.]

THURSDAY, 10TH JULY, 1947.

Members present:

Mr. FREDERICK WILLEY (*Chairman*).

Viscountess Davidson.  
Colonel James Hutchison.

Mr. John R. Thomas.

#### CIVIL AVIATION.

Sir HENRY SELF, K.C.B., K.C.M.G., K.B.E., Permanent Secretary; Mr. E. A. ARMSTRONG, C.B.E., Under Secretary, Establishments; Mr. G. S. DUNNETT, Under Secretary, Air Services Department; Mr. A. H. WILSON, C.B.E., Under Secretary, Aerodrome Administration; Mr. T. PARIS, Director of Finance (Ground); and Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E., Director of Civil Air Operations, called in and examined.

*Chairman.*

2649. Sir Henry, it will be of some convenience and advantage to the witnesses if we touch upon any Establishment questions first of all?—(Sir Henry Self.) Thank you, Sir.

2650. I do not think there are many questions affecting the establishment which we wish to put, but there is one about which you might be able to help us. Have you had any assistance from the Organisation and Methods Department of the Treasury?—We have had the O. and M. people in quite regularly and systematically from the Establishment Department of the Treasury. We have, in fact, got representatives of the O. and M. Department at the moment working in the Ministry in connection with the Economics, Intelligence and Statistics Division, and, I think, Mr. Wilson, they are, in fact, reviewing your proposals for more new Divisions to deal with aerodromes?—(Mr. Wilson.) Yes; and they are also looking into the Supply organisation of the Ministry; the arrangements for looking after Stores. (Sir Henry Self.) I personally have had a long talk with the O. and M. representative myself to get some help and guidance on this matter, and we

attach great importance to their being right in and given every facility to guide us in the right way.

2652. Have you an O. and M. Division within the Ministry itself?—No. The ordinary standard practice is, as I stated previously, that the Principal Establishment Officer, who was appointed three months ago as a recognition of our need has under him Officers who perform parallel functions to those of O. and M. under his guidance.

*Chairman.*

2653. Thank you. We have previously touched upon the question of delegation of powers to the divisions; let me make it clear at once that I mean the geographical divisions?—Yes.

2654. I have just been informed by the Clerk to the Committee that we have received a Memorandum upon that this afternoon?—I should explain about the papers. I understood that you required them to be in by July 12th, which was the end of this week, so perhaps that accounts for their not being available in time for prior circulation.

2655. I am sure that they are available in time for the purposes of the Subcommittee?—Thank you.

10 July, 1947.] Sir HENRY SELF, K.C.B., K.C.M.G., K.B.E., [Continued.  
 Mr. E. A. ARMSTRONG, C.B.E., Mr. G. S. DUNNETT, Mr. A. H. WILSON, C.B.E.,  
 Mr. T. PARIS, and Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E.

2656. Can you tell the Sub-Committee whether any progress has been made regarding the creation of further divisions similar to the Scottish Division—in other words, regarding the other three divisions?—The London Division is formed, as Mr. Wilson has explained to you on a previous occasion. We have not set the other two divisions in train because, in our judgment, we should like to bring them into being as soon as we have had a little experience with the first two and know where we are going with the organisation. Secondly, of course, as I think has been explained on many occasions, we are under this real handicap of having to advertise our appointments. That is a very right and proper thing to do, so that everybody should have the right of application, but I had to register a memorandum this morning on the difficulties it means. The appointment of Controllers of Aerodromes cannot be made if we have got to advertise, possibly for three months, and the Government have now approved our aerodromes programme.

2657. Why should it involve a delay of three months?—It is simply due to the fact that the papers will not accept an advertisement under six weeks; then you have to give a month for people to make their applications; then you find you get 3,000 applications for half-a-dozen posts, and the screening of those advertisements is a laborious job. By the time you have prepared a short list and the Selection Board have interviewed them, I am afraid the time does really run between the start and appointment to three months. That is relevant to the appointments of these two Controllers for the remaining divisions, because in fulfilment of Parliamentary statements we have undertaken to advertise the appointments and to go through the full procedure.

Mr. John R. Thomas.

2658. I would like to ask whether those specialist officers would not be drawn in the usual way from the R.A.F.?—I share your view, that the special experience of the R.A.F. is most important and invaluable for this; but Parliament has been very in-

Mr. Armstrong withdrew.

Chairman.

2666. If we may now turn to several miscellaneous points arising, the first is the Air Transport Advisory Council established under Section 36 of the Civil Aviation Act of 1946, and for which £15,000 is provided in the Estimates. Has the Council met and, if so, how frequently?—The Council is having its inaugural meeting this afternoon.

2667. That was, in fact, a very appropriate question?—Yes. The appoint-

ment, and rightly so I think, that we have again got to throw the field open to all in civil life as well as in the R.A.F., so that until we get the civil applications we are unable to assess the relative virtues of the R.A.F. and the civil.

2659. Do you use the Executive Department, or Administration Department, of the Ministry of Labour?—The Appointments Department?

2660. Yes.—Yes; we are in close touch with them continuously; they have been very helpful indeed in putting names forward.

Chairman.

2661. Have you had any further advice from the Ministry of Labour on establishment questions?—On establishments as such?

2662. Yes.—I do not think we ordinarily would consult them with regard to establishments as such; that is a matter for clearance with the Establishment Department of the Treasury who, of course, control the establishments for all government organisations.

2663. I notice that we have got a memorandum on the financial powers delegated to the Divisional Controllers and Airport Commandants. I have just hurriedly glanced through it, but in view of the information that is contained in that memorandum I do not think we need pursue it further, unless Members of the Sub-Committee have any questions arising on that memorandum?—Thank you.

2664. I think probably it would assist you if I indicated (again subject to the other Members of the Sub-Committee) that I do not think there will be any other questions affecting the establishment arising this afternoon.—With your permission, Sir, if the establishment representatives may withdraw, I think they would appreciate it very much; they have a special engagement this afternoon.

2665. Yes; we do not wish to inconvenience them, Sir Henry.—Thank you, Sir.

ments have been made. As you will recall, the Chairman had to be nominated by the Lord Chancellor; Lord Terrington has been nominated. There had to be a representative who had knowledge of air transport; that nomination is Mr. Leslie Runciman, who was previously Chief Executive of B.O.A.C. Similarly, there is a representative of surface transport; that is Major-General Szlumper, who, you remember, was with the Southern Railway Company and has done very important

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Mr. G. S. DUNNETT, Mr. A. H. WILSON, C.B.E., Mr. T. PARIS,  
and Air Commodore G. P. CHAMBERLAIN, C.B., O.B.E.

work for the Government on the question of surface transport generally. There had to be two other members of general interest, and the two nominations have been Lord Provost Primrose of Perth and Sir Donald Banks. Sir Donald Banks was previously Director-General of the Post Office, and also later Permanent Secretary of State for Air when civil aviation was in the Air Ministry, and brings rather a unique experience to bear on the point. The organisation has been set up, and they have a small staff until we know exactly what their needs are. Of course, nobody can say what appeals are going to be made, but I should personally think that with the publication of the Government's aerodrome programme released this week it is quite probable that there will be a number of appeals to the Council.

2668. Is membership of the Council a paid appointment?—It is proposed to remunerate them on a daily basis. The fees proposed are, at the moment, under discussion and we hope that they will be determined fairly soon but, subject to review, when we can see how the thing is actually working out, so it will be difficult to know whether a consolidated fee, or whether a daily fee, would be better until we know what the volume of the appeals is going to be. The Chairman and members are all very happy that we should feel our way on the question of remuneration.

2669. I notice also in the memorandum you supplied to the Sub-Committee that there is a reference to the National Civil Aviation Consultative Council, the membership of which is set out in the memorandum. I wonder whether you could tell the Sub-Committee in a little more detail what are the purposes of that Council?—It is an analogous body to the National Council which was originally established by the Minister of Production in the war and with which I had the privilege of being associated. The experience gained there led the President of the Board of Trade (if I am not trespassing off my own wicket) to establish his National Council for industrial matters. The Ministry of Labour has similarly established a National Council and we have followed the same pattern, establishing this National Council to be a central forum for ventilation of all difficulties and problems, and to give the Minister an opportunity of drawing to himself the considered advice of all interests and organisations associated with civil aviation. The Council meets about once every two months. It has set up two or three Sub-Committees to deal with specific problems. One of them is to consider the possibility of increasing the safety of crew and passengers in the event of an accident by means for improving—I do not want to use a bad word; somebody did talk about crash worthiness but we dis-

like that word—anyway, to improve the whole lay-out and design of the aircraft so that you can promote maximum safety in the event of an accident. Another Sub-Committee has been set up to advise the Minister as to what facilities are desirable for the handling of passengers at the airports, and their conveyance to and from aerodromes. That is designed to enable us to get the best advice we can through the medium of this Council on the problems, particularly at Heath Row, Northolt and elsewhere, where large numbers of people will be arriving and awaiting clearance through Customs and Immigration, and then to get them to and from London. There is another suggestion, that the Council might be invited to help us in this problem of what amendment should be made to the procedure for accident enquiries, which has been the subject of considerable discussion lately. There was a motion on that on the adjournment the other night, but I should perhaps leave that for explanation in the House by the Parliamentary Secretary.

2670. How does the work of this particular Council, regarding safety, affect the work of the Air Safety Board?—The Air Safety Board is, of course, an official body which is in regular session dealing with the day-to-day problems of air safety, whereas the Sub-Committee of this Council is making a long-term review of what suggestions can be made for the actual development of the layout and the structure of an aircraft as revealed by the experience of passengers mediated through the transit agencies and the people represented on this Council. The Air Safety Board is an authority for bringing to a focus the technical appreciation of the subjects and advising the Minister from the technical standpoint. This Council, of course, is not technical. It is intended to be representative of the user standpoint, combined with the general help and guidance of the operators and the constructors, in association with laymen giving a common expression of opinion. The Air Safety Board is a technical Board of standing technical authority.

2671. Is the Ministry of Supply represented on the Council?—No; this is a Council for civil aviation as such. We had a meeting of all the members of the Council interested the other day at which we gave them a full review of our aircraft construction programme, short and long-term. We invited the Ministry of Supply to come, and they very readily took part, and gave the picture of research and development of air plans in parallel with us; so that they work with us but they are not definitely represented on the Council.

2672. We have touched upon research at previous meetings of the Committee. I wonder whether you could help us upon

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Mr. G. S. DUNNETT, Mr. A. H. WILSON, C.B.E., Mr. T. PARIS,  
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this point? Personally, I can understand the difficulties of the problem, but I can see the danger of a considerable amount of duplication and overlap on research work. Is the position at the moment that the Ministry of Civil Aviation is responsible for what we might call operational research?—The Minister of Civil Aviation is not responsible for the aircraft research and development programme proper other than to draw the attention of the Minister of Supply to what needs to be done.

2673. In other words, it is purely an advisory function?—Of certain items to which we should have priority, and the like. The Operational Research Organisation is from the operational user standpoint, as opposed to the production of the article which they will operate. That is clearly under the aegis of the Ministry of Civil Aviation, to co-ordinate the work of the three Corporations and their own.

2674. What establishment has the Ministry to enable it to conduct this research work?—The Operational Research Establishment has been determined quite recently and is being settled on a very limited basis with, I think, five technical officers under Dr. Bell. (Air Commodore Chamberlain.) We asked for one Principal Scientific Officer to lead it and eight subordinates, and you, Sir, know best how many are established at the moment. (Sir Henry Self.) Then we had a meeting with all parties concerned, including the Ministry of Supply, whose collaboration we wanted in this, and the Corporations, and under my Chairmanship this meeting, with Air Marshal Sir Conrad Collier and the Controllers concerned agreeing, proposed the establishment to start with of five technical people till we can see what progress we make and what the real need is.

2675. I remember you mentioning at a previous meeting a Standing Committee, of which I believe you are Chairman, and on which the other Ministries are represented. Is that the Liaison Committee on Research?—In the pure research field you have the Civil Aircraft Research Committee of the Aeronautical Research Council. They advise the Minister of Civil Aviation and the Minister of Supply.

2676. Perhaps it would help, Sir Henry, if you just gave in some detail the role of the Aeronautical Research Council?—The Aeronautical Research Council is a body which is recognised by the Minister of Supply as an authoritative body to advise him on problems of fundamental research over the whole field of supply for aeronautical equipment; they have functioned for 25 or more years and have been the reviewing authority of the programme of research and development which has been put in train, and have established a very important prestige in this

field. They are an independent body recognised by the Minister of Supply and given authority by him under suitable terms of reference; they approached the Minister of Civil Aviation to suggest that it might be a very good thing if we appointed a Committee for civil aircraft research problems analogous to the way they had done it for other departments. We readily accepted it. The Committee has been comprised mainly of independent scientists nominated by the Aeronautical Research Council, and supported by official representatives of the Ministries, and by parallel authorities such as the Air Registration Board, and that Committee sits and reports technically to the Aeronautical Research Council, but their reports and papers are made fully available to the Ministries. They all come to me, for example, to keep me fully informed of what they are doing. Our people put in papers to them; there is complete exchange which goes on, and they guide and help us in establishing the forward programmes of research developments for which the responsibility rests with the Ministry of Supply. We then pass beyond the field of pure research and development into the field of actual development of a practical object into the production stage. That is reviewed and organised under the supervision of the Inter-departmental Civil Aircraft Requirements Committee, of which I am the Chairman, and on which there are representatives of the Ministry of Supply, the Ministry of Civil Aviation, together with the three Corporations. There we, first of all, review the whole situation from the present aircraft programmes. We made proposals for a new programme last year, which has now been implemented, and we are engaged, at the moment, in forward planning for the further requirements which will emerge after the new types are brought into service, which are now being developed and produced. So it is a Committee which carries on the work of the pure research programme into the development and production stage, but, quite obviously, there must be give and take between the two sides, and the closest collaboration, so they work in knowledge of which each is doing.

2677. Thank you. To turn to a rather different point, I.C.A.O., can you tell the Sub-Committee what our contribution to I.C.A.O. is?—Approximately, £67,000.

2678. As far as we work through I.C.A.O., are our representations made directly by the Ministry or through the Foreign Office?—They are made directly from the Ministry to our member on the Council of the Organisation sitting in Montreal; there is a regular flow of exchange of documents between the Organisation and ourselves, through our member of the Council.

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2679. The Organisation is confined to national States, is it?—It is purely governmental as opposed to I.A.T.A., which is the Operators' Association.

2680. So that if a Corporation wished to put forward any point of view which was proper to be discussed there, it would have to come through ministerial channels?—If they wished to raise a question on the international plane and develop that themselves through the International Air Transport Association, which is the Operators' Organisation, there might be a considered joint representation come from that body to the International Governmental Association. Alternatively, the approach is for a national operator to ask its particular Government to represent the matter direct to I.C.A.O.

2681. Those are the only two avenues of approach to I.C.A.O.?—Yes.

2682. If we could turn to some of the points which we left during the course of previous meetings, we have seen the announcement made recently about the Airport Programme. Can we assume from that that you are now in a position to go forward with a definite programme of constructional work for this year?—(Mr. Wilson.) We can go forward with a certain amount of constructional work now, subject to our agreeing the phasing of the work and the amounts with the Treasury, of course. We shall not go forward with constructional work at all the places mentioned in the programme, because that is mainly a programme of acquisition rather than a programme of works, but it does clear away a certain barrier which has been holding us up.

2683. Can we assume that, having got this overall programme, there is no impediment now to you going forward with a limited constructional programme for the current year?—That is the position, subject only to labour and materials.

2684. You mention labour and materials. What is the machinery for deciding your allocation of labour and materials?—In the first place, of course, the phasing of the programme will have to be cleared through the Capital Investment Working Party, and there is the clearance of labour through the usual departmental machinery with the Ministry of Labour and the Ministry of Works, so that we get a quota of labour spread over the country.

2685. But when do you anticipate having decisions upon which you can work?—It is a little difficult to say. Certain decisions can be taken very quickly. For example, we have just recently decided to go ahead with one or two specific cases immediately the programme was cleared; other cases may take longer, and we shall have to take into consultation the operating Corporation, B.E.A., because it is useless for

us to develop aerodromes at a pace which does not match up with their development and their ability to provide the services to particular places. That on their side is very complicated, because the services must be a network devised against the background of proper maintenance arrangements and fitting in the time-tables and routes.

2686. You mention phasing the work. Over what sort of period do you think the work will be phased?—It is difficult to say how these particular aerodromes will fit in a given time limit to the end of the work, because as times goes on new requirements will emerge, making it necessary to do other work, and it is difficult to say when known requirements at this moment will be finished and new requirements will come in. The margins of the two things will tend to overlap; but we ought, in the course of three or four years, to get the foreseeable things done on a programme which can be worked out fairly soon; thereafter it will depend upon changes in types of aircraft, the way aircraft are introduced into particular routes and factors of that sort.

2687. Another subject that was left undetermined was the programme of the Corporations. Have you got any further information for us on that, Sir Henry?—(Sir Henry Self.) We have made a good deal of progress on that. The situation has clarified quite a lot. We have not achieved the dates that I led you to think we should achieve, which was towards the second half of June. The situation is complicated by B.O.A.C. being dependent upon certain discussions with the operators from the Commonwealth of Australia. We had the advantage of the Australian representatives coming through London from the I.C.A.O. Assembly, so they could not be here till early in June, and we had a fortnight's negotiation with them to determine a basis for the maintenance of the parallel operation between this country and Australia, the two Governments collaborating through their Operators, a situation which we are particularly anxious to preserve; and we have reached agreement on a basis of pooling the operation and the financing of it which is *ad referendum* the two Governments. I think that has been approved here; we are awaiting the approval of the Australian Government. As soon as that is available, we know pretty clearly the basis of the route operation of B.O.A.C. They have put forward figures and proposals which have been subject to a good deal of examination, and we are now awaiting a little further light and guidance on the subject; but we do hope that we shall finalise it quite shortly. I would not, however, like to mislead the Sub-Committee on this point at all, because it is quite clear from the examination we have carried through so far that we cannot

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this first year of working do it in the precise, clear form that we shall hope to do it in future years. Our present thought is that we ought to crystallise this out in a definite grant which will only be subject to fluctuation on certain essential basic assumptions, such as variations in the price of petrol, or something of that sort; and, of course, always subject to an overall limit of subsidy which will keep within the statutory limits of £10,000,000 for the three Corporations. We think that that grant is going to emerge round a figure of £7,000,000 for this current year. We know that that is not likely to be appreciably above what are the needs of the situation, because their current expenditure is involving a shortage of something over £2,000,000 a quarter, so that if they are going to reach this figure of £7,000,000 for the year, there have to be quite substantial economies, coupled with the fact that I think the total capacity operation represents an increase from 60,000,000 to 80,000,000 capacity ton miles; so they have to do quite an increased operation and at the same time effect substantial economy on the scale of their current expenditure at the present time. Supposing that comes out at £7,000,000, we then have the picture of B.E.A., which again can now be finally focussed up in the knowledge of the aerodrome programme which was approved last week by the Government. Their figure of £4,000,000, roughly, which was the upper limit we were first thinking of, has been progressively revised and revised, and I think we look to a final figure stabilised round £2½ million to £2½ million. Then there is the question of B.S.A.A. There the unknown quantity is what is going to be their load factor, because they have been operating on a seller's market and getting a very big load factor, and nobody can say how that load factor is going to affect their out-turn, between a deficit of half a million and a possible profit of half a million. The question is, what should be the right assessment. Our present thought is that we should crystallise it out roughly at a quarter of a million for possible subsidy. This, with the £7,000,000 for B.O.A.C. and the £2½ million, which is the figure I personally hope will emerge for B.E.A.C. amounts to £9½ million against our £10,000,000 upper limit, so that we have very little for contingency provisions.

Colonel James Hutchison.

2688. If I remember rightly, the rates of subsidy are, in fact, defined as between three Corporations, or is it a global sum?—It is a global sum for all three together.

2689. If I also remember rightly, the B.O.A.C. came forward with a programme which you were satisfied would lead to an excess over the global sum with the other

Corporations getting a fair whack; they went away and they have come now, I understand, with something like £7 millions of a deficit, but that is subject to certain adjustments in connection with the Australian negotiations which are going on?—Yes. The Australian figures worked out better than we had hoped; there are certain items which both sides agreed could readily be spread over a period of years like the training charges, and they have also budgeted for quite a substantial number of economies.

2690. With so many unknown factors, might you not risk getting into this situation: If you are closely bound by your over-all figure of £10 millions, to budget to be absolutely certain to be under £10 millions, you might cut out things which would otherwise be desirable. What would be your position if, in fact, at the end of the year, you showed a deficit of £10½ millions, let us say?—We should not pay more than the £10 millions. We should not carry it forward as a liability on our side at all; the Corporations have to carry the loss on their own finance. The assumption is that they will have to carry their loss as a charge against working capital, and they themselves will have to average out later, but it will not be a case of our carrying forward a liability into the following year.

2691. Would you say it is a very crippling clause, that under no circumstances can you exceed the £10 millions in the Act?—I think if you do not have an upper limit of that sort which is reasonably related to the situation, you tend to drift into the danger of operating on a deficiency grant basis. There is no real incentive towards economy throughout the widespread organisation that they have got. I feel sure that that would be the view of the Board themselves, that they would like to have a definite target against which they have got to achieve results, and in the last resort, as you have pointed out, it means that you have to get some sort of limit on the scale of operations that are being carried through. But that is a question of judgment, as to how far it is right to go forward with a scale of operations which might involve you in an excess on your maximum subsidy for the year, and yet is the only means whereby you might get below it, because it is quite clear, if you cut back your scale of operations, you come to a stage where you have to carry your organisation. You might keep all your aircraft on the ground; then the cost of the whole of your organisation has to be paid out of the subsidy. As opposed to that, the more operations you can support with your sub-structure the bigger you have got the spread of those overheads, and the better chance you have



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of making a better financial return, so that with an increase of operations you might get a smaller subsidy. On the other hand, you are in the danger, if things go badly for you, of incurring a larger loss. That is a question of judgment.

2692. On the whole, you think this maximum of £10 millions subsidy is a reasonable one and not, in fact, crippling your programme?—It is due to fall to £8 millions next year, but my own personal opinion is that it is reasonably related to what we ought to achieve.

*Chairman.*

2693. What field of economy have the Corporations in mind?—They did launch very early in the year a great intensification of their economy plans for concentration of the organisation overseas, getting the grouping of officers brought into smaller limits, to cut out as much as they can the fringe of labour attached to these stations spread out all along the routes. The drive has been going on now for some months; it is already showing considerable results, and I think we shall see the benefits of it increasingly as the years go on. In addition to that, there are the problems of cost of maintenance and upkeep of these aircraft. It is the pride of the British Corporation that their servicing and maintenance of the aircraft is the greatest asset that a British Transport Line can offer, but subject to fundamental considerations of safety there is a point at which you can overspend, even on that, and they have to exercise very profound judgment on a point of that sort.

*Colonel James Hutchison.*

2694. On the question of servicing, if I remember rightly, one of the considerable costs to B.O.A.C. was the necessity to fly light in order to service "Constellations" from the United States to Montreal. Can you tell us if there is any reason why the servicing of "Constellations" has not taken place at Prestwick where they were, in fact, serviced during the war, so as to avoid that expenditure?—The whole question is how we can spread the available hangars of this country and the available overhaul facilities to service the fleet that is required to be operated. You will recall the Government decision in regard to the use of current British types, and the fact is emphasised that you could only carry smaller loads with these aircraft, which means that you have to keep a larger number of aircraft in service, and that implies that you have a heavier demand on your available hangar facilities. It would have been possible, if we could have cut down the number of aircraft in use, to have brought these aircraft back over here and serviced them in this country; but in parallel with that difficulty there has been, with regard to "Constellations", the

problem of servicing American types of engines and getting the joint benefit of the Lockheed servicing organisation which is based on the other side. We are, however, pressing the Corporation very strongly to bring that base back to this country, and they are very concerned to do so. I do not know whether Mr. Dunnett can give you any later information on that?—(Mr. Dunnett.) No, Sir, except that it has been agreed in the last three weeks to establish a joint working party with the Corporation ourselves, and I think with the Ministry of Supply also, to work out a time-table for bringing the thing back here.

*Chairman.*

2695. Is that back to Heath Row?—I think that is what the B.O.A.C. would like, but the terms of reference are to bring it back to the United Kingdom.

2696. So that it is within the terms of the working party to consider Prestwick?—Yes, certainly. (Sir Henry Self.) I think Mr. Wilson could possibly give you some points on the hangar difficulties there. (Mr. Wilson.) The main difficulty, of course, is that a "Constellation" does want a very tall hangar, and most of the very large hangars of the requisite size that exist in this country are at aerodromes which are not operationally suitable for "Constellations", even when light; and even if they are, they are in a location where there is no supply of labour to back up the maintenance organisation. When you bring those three factors together, the number of possible places where you could put this "Constellation" maintenance is extremely small. In the case of Prestwick, we have not got the actual hangar accommodation, but this working party is going to set to work quite soon and we are waiting, at the moment, for the arrival of a representative of the Corporation, their American representative, who will be over here within the next week or so, in order to get from him exactly what the requirement is in terms of actual quantities of labour, and so on, so that we can look around and see what we can find to fit this particular maintenance in.

*Colonel James Hutchison.*

2697. The difficulty I am in, and you will perhaps correct me if I am wrong, is that my impression is that a very considerable number of "Constellations" did, in fact, fly during the war to Prestwick, and were serviced there, I think. If that could happen then, I cannot see that it should not happen now.—(Sir Henry Self.) "Constellations", if I may recall, Colonel Hutchison, were only produced in very small numbers till late in the war. I doubt if they actually had "Constellations" operating and being serviced at Prestwick as opposed to being serviced in America

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by Lockheed's, because Lockheed's have a very big servicing organisation available there. Of course, I know the C.54, the DC.4 type of aircraft came over in considerable numbers in the Service *en route*, but even they had their main servicing on the other side.

*Chairman.*

2698. But this question is going to be determined by the working party, which will give it consideration?—Yes. We are very keen about it. I believe in being perfectly frank with the Sub-Committee. We made this point with the Corporation over some fifteen months and pressed them strongly to bring the "Constellations" back to this country. They said: "Yes, if you can give us hangars at Heath Row" (as we hoped we might sometime during 1947), "we will come back, concurrently with the availability of those hangars." They are not yet available.

*Colonel James Hutchison.*

2699. You say Heath Row, but my particular question was with regard to Prestwick because my information was that it had, in fact, been done there. Therefore, may we take it that Prestwick will enter into your purview? If they have said: "We will come, if you can give us the hangar accommodation at Heath Row" might your reply not be: "We cannot give it you at Heath Row, but we can give it you at Prestwick, which would cut out this dead flying"?—If we could accommodate these aircraft at Prestwick, and the hangars were big enough to take the "Constellations," we should be only too glad to press upon the Corporation to do so, and they would do so. I think Mr. Wilson made the point that for the "Constellation" type of aircraft the hangars at Prestwick are not big enough to accommodate them.

*Chairman.*

2699A. Before we leave the general question of the programme of the Corporations, am I right in this conclusion: In your opinion, whatever difficulties may have arisen from the protracted nature of the present negotiations, that is offset by the value of devising a grant formula which will considerably reduce the negotiations in future years?—Yes.

2700. Are you satisfied that you are reaching such a formula as will be acceptable to both parties?—I think the B.O.A.C. will feel that we are pressing a figure which they would like to be about £7½ million; we feel it should be £7 million, but, subject to that qualification, I think they will be prepared to accept it and work wholeheartedly to it.

2701. They will accept the formula, at any rate, in so far as it will determine variations?—Yes.

2702. We have mentioned Prestwick. We had the opportunity of visiting Prestwick. I wonder whether you could tell us what the present position is regarding the negotiations affecting the very exceptional situation at Prestwick; whether any progress has been made in determining the management fee for Scottish Aviation Limited; whether any progress has been made towards the purchase of the airfield and questions of compensation, or the charges to be made for the services provided by Scottish Aviation?—(Mr. Wilson.) Nothing very much further has happened since a fortnight or so ago when I spoke to this same point, except that now the aerodrome programme is approved, we can ask the Air Ministry Lands Division as our agents to open negotiations in regard to the acquisition. That statement needs to be qualified a little in that we have to determine exactly what it is we are going to acquire in regard to the possible future lay-out of the aerodrome, but there is a considerable amount of property which is cleared in the sense that we know we want it and now that the Government has approved and announced the aerodromes programme, the technical bar to opening negotiations has gone. It is perhaps fair to say that Scottish Aviation themselves have not been pressing this point; they have been quite prepared to wait, taking payments on account as regards compensation until such time as negotiations are opened up. The management fee is still awaiting settlement, although there again certain payments have been made by the Department on the basis of actual expenditure for staff, other stores and so on.

*Colonel James Hutchison.*

2703. In the meantime, there is a very urgent question, is there not? That is, the upkeep of the buildings which, in fact, are going to be taken over. Was it not early in 1947 that the Ministry was empowered, and entered into the right, to take over the buildings, such buildings as, in fact, would then, or might then have been defined? I understand that no definition as to which buildings were in fact going to be taken over and which left has yet been given and that the buildings are, in fact, being upkept by nobody?—The buildings to which you refer are probably the factory buildings, as we call them, which were erected for the most part by the Ministry of Supply during the war, and are therefore in the nature of work on requisitioned land which can be acquired under the Requisitioned Land and War Works Act. Those buildings are occupied by Scottish Aviation under a licence agreement. The legal situation is somewhat complex, and we have been advised that the liability for the maintenance of those buildings rests under the

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licence agreement with Scottish Aviation. The Company is inclined to challenge that view; but we have recently made an offer to Scottish Aviation Limited of some sort of longish term lease of those buildings, and they are prepared in their latest letter to us to undertake the repair of these buildings, which we think is their legal liability, but without prejudice to their making a claim against us, so that at least the knot is cut which seemed to be preventing certain maintenance work being done on the roofs of these particular factory buildings.

2704. My anxiety merely is that the position should be so cleared up that the buildings do not fall to pieces before or during the winter?—(Sir Henry Self.) If I may just supplement what Mr. Wilson has said, he refers to negotiations we have had. Both he and I have seen members of the Board; in fact, he does not know, but yesterday I saw another member of the Board, and was at pains to assure him that we were hoping to clear in the immediate future an arrangement for a long-term lease for them for the buildings they need, subject to such buildings as may have to be demolished to make way for the third runway when it is laid down; but with that long-term lease, and he seemed to think it was quite a satisfactory basis, they would be able to go forward with the necessary repairs which are, I believe, less in cost than we had previously thought might be the case; and I feel convinced myself from my talk yesterday that the situation is coming out to the satisfaction of both sides.

2705. We heard a good deal about this third runway when we were at Prestwick and the alternatives. Can you tell us whether as a matter of policy it is decided to have a third runway or is it still in an exploratory stage?—(Mr. Wilson.) It is decided, a third runway is a highly desirable thing at some stage in the development of Prestwick, but whether or not that view is turned into a definite approval of a particular project must have some regard to the actual cost of that project. We know that a third runway at Prestwick will be extremely costly because wherever we put it we shall have to divert a road, possibly a railway, certainly a road, and there will be some small demolition of property and there will be difficulties about the nature of the soil, so it is going to be extremely costly and it might prove to be prohibitive in cost. I do not say it will, but one must reserve the position; one must think again if the cost comes out at some prohibitive figure. Subject to the cost being of a reasonable order for the benefit that will be given by a third runway, and that benefit is in terms of increased usability with variations of wind and increased capacity, then there is no reason why the third runway should not

go ahead, but the need for a third runway has got to be weighed; the benefit that it will confer upon the usability of the aerodrome has to be weighed against the financial cost, and that weighing has not yet been done because the cost is not yet settled.

Chairman.

2706. Regarding the future of the airport, is it the intention of the Ministry ultimately to provide the services directly?—Do you mean the management services, Sir?

2707. Yes?—Oh, yes. The intention is to bring the management of the airport on all fours with the management system at other airports. These contracts with Scottish Aviation Limited are merely a transitory phase; they are a transition from the old arrangements during the war to what will be the standard arrangements.

2708. If we may leave that and turn to the purchase of aircraft, in the memorandum issued by the Financial Secretary to the Treasury to the Civil Estimates, paragraph 237, he deals with civil aircraft and associated equipment. Referring to sub-head F in the Estimate, and dealing with the decrease in this year's Estimate he says: "This decrease is mainly due to the decision that settlement in respect of future orders for aircraft, aircraft spares, etc., for the three Corporations will be made by the Corporations direct, and not by the Ministry." I wonder whether, Sir Henry, you could explain to the Sub-Committee the precise effect of that statement?—(Sir Henry Self.) Until the Corporations came into being, the programming of aircraft had gone forward on the basis of an order placed by the Ministry of Civil Aviation on the Ministry of Supply who then placed the order, and our estimates have shown the cost of the commitment that we had undertaken; then our Appropriations-in-Aid show a corresponding relief from the Corporations, and we think that, ultimately, it will balance out. That was an extra phase to enable these programmes to proceed; but we felt last year that with the Corporations standing on their own feet they should themselves finance the orders even though they were placed through the agency of the Ministry of Supply, so that when we can dispose of the outstanding contracts and the receipts in respect of them, we should hope that those items would disappear from our estimates, and then we have instead simply the items in the Ministry of Supply for Appropriations-in-Aid not from us but from the Corporations.

2709. Is this opinion expressed by the Financial Secretary to the Treasury dealing rather with the future than with the present?—It was a decision given when the programme was approved last August in respect of the requirements of the Corporations that, in future, they should carry the

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liability direct. At the moment, of course, we have the embarrassing situation that certain aircraft were ordered in 1945 which the present Corporations do not always want to take, and I am afraid the Accounting Officer of the Ministry will have to face the Public Accounts Committee eventually if those aircraft are not disposed of as it was proposed that they should be. The cost will then appear as uncovered in our accounts.

2710. In other words, the Ministry of Supply may deliver to you aircraft which you are unable to sell to the Corporation?—Exactly.

2711. That has not arisen, has it?—No, but I am afraid it will. I can see clear indications already.

2712. Apart from this transitory phase, if the Corporations wish to place any orders at the moment they will place them direct with the Ministry of Supply?—Yes.

2713. Apart from the sale, we understand that you also hire aircraft to the Corporation?—That was a post-war decision, that as these wartime conversions and wartime types could clearly have no reasonable life in service it would be unfair to load the Corporations with the full capital cost of those aircraft, and the Treasury approved a proposal, which we made, that they should be allowed to hire these aircraft on an annual basis, related to a five-years' life for the type; but they have no obligation to continue for more than the year for which they hire them.

2714. Can you indicate to the Committee which types are covered by hire arrangements?—Could Mr. Paris give you the details?

2715. Please?—(Mr. Paris.) The "Lancastrians" and the early range of "Yorks" on hire to B.S.A.A.; the early range of "Vikings," 28 "Vikings"; and more recently, as a special measure, the "Solent" type flying boat are the main categories.

2716. Which Corporations, in fact, hire aircraft?—All three. (Sir Henry Self.) Mr. Paris mentioned 28 "Vikings." I would like it to be clear that those were the first 28 off which were not of the same type as the later version; it is a special preparatory model which we are trying to dispose of quickly.

2717. Without going into detail, can you tell us whether any particular Corporation is hiring more aircraft than the other Corporations?—I should anticipate that by saying that I think it is possible that B.S.A.A. would hope to have their main fleet of "Lancastrians" and "Yorks" available on hiring because they are the only aircraft they can get until they can get their "Tudors" into service, so to

that extent they perhaps have a larger proportion of hiring than others in relation to their total fleet.

2718. That merely arises from the fact that the Corporation is using more of the types which are being hired than the other Corporations?—They had no initial fleet of their own at the start.

Mr. John R. Thomas.

2719. May I ask whether those aircraft are held on the charge of the Ministry of Civil Aviation, and whether they come into the Estimates at all in any shape or form as assets?—They are taken on charge by the Ministry of Civil Aviation and paid for by the Ministry of Supply, and then the Ministry of Civil Aviation execute a hire agreement with the Corporation to cover the repayments, which will accrue in appropriations-in-aid.

2720. So there will be a possible deficit on that—the difference between the cost of what income is received from the hire, plus the scrap value?—If we do not get a 5-year life out of them there will certainly be a deficiency, dependent upon what disposal value we can make of them when they become surplus.

Colonel James Hutchison.

2721. What is the period of hire?—It is annual hire.

2722. So that the Corporations may throw them back at you any day?—Exactly.

2723. Then the Ministry of Civil Aviation would have to bear a loss as a result of that?—Yes.

Chairman.

2724. How do you arrive at the figure of 5-years life?—It used, of course, to be the old idea that a 7-years' life was appropriate. There were people who thought you could spread it over 10 years' life, but with the development of post-war types so clearly in sight it seemed unreasonable to suppose that a converted type could ever have more than five years effective life in service. For the reason that I have given, even that is sufficiently speculative as to warrant you giving a hiring agreement to the Corporations.

2725. With no fear that even five years may be an over-optimistic estimate?—I put it another way. I should hope myself that when we get the real post-war types into service there will be no question of writing them off over a five-years period; they certainly ought to remain in service longer than that, at least 7 years, possibly up to 10 years. After all, the old "Empire" flying boats have only just gone out of service, although they came in in 1937; they have had a 10-year life.

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Colonel *James Hutchison*.

2726. Is it not more a question of flying hours than *anno domini*? You might easily fly an aeroplane down into the ground, so to speak, in two years, if you work it really hard?—If you flog it, yes.

2727. Which, after all, is really what an efficient Corporation try to do because the more you keep your propellers turning the better your results, on the whole?—The Corporation would probably agree that the normal situation should be that given sufficient maintenance the number of hours utilisation per annum within limits should not mean an undue shortening of the life, providing that you have replacements coming through. (Air Commodore *Chamberlain*.) I would say that of the majority of types now used by the Corporation, they are well aware how many flying hours they could get. The makers' experience, plus the experience the Corporations have had, indicates how many years useful life known types will give. In other words, useful life is bound up in the amount of flying the airframe, rather than the engines, will do.

*Chairman*.

2728. Is it a fair summary, Sir *Henry* to say that you believe that in the hire arrangements, or the general arrangements made regarding these aircraft, the Ministry have a good commercial proposition before them?—(Sir *Henry Self*.) No; I do not think we have a good commercial proposition; quite the reverse. We have had, through war circumstances, to make available to the Corporation aircraft which are not able to hold their own for any length of time.

2729. I did not mean from the point of view of operation; I meant from the point of view of the Ministry?—From our point of view, I am afraid it is not a good commercial proposition; it is the best proposition we can make.

2730. On the transactions affecting this particular aircraft, do you anticipate that the Ministry is going to bear a loss?—I do.

2731. How will that loss arise?—That loss will arise because we shall pay the capital cost of the aircraft to the Ministry of Supply, and we may only get back two-fifths or three-fifths of the cost because we are allowing the Corporations to hire them year by year on a 5-years expectation of life, and they may only keep them in service for one, two or three years.

2732. You do not think you will be able to dispose of them at a commercial price after their usefulness to the Corporations has passed?—Disposal in that way is highly speculative. There may be some freight operators who would like to

take them, but as passenger aircraft I should doubt whether, having been given up by the Corporations, private charter firms would take them over.

2733. Might it not be argued in that case that the Corporations are, in fact, getting a hidden subsidy?—They are not getting a hidden subsidy because they are saying to us, as the owners of these aircraft: "We would like to use your aircraft, but we cannot afford to take them for 5 years. If you want to realise something on your aircraft you have got to give us a hire agreement and take the risk of how long they remain in service." Put in another way, it is a commendably astute commercial negotiation.

2734. On the part of the Corporations?—Yes.

Colonel *James Hutchison*.

2735. Sir *Henry*, you were in a shockingly bad negotiating position as a Ministry because, virtually, the only market you had was the Corporations. I suppose you could have sold them at a knock-down price elsewhere? Would there have been any alternative, really, as opposed to hiring these to the Corporations?—There would, of course, have always been the possibility of hiring them to charter firms, but I do not suppose, for one moment, that the charter firms would have been any more willing to take them, except on a hire agreement than the Corporations.

2736. It is really a relic of the war; you are left with that baby to hold?—Exactly.

*Chairman*.

2737. What determined the price at which you obtained these aircraft from the Ministry of Supply?—Actual cost.

2738. It is on a cost basis?—Yes.

Mr. *John R. Thomas*.

2739. I take it that those costs have already gone in the past accounts of either the Ministry of Supply or the Ministry of Civil Aviation?—Yes.

2740. Probably this is outside your sphere, and I am subject to correction here: Would it be clearly visible to, let us say, the Public Accounts Committee when they come to investigate this matter, should they investigate it, as to the number of aircraft that have been purchased, the hire received from them and the scrap value of the sales? Will there be any information supplied by the Ministry? Will it occur in your Accounts, for instance, or will it be hidden in past estimates?—No, Sir. I am very glad you have made the point. I think we shall make a special point of drawing attention to the situation by a footnote, if necessary, to bring it out clearly. From my last examination by the Public Accounts Committee, I feel sure that they are very much alive to this question as one for future examination.

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2741. One other point; and that is, what is your opinion, Sir Henry, of the effect of the hire agreement on the Corporations? Will it adversely affect them financially by having to hire from the Ministry compared to the cost of purchasing their own aircraft and their normal depreciation on the capital cost?—If they could get efficient post-war types for purchase outright at full cost, it would be a more economic proposition to them than hiring these obsolescent types, because the hire charge represents a higher cost to them operationally for the reason that they are not getting the same yield out of the aircraft as they would with the more efficient type.

Colonel James Hutchison.

2742. Could we have a word about the inverse position, as to how the chartering by you or by the Corporations (it may be that you cannot answer it) is carried through with charter companies? We flew up to Prestwick, for example, in a Scottish Aviation converted Dakota which the B.E.A.C. had chartered from them. What is the basis of hire by the Corporations?—The Corporations charter, to supplement their own resources, on a strict commercial basis. It would be a question of management for them, and we should not presume to enquire what the terms were.

Chairman.

2743. I wonder if you could indicate from your general knowledge whether these charter arrangements made by the Corporations are extensive or not?—We have taken the view in the Ministry that it would be very wrong to deny the British public the benefit of the services if there is somebody available to operate them, and the Corporations themselves cannot give the facilities at this time. We have, therefore, encouraged the Corporations and the charter firms to come to mutual bargains whereby they collaborate and give these facilities in this way. The result is that there is quite a considerable number of chartering services that have been arranged between Corporations and charter firms, but I think that is going to be a steadily decreasing field over the next eighteen months to two years.

2744. Do the hiring and selling activities of the Ministry extend to companies apart from the Corporations?—No, Sir. We have facilitated the sale of surplus aircraft to charter firms other than the Corporations at standard disposal prices.

Mr. John R. Thomas.

2745. I would like to ask Sir Henry what is the opinion of the Ministry in regard to the competition of the charter companies as affecting the Corporations? I know that at the moment they are on a seller's market, of course, but over the long term?—Over the long term, of course, in the

field of scheduled service there can be no competition because immediately the Corporations are prepared to operate themselves they cease to put the umbrella over the operation and it must therefore cease. The competition must come primarily in the field of freight. There I think it is right and proper that straight freight charter would grant a case of free competition, and that, if the Corporations enter that field, they should not expect to get the bulk of the field but merely such work as fits in best with their overall scope of activities and gives them a balancing quota to spread their overheads better. The point I am trying to make is that the Corporations are established primarily for operating scheduled services which cover passengers, mails and freight on the scheduled routes, but when you enter into the field of charter operation, the Corporations would expect to stand on their own feet in fair and free competition with the private charterers.

2746. I should have mentioned that in a professional capacity, at any rate, I have some interest in this subject and I know something of what is happening in the case of the charter companies. It does seem to me that at the moment, for the reason that the Corporations cannot supply the service to the public, and I think that is quite evident, that the service is not there for the public, the charter companies, of course, are enjoying a very healthy and prosperous time. I would submit that they are in competition with the airlines, because if they go to a travel agent, and it is in that direction that I am interested, the travel agent will have half-a-dozen people; he can charter a plane and get them away. Normally, that agent is an agent of the Corporations; he cannot provide the accommodation; he cannot get reservations with the Corporations. The agents, therefore, do the next best thing, and they organise a party of 2, 3 or 10, as the case may be. That, definitely, must be regarded as competition, and in the long term will it be possible for that to continue, because as long as the charter company are not operating a service in competition, I assume that they will be able still to carry on by getting parties together, and so forth?—Well, Sir, I must, with respect, give the answer which we normally give to enquiries of this sort, which is that only the Courts can determine whether the law is being broken; but I am bound to draw the attention of people who make these plans to the terms of Section 23 of the Act which expressly provides that a scheduled journey means one of a series of journeys which are undertaken between the same two places and which together amount to a systematic service operated in such a manner that the benefits thereof are available to members of the public from time to

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time seeking to take advantage of it. There are three strands there and, with respect, I rather thought the description you have just painted was in danger of embodying all those three strands.

2747. It does?—In which case it might have been thought that it was in danger of being in breach of the law.

2748. I think it is?—If that were so, obviously, sooner or later, the matter will have to be dealt with. It is no real threat to the Corporations from that source.

*Chairman.*] I do not think we should embark upon questions of interpretation. It will probably be very helpful when our Minutes are eventually published that attention should be called to this discussion.

*Mr. John R. Thomas.*] It is relevant to this Sub-Committee, because the Corporations are Government controlled organisations and they do grant agencies to travel agents; therefore the travel agents are acting as the agents of the Corporations, and, in addition, and with the knowledge of the Corporations, they also may act as agents for the charter companies. It may give rise to very serious complications in the future, I think.

*Chairman.*

2749. Why are the "Solent" flying boats subject to this hire arrangement? Could they not be sold?—(*Mr. Paris.*) The answer to that is related to the difficulties in developing a service on the route to South Africa and the route to Australia. It is due to the original anticipations that a land route and land planes would be available earlier than has in fact proved to be the case. The Corporation, B.O.A.C., was expected to play its part as the instrument of British Government policy in seeing that these routes were operated in conjunction with the South African and Australian operators, and approved by their Governments, and the only means by which the Corporation could play its part in this initial stage, during which there was failure to provide them with the ground organisation required for a land plane service, was by obtaining their agreement to operate a sea-plane service. It was felt that in these circumstances the seaplane service, was quite clearly going to be uneconomic, and there was a special case related to the special difficulties of these routes for hiring these flying boats to the Corporations.

2750. But is the hiring arrangement made because it is a device to afford the Corporation a commercially advantageous position regarding the money they pay for the use of the aircraft, or is it because the use of the "Solent" flying boat will not extend over five years?—(*Sir Henry Self.*) I think the answer to that is that it is due to the uncertain period during which the flying boat operation will be continued. The

"Tudors" come in on that route, followed by the "Hermes," and we expect to put a de Havilland "D.H.106," into service as soon as we can. There are a number of unknown factors there, especially on the ground organisation, east of Calcutta and south of Nairobi, which make it difficult to schedule with precision the dates when those new types will come in. My own personal judgment is that the "Solent" flying boats will continue in service the full five years, in which case we are probably not losing, but if in fact the other types can be brought into service over the whole route, and to the extent necessary for the growing capacity that will need to be catered for, then it would be very right that the "Solent" flying boat should give way to newer types. In that event the Corporations would have been unduly handicapped by having to finance interim types for a very short period of time when, if they had been free agents, of course, they would probably not have embarked upon that particular operation for reasons we have already described.

2751. Is it fair to compare the position of the Ministry of Civil Aviation in this regard to the position of the Ministry of Supply, regarding aircraft construction, that there are risks here which it is thought that the State should bear rather than the operating companies?—Yes.

2752. And that those risks are borne generally in the advantage of the development of civil aviation?—Quite.

2753. A final question: Is there any yardstick to determine the efficiency of our internal services? Can we take into account the services provided by the independent companies which operated in this country before the war? Is there any value in such a comparison?—There would be, if the conditions of operation remained unchanged, but in the nature of the case we should expect to improve substantially upon prewar practice and rates as new types come in. Of course, there are very real comparative yardsticks to be obtained from other European countries' operations in their internal services. We have an abundance of information of United States operations. Subject to Air Commodore Chamberlain being able to provide for regularity of operations in all conditions, eventually, one would have supposed that in time the operations in this country would approximate to shuttle service conditions and yield low rates. There would be no lack of yardsticks. I do not think the pre-war practice would be a good yardstick because it would be too high, in my judgment.

2754. When you say too high, what do you mean exactly?—I should expect to get better results than pre-war practice on the internal routes.

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2755. It struck me, in looking at the memorandum, that in the negotiations which have been conducted, or are proceeding for taking over the companies previously running internal services, a good deal of information must, therefore, have become available, and I only asked the question for that reason?—In the negotiations for taking over those companies, particularly the railway air services, the expectation was that they would have a considerable improvement in their services, and financial results, over the years to come as compared with present practice, so perhaps I may readily accept your thesis, if you would relate it to their forward expectations as well as to their achieved results.

2756. Yes—Before you terminate the proceedings, Sir, may I crave your indulgence.

2757. If you please.—My Minister wanted me to make one position clear to the Sub-Committee. You will recall that at a very early stage I am afraid we had rather an unprepared discussion on the question of the Order defining the powers of the Corporations under Section 2, subsection (3) and the further subsection (5), which dealt with the possibility of limiting the powers of the Corporations. I have reported the result of that discussion to the Minister, and he wishes me to make his position clear in the matter, if I may.

2758. We shall be very much obliged to you if you do. I meant to put this point to you. I am very grateful to you for raising it.—He feels very much concerned that the Sub-Committee should appreciate, as he stated from the beginning, for example, in the House of Lords on November 26th, that he feels he does not want to operate on the basis of giving written directions or orders to the Corporations. He believes that the correct relationship is one of mutual confidence and co-operation with the members and the Chairmen of the Boards. With that basis, there is a much clearer approach to effective results, and he feels that the experience of the last nine months warrants him in continuing that attitude. For that reason, he would like me to explain that he does not propose to make an Order defining, at the present time, under Section 2, subsection (3), the powers of the Corporations, because that subsection expressly provides that it would be for the information of the public if he so deemed it necessary; but it is equally provided that any such Order would be without prejudice to the generality of powers possessed by the Corporations under the two earlier subsections; so that the effect of the Order would be specific merely in defining for public information if the Minister deemed that course necessary. As I have

explained, he feels that it is not necessary and that the Corporations fully understand their position in this matter; they have the fullest scope given to them by Section 2, subsections (1) and (2). Therefore, he is detracting nothing from the powers of the Corporations; and equally he wishes to point out that if he did issue such a defining Order it would follow necessarily that he should issue limitation orders under subsection (5) in regard to certain matters which he should limit in the public interest. For example, on this question of the ordering of aircraft, he would immediately have to define, under subsection (5), the powers of the Corporations by a limiting Order. In the case of the operation of aerodromes, he would have to start defining the limitations of the activities of the Corporations. In the running of hotels he would have to say whether they could run hotels and, if so, where, and clearly would have to limit their operations to overseas regions only. I could recite to you a catalogue of limitation difficulties which would immediately arise if you defined the powers of the Corporations, but immediately you draw up a series of limitation orders you expose yourself to the legal principle that what you have not stated is, *ipso facto*, free. That is the first difficulty.

The second difficulty is that if you do start making limitations, you have to make them in terms which may be unduly restrictive in character and extend beyond what is the real intention; so, taking the whole situation in broad outline, it is his considered decision that he does not propose, at the present time, to make an Order for the reasons I have stated under subsection (3), and he felt that I ought to explain that to the Sub-Committee.

I also have to ask your indulgence in another matter. I misled you in an earlier meeting. I recall it was without notice, but I said that the draft of the Order was with the Treasury Solicitor; it was not; I wrongly suggested that he had it. It was in my own Department, and we were the responsible people for the delay.

2759. I am very much obliged to you for that explanation and confession, Sir Henry. May I ask whether the Minister's decision (I gather this is so, but I think I ought to have it on record) accords with the wishes of the Corporations?—He has no reason to believe that they would dissent from that judgment. I think they expected that there would be a defining Order, but I know that the point has been explained to one at least of them, and I think the Minister will take the advantage of explaining to all of them, the difficulty of having to marry it with a limitation Order and his own declared desire in the House of Lords to avoid formal Orders and formal directions as much as possible, and rely upon mutual collaboration and



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joint working. The Corporations are clearly in full knowledge of what they can do, and what it is necessary for them to do; they readily come and consult with us, and if there is any question of policy the Minister has his regular meetings and explains his policy to them. There is no ground to fear, from the last 12 months' experience, that there is any misunderstanding or difficulty between the Minister and the Corporations on this question.

2760. Thank you very much indeed. I do not think I should allow this present sitting of the Sub-Committee to conclude

without thanking you personally, Sir Henry, together with your officials, for the very helpful manner in which you have not only given evidence before the Sub-Committee but provided, and readily provided, all the information for which we have called. I assure you that we fully appreciate that the Ministry is in a very formative state. We hope that our enquiries have not been too onerous for you, and that as a result of our enquiries we will jointly be able to forward the work of the Ministry. I am extremely obliged to you.—Thank you, Sir; I appreciate that very much.

*The Witnesses withdrew.*

[Adjourned till Tuesday, the 22nd July, at 11 a.m.]

TUESDAY, 22ND JULY, 1947.

Members Present:

MR. FREDERICK WILLEY (*Chairman*).

Mr. Barton.  
Viscountess Davidson.  
Colonel James Hutchison.  
Mr. Kirby.

Captain Sir Peter Macdonald.  
Major Niall Macpherson.  
Mr. John R. Thomas.

Mr. W. R. VERDON SMITH, President of the Society of British Aircraft Constructors, Ltd., and Director of the Bristol Aeroplane Company; Major Sir HEW KILNER, M.C., Deputy-Chairman and Managing Director (Aircraft), Vickers-Armstrongs, Ltd.; and Mr. E. C. BOWYER, Director of the Society of British Aircraft Constructors, Ltd., called in and examined.

*Chairman.*

2761. Mr. Verdon Smith, we welcome you again to our Sub-Committee. We understand you are the President of the Society of British Aircraft Constructors?—(Mr. Verdon Smith.) Yes, that is so.

2762. And, of course, you are also Director of the Bristol Aeroplane Company?—Yes.

2763. Major Sir Hew Kilner is Deputy Chairman and Managing Director of Vickers-Armstrongs?—(Sir Hew Kilner.) I am not Deputy Chairman of the Society of British Aircraft Constructors.

2764. No, you are Deputy Chairman and Managing Director of Vickers-Armstrongs?—Yes. (Mr. Verdon Smith.) And a past President of the Society.

2765. Yes; and Mr. Bowyer is Director of the Society?—He is the Director of the Society. He is the chief executive of the Society and his title is The Director.

2766. I follow. Thank you. The Sub-Committee has been inquiring into the Estimates of the Ministry of Civil Aviation, and, of course, aircraft are not an insubstantial feature of civil aviation. We understand that contracts for the purchase of aircraft are put through the industry by the

Director of Contracts, Ministry of Supply?—Yes.

2767. Does that apply to all contracts for the purchase of civil aircraft in this country?—You are speaking presumably of the State-owned Corporations?

2768. Yes?—So far as I know, all purchases of aircraft, that is, of British aircraft, by the State Corporations are made through the medium of the Ministry of Supply.

2769. Do you have any contact at all with the Corporation direct?—Yes, a good deal of contact direct, though I thought you were speaking particularly of a contractual relationship.

2770. Yes?—For the supply of aircraft themselves the contractual relationship is through the Ministry of Supply at present, but a considerable amount of direct contractual work takes place between the Corporations and the constructors for the supply of spare parts and the provision of repair facilities, particularly for engines, for example.

2771. From your point of view do you find any inconvenience arising from the fact that the contracts are placed solely by the Director of Contracts?—Well, I think it is generally considered that the

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procedure is rather complicated, particularly when dealing with articles which are already in production and are required in quantity by the Corporations. But there are, on the other hand, a great many reasons why certainly research and development work, as well as the construction of prototypes, are best handled by the Ministry of Supply and co-ordinated with the provision of other aircraft requirements for the Services.

Colonel *James Hutchison*.

2772. Would it be a fair question to ask as to whether the situation would be satisfied in your view if all the research on prototype production or if all prototype production was handled by the Ministry of Supply, and thereafter the users came to you people direct; in other words, once the aircraft was designed and made available, in your view should orders still pass through the Ministry of Supply?—I should like to be very careful in giving my reply here, Mr. Chairman, because I do not quite know whether you are asking me to speak in a purely personal quality or to express a view on behalf of the members of the Society generally.

Colonel *James Hutchison*.] Would it help if it was not put on the record?

*Chairman*.

2773. Perhaps it would be better if you spoke on behalf of the Society, and then if you wish to add anything which you do not wish to go on the record to indicate that, and it will not appear on the record.—Thank you. So far as the Society is concerned, I think I should explain that we have given this matter a great deal of thought and we have had many discussions on the subject. It is obviously a complicated and fundamental question, and the answer to it tends to vary according to the experience of the particular firm concerned. I would say that it is not so much that there is a division of opinion upon this as that there are almost infinitely varied opinions, ranging from those at one end of the scale who feel that the aircraft constructor is concerned to supply his products to the customer who operates them, and the closer they are in contractual relationship the better (that is the common experience of the man whose sale of aircraft is probably small, where the research and development expenditure and the outlay on jigs and tools is much more consistent with the ordinary scale of commercial activity, as, for example, in the motor car industry), and at the other end of the scale those who have been asked to undertake projects on so great a scale and such a high cost and involving so much need to make use of Government research establishments and facilities, such as the Royal Aircraft Establishment at Farnborough, that they could not reasonably undertake the proposition

themselves as an expenditure which is simply incidental to their ordinary business, or probably which the Airlines would be prepared to regard as simply incidental to the cost of the ticket. So that between those two extremes there are various points of view; and here I can perhaps try to express a personal point of view, namely, that I think that the answer to the question put to me is that research and development can up to the prototype stage and the stage at which the aircraft is cleared for operational use best be handled by the Ministry of Supply, but that thereafter there is a great deal to be said for the Corporations placing their orders for production quantities. That is not a completely satisfactory solution, because it may very well involve serious delays, if no arrangements exist under which steps preliminary to production can be taken before the aircraft is finally and completely certified or certificated as being suitable to conform to all civil operational requirements. I think there should be some arrangement, probably through the medium of the Ministry of Supply, to enable the constructor of a type which looks as though it is going to be wanted very definitely to make a start with jigs and tools and perhaps the ordering of materials, as a step towards their production if time is of the essence of the proposition, as it nearly always is in the production of aircraft. I am afraid that is rather a long answer to the question, but it is a very fundamental matter, and it might well be, if I might say so, that Sir Hew Kilner might like to add to what I have said.

2774. Does Sir Hew want to take advantage of that?—(Sir *Hew Kilner*): I would say, Sir, that I very much doubt whether that is a practical possibility, if you are going to have the Ministry of Supply ordering prototypes in development work under contract and the actual aircraft ordering by the Corporations, because it seems to follow that an order for production of aircraft could not be placed until the whole of the development work was completed. You would not be in a position to quote them a price. That would lead to such delay in provision of aircraft as would make it, I think, quite unacceptable.

Colonel *James Hutchison*.

2775. Put it in the form of repeat orders. You are thinking of the original prototype, and the original set of orders that would flow from it?—Yes.

2776. Repeat orders will have to go through the Ministry of Supply?—I would see no objection to a repeat order being placed by the Corporations.

Viscountess *Davidson*.

2777. Direct?—Yes.

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[Continued.]

Captain Sir Peter Macdonald.

2778. In either case materials would have to go through the Ministry of Supply, because they are responsible for materials?—No, we buy our own materials.

2779. They control all metals?—Under the general supply of material controls, but not individual contracts to that extent.

Colonel James Hutchison.

2780. Is there any control by the Ministry of Supply over orders placed with constructors by concerns other than the Corporations, such as (a) charter companies if and when they want these machines, and (b) foreign buyers?—Not at all; nor would we admit it.

*Chairman.*] We assume that those sales carry a loading factor for development in the same way as Ministry of Supply orders.

Mr. John R. Thomas.

2781. Might I ask what possible advantage does Mr. Verdon Smith think could accrue to the operating companies by placing repeat orders direct? Is not it a fact that the Ministry of Supply could order in much greater quantities and allocate them between the operational companies?—*(Mr. Verdon Smith)*: I think we have got to have considerable regard to the policy of development in the Corporations in the sense of their being entities and responsible for themselves and their own management of a policy on the part of the Corporations, and within the broad limits that I have tried to outline I think it is in the interests of the country and of the constructors, and certainly operators themselves, that they should be given as free a hand as possible to exercise their own initiative and their own responsibility. Therefore I would think that this would be just one of those steps which it is highly desirable they should be allowed or encouraged to take themselves.

*Mr. John R. Thomas.*] I think that that is just a matter of opinion. The question I put has not been answered: What would be the advantages? But probably it would be better to leave it at that.

Major Niall Macpherson.

2782. To what extent can orders be grouped, and to what extent are types of aircraft appropriate and limited to particular Corporations?—To a very considerable extent the types of aircraft are going to be peculiar to the routes and the types of routes on which they are operating, in the same way that steamships are generally peculiar to the type of route, the Atlantic, Indian Ocean, or whatever it may be, upon which they are operating. For example, British European Airways' requirements for short haul operation in Europe are completely different from the requirements of the other two main lines, and within British

Overseas Airways, the comparatively short Empire routes across the Mediterranean and out to the Far East or down to South Africa are themselves fundamentally different from the North Atlantic service, or indeed from the South Atlantic service operated by British South American Airways. Unless aircraft are designed and constructed to meet those specific requirements, we certainly shall not get the best out of the aircraft themselves.

*Chairman.*

2783. Do you think there is any substance in the argument that owing to competing demands the Ministry of Supply should place contracts in order to ensure that the resources are properly allocated?—All contracts?

2784. Yes?—No, I do not think that is necessary. Already quite a substantial proportion of the production of some firms is dealt with on an ordinary supply to consumer basis, and the Ministry of Supply are kept informed of progress, as the sponsoring Ministry, in the same way as the Ministry of Supply have an interest in the automobile industry and in the production of automobiles.

2785. Have there been discussions between the Society and the Ministry upon this point?—Yes.

2786. Have those discussions been satisfactory from your point of view?—I would say that the answer to that also is yes. There, again, I do not want to qualify what I am saying by what I said at the beginning, that there is a very wide range of opinion as to the best practice.

Captain Sir Peter Macdonald.

2787. As far as the prototype stage is concerned, it should be under the Ministry of Supply. Manufacturers are not prepared to undertake the expense, for instance, of producing a prototype at the request of one of the Corporations; they have not got the equipment, the tunnels and so forth, for testing them?—I do not think that the reason why we feel that the Ministry of Supply should have the responsibility for prototypes is because there is a lack of equipment available to the firms. I think our feeling is more that research and development of new design and new types of aircraft, whether civil or military, involves a financial liability in itself which, as I said earlier, cannot simply be accepted as an incidental overhead because the figures involved are so great. The British Government, I think, has been extremely wise and far-seeing in encouraging and sponsoring research and development for civil aircraft transport on lines similar to those adopted for military aircraft, and we see the great difficulties in a departure from that practice in the United States of America, where, after Government assistance during the war years, which assisted American aircraft manu-

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facturers to develop types of aircraft which are now available, all of which have been developed by Government assistance, that having now ceased, the airlines and the constructors are finding themselves in the very greatest difficulties about knowing how to proceed because of the cancellation of various new types, which has resulted because it is uneconomic for the operators or the constructors to carry on without Government support in this matter.

*Chairman.*

2788. Is the major factor, then, one of finance?—I should say that the major factor is one of finance, very closely associated with the technical aspect, where the fundamental research and development for civil and military types can best be integrated and a common policy pursued.

2789. Do you think there is any danger that such a system might tend to promote failures?—No.

2790. You can see the argument, that as the burden is not being borne directly by the Ministry there may be a tendency to promote extravagant development?—That is a matter entirely within the control of the Government itself, and I should say that any departure from that practice would be likely to result in failures more familiar to Carey Street.

2791. From the point of view of the industry at any rate you are satisfied that the present system is operating to the benefit of the industry?—Yes.

2792. Without involving the State in unnecessary risk?—Yes.

*Major Niall Macpherson.*

2793. You said, Mr. Verdon Smith, that the ordering of planes for civil and military use is co-ordinated. Does that mean that as far as possible they try to order a type that will serve both uses?—No, I did not mean that. I meant rather that there is a great deal of work going on, particularly in the research establishments, which is not necessarily related to a specific project, but which concerns high speed flight, high altitude flight, de-icing problems, the application of gas turbines, and a whole stream of technical subjects, where I think the greatest advantage is served and civil aviation gets the benefit if the effort on the military side and on the civil side goes together.

2794. You said you did not mean that, but is that the fact, that planes are used for both purposes?—In the immediate post-war period, of course, it is familiar knowledge that quite a number of aircraft that had their genesis for military purposes have been converted to passenger and goods carrying work. It is also, of course, the case that several aircraft just coming into production have a closer affinity to military

types than they would have if they had been designed from the start for civil purposes. I do not by that mean that some of the types I have in mind are so-called interim military conversions; that is not the case. I think a certain amount of misapprehension has been caused in some quarters by remarks that have been made to that effect.

*Mr. John R. Thomas.*

2795. Might I ask Mr. Verdon Smith whether, in view of what he said as regards research and development by the Ministry of Supply, it would perhaps be unwise for orders to be placed direct by the Corporations because they might not be up to date with development and research, and is not it possible that if they were left to their own initiative they might be giving orders for planes which, or some parts of which or in some way may have become obsolete, and the Ministry of Supply in their development would know of improvements and so forth and would be able to legislate against that by placing the orders themselves? I was trying to clear up this question of ordering by the Corporations?—Apart from the fact that it is the duty of any constructor that he owes to himself and to his shareholders to make quite sure that the users of his product are fully acquainted with the latest development which he can offer them—apart from that purely commercial consideration—I think the arrangement between the air transport Corporations, the Ministry of Civil Aviation and the Ministry of Supply are such that there ought to be absolutely no reason why the operators are not fully informed of the most up to date position of research and development. I would instance, for example, the establishment under the Aeronautical Research Council of a special Civil Aviation Research Committee, with which you are probably familiar.

2796. Then it comes down to this, and I would like confirmation about this, that it is merely more or less a book-keeping entry whether orders are placed by the Corporations or by the Ministry, that they are all interlocked, and that if the development and research side is so interlocked that the Corporations and the Ministry of Supply, on this question of ordering direct by the Corporations, are acting together, there cannot be any real question involved as to the efficiency of either the planes or of the operators?—Well, I think it makes a considerable difference whether you say to a man: "Please go to my technical expert, and if he agrees he will order you something"; or you say to him: "It is entirely your own responsibility to decide what you get and whether you spend your money wisely."

*Mr. John R. Thomas.]* That is more or less what you are doing.

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[Continued.]

*Colonel James Hutchison.*

2797. May I ask if there is any case of two concerns manufacturing the same aircraft, that is to say, two producers manufacturing aircraft which is precisely identical in design or which is being used for the same purpose and not precisely identical in design? Perhaps I may go on to show what I am trying to lead up to, because it may happen in future. It becomes a very considerable difference at that stage as to whether the Corporation can go to either of those two producers, whichever he thinks is the better and from whom he will get the better service. If, on the other hand, he passes it through the Ministry of Supply, the Ministry of Supply would, presumably, have power to say: "You shall get" (let us say) "a dozen Vikings, and you shall get them from Company A." That is the point I am trying to get at?—No, I think there are no cases where the same civil aircraft is being manufactured in more than one factory at the same time.

*Captain Sir Peter Macdonald.*

2798. But it is the responsibility of the Ministry of Supply to decide which firm is to make any particular type, taking the Corporations as customers, and to decide what he requires for his operational purposes; he cannot go direct to the manufacturer and say: "This is what I want". He has to go to the Ministry of Supply, and then the Ministry of Supply in turn have to place an order with the manufacturers. They decide who the manufacturers shall be, and not the Corporation. Is that so?—They leave the matter first of all to competitive tender, and then, subject perhaps to overriding considerations of policy, where there is a serious clash between military requirements and civil requirements, to the best of my experience they will place orders with the firm which offers the operator the most satisfactory solution of his specification requirements. That is speaking, not exactly of the future, but of the arrangements that are evolving at present, because, of course, the period of transition from the immediate end of the war was rather one of taking immediate action with those available designs which were brought forward and placing orders. Accordingly the present practice is to cut the competitive tender and offer the operator the answers to the tender, asking what he wants done next.

2799. But you cannot tender very well until you have your prototype, and you cannot, for instance, give a cost tender until you know what the prototype costs?—I was speaking in this case of invitations to tender for design and construction of prototypes rather than for the production of quantities.

*Chairman.*

2800. When we turn to production it will be for practical purposes limited to the particular firm which has produced the prototype?—The firm or firms. It is perfectly possible to ask three firms to build to one design.

*Mr. Barton.*

2801. Is not the basic consideration this question of control of design? Can I put this question: How is the design in the first place controlled? The aircraft manufacturers, I suppose, have their own designers?—Yes.

2802. I presume the Ministry of Supply have, too?—May I just deal with that? The Ministry of Supply has no design staff working on the drawing board in the sense that constructors have. What the Ministry has is a team of technicians expert in the various fields, whose position is partly administrative and partly, one might say, critical but not formative.

2803. I understand that. Now, from that point of view can we go further?—I presume, then, in those circumstances, the aircraft constructors get the design on the drawing board, and immediately go into consultation with the Ministry of Supply or the Corporations or both?—At present the position is rather the converse. The Corporations, being the operators, say what they want and draw up a broad specification. That they hand to the Ministry of Supply, and the Ministry of Supply invite firms in the aircraft industry to tender to that specification. From that stage when the reply to the tender is received at the Ministry of Supply, discussion takes place between the Ministry of Supply and the operator concerned, and thereafter I think the way in which things are tending to work out is that, having decided which tender he is most interested in technically, the operator and the Ministry of Supply officials then go into the matter in greater detail with the successful tenderer with a view probably to incorporating a certain number of things which they would like to see done, reaching final agreement on the specification in greater detail than was possible at the first stage.

2804. Whose responsibility is it from that stage then to construct the prototype? I mean from the financial point of view?—As things stand at present, the Ministry of Supply are likely to place an order with the successful tenderer for the design and construction of one or more prototypes, and it is then the responsibility of the constructor to produce the aircraft in accordance with the specification requirements.

*Chairman.*] On what basis is that contract made?

*Mr. Barton.*] Yes, that is the point,

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[Continued.]

*Chairman.*

2805. On a cost basis?—That will depend on the individual circumstances of the case, and I am afraid I could not give you an answer which would be comprehensive, because it is no part of the Society's work to know the details of contractual relationships of individual firms with the Ministry.

2806. In short, they vary according to the particular prototype and the finances involved?—Yes.

*Mr. Barton.*

2807. Is the contract drawn for the production of a prototype without any regard to the ultimate production numbers?—No. One of the items of information which the Ministry ask the tenderer to present is a statement of his ideas of estimated tooling costs, estimated man-hours for the production aircraft, and so on, in terms of various possible quantities.

*Major Niall Macpherson.*

2808. Could I clear up this point about tenders? In a sense, it is a new use of the word "tender," because it seems primarily to be concerned with specification rather than cost?—(Sir Hew Kilner): Both.

2809. Yes; but is it possible for an aircraft manufacturer to gauge more or less what the construction of the prototype is going to cost, and thereafter to see how much, in the event of its proving successful, the plane will cost for such and such a quantity or double the quantity or so forth?—It is possible for a constructor to gauge what the prototype will cost provided it is not too experimental. If it is something like, say, the Brabazon I, it would be a very rash constructor who would attempt to gauge the cost of it, but if it is an aircraft which is a development or an advance on a more or less known type he can to some extent within reasonable limits gauge the cost.

*Chairman.*

2810. The tender is competitive in two senses: competitive regarding cost and also regarding design?—Yes, and I think probably the greater weight will be thrown on design, because that is the more important element ultimately. May I add to Mr. Vernon Smith's previous reply? I should like to make it clear to the Subcommittee that although in some cases the Ministry of Supply places definite contracts for the design and development of prototypes, in some cases the constructor bears a substantial part of that cost so that he shall be free to sell that aeroplane in other markets.

*Major Niall Macpherson.*

2811. Is that a matter of arrangement?—That is a purely domestic arrangement.

*Chairman.*

2812. Does that arrangement apply in the case of the Viking?—We bore a very substantial part of its development cost, and we shall do that in the case of the contract for Viking replacement.

*Major Niall Macpherson.*

2813. I suppose you judge that tender on the basis of your own estimate of how many of that design of plane you could sell outside the particular order of the Ministry of Supply?—Certainly. If I were given a contract to design and build an aeroplane which I thought would not sell in any other market than that of the Corporations, I would not be interested in bearing any cost of the development of the design, but if I feel that that is an aeroplane which I can with advantage sell elsewhere, in my particular case—I do not say the whole industry—I would bear part of that development cost if through that I could sell it in other markets.

2814. Are these figures of the proportion that you yourself are prepared to bear of the development cost actually disclosed to the Ministry of Supply?—Yes.

*Chairman.*

2815. Do we gather that if you do not bear a proportion of the cost then you would be subject to absolute control of the Ministry of Supply, and if you wished to sell in another market you would have to obtain their consent?—I would not like to give an exact answer to that question, but I would say that if I do bear part of the development cost no question then arises.

2816. You mentioned aeronautical research. What voice have constructors in the research undertaking of the Ministry of Supply?—(Mr. Verdon Smith.) That is a very broad question. First of all, there is, of course, the general policy of research administered under the direction of the Aeronautical Research Council. The constructors are not represented on the Aeronautical Research Council, and it is the opinion of many of us that that is unfortunate, but there are, I think, quite convincing departmental reasons why that has been the case for many years. Apart from the Aeronautical Research Council itself, there are numerous Committees dealing with special subjects, and on those Committees industrial representatives selected from names put forward by the Society are members. That gives industrial influence on the research programme in particular fields. Apart from that the constructors, both individually and collectively, through the Society have been informally influential in securing development and research policy on particular lines from time to time; for example, in connection with the provision of wind tunnels the Society's Technical Section was invited by the Ministry to

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[Continued.]

draw up their ideas on requirements for standardised wind tunnel equipment, in close contact and jointly with the Ministry of Supply officials. In connection with questions on the standards of airworthiness, there is an Airworthiness Committee on which the Society has representation, and so in a number of ways within the general policy of the Ministry the Society's activities, I think, are of assistance in developing that policy. But it would not be correct to suppose that the industry, other than by the sort of recommendations its members put forward, has a direct say in the research and development policy of the Ministry of Supply.

2817. You mentioned convincing reasons for their non-inclusion on the Research Council. In your opinion, do those convincing reasons still apply?—The reasons are that obviously in a Council dealing with matters of major national policy there may well be at some stage embarrassing personal considerations which it might be invidious and which it might be dangerous to the Government to allow, possibly, to come in. I think it is one of those cases where complete independence and impartiality must not only exist but must appear to exist. For those reasons we have not pursued that matter further.

Mr. Barton.

2818. Would you say that on that account aircraft constructors are unnecessarily having to maintain their own research organisation, and could you give us your opinion as to the extent of overlapping between the organisation of the Aeronautical Research Council and the research organisation of aircraft constructors?—I do not think there is any such overlapping, because the membership of the Aeronautical Research Council includes officials of the Ministry of Supply who are in a very good position to effect a link between the policy of the Aeronautical Research Council, which is naturally concerned with the more distant future, and the immediate work going on within the industry, of which Ministry of Supply officials have very full knowledge.

2819. Yes. That can be a very material point in present development, can it not? Could we take your own case with the Brabazon I?—I suppose in regard to the Brabazon I research on the design of the plane is being conducted in the main by the Ministry organisation, but you, as actual constructors, in the course of constructing the prototype, I should imagine, from day to day come up against difficulties. You are obviously in this position, that through your Research Department you have to answer your particular problems. To what extent in those circumstances is there co-operation between your Research Department and the official Research Section of the Ministry of Supply?

—Taking an example like that helps the problem a great deal. In that particular case, as soon as the project was decided upon, the Ministry of Supply, or M.A.P. as it was then, arranged for our aircraft design staff to have the assistance of various special panels concerned with research on specific subjects, the various metallurgical questions affecting structure weights, various pressurisation questions, questions of flutter and gust alleviation, and all these various subjects, which were made the study of particular panels by arrangement with the Government Research Establishment. For example, with regard to wing structure, a half scale model was constructed and was tested at Farnborough, and a great deal of data were obtained from that which enabled us to alter the wing design and to take advantage of the information gained. As the work proceeds further from the original theoretical considerations to practical construction, so the research work tends to be more pragmatic and is more and more the responsibility of the designing firm. The actual working out of the power operated control system for the aircraft controls has been done almost entirely at the Company's works, with the assistance and advice of experts at the research establishment. I should like to emphasise that in the project it would have been impossible for a better degree of complete technical co-operation and understanding to have existed; it really has been first rate, and demonstrates how the existence of an organisation like Farnborough and the N.P.L. can work in with a constructing firm in solving as they go along the problems on a project of this sort.

2820. You would say that that applies in a lesser degree, of course, to the development of the more orthodox types?—I would certainly say that.

2821. Take the Viking question.—(Sir Hew Kilner): That did not involve any new experiment in itself, but in the case of any future aircraft that would apply. The less novel or the less complex, the less the constructor has to go back to fundamental research.

Mr. Barton.] From that point can we get to the cost loading on research, Mr. Chairman?

Chairman.] Before we turn to that, there may be further questions on the point of research generally. I do not know whether Members of the Sub-Committee want to pursue the question of research apart from the loading factor?

Mr. Kirby.

2822. Could we have it quite clear what is the relationship between the Ministry of Supply and the contracting firms in all these matters of prototypes: that in general they work well together and that

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[Continued.]

there are no difficulties on either side?—  
(Mr. Verdon Smith): I would certainly agree.

Mr. Barton.

2823. There is just one further point which comes under research that I should like to clear up, and that is I would like to know the relationship between the contractors and the operating Corporations on operational data. Perhaps Sir Hew can answer it with regard to operation of the Viking?—(Sir Hew Kilner): I would rather the President answered. (Mr. Verdon Smith): This is a subject where in the past there has been a feeling that there was a very considerable gap and that there was not on the civil side anything like the same amount of information available to the constructors as there has been on the military side. This is one of the subjects which we have been discussing with the Corporations, and this particularly formed the subject of a discussion yesterday with the Corporations. I think that arising from that I can feel well satisfied that there will be a very considerable increase in the interchange of experience particularly on maintenance and reliability questions and the like

Major Niall Macpherson.

2824. Do you get any similar data from non-trading corporations?—(Sir Hew Kilner): Yes, we get a fair amount; but I would agree with the President's answer to that question, and I was very glad to hear the last statement he made. The Corporations themselves, I think, are in great difficulty in providing those data, because what we really want to know as aircraft construction is the cost operating the aircraft, where the major costs fall, and so on, in order that we may by our design, if possible, effect economies or assist them in that direction, and I think that it is very difficult for the Corporations to give us this information sufficiently quickly, because I doubt if they have the information themselves; but I hope that will improve, and, as I say, I am very heartened by what the President has said with regard to his interview with them.

Mr. Barton.

2825. Surely the Corporations get an operational report from the pilot of a particular aircraft on a particular journey, and it is that type of difficulty, surely, that would assist the constructors?—The constructors get all the information they want as regards the economic requirements or failure of their aircraft, but I do not think that that is quite the point that I had in my mind. I had in my mind more the actual economics of operating civil transport aircraft, and what are the really important economic factors which can be effected by the design of the aircraft and their relative values.

Major Niall Macpherson.

2826. For example, ease of maintenance?—Yes, ease of maintenance is an obvious one. There are a lot of other factors which are not so obvious by which we would be able to assess the value more readily if we had the actual figures of cost and so on.

Captain Sir Peter Macdonald.

2827. Could you give us an example of what you mean?—I should like to know, for instance, the number of hours the aircraft are airborne as compared with the number of hours they are standing in loading with passengers or goods; the number of hours they are on service as compared with the total number of hours in the day; the effect on operating costs of capital cost of aircraft as compared with, we will say, maintenance economy and so on: all those are vital to the design. I might possibly design an aeroplane at twice the cost to the operator, and he might be able to effect a certain amount of economy in maintenance, but I want to know is it worth it to operate it? Is he prepared to pay £50,000 more for his aeroplane if he can cut his maintenance costs by X per cent., or is it not?

2828. Surely that is information which is vital, is it not?—Yes. In all the cases I have given you I think we pretty well all know what is necessary, but I merely give them as typical.

Mr. Barton.

2829. In your opinion, is there a desire on the part of the Corporations to help in that direction?—Yes, I think there is a desire.

Chairman.

2830. But they have no technical resources to provide the information?—I doubt whether they have yet got a sufficiently smoothly working operation to be able to do so as quickly as we would like, but I think we shall get it. (Mr. Verdon Smith.) We have certainly had the hearty assurance of their readiness to try to do all they can to help us, and in turn to help them, and we have got to work that out in practice as their experience increases.

Major Niall Macpherson.

2831. How does the Ministry come into this, I mean the Ministry of Civil Aviation? Does it come into it at all?—I do not think the Ministry of Civil Aviation either does or could come into the matter to any very great extent.

Chairman.

2832. I have two general questions to ask you. Are we to gather that there is still of necessity demarcation between the research functions performed by the Ministry and those performed by the constructors?—Yes; the line is not a straight



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line. I think those in the business know where the boundary runs.

2833. 'It works satisfactorily?—I think so.

Captain Sir Peter Macdonald.

2834. You do not think there is any unnecessary delay between the placing of an order by a user and getting into production, through having to go through the channel of the Ministry of Supply? You do not think any delay could be avoided by direct contact?—It is a very difficult question to answer, because there may well be a certain amount of delay in the early stages whilst rather more people with perhaps a certain amount of different experience are being brought into discussion, but it may very possibly save a wrong decision being taken quickly and too early resulting in several years' waste. It may happen one way or the other, but I do not think that procedure itself involves serious delay as compared with the other very large time factors in the construction of aircraft. (Sir Hew Kilner.) I would have gone much farther than that. I would have said that I think you will get more delay if you have your order direct from your Corporation, for this reason, that materials and prototype parts all take a long time to deliver today, and therefore you want to get your orders out and have work started in your shops as early as possible. Now, for orders placed by the Corporations, quite clearly they cannot place an order until I am in a position to quote a firm and definite price. We have no machinery for placing an order other than at a firm and definite price. Through the Ministry of Supply we have evolved, especially during the war, the procedure which is known as the Instruction To Proceed, by which we can get our work started and our orders placed before the actual final price has been agreed.

2835. You can start tooling up?—We can start ordering our materials and tooling up, and indeed we can start construction. Now, if the order comes straight from the Corporation, just like any other ordinary customer, we could not proceed until we do get a definite order; so that I think that the ultimate supply of the aircraft would be delayed by the order coming direct from the Corporation as compared with the present procedure, where it comes from the Ministry of Supply. Do you agree with that, Mr. President? (Mr. Verdon Smith.) Yes.

Chairman.

2836. Apart from questions relating to particular prototypes, are the results of research conducted by the Ministry made generally available to the constructors?—A very great amount of information is made generally available, and a great deal more is always available to a constructor who

likes to ask for it and go and get in touch with the appropriate people themselves. I would say that there is an open door at Farnborough; elsewhere the design staff has extraordinarily good facilities.

Chairman.] Thank you. Now perhaps Mr. Barton could pursue the point of loading.

Mr. Barton.

2837. I should like Mr. Verdon Smith to give us some idea of the procedure that is adopted for carrying the cost factor of research on aircraft in production, and what is the proportion agreed with the Ministry. Is the proportion satisfactory; and to what extent is the research cost of aircraft constructors passed on to a particular model which also carries a cost loading factor for Ministry research?—I take it that Mr. Barton is referring particularly to aircraft supplied to the three Corporations?

2838. Yes?—Then I think the answer will vary with the different circumstances rather in the way that Sir Hew Kilner indicated, that each constructor in relation to each type of aircraft would probably make his own arrangements with the Ministry of Supply under which he will take such and such a proportion and saddle his sales other than to the Corporations with such an amount of that proportion as he thinks the market will stand, spread over as long as he intends to keep the aircraft in production, or as may suit him best. With regard to the development element in the price of aircraft to the Corporations incurred by the constructor as distinct from the Ministry in their own establishments, the proportion again is going to vary very much indeed with the type of aircraft and the amount of novelty involved. So far as some of the bigger and more novel types are concerned, most of the research and development expenditure is the subject of direct contracts placed by the Ministry of Supply for such and such development with the constructor, and it is no part of the constructor's business to allocate a bill paid by the Ministry of Supply against standard production quantities. The extent to which the Ministry of Supply in passing on a charge to the Corporations may increase the price of production aircraft charged by the constructor with an element in respect of the outlay they have incurred in research development is something I cannot say anything about.

Colonel James Hutchison.

2839. There is one element you have left out, the cost incurred by the Ministry in their research and applicable to orders which you may receive from other corporations. There will be some loading, I take it, from the Ministry to you, which you have to pass on to the buyer?—Yes. That, again, varies very much with the circumstances, but we generally enter into some arrangement with the Ministry under which

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some percentage of the selling price will be credited to the Ministry account by the contractor.

2840. Has that worked satisfactorily so far? Of course, it is all in its infancy, I know, but I wondered if it had been satisfactory, because it might be a very important factor?—Yes. I can give you, I think, as good an example of that as you will get, and that is the practice with regard to aero engines, where the method was adopted for many years before the war—for example, my Company had an arrangement with the Ministry of Supply, or the Air Ministry as it then was, under which we credited the Ministry with a percentage of all proceeds from royalties or licences and also with an amount—I think it was 5 per cent.—of the selling price, which was credited to a particular account.

Mr. Barton.

2841. Would it be true to say that your own research costs are costed as a general overhead, or is there a specific cost for the work done on a particular type of aircraft?—I think most firms would charge most of their research and development to specific projects and not to all items; for example, not all of my company's expenditure is dealt with by allocating it to specific contracts, and in that connection I would take again our aero engine business. We have a general research and development expenditure on fuels, on metals, and on a hundred and one items which are not peculiar to a specific project, and that is carried by the business as a whole, and then we come to some specific questions where we want to obtain particular results from a particular engine for a particular purpose which would be related to that engine.

Chairman.

2842. I am not sure whether I have got this correctly. Am I right in believing that when you decide the loading factor you take into account the research expenditure of the Ministry of Supply as well as the cost of the prototype to the constructor?—Yes. We make an arrangement with the Ministry of Supply, an arrangement which, because it concerns forward deliveries, must be a bargain and take into account the assistance the Ministry has rendered.

Colonel James Hutchison.

2843. My question, Mr. Chairman, is on a different subject. It is a question on the conversion of aircraft. I wonder how far the Ministry of Supply intervene in that problem. I take it that aircraft constructors do in fact on occasion convert aircraft, and I wondered if they dealt in those circumstances direct with the user or with the Ministry?—I have no direct experience myself of any such cases, but

I think I know one case which you may have in mind where, I think, the work was done directly for the Corporations concerned, and I rather think, although I am a bit uncertain of my facts, that in another case which has had a certain amount of publicity lately the arrangements were made through the Ministry.

2844. There must have been cases of Yorks, Lancastrians, Dakotas and so on being converted from wartime use to civilian use, and it was in that sort of case that I wondered whether the users were free to go to the concerns which undertake conversion, and particularly whether the Corporations were free to go to the firms that undertake conversion, or whether it passed through the Ministry of Supply?—I think there have been three solutions of that problem: In the one case I know of, in the case of flying boats, the B.O.A.C. converted Sunderlands to Hythes themselves in their own shops at Hythe; in another case I think I am right in saying that the B.E.A. have gone direct to Scottish Aviation Ltd. and have had the work done to their own order; and I think again I am right in saying that the conversion of JU52's to Jupiters for B.E.A. was undertaken by the Ministry.

Chairman.] If there are no further questions on that subject, I have one very general question to conclude. Surveying the industry generally, can we say that at the moment there is a specific programme for construction and development?

Captain Sir Peter Macdonald.] Short-term or long-term?

Chairman.

2845. Short-term?—Each Corporation has its ideas about what it wants, each constructor has his ideas about his own policy, and the particular field in which he wants to work; but the Ministry of Supply, I think, would say that they have an over-all idea of how to make the best use of the aircraft industry both for civil and for Air Force and for Admiralty purposes, and that with a large measure of give and take in fitting things in as circumstances arise, there is an over-all programme for the industry.

Chairman.] Thank you very much. If there are no further questions, may I thank you very much for the assistance you have given to us this morning. I am afraid you may have the impression that we have wandered rather far afield from the Estimates of the Ministry of Civil Aviation, but with a topic like civil aviation it is extremely difficult to keep within the narrow confines of the Estimates. I assure you that the information you have given us this morning will be extremely valuable to us in coming to our conclusions.

The Witnesses withdrew.

[Adjourned till Thursday, 31st July, at 11 a.m.]

## APPENDIX I.

*Memorandum prepared for the Select Committee on Estimates, March, 1947.*

MINISTRY OF CIVIL AVIATION

## CENTRAL ADMINISTRATION

*Origin and pre-war growth*

The powers of the Secretary of State for Air in respect of Civil Aviation derived from the Air Navigation Act, 1920, Section 6, later superseded by the Air Navigation Act, 1936.

A Department of Civil Aviation of the Air Ministry was first created in 1919 under a Controller-General who included amongst his functions responsibility for all forms of signals and communications both Service and Civil and was responsible for the supervision of the Meteorological service. In 1922, however, the Civil Aviation Department was reorganised, responsibility for signals and telecommunications being transferred to the Chief of Air Staff while the Meteorological Office was transferred to the administration of the Secretary of the Air Ministry. In 1934 the status of the Director of Civil Aviation was raised to Director General and following the report of the Cadman Committee (1938) a major reorganisation and expansion took place. The main features of this reorganisation were the addition of a Directorate of Civil Research and Production and a Director of Civil Aviation Finance. By August, 1939, the total staff of the Department was 273, the organisation consisting of five Directorates as follows:—

- Home Civil Aviation.
- Overseas Civil Aviation.
- Civil Aviation Finance.
- Civil Research and Production.
- Operational Services and Intelligence.

It should be noted that all common services (typing, messengers, etc.) were undertaken by the Department of P.U.S., Air Ministry, and all Telecommunications services by the Department of the Chief of Air Staff (Directorate of Signals).

During the war the Civil Aviation administration was reduced to a "care and maintenance" basis although it should be mentioned that the Telecommunications Organisation under the Chief of Air Staff continued to expand on the basis of plans adopted as a result of the recommendations of the Maybury Committee (1937), the services provided thereby being used by the R.A.F.

*Post-war structure*

The Ministry of Civil Aviation Act, 1945, provided for the appointment of a Minister of Civil Aviation charged with the general duty of organising, carrying out and encouraging measures for the development of civil aviation, for the designing, development and production of civil aircraft, for the promotion of safety and efficiency in the use thereof and for research into questions relating to air navigation. The administration of the Department as planned at that stage of its development was under the charge of a Director-General who controlled six Divisions as follows:—

- (i) Ground Facilities and Flying Control (including Telecommunications Services transferred from the Air Ministry);
- (ii) Air Services;
- (iii) Aircraft;
- (iv) Establishments Personnel and Miscellaneous Flying;
- (v) Finance and Accounts, Statistics, Intelligence and Publicity;
- (vi) Legal and Parliamentary;

The Accidents Investigation Branch was transferred from the Air Ministry on 1st May, 1946.

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The Civil Aviation Act, 1946, made further provision in respect of civil aviation, particularly regarding the development of air transport services by three corporations operating under public control, the acquisition of land and administration of aerodromes required for scheduled air services. These additional functions and responsibilities necessitated a reorganisation and expansion of the Ministry which was accordingly raised to the status of a first class Department of State administered by a Permanent Secretary assisted by a Chief Aeronautical Adviser, a Deputy Secretary, three Under Secretaries and a Director-General of Technical Services. The Ministry was divided into four Departments as follows:—

*Secretariat and Planning Department (Under Secretary)*

Secretariat and Parliamentary Division  
 Planning Division  
 Economics and Intelligence Division  
 Legal Division  
 Chief Information Officer.

*Air Services Department (Under Secretary)*

British Overseas Airways Division  
 European and South American Division  
 Air Services (General) Division  
 Directorate of Finance and Accounts (Air).

*Aerodromes Department (Under Secretary)*

Aerodromes Divisions (four)  
 Directorate of Finance (Ground) Services  
 Directorate of Accounts and Supply  
 Directorate of Works (Civil Aviation)—(accommodated in the Ministry, but forming part of the organisation of the Directorate-General of Works, Air Ministry, which undertakes works services on an agency basis).

*Directorate-General of Technical Services (Director-General)*

Personnel and Miscellaneous Flying Division  
 Directorate of Control and Navigation  
 Directorate of Telecommunications  
 Directorate of Aircraft Requirements  
 Directorate of Civil Air Operations  
 Inspectorate of Air Safety.

In addition, two Establishment Divisions and a Director-General of Long Term Projects and Planning (graded as Assistant Secretary) reported direct to the Deputy Secretary.

The Civil Aviation Act also made provision for an Air Transport Advisory Council to consider any representation from any person with respect to the adequacy of the facilities provided by any of the Corporations; and to consider any question referred by the Minister relating to facilities and/or charges for transport by air in any part of the world, or any other question relating to the improvement of air transport services.

The Minister has also set up a National Civil Aviation Consultative Council to act as a forum for a review of developments of civil aviation generally and to assist the Minister in examining questions relating thereto. The Council comprises members representative of the Operators, Personnel, Constructors, Users, Aerodrome Owners, Insurance interests, etc., members being nominated by the Corporations, the Charter Association, Associations of Personnel and Trade Unions, the Society of British Aircraft Constructors, the Association of Municipal Corporations, Aerodrome Owners Association, Lloyds, etc.

*Recent Developments*

The continued expansion of work, particularly in the fields of aerodrome administration, ground services for the safety of aircraft operation and international planning and negotiation, has necessitated the strengthening of the organisation at its higher levels. Posts have, therefore, been approved for a Controller of Aerodromes and a Controller of Technical Services (the latter post superseding that of Director-General of Technical Services) both these officers being responsible directly to the Permanent Secretary. An additional

Under-Secretary post has also been added to take charge of a Secretariat and Establishment Department and posts for a Director of Traffic and a Director of Amenities have also been approved. The main outline of the organisation is therefore now as follows:—

*Deputy Secretary*

Secretariat and Establishment Department (Under-Secretary, reporting direct to Permanent Secretary as Principal Establishment Officer)  
 International Department (Under-Secretary)  
 Air Services Department (Under-Secretary)  
 Director of Long Term Planning and Projects (Assistant Secretary).

*Controller of Aerodromes*

Aerodrome Administrative Work (Under-Secretary)  
 Director of Traffic  
 Director of Amenities  
 Director of Works (Civil Aviation).

*Controller of Technical Services*

Director of Civil Air Operations  
 Director of Control and Navigation  
 Director of Telecommunications  
 Director of Air Safety and Training  
 Director of Aircraft Requirements

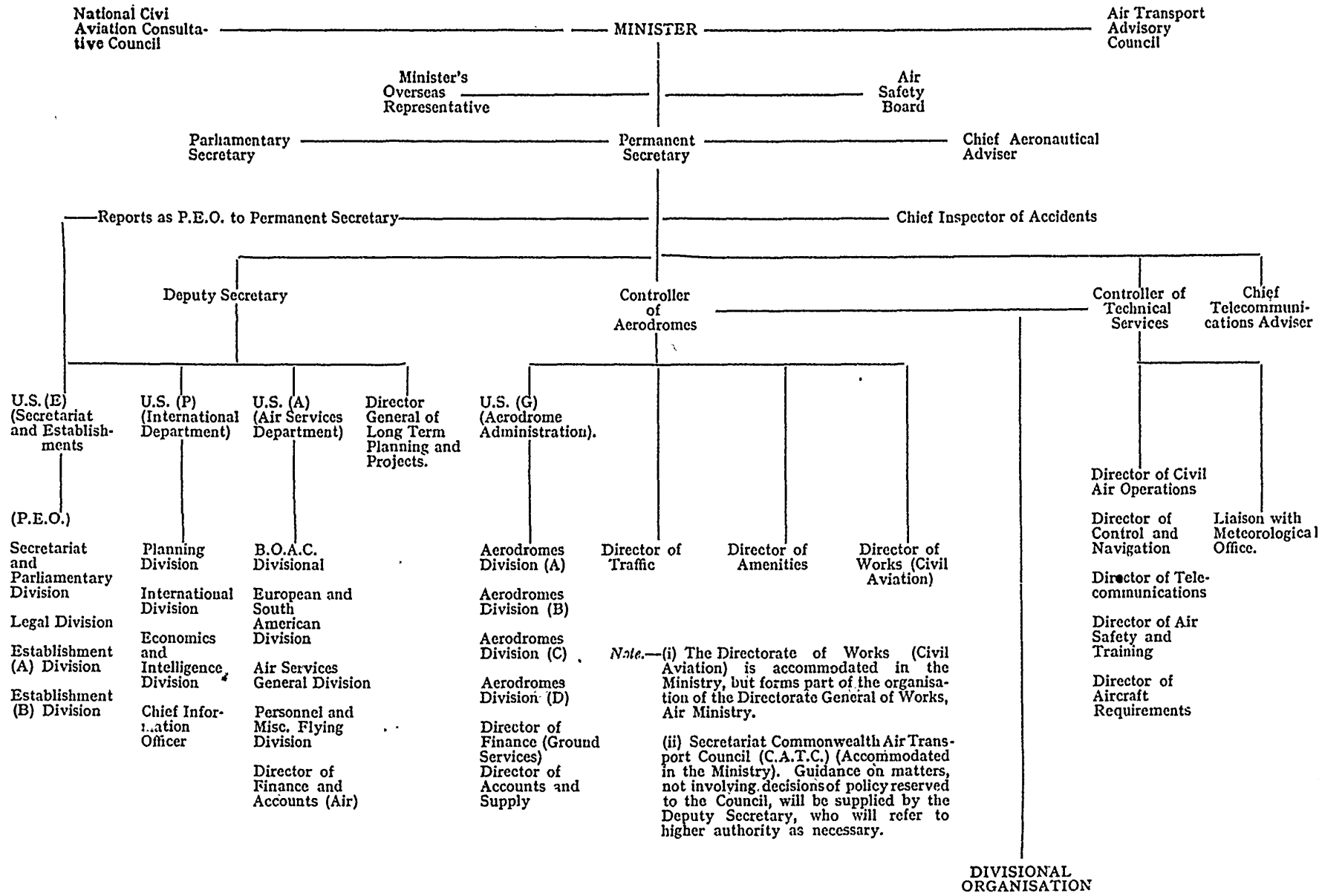
*Divisional Organisation*

In order efficiently to administer the large aerodrome and ground facilities organisation required in the United Kingdom for air transport purposes, it has been found necessary to set up a decentralised organisation on the basis of four Divisions to deal with the considerable variety of technical and administrative questions which it is not possible to settle on a purely local basis, but which on the other hand it would be inappropriate to remit to a Headquarters Department. The four Divisions, which are in the process of formation, conform to a grouping of the flight safety regions into which the United Kingdom has already been divided for wireless communication with aircraft and their control from the ground, taking into account also the need for avoiding uneconomic or unworkable sub-divisions of the work to be discharged. The four Divisions are as follows:—

Scotland.  
 Northern.  
 Southern and Western.  
 London and Eastern

Controllers are being appointed to take charge of these Divisions and will be assisted by a strictly limited number of Divisional Operations, Telecommunications and Air Traffic Control Officers with a small executive and clerical staff to which certain financial, establishment and accounting powers will be delegated.

A chart showing the layout of the organisation of the Ministry is attached.



### THE THREE CORPORATIONS

#### BRITISH OVERSEAS AIRWAYS CORPORATION (B.O.A.C.)

This Corporation was established on 24th November, 1939, under Section 1 of the British Overseas Airways Act, 1939, which had received the Royal Assent on 4th August, 1939. Under the Act B.O.A.C. duly acquired the undertakings of the existing companies, Imperial Airways Ltd. and British Airways Ltd., as from the appointed day, 1st April, 1940, and operation of air services by the Corporation did not commence before that day.

As from 1st September, 1939, the aircraft and organisations of Imperial Airways and British Airways were placed at the disposal of the Secretary of State for Air, under the relevant clauses of their existing subsidy agreements, and operated at his direction. On 1st April, 1940, following the vesting of the constituent companies in the Corporation, the Secretary of State for Air, in the exercise of powers conferred by Section 7 of the Air Navigation Act, 1920, as amended by Section 32 of the British Overseas Airways Act, 1939, made an Order requiring B.O.A.C. to place their undertaking at his disposal. Thus from the outset the Corporation operated not as a commercial concern but as an instrument of the State in support of the war subject to directions from the Secretary of State for Air and later the Minister of Civil Aviation. In consequence the whole of any ascertained net deficiency in each year's accounts of B.O.A.C. has been met from public funds—Air Votes up to 31st March, 1945, and Ministry of Civil Aviation Votes thereafter—and the grant procedure laid down in Sections 24-30 of the British Overseas Airways Act, 1939, has not been applied.

From the termination of hostilities B.O.A.C. have been changing over progressively to normal commercial management and the Order of 1st April, 1940, will shortly be revoked. Thereafter State control will be restricted to the provisions of the Civil Aviation Act, 1946, the surviving sections of the B.O.A. Act, 1939, and any Orders or directions issued thereunder.

In accordance with Sections 22 and 23 of the B.O.A. Act, 1939, the Corporation have each year submitted to the Minister audited accounts and a report on the year's operations and the Minister has laid copies before each House of Parliament. The accounts have from time to time come under the notice of the Public Accounts Committee in relation to their examination of the Appropriation Accounts of Air Services and the Reports of the Comptroller and Auditor-General thereon. In the 1945-46 Session the P.A.C. had before them the B.O.A.C. accounts for 1942-43 and 1943-44, but the B.O.A.C. accounts for 1944-45 which were presented to each House on 30th April, 1946, were too late to receive P.A.C. consideration in that Session. Submission to the Minister of the B.O.A.C. accounts and report for 1945-46 was made on 13th March, 1947, and these documents have now been laid before each House.

In considering the accounts of B.O.A.C. for the war-time period of 1st April, 1940—31st March, 1946, it must be borne in mind that the annual deficits incurred in respect of air transport services are *not* comparable with the profit and loss of a commercial airline. During this period no revenue is shown in the accounts for the carriage of mails owing to modification of the Empire Air Mail Scheme from 1st September, 1939, and the consequential arrangements between the G.P.O. and the Air Ministry whereby postal revenue accrued to the Air Ministry (later the Ministry of Civil Aviation). There was also an extensive waiver of charges for traffic carried on behalf of certain Government Departments financed from the Vote of Credit (including the Fighting Services) and in return the Air Ministry made no charge for aircraft, spares, stores and services supplied to B.O.A.C. The sums involved in these waivers were large and their exclusion from the accounts makes it impossible to determine the true cost of operating the services. From 1st April, 1946, however, waiver of charges has ceased and mail revenue will appear in the B.O.A.C. accounts which should then present the financial position on a commercial basis for the first time.

The B.O.A.C. reports presented to Parliament give information in reasonable detail (curtailed for security reasons during the war period) of the services operated, the composition of the fleet used, traffic handled, staff employed and other activities of the Corporation. Further information can also be obtained from the booklet "Merchant Airmen", which is the Air Ministry Account of British Civil Aviation, 1939-44, prepared by the Ministry of Information and published by H.M. Stationery Office in 1946. There is also a B.O.A.C. publication "Air Line in Action" which gives a brief history of B.O.A.C.'s war-time services.

#### BRITISH EUROPEAN AIRWAYS CORPORATION. (B.E.A.C.)

This Corporation and British South American Airways Corporation were set up on 1st August 1946 under Section 1 of the Civil Aviation Act 1946, in order to operate all British scheduled air services other than those deemed to be appropriate to B.O.A.C. (overseas services to the Far East, Australia, India, Middle East, Africa and across the North Atlantic).

B.E.A.C.'s sphere of interest is defined as Europe and the internal services of the United Kingdom. The European services were inherited from B.O.A.C. who had already set up a European Division in January 1946 to take over services from R.A.F. Transport Command and who, but for the war, would have been operating extensively to Europe from the outset (civil air services to certain neutral European countries were maintained by B.O.A.C. throughout the war). Internal air services had been excluded from B.O.A.C.'s sphere of interest and had been continued throughout the war on a restricted basis on behalf of the Government by the railway-controlled airlines comprised under the Associated Airways Joint Committee (A.A.J.C.) by Allied Airways (Gandar Dower) Ltd. and, from June 1945, by Channel Islands Airways Ltd. As from the passing of the Civil Aviation Act, 1946, these companies could no longer operate except as agents or associates of B.E.A.C. but agreements conferring this status were entered into for periods of 6 months and upwards in order that the air services should continue pending the establishment of English and Scottish Divisions of the Corporation. With Government approval B.E.A.C. have offered to acquire these private airline undertakings as going concerns on payment of a price calculated on the basis of net maintainable revenue and an appropriate number of years' purchase to be applied thereto. The purchase of the A.A.J.C. companies was completed on 28th February 1947 after transfer of the services to B.E.A.C. on 1st February. Negotiations with the other two companies are proceeding and it is expected that the services will be taken over by B.E.A.C. at an early date.

#### BRITISH SOUTH AMERICAN AIRWAYS CORPORATION. (B.S.A.A.C.)

As explained above this Corporation came into existence on 1st August 1946 to operate British air services to the South American and Caribbean areas. These services had been initiated by a company, B.S.A.A. Ltd., originally formed in 1944 by the main Shipping Companies operating to South America and subsequently taken over by B.O.A.C. for subsequent transfer to B.S.A.A. Corporation following the announcement in December 1945 of Government policy involving the public ownership of British airlines. The shares of the Company were transferred from B.O.A.C. to B.S.A.A.C. on 1st August 1946 and at present the Company is continuing to operate on behalf of B.S.A.A.C. pending the revision of inter-Governmental agreements with certain S. American countries.

Operations commenced on 1st January 1946 with a proving flight to S. America and in March 1946 a regular twice weekly service to Rio de Janeiro, Montevideo and Buenos Aires was commenced. Routes serving Chile, Venezuela, Peru and the Caribbean have since been added and there are now 5 B.S.A.A. services a week from the U.K. to S. America.

*The functions of the three Corporations, programmes of services, and plans for the future.*

The functions of the three Corporations are defined in Section 2 (1) of the Civil Aviation Act, 1946, under which they are given power to provide air



transport services and to carry out all other forms of aerial work (whether on charter terms or otherwise); they are also required to exercise those powers so that the air services may be developed to the best advantage and made available to the public at reasonable charges

Up to 31st March, 1947, the three Corporations have developed services on the basis of a progressive extension and intensification of the war-time services in accordance with a broad plan of development agreed with the Ministry and revised from time to time to meet a fluid situation. Schedules of services and fleets of aircraft now in operation, together with an explanation of the rates of charges shown in the schedules, are appended. (Notes 2 (b) (ii) and (iii).)

For each of the 9 years commencing 1st April, 1947, each of the three Corporations is required under Section 12 of the Civil Aviation Act, 1946, to submit to the Minister:

(a) a programme of the air transport services which the Corporation propose to provide during that year and of the other activities in which the Corporation propose to engage during that year; and

(b) an estimate of the revenue to be received by the Corporation during that year and of the expenditure to be incurred by them on revenue account during that year.

This information has to be supplied in a form prescribed by the Minister with Treasury approval and is required primarily for the determination of any Exchequer grant or subsidy needed. During the initial period, until experience has been gained of commercial operations with untried types of aircraft, any direct subsidy assistance which may be required will take the form of grants representing the amount required to defray the estimated excess of expenditure over revenue for the year. After this initial period it is proposed to base any direct assistance from the Exchequer on a system of agreed estimates of target costs related to types of aircraft used and the extent of their utilisation, together with target revenues based on estimated load factors. The fixing of a grant by reference to a programme of services ipso facto implies the approval of the programme.

In the case of Corporations not requiring Exchequer grants, the Minister lacks the financial sanction referred to above and his powers under Section 4 of the Act are limited to directions of a general character. Under Section 2 (5), however, he can by Order limit the powers of any Corporation to such extent as he thinks desirable in the public interest. In the last resort the Minister could change the composition of the Board of the Corporation if he considered that the duties of the Corporation could not with confidence be entrusted to the existing members (see paragraph 5 of First Schedule to the Act).

In addition to the programmes and estimates required during the 9 year grant period ending 31st March, 1956, the Corporations are required under Section 22 of the Act to submit the following estimates and programmes so long as the Act lasts:—

(a) For the three year period beginning on 1st April, 1947, and for every three year period following immediately upon the end of such a period ("planning period"), a programme of activities and a financial estimate of both revenue and capital items. (Sub-Section 4) and

(b) For each financial year (beginning on 1st April) an estimate of expenditure to be incurred on capital account.

Whilst the Act does not specifically require the Minister to approve the programme and estimates submitted under Section 22, the programme must conform with any general directions given by the Minister under Section 4 of the Act. The main control over the programme of development rests in the Minister's power to determine the amount of Exchequer assistance required to implement it.

To sum up, the three Airways Corporations have a large voice in the planning of their services and in general the Minister will accept their judgment on operational and technical matters and will not seek to interfere on day to day management. The Minister is, however, ultimately responsible for the efficient operation and successful development of the air services allocated to the three Corporations

and will discharge this responsibility both by frequent consultation with the three Chairmen as well as by examination of periodic programmes and financial estimates.

Owing to uncertainties over the types of aircraft to be available in 1947/48 the programmes of the Corporations are still under discussion at the time of preparation of this memorandum. It is hoped, however, that by the time the Committee is ready to take evidence it will be possible to give information on this score. It follows that in the absence of settled programmes it has not yet been possible to consider the final estimates and determine the amounts (if any) of Exchequer grants for 1947/48. In the light, however, of the estimates already presented it was deemed prudent to make the following provision for Exchequer Grants in the Ministry's Parliamentary Estimate for 1947/48:—

Subhead K.1. (B.O.A.C.) £5,000,000.

Subhead K.2. (B.E.A.C.) £2,250,000.

Subhead K.3. (B.S.A.A.C.) £250,000.

These amounts are provided to cover payment of (a) balance of grants due to the Corporations for 1946/47 (Section 11) and (b) advances on account of grants to be determined for 1947/48 (Section 12). The grants for 1946-47 are deficiency grants determined after the event by examination of audited accounts and thus some delay is inevitable before the final balances can be calculated. For 1947/48 and future years it is hoped to provide an incentive to economical operation by fixing the grants (or the basis thereof) before, or early in the year to which they relate.

B.O.A.C.'s. FLEET AS AT 20TH MARCH,  
1947

B.S.A.A.'s. FLEET AS AT 20TH MARCH,  
1947

*Landplanes*

Liberators	...	12
Dakotas	...	39
Lodestars	...	17
Yorks	...	30
Lancastrians	...	14
Lancasters	...	1
Halifaxes	...	8
Haltons	...	6
Constellations	...	5
Vikings	...	9 (on loan from B.E.A.)
Oxfords	...	8
Dominies	...	1
Ansons	...	2
Proctor	...	1
Tudor	...	2
		—
		155
		—

*Flying Boats*

"C" Class	...	3
"G" Boat	...	1
Boeings	...	3
Sunderlands	...	25
		—
		32
		—

GRAND TOTAL :—187 aircraft

Lancastrians	...	6
Lancasters	...	3
Yorks	...	12
Proctor	...	1
		—
		22
		—

FLEET OF AIRCRAFT OPERATED BY  
B.E.A.C. (PLUS CHANNEL ISLANDS  
AIRWAYS, LTD.) AS AT 1ST MARCH, 1947

D.H. 84	...	1
D.H. 89	...	42
Avro XIX	...	14
Dakota	...	30 (including 1 on loan from B.O.A.C.)
Viking	...	18
Ju. 52	...	9
Lancastrian	...	1 (on loan from M.C.A.)
		—
TOTAL	...	115
		—

EXPLANATION OF RATES OF CHARGES

The traffic of the Corporations is divisible into two main categories distinguishable by the manner in which, and the level at which, rates of charges for each are determined. The categories are:—

- (A) Passengers, excess baggage and freight.
- (B) Air mails.

Comparative basic rates on each group of services are:—

	(A) Passengers Pence per Mile	(B) Letter Mails Gold Franc per tonne/km.*	Ratio of (A) to (B)
<i>B.O.A.C.</i>			
North Atlantic Services	5.5	6	2 : 7
Empire Services...	5.5	3.5	1 : 2
<i>B.S.A.A.C.</i>			
Latin American Services	6.25	5	2 : 5
<i>B.E.A.C.</i>			
Continental Services ...	6.3	6	1 : 3
Domestic Services ...	5.5	2.25 (average)	7 : 9

*Category (A)*

On international routes, excess baggage and "express" freight rates stand in the ratio of 1:1 and 5:6 respectively to the passenger rate. Unbooked freight is charged at about half the express rate. A sliding scale of higher charges, on an *ad valorem* basis, is applied to valuable freight. On domestic services both the excess baggage and freight rates are in the ratio of 9:7 to the passenger rate.

*Category (B)*

No mail other than surcharged letter mail is at present carried on the Corporations' international services. Proposals are under consideration by Governments for the introduction of certain other mail facilities on their European services at the following rates:—

	Gold Francs per tonne/km	Ratio to Passenger Rate
Unsurcharged Mail ... ..	3	3:2
Parcels ... ..	1.8	9:10
Newspapers ... ..	1.50	5:7

At present inland mails are carried only on a few domestic day services.

**RATE FIXING MACHINERY**

It is the duty of the Corporations under Section 2(i) of the Civil Aviation Act to provide services at reasonable charges, and in practice the Corporations' rates for all types of traffic are subject to the approval of the Minister.

*Passenger fares, excess baggage and freight rates on international services.* The determination of rates for this category of traffic is regarded as a matter for agreement between operators in the first instance, subject to approval by Governments. The bi-lateral agreements negotiated with other Governments for the reciprocal exchange of right to operate air services include rate fixing provisions accordingly. Many of the Agreements provide for the acceptance, subject to mutual governmental approval, of rates determined in the first instance by the Regional Traffic Conferences of the International Air Transport Association (I.A.T.A.)—an international association of airline operators. The object of this rate fixing machinery is to avoid subsidised rate warfare.

Of the rates quoted by the Corporations for this category of traffic, most have been recommended in the first instance by Regional Traffic Conferences of I.A.T.A.; the remainder, pending extension of Conference machinery to the routes in question, have been agreed with the Corporations' competitors.

*Air Mails:* The Ministry's policy is also to encourage I.A.T.A. to extend its sphere of rate determination to air mail conveyance rates. So far I.A.T.A. has made definite recommendations for the European area which the Ministry has been able to approve (paragraphs 2 and 4 above).

**RATE FIXING CRITERIA**

Our policy aims at the progressive elimination of subsidies and a rate structure for each Corporation based directly on costs. The basic criterion which the U.K.

\* Air mail conveyance rates are, according to postal usage, commonly expressed in gold francs per tonne/kilometre.

1 Gold Franc = 1s. 7½d. (at present exchange rates)

1 Tonne = 1,000 Kgs., or 2,204 lbs.

operators have advocated to I.A.T.A. for fixing rates is "cost to the efficient operator using modern economical equipment plus a reasonable margin of profit."

This criterion is already being broadly applied to I.A.T.A.'s recommendations for passenger fares, excess baggage and freight rates, the actual or estimated costs on which recommendations are based being subject to governmental scrutiny. It is clear that during the present transitional stage, when many operators are perforce using aircraft of inferior economic performance, the adoption of rates based on the costs of the most efficient operator using modern economical equipment will inevitably mean that some of the inferior equipped operators will be unable to make ends meet.

On domestic services passenger rates are being systematised on the basis of a long-term cost estimate for the types of equipment available plus a profit margin. The rates, which will be 4½d. and 5d. per passenger mile for services over land and over sea respectively, assume a favourable load factor, i.e., ratio of capacity filled to capacity available. Standardisation at this level will be completed in the near future.

The criteria applied to air mail conveyance rates during the present period of building up traffic are:—

- (i) that they should permit of reasonable postage rates which reflect the benefits of acceleration provided over surface transmission;
- (ii) that they should obviate the need for any subsidy to mail traffic as such;
- (iii) that, whilst not equated to costs of operation, they should stand in a reasonable and recognisable relationship thereto, the priority granted over other forms of traffic being taken into consideration.

The different considerations which at present govern the fixing of rates for (a) mails and (b) other classes of traffic rule out parity at this juncture and invalidate direct comparison of current rates for the two main categories of air traffic. The ultimate objective, however, is to fix the rates both for mails and other classes of traffic by reference to the common standard of costs of operation plus a margin of profit, so that one class of traffic does not subsidise another. During this unstable formative stage, however, when revenues are insufficient to meet costs, the lower passenger fares are a reflection of an I.A.T.A. policy of traffic promotion and do not imply that mails revenues are used to subsidise other forms of traffic. Recent reductions in air mail postage rates have in fact largely resulted from the ratio narrowing from 7:1 to 7:2 on the North Atlantic, and the introduction of a comparatively low rate on the Empire services. The carriage of all first class mail in Europe without surcharge at 3 gold francs (paragraph 4 above) will mark a definite step towards realising the long-term policy of relating both mail and passenger rates directly to costs, and so obviating a situation in which one class of traffic may appear to subsidise another.

#### THE COSTS OF THE TRANSPORT SERVICES AND NUMBERS OF PASSENGERS CARRIED B.O.A.C.

(i) As stated earlier in this memorandum under the brief history of the Corporations, owing to the extensive mutual waiver of charges as between B.O.A.C. and certain Government Departments it is impossible to determine the true cost of operating services during the period up to the cessation of the waiver system on 31st March, 1946.

It is not possible to adjust for waiver and the published accounts cannot, therefore, afford a true measure of trading results, but they do indicate the extent of the deficiency grant required from public funds, after being adjusted for mail revenue and the cost of special services. Furthermore, it must be emphasised that the inter-Departmental arrangement under which net postal revenue from the carriage of mails accrued to the Air Ministry (later M.C.A.) to be set-off against the cost of the air services, is not one which would apply commercially. Normally, the net air mail revenue would accrue to postal funds from which payment to the airline operators for mail carried would be made at commercially agreed conveyance rates.

The Corporation's Annual Report does attempt to adjust for waiver but the result achieved should be treated with reserve.

The costs of the air services operated by B.O.A.C. charged to public funds from within the Corporation's deficiency grants may be summarised as follows:—

	1943/44 £	1944/45 £	1945/46* £
Net expenditure on Air Services (excluding obsolescence on aircraft)†... ..	4,741,795	5,688,712	5,789,706
Special Services recoverable within deficiency grant ... ..	519,964	541,125	470,180
	5,261,759	6,229,837	6,259,886
Less—			
Payments from G.P.O. for mails ... ..	4,278,233	6,307,594	3,220,070
Total—			
Deficit (charged or chargeable to A.M. or M.C.A. Votes) ... ..	983,526‡		3,039,816
Surplus ... ..		77,757	
Less—			
Services other than air transport ... ..	269,964	157,706	259,611
Net deficit on air services ... ..	713,562		2,780,205
Surplus ... ..		235,463	

(ii) As to the numbers of passengers carried, it will be appreciated that these figures in themselves are not a true index of the volume of the traffic uplifted, since the distance travelled by each passenger is a relevant factor, as is the amount of freight, mail, etc., carried.

Statistics of B.O.A.C.'s operations for three full years are given below, together with the latest subsequent figures at present available, covering the period from 1st April to 31st December, 1946.

	1943/44	1944/45	1945/46	1946/47 (First three quarters)
Aircraft hours ... ..	93,400	138,105	179,193	105,172
Aircraft miles ... ..	14,320,780	21,767,942	29,075,668	17,913,843
Capacity ton miles ... ..	31,353,422	53,458,344	67,352,983	44,363,285
Passenger miles ... ..	124,770,418	197,947,494	310,836,095	206,940,214
Traffic carried:				
Passengers ... ..	72,614	103,804	144,090	105,458
Excess baggage—tons ... ..	342.77	558.28	894.92	—
Mail—tons ... ..	1,480.97	1,966.05	2,151.52	1,290
Diplomatic bags—tons ... ..	702.42	850.20	639.17	—
Cargo—tons ... ..	3,709.50	5,519.54	4,279.51	1,715§

#### B.E.A.C. and B.S.A.A.C.

As has already been stated in the "Brief History of the Three Corporations" these two Corporations were not formed until 1st August, 1946, and insufficient time has elapsed for accurate costs to be available.

The latest available statistics of the Corporation's operations are given below covering the period 1st August to 31st December, 1946:—

	B.S.A.A.C.	B.E.A.C.
Aircraft hours ... ..	5,829	11,129
Aircraft miles ... ..	1,175,112	1,873,818
Capacity ton miles ... ..	Not available	3,760,827
Passenger miles ... ..	15,777,345	20,940,286
Tons of cargo ... ..	77	281
Tons of diplomatic mail ... ..	1	44
Tons of mail ... ..	58	283
Tons of baggage ... ..	—	824
No. of passengers ... ..	3,446	44,573

\* The 1945/46 figures have been extracted from the Corporation's audited accounts but have not yet been approved by the Ministry or Treasury for deficiency grant purposes.

† The total sum of £1,640,710, which was paid to the Corporation in respect of deferred obsolescence on aircraft for the period 1st April, 1940, to 31st March, 1946, is not included in this Statement.

‡ In 1943/44 and previous years a specific payment of £141,667, additional to the deficiency grant, was made to cover B.O.A.C.'s annual provision for the redemption of Airways Stock (included in deficiency grant for 1944/45 onwards).

§ Includes baggage and diplomatic bags.

### LAND ACQUISITION

#### *Land Acquired or to be Acquired for Civil Aviation in the United Kingdom*

A.	Total acreage of aerodromes already under sole or part control of M.C.A. ... ..	20,039
B.	Total acreage of aerodromes which M.C.A. eventually plan to take over ... ..	9,464
C.	Total acreage of service aerodromes at which M.C.A. will have joint user facilities ... ..	4,800
	Total estimated acreage of aerodrome Telecommunication sites ... ..	144
	<b>Total</b>	<b>34,447</b>
D.	Total acreage of civil aerodromes under control of outside interests (including aircraft manufacturers) ... ..	12,669
	Total estimated acreage of Telecommunication sites to be provided by M.C.A. at private airfields ... ..	72
	<b>Total</b>	<b>12,741</b>

### AERODROME MANAGEMENT

Before the war, all but three aerodromes in the United Kingdom were owned by municipalities or private enterprise, but as from 1937-38 the technical services (air traffic control, radio and meteorological services) were provided by the State. There was thus a division of responsibility as between management and technical services. The three State aerodromes were organised to follow this pattern.

With the end of the recent war, the Ministry of Civil Aviation, in taking over aerodromes, conformed to this pattern. Aerodrome Managers were appointed to look after the business side of the aerodrome, including Works Services and certain operational, but non-technical, functions, whilst the technical services were each separately directed from Headquarters. Under the Civil Aviation Act, Section 38(2), the Minister of Civil Aviation is required to appoint at each State-owned civil aerodrome an officer who shall be responsible for all services provided on the aerodrome on behalf of the Minister, including signalling services, flying control services and services connected with the execution of works. In accordance with this requirement, aerodromes will, in future, be administered by Aerodrome Commandants, who will co-ordinate and supervise the duties of (a) the heads of the technical services without derogating from their technical responsibility, (b) the Aerodrome Business Manager, and be responsible for all activities on the aerodrome within the sphere of responsibility of the Minister. So far, appointments of Aerodrome Commandants have been made at the London Airport, Northolt and Prestwick. Action is in hand for the selection of Aerodrome Commandants for other aerodromes taken over by the Ministry of Civil Aviation. This system is essential to provide a proper standard of efficiency and safety.

Under the Aerodrome Commandant, the Aerodrome Manager will be responsible for all business activities such as the collection of landing charges, the allocation of accommodation, the operation of fire and rescue services, the cleaning of public buildings and, within certain limits of devolved powers, the initiation of works services and making arrangements for "concessions" to firms wishing to provide such services as shops, car-hire, catering, etc.

Between Aerodrome Commandants and Ministry of Civil Aviation Headquarters, Divisional Offices are to be set up on a geographical basis so that day-to-day matters beyond the responsibilities of Aerodrome Commandants can be dealt with away from Ministry of Civil Aviation Headquarters. The Divisional Controllers, of whom there will be four, will be in a position to keep in close touch with what is going on at aerodromes within their divisions;

this system will lead to a very considerable increase in efficiency. Like the Aerodrome Commandants, Divisional Controllers will be responsible for technical services as well as for business management, and they will have suitable personnel on their staffs for this purpose.

Initially, the financial powers of Divisional Controllers and Aerodrome Commandants may have to be rather restricted, but it is hoped, as experience is gained, to extend the powers of these officers to the greatest degree practicable commensurate with proper financial control.

It is hoped from the 1st April next to set up, at a first selection of the larger aerodromes, a system of individual income and expenditure accounts, which, again, will be extended as experience is gained.

The present position as regards the appointment of Divisional Controllers is that a Scottish Divisional Controller has been appointed, and arrangements for accommodation and staffing for his headquarters are well advanced. The Scottish Divisional Office should be functioning, at any rate in part, within about a month. A London Divisional Controller has also recently been appointed, but no progress has yet been made with the selection of staff or the provision of accommodation for this Divisional Office. The other two Divisional Offices, covering respectively the North of England and the South-West of England will be established later this year.

Works Services at Ministry of Civil Aviation aerodromes are performed on behalf of the Ministry by the Air Ministry Works Department. That Department has resident staff at the more important State-owned civil aerodromes, and uses all the resources of its decentralised organisation for the execution of works at State-owned civil aerodromes.

#### ADMINISTRATION AND ORGANISATION OF CONTROLS, BLIND LANDING AIDS, RADIO, ETC., SERVICES AND METEOROLOGICAL SERVICES

The provision of air traffic control and radio services for British civil aircraft falls within the terms of reference of the Controller of Technical Services, Ministry of Civil Aviation.

In the United Kingdom the provision and administration of these services is done by the State. Abroad such services fall into three categories:—

- (i) Services in Colonial territories.
- (ii) Those provided by Sovereign States.
- (iii) Ground services in territories occupied by allied military Governments.

The provision of services in foreign States is, of course, the liability of the individual State concerned: the services in the Colonies while being in principle a colonial liability require, in fact, as the Colonies are regularly required to provide facilities along British trunk routes, assistance in some form or another from this country. The situation in territories occupied by allied military Government is at the moment in process of resolution; generally speaking civil air routes across these territories are as yet few in number and, where required, facilities are provided by the Air Forces concerned (acting as the agent of the Control Commission).

The Controller of Technical Services in the Ministry is assisted by a Director of Civil Air Operations and by specialist directors covering the fields of Telecommunications, Navigation, Control and Aircraft Requirements (soon to be augmented by a Director of Flying Safety for accident prevention). It is the duty of the Director of Civil Air Operations to determine the requirements of British operators both at home and abroad, to formulate a technical policy to meet those requirements in conjunction with the appropriate specialist directors, and then to prepare co-ordinated plans, either for implementation by the appropriate directorates, or to secure agreement to the implementation of those plans along British routes overseas. Additionally the Director of Civil Air Operations has in conjunction with specialist Directorates to secure recognition of British views at international conferences on technical services and has to advise on the technical aspects of safety and other air legislation.

Civil Aviation in the international field presents a problem which is perhaps wider in scope than that of any other means of transport. In addition to sound

design, first-class building, expert servicing, and high standards of crew training modern aircraft must depend on efficient ground service for their safe and efficient operation; the essential elements of these ground services are radio aids to navigation and instrument approach, efficient air traffic control, and meteorology. These last two, Control and Met., cannot function without efficient communications.

When considering international flight two facts must continuously be borne in mind.

(i) The amount of radio equipment which can be economically carried by aircraft is limited.

(ii) If safety is to be assured, pilots and other aircrew must not be asked to cope with a widely differing variety of operating and control procedures along their routes.

These facts were very much in mind when the Provisional International Civil Aviation Organisation was set up at the Chicago Conference in 1944 and much of the work done by P.I.C.A.O. up-to-date has been directed towards securing uniformity of radio aids, operating and air traffic control procedures along international air routes.

The complete solution of the problem is far from easy. Before the war Europe had tackled the problems which faced European Aviation and had reached generally accepted solutions. The North American Continent faced with a different set of problems had reached somewhat different solutions; inter-Continental flight was in its infancy and it was not so large in volume that its operations caused serious disturbance to the more highly developed aviation patterns at its terminal points.

The outbreak of war brought enormous changes. The needs of the allied Air Forces resulted in large numbers of new navigational systems each of which was accompanied by its own operational technique and many of which were specifically suited to a particular theatre of war and did not consequently spread throughout the world. Additionally the necessity of ferrying large numbers of aircraft from the factories to the various theatres of war and of dealing expeditiously with the enormous traffic densities caused by large scale operations brought the problems of air traffic control into prominence.

The end of the war showed a very complex situation.

(i) European civil aviation had been virtually closed down and European operators and technicians knew nothing of wartime developments.

(ii) British Civil Aviation had to restart its internal services and gradually transfer from wartime to peace time routes overseas.

(iii) Inter-Continental flight which was just beginning in 1938 had become common place.

(iv) There was a world wide shortage of aircraft equipment designed to meet civil requirements.

(v) Many existing facilities were purely military in character, were operated by military Air Forces in other peoples' territory and could not be relied upon indefinitely.

(vi) The facilities which existed had been installed primarily to meet operational needs such as bombing and night fighting; they were often of a mobile and temporary nature and were frequently not suited to civil needs.

British Civil Aviation faced with the knowledge that air services must be got going immediately and that international standardisation through P.I.C.A.O. must necessarily take some years decided to press forward and use the most suitable types of wartime equipment which could be made available to civil air services, as an addition to the basic civil facilities which had existed before the war.

This course presented some difficulties. European technicians had to be trained to understand and operate new types of equipment, Governments sorely pressed for technicians to rebuild their industries found it difficult to make skilled manpower available for taking over and operating military installations



and for installing the new ones necessary for civil operations. These difficulties are being met as they arise and experience so far has proved that a solution along these lines was right.

As a result the pattern of British aviation emerges as follows:—  
*Europe and the United Kingdom.*

The Medium Frequency Direction Finding system is now operating again. This aid enables a ground W.T. station to determine the bearing of an aircraft's transmission. Two or more stations working together can consequently fix the position of the aircraft. In addition to the direction finding system numbers of medium frequency beacons and Radio Ranges have been brought into operation. The radio range enables an aircraft equipped with a suitable receiver to home to the range beacon along any one of four tracks approximately at right angles to each other while the medium frequency beacon enables an aircraft equipped with a receiver and a loop aerial to determine its bearing from the beacon.

The Standard Beam Approach system which is the development of an instrument approach system that was coming into general use in Europe before 1939 has been adopted for interim use in Europe. It consists of a Very high frequency (VHF) beacon on the ground that gives the pilot accurate direction indications which enable him to line his aircraft up with the runway in use and approach along a straight flight path. The pilot is given indications of his position along the flight path when he passes over two marker beacons before reaching the touch down point.

In addition to the above aids which were known before the war the British Government has recommended the use of the GEE system for European Civil Aviation. This radar system provides an extremely accurate means of fixing position. It was developed during the war and was the backbone of the navigational system used by the allied Air Forces in Europe. It is now available in England, France and part of Germany. The British Government has offered assistance to other European nations to enable them to install it in their territories. The V.H.F. radio telephone and direction finding system is also coming into general use. This is a voice communication system which came into general use during the war. It has a considerable advantage over the medium frequency systems in that it is not affected by thunder static. The system is now generally available at European terminals and it is planned to make the widest possible use of it in this country.

#### *Overseas Services.*

Overseas services did not at the end of the war present as difficult a technical problem as those within Europe. The war had brought about enormous expansion of ground facilities along the routes and the problem at the moment is rather one of converting well tried military organisations to civil use, with the attendant difficulties that arise from the fact that the military forces are normally not handing over to United Kingdom operators but to Sovereign States, many of which have not as yet reached a very high state of technical development. Assistance in the solution of problems such as this is one of the immediate functions of International Airadio, Ltd.

The types of aid in use on these overseas routes are once again based on the pre-war pattern with the additional use of well-proved wartime systems.

The basic system generally consists of medium frequency and high frequency direction finding stations with the addition of very high powered medium frequency beacons and radio ranges; the main additions to these are the use of very high frequency radio telephone with direction finding and the Rebecca/Eureka/Babs system. The Rebecca/Eureka/Babs system consists of a special aircraft set called Rebecca by means of which an aircraft can ascertain its distance from a ground radar beacon (Eureka). The aircraft can, if fitted with special aerials home, to the beacon. The same aircraft equipment enables the pilot to make use of a special instrument approach radar beacon known as Babs (Blind Approach Beacon System) which gives the navigator accurate indications enabling him to direct the pilot along a straight flight path to the runway in use. The navigator is also able to read continuously the distance from the touch down point.

Over and above the systems mentioned other aids are now beginning to come into general use; outstanding are two new methods of instrument approach. The P.I.C.A.O. instrument landing system and ground controlled approach (G.C.A.).

The P.I.C.A.O. I.L.S. system is, in its operational principles, very much like S.B.A. It provides indications which lead the pilot to the runway in use but in addition it gives indications of altitude during the approach so that the pilot can follow not only a path in the horizontal plane leading to the runway but can also make use of a path in the vertical plane leading to the same point. This system is a civil development of the U.S.A.A.F. equipment known as SCS.51, and is one of the first fruits of P.I.C.A.O. standardisation. The introduction of the equipment has already commenced and as more equipment becomes available it will slowly replace S.B.A. and Babs.

The G.C.A. system is a wartime radar instrument approach equipment; it consists fundamentally of radar signals on the ground which enable the ground controller to see the position of the aircraft in relation to the runway and by using radio telephone guide it in both elevation and azimuth to the touch down point. One civil G.C.A. equipment is now in use at London Airport and a further number are planned for installation at major civil airports during the next 18 months to 2 years.

The status of G.C.A. is that of a system which has been recommended by P.I.C.A.O. for use at busy airports. It fills several needs.

(i) It acts as a monitor on all approaching aircraft thereby checking from the ground that the pilot of an approaching aircraft using another Instrument Landing System is carrying out his functions safely and efficiently.

(ii) It calls for no special equipment in the aircraft and thereby acts as a perfect emergency standby in the event of failure of the P.I.C.A.O. instrument landing equipment in the aircraft.

(iii) It is usable by small aircraft some of which cannot carry the special equipment needed for using other approach systems.

(iv) The demands made upon the pilot who may be tired after a long flight are considerably less than those required by the pilot who makes use of other approach systems.

The two main disadvantages of the system are:—

(i) That it is dependent on the use of a common language.

(ii) That the pilot has no check on the correctness of the instructions given to him from the ground, and in consequence may feel some hesitation about descending as low by the system as he would with aids which give him direct information.

All considered it is clear that the pattern of the P.I.C.A.O. I.L.S. at all international airports and G.C.A. at major terminals is as complete as technical development can at the moment achieve on a commercial scale, and that within the limitation of existing systems it goes as far as is possible to meet the operational requirements which must be satisfied if civil air transport operations are to reach an assured economic standard of safety and efficiency.

The limitations of existing I.L.S. systems are fairly clear, at the moment it is not possible to use them commercially in dense fog; experiments to solve the fog problem have been under way for some time but at the moment are not sufficiently advanced to be translatable into terms of planning. In the meantime solutions are being sought in two directions both of which permit the actual touch down and landing to be completed visually. The first way lies in the use of F.I.D.O. which clears the fog away and permits a normal landing. To this end F.I.D.O. is being retained in commission in this country for emergency use and experiments are in hand to see whether the system cannot be so improved that it becomes commercially more attractive. The second way lies in the development of very high intensity lighting which will have sufficient strength to enable the pilot to complete a visual landing after he has reduced height to the safe minimum altitude on the instrument approach system.

Apart from instrument landing facilities P.I.C.A.O. has given consideration to other navigational systems which normally are classified either as long or as short distance aids.

Owing to differing traffic, geographical and climatic conditions it has not proved possible as yet to complete standardisation in either category; it has, however, been possible to narrow the field down from a very wide variety to one or two aids of each type, and P.I.C.A.O. has recommended the continued use of these types until a complete international standard can be achieved. At the same time an agreed operational requirement has been laid down which should go far to ensure that future developments will meet the full need. The aids selected for short distance navigation are the V.H.F. Omni-directional radio range and the Gee system. While in the sphere of long distance aids the continued use of H.F. Loran and Consol has been recommended, with a strong recommendation that low frequency Loran should be tried out as soon as possible.

#### *The Air Traffic Control Service*

The Air Traffic Control Service exists "to promote the safe orderly and expeditious movement of air traffic." Broadly speaking the service is the ground partner in every flight operation and it depends just as much as does the aircraft on the availability of adequate efficient radio aids to navigation and instrument approach and upon the existence of good meteorological facilities; it also needs a very comprehensive network of ground communications by telephone, teleprinter and radio.

The functions of Air Traffic Control differ according to the characteristics of the flight operations in the region concerned. Along lightly flown routes the service is concerned with watching the progress and safety of aircraft in flight, with advising such aircraft of the existence of difficult or dangerous conditions and with the provision of advice as to how best such conditions may be avoided. As aircraft approach their terminal airports when the air becomes more congested these functions are added to by the increasing necessity of so routing aircraft that danger of aircraft colliding is eliminated and at the same time so marshalling arrivals at the terminal airport that aircraft will not be held waiting for their turn to land but will be able to approach without any delay.

When the aircraft reach the vicinity of the terminal airport the duties of Air Traffic Control become even more onerous. The aircraft must be marshalled precisely and efficiently and must be placed in orders of landing and take-off. The runways best suited to operations must be put into use, the movements of aircraft taxiing on the ground must be fitted smoothly into the movements of aircraft waiting to land and to take-off. Ground transport and pedestrians must be controlled so that their movement fits in smoothly with the ground traffic pattern of the airport. Landing aircraft must be directed to unloading points and company officials must be kept informed of the progress of flights. Aircraft wishing to take-off must be directed to the appropriate runway, must be informed of the latest conditions along the route and their flights must be notified to other controls and cleared through to their destinations.

The broad pattern of Air Traffic Control is fairly easily understandable. In general a centre called an Area Control Centre deals with the movements of aircraft through fairly large geographical regions and is in direct touch with all airports and ground facilities in the region. Within the large area there will tend to be congestion within 30 to 40 miles of airports where considerable numbers of movements take place and these movements within this smaller approach and departure area will be marshalled by another special control section stationed usually on the airport concerned and called Approach Control.

Movements on and within the circuit of the airport are once again a more complex problem and are dealt with by yet another control section called Airfield Control.

The outline above tends, perhaps, to over simplify the problem but it gives some idea of the absolutely essential nature of the traffic control service from the point of view of aircraft safety, and points to the absolute need for maximum

efficiency in the control service if aircraft are not to waste expensive flying hours waiting to land and if modern expensive airports are to be economically utilized.

The administration of the Civil Control Service within the United Kingdom is the responsibility of the Ministry of Civil Aviation. Owing, however, to the small size of the country and the absolutely essential nature of uniform control in the same air space it has now been agreed that a unified control service staffed as appropriate by the R.A.F., by the Royal Navy, and by civilian controllers, will be put into effect in this country. At the moment planning to this end is well under way.

Besides calling for an elaborate network of G.P.O. telephone and teleprinter lines the Control Service needs special types of radio and radar facilities to assist it in its duties. The information so gained must be presented in readily assimilated form so that advice or instructions from the Control staff can pass quickly to aircraft or other control centres needing it. Active development is going ahead and the first fruits of the development programme will be seen in the months to come.

The types of radio equipment immediately required by the various types of control are:—

(1) *Area Control.*

A ground radar set is required which will enable Area Control to see and monitor the position of aircraft in busy areas; steps are being taken to set up a wartime equipment for this purpose in the London Area and at the same time experiments will be carried out which, it is hoped, will lead to a specification for a more complete civil equipment.

(2) *Approach Control.*

An approach control radar set with automatic direction finding incorporated to assist in the identification of aircraft will be put into operation shortly at London Airport. The set, although the first of its kind, will it is confidently anticipated enable approach control to see all aircraft within 20-25 miles of London Airport.

(3) *Airfield Control.*

A radar set which will display to the Airfield Controller all movements on the surface of the airfield has been under development during the past 18 months. The first experimental model is now nearly complete and will be tested during the next few months under operational conditions with a view to compiling the operational data needed to place a firm specification. The Airfield Controller would be supplied with information of movements of aircraft in the air near the airfield by an extension of (2) above.

*Meteorological Services.*

Meteorological services for civil aviation are provided by the Air Ministry. Following on a request from the Ministry of Civil Aviation the Meteorological Office assigns the staff necessary to carry out the required services. The staff in all but exceptional cases is civilian and when allocated to civil aviation comes under the operational control of the Airport Commandant or other appropriate authority.

Within the Meteorological Office an Assistant Director and two Branches are devoted to civil aviation requirements. One Branch specializes on Home and the other on Overseas needs. The Home Branch deals with requirements both in the United Kingdom and Europe and the Overseas Branch apart from providing for overseas requirements is responsible for the United Kingdom aerodromes at Prestwick and London.

The Meteorological Office receives at its Central Forecast Station at Dunstable every hour, reports from centres all over the United Kingdom, Europe and Meteorological Stations farther away. These reports are drawn up on special meteorological charts and are retransmitted to other centres concerned.

Apart from these reports direct interchange of landing information takes place between airports along the air routes so that aircraft can be certain at any time of receiving the latest information in flight.

Each airport is an addition linked up with the main station in its area which is in turn linked up with Dunstable so that crews before take off can be sure of receiving any information they require from the Meteorological Officer at the station who is aware of the latest developments.

#### *Briefing Service.*

It is pointless to establish sufficient radio aids and control systems unless minor day to day changes on serviceability or techniques can be brought effectively to the notice of aircrew. To this end the Ministry of Civil Aviation provides briefing facilities at its main airports to ensure that aircrew have the opportunity to prepare flight plans that will ensure safe flights by reason of the fact that the information provided to crews is always accurate and up to the last minute. The elements of the briefing service are, of course, meteorology, signals, control procedures, aerodrome serviceability and navigation.

#### *Ground Training Organisation.*

The efficiency of modern technical services has become increasingly dependent upon the existence of a very complete ground training system. The crews who are to man and operate modern technical systems such as ground controlled approach or modern air traffic control radars and the Air Traffic Control staffs all require an increasingly complex and long training if efficient and safe service is to be provided.

During the war the R.A.F. set up enormous training organisations and civil aviation during the past two years has been fortunate in that these have been available to it; with the reduction in strength of the R.A.F. the load must now be increasingly borne by civil aviation and steps to this end are now being taken.

Where possible the guiding principle behind these steps is that integration of Training Organisation with the R.A.F. should be carried out, with its corresponding decrease in overhead costs and increase in the efficiency and standards of the systems in use.

## APPENDIX II.

### FINANCIAL POWERS DELEGATED TO DIVISIONAL CONTROLLERS AND AIRPORT COMMANDANTS

#### I. AIRPORT COMMANDANTS

##### *(a) Powers in relation to repairs and new works*

Airport Commandants have the power, exercised through the agency of local Superintending Engineers representing the Air Ministry Works Department to put in hand repair works costing not more than £2,000 for any one project. They may also, through the same agency, execute new works costing not more than £10 for any one item. This latter limitation is being raised to £50.

##### *(b) Powers of local purchase*

In an emergency which cannot be promptly dealt with by drawing upon Divisional Stores, Airport Commandants may make purchases locally on their own responsibility, but financial limits of this discretionary power are at present £1 per item and £5 per month, but they are about to be increased to £5 per item and £25 per month.

Normally Commandants are able to provide advance estimates of their requirements which are covered by bulk purchase at Headquarters and held at their disposal at Divisional Stores for withdrawal as required.

## 2. DIVISIONAL CONTROLLERS

Proposals for delegating financial powers to Divisional Controllers have been worked out, but promulgation has been deferred for a short period while suitable staff is being selected and where necessary instructed in their duties at Headquarters.

### *(a) Powers in relation to new works*

The Divisional Controllers will have power to authorise new works services up to a limit of £500 for any one complete project. Once all the Divisions are functioning it may be advisable to allocate to each an overriding annual allocation not to be exceeded without reference to Headquarters, in order to guard against any possible over-spending on the Estimate for the year.

### *(b) Rents, recovery action and local contracts*

The Divisional Office will check and certify for payment all recurring demands for rents and way leaves, and will initiate action to recover sums due from tenants under existing contracts in respect of heat, light, power and water supply. It is proposed that Divisions will place contracts on behalf of aerodromes, either singly or in groups, for domestic services such as window cleaning, chimney sweeping, laundry, and the repair of boots and clothing for uniformed staff. The supply and maintenance of motor vehicles will be arranged at Headquarters through the Ministry of Supply, and flexibility will be ensured by conferring upon Divisions authority to place contracts for local repairs up to a £100 each item, and to permit aerodromes to vary normal arrangements in appropriate circumstances, either by hiring additional vehicles or by hiring out under principles and rules laid down by Headquarters.

### *(c) Petrol and Oil*

Petrol and oil are normally covered by Headquarters contract but Divisions are being given unrestricted powers where stocks are exhausted or where there is a breakdown of supply or other emergency.

### *(d) Emergency action*

Similarly, Divisions will have full power to take all action necessary in relation to the time and risk factors, to supplement normal arrangements for the provision of crash removal gear, fire fighting and first aid appliances and equipment, and temporary airport lighting.

### *(e) Furniture*

Furniture at aerodromes will be provided according to designs and standards arranged at Headquarters, but Divisions will have unrestricted powers to authorise renewals and repairs and may authorise local requirements outside the approved scales up to a limit of £25 for a single item. Contracts for cleaning furniture will be placed by Divisions.

## 3. CONSIDERATIONS UNDERLYING THE ABOVE ARRANGEMENTS

It may be convenient to state briefly the main considerations which have influenced the shaping of the arrangements discussed in the preceding paragraphs. On the one hand, centralised financial control is justified in so far as it ensures maximum economy through bulk purchasing contracts and avoids extravagant or abortive expenditure such as might be incurred locally as a result of imperfect appreciation of future policy developments in a period of expansion affecting aerodromes to be used, the types of aircraft to be employed, and the type and volume of traffic to be handled. Furthermore, the responsibility for ensuring that the Annual Estimates of expenditure are not exceeded cannot be devolved, Expenditure of exceptional magnitude or involving the application of some new principle of development must necessarily be controlled centrally.

On the other hand, speed in execution and adaptability to changing circumstances involving the best use of local knowledge can only be achieved by fostering local autonomy.

4. It is expected that conditions will gradually become more stable; for example, the programme of land acquisition has only just been commenced, and standard scales for providing mechanical transport and radio aids are still under review. It has also to be borne in mind that the effectiveness of local officers in matters of finance depends to a large extent on training and experience. For these reasons, the arrangements now in force or about to be introduced, for delegating financial powers, are regarded as a prudent beginning, to be extended and supplemented later on whenever there are reasonable grounds for believing that such a step will promote the efficiency of the aerodromes organisation and economy in its administration.

July, 1947.

### APPENDIX III.

*Memorandum for the Select Committee on Estimates to indicate services performed at London Airport in the following categories:—*

- (a) Services provided by M.C.A.
- (b) Services provided by British Corporations.
- (c) Services provided by foreign operators for themselves.

#### GENERAL DIVISION OF FUNCTIONS

1. The services performed at London Airport by M.C.A. are those necessary to the management and administration of the airport; the Aerodrome Commandant is responsible to the Minister for all these services provided on the airport on behalf of the Minister, including "signalling services, flying control services and services connected with the execution of work". (Section 38 (2) of Civil Aviation Act, 1946.) The function of each of the three Corporations is to provide air transport services (Section 2 of 1946 Act) and their services at the airport are limited to those necessary for airline operation. The foreign operating companies provide services similar to those of the British Corporations except where, as in many cases, they contract with a British Corporation to act as agents for them.

2. The relation at the Airport between the Ministry and the operator is very much that of landlord and tenant. But airport management, on behalf of the Ministry, is also responsible for providing or arranging for the provision of general amenities for the comfort and convenience of passengers and the public, e.g., restaurants, waiting rooms, spectators' accommodation, shops, etc. On the technical side, the Ministry provides air traffic control, telecommunication and briefing services and a fire and rescue organisation. Meteorological services are provided by the Air Ministry.

3. The airline operators convey passengers, baggage and freight between London and the Airport and see that they are embarked on the right aircraft or road vehicles as the case may be. It follows that they concern themselves with the proper documentation of passengers, baggage and freight and guide them through the Customs, Immigration and Health examinations. They are responsible, subject to air traffic control, for the arrival and departure of aircraft, for the maintenance of aircraft and for the ancillary administrative and technical services essential to the operation of the airline. These airline services are provided independently by each of the operators using the Airport but the British operators, in many cases, act on an agency basis for foreign operators, most of whom, however, do their own office and administrative work. The American operators also accept responsibility for marshalling their own aircraft on the apron (see paragraph 13 below).

#### DETAILS OF SERVICES ON WHICH DUPLICATION WAS THOUGHT POSSIBLE

4. Power to appoint M.C.A. constabulary is given in Section 44 of the 1946 Act. The M.C.A. constabulary are responsible for:—

- (a) Control of traffic within the aerodrome boundary, including passengers, visitors and vehicles.
- (b) Prevention of trespass, e.g., keeping unauthorised persons off taxi-ways or runways where their presence may endanger life or property.

(c) Tarmac and passenger building duty to safeguard the interests of the Customs, Immigration and Health Authorities. In particular, although the Traffic Staff of operating companies (in pursuance of the legal obligation placed on pilots of aircraft) are responsible for conducting passengers from their aircraft to the Customs, Immigration and Health Authorities and also for seeing that baggage and freight is brought in for Customs examination, it is the responsibility of the Constabulary to supervise the process and ensure that there is no contact between visitors and passengers who have not cleared these controls.

B.O.A.C. employ Security Wardens who can be regarded in no other light than as "House Police" such as are employed by departmental stores. Their functions are as follows:—

(a) prevention of theft of Corporation property in premises wholly occupied by the Corporations;

(b) safeguarding Diplomatic mail, passengers' possessions, precious cargo whilst in the custody of the Corporations and their responsibility;

(c) supervision of loading and unloading aircraft from the same point of view;

(d) examination of incoming aircraft to ensure that passengers' personal effects are not left on board, examination of aircraft instruments, etc.;

(e) Normal preventive measures involved in handling mail and freight generally, including investigation into larcenies and violations requiring examination of documentation.

Each operating company is liable for any compensation for loss of articles in their custody and it is reasonable that these domestic security measures should be performed by them. There is no duplication of manpower in the carrying out of the M.C.A. and Corporations security measures since the duties performed by the respective staffs do not overlap. No economy in the number of staff employed would be achieved if they were to be amalgamated under one control. About 12 Wardens are employed by B.O.A.C. for work at London Airport itself; others, based on London Airport safeguard hostels, stores, etc., located outside the Airport boundary and operated by the Corporation.

5. B.O.A.C. also perform similar security services for all foreign operators for whom they act as agents; B.S.A.A.C., having a much smaller organisation do not employ Security Wardens as they find that a night watchman is at present adequate.

#### BAGGAGE HANDS

6. M.C.A. employ baggage porters whose task it is to unload from coaches, etc., baggage on arrival from central London, carry it to the Customs bench and, after inspection, from there to operating companies' vans which are drawn up at the Customs building. Similarly, baggage from arriving aircraft is unloaded by M.C.A. porters from the companies' vans at the entrance to the buildings, taken to the Customs bench and from there to the coach departing for central London. These services are performed in, and restricted to, the airport buildings.

7. The operating companies take baggage in their vans between the passenger handling buildings and the aircraft. They employ baggage loaders at the aircraft whose function it is to load and trim the baggage so that it is correctly and safely disposed in the aircraft. The correct trimming of the baggage is essential to the safety of flight and its supervision is the personal responsibility of the Captain of the aircraft. For this reason, this function, which calls for special skill on the part of the staff employed, must be an operator's responsibility.

8. There is, therefore, a well-defined distinction of function between the M.C.A. baggage hands or porters and the operator's loaders. There is no duplication or waste of staff since the two functions must be performed concurrently and the same number of staff would be required even if it were practicable or desirable for both to be under one control.

9. B.C.A.C. perform aircraft loading services for foreign operators at the Airport on an agency basis; B.S.A.A.C. employ their own staff.



## APRON MARSHALLERS

10. The marshalling of aircraft on the apron involves two separate functions:—

- (i) allocation of a bay to the aircraft;
- (ii) the physical "waving in" of the aircraft to that bay.

The first function is performed by an M.C.A. marshaller, acting under instructions from the Air Traffic Controller. The second is undertaken by the operators. The second function must be an operator's responsibility since, under present circumstances, the operator bears the risk of damage through accident. The allocation of bays is done independently by M.C.A., rather than by one of the operators, to ensure that no question of favouritism arises.

11. There is, however, no duplication of manpower. M.C.A. have one man on duty per eight hour shift and the operators make use of their engineers to wave them in. These engineers have, in any case, to be at the aircraft parking place to work on the aircraft as soon as it is free for them. There is no separate grade of "marshaller" in the Corporations.

12. B.O.A.C. perform these marshalling services for the foreign operators for whom they are agents, except the U.S. operators, who do their own, as do B.S.A.A.C.

## TELEPRINTERS.

13. Teleprinter services are maintained both by M.C.A. and by the Corporations. The M.C.A. teleprinter services are part of a widespread network for passing navigational and operational messages between aerodromes and certain "traffic" messages which are allowable under international agreement. They form part of the air traffic control and telecommunications network available for the benefit of all aircraft operators. The Corporation's teleprinter services, on the other hand, are provided for purely domestic purposes. There are two distinct services. The Ministry needs to maintain a network which is always clear for urgent air traffic control, meteorological and operational messages, and cannot risk delay on this network by allowing it to be used by operators' commercial messages. The operators equally have to have means of sending urgent messages, sometimes of an operational character, for the conduct of their own business as carriers and operators. Operators' messages of an operational character can be sent through M.C.A. channels but there would still remain a substantial volume of commercial and traffic messages which should not normally be allowed to impede M.C.A.'s operational network. In qualification of the above statement it should however be pointed out that M.C.A. have had serious difficulties in bringing their complement of teleprinter operators at London Airport up to the approved strength necessary to give a fully adequate service and the operators have thus to some extent found it necessary to provide operational services of their own which might not have been necessary if the M.C.A. system had been fully effective. This situation should disappear once M.C.A.'s complement is satisfactorily filled. The Corporations have two main channels, one as an extension from the central M.C.A. section on the airport which is intended to convey operational messages, and tie lines to their head offices, to enable them to pass domestic information, such as advance passenger lists, etc., quickly. The extension teleprinters to the Corporations could only be replaced by a system of messengers and represent a saving of manpower. The service provided by the Corporations' domestic tie lines could not be provided by the M.C.A. teleprinter system which exists for quite different purposes and has different outlets. There is an analogy in other fields as between the G.P.O. teleprinter system and the private teleprinter lines operated by large commercial undertakings, e.g. between head office and branches. The Annex to this paper gives an account of the historical background against which this paragraph should be read.

14. Each operator requires a separate teleprinter section.

## CONCLUSIONS.

15. Many similar types of staff are necessarily employed at State Airports by the Department and by each operator but although some of the work performed by these staffs may appear to be of a similar type, it is not, in fact,

the same. For example, all employ drivers, secretaries, etc., to undertake functions which are the individual responsibility of the management of the particular operator concerned. For this reason, at the London Airport, whilst particular services may appear to overlap, in fact there is a clear and well-understood division between those deriving from the State's position as aerodrome owner and manager and those of purely domestic nature within the proper functions of the users of the airport. The Sub-Committee can be assured that the logical division of functions as at present arranged does not involve any duplication of manpower.

July, 1947.

#### APPENDIX IV.

##### *Charter Agreements made by the Corporations.*

###### (a) B.O.A.C.

*Statement submitted 23rd July, 1947.*

In the past, by agreement with the Ministry of Civil Aviation, and in order to provide the necessary capacity to meet public demand, we have entered into various charter agreements; outstanding among which was the charter on a weekly basis to the Skyways company for the operation of a U.K./Karachi service. This charter terminated at the end of June, 1947.

In the U.K./Karachi charter B.O.A.C. acted as principals but on several other occasions we have acted as agents for third parties. Outstanding examples of this type of arrangement are the charters for the Anglo Iranian Oil Company between the U.K. and Basra, and a series of charters on behalf of the West African Government at their request.

Prices for these charters varied between 14s. 3d. per mile and 16s. 11d. per mile, according to the circumstances.

It is the policy of the Corporation only to charter in this way when our own resources do not permit us to meet public demand. As our resources increase so charters will diminish.

Our Charter Section deal with a considerable number of *ad hoc* charters which come to us as enquiries and are passed on by us to appropriate Charter companies. We receive a booking fee for this service. It would be impossible at this stage to give an accurate estimate of the revenue derived from this source but during June and the first three weeks of July, 1947, the Corporation received a total of £407 as commission.

###### (b) B.E.A.C.

B.E.A.C. submitted the following list of charter firms employed during the first six months of 1947. The terms of charter, of course, vary considerably according to the type of aircraft, the nature of the journey, the load to be carried, and the waiting time involved.

Air Contractors Ltd.  
 Huntings Air Travel Ltd.  
 Bond Air Services.  
 London Aero and Motor Services, Ltd.  
 Skyways, Ltd.  
 Morton Air Services.  
 Swissair.  
 Silver City Airways.  
 Lancashire Aircraft, Co.  
 Westminster Airways.  
 British South American Airways.  
 Scottish Airlines.  
 B.A.T., Ltd.  
 Airwork, Ltd.  
 Sivewrights.  
 Air Transport France.  
 International Airways.

###### (c) B.S.A.A.C.

B.S.A.A.C. have no charter agreements with private companies.

## APPENDIX V.

*Capacity-ton-Kilometres.*

In an attempt to measure the efficiency of the Corporations, the Sub-Committee requested them to submit figures showing the main categories of staff, with the number employed in each, and the number of capacity-ton-kilometres\* performed per head. They realised that there were many qualifying factors to be taken into account. B.O.A.C., for instance, has a large number of locally-engaged employees overseas who are in very low wage categories.

NUMBER OF STAFF IN RELATION TO NUMBER OF  
AIRCRAFT AND C.T.K.s PRODUCED

B.O.A.C.

Category of Staff	Number at 31st March, 1947	Number per Aircraft (193 at 31st March, 1947)	C.T.K.s performed per Employee
Aircrew ... ..	1,400	7.25	} 306.45
Administrative ... ..	7,653	39.66	
Industrial ... ..	13,529	70.10	
Catering ... ..	1,882	9.75	
TOTAL ... ..	24,464	126.76	

B.E.A.C.

Category of Staff	Number at 30th April, 1947	Number per Aircraft (88 in operation)	Number per Aircraft (Operating Fleet)	C.T.K.s performed per Employee (for month of April)
Aircrew ... ..	725	6.3	8.2	} 274
Administrative ... ..	3,296	28.1	37.4	
Industrial ... ..	2,281	19.5	25.9	
Catering ... ..	312	2.7	3.5	
TOTAL ... ..	6,614	56.6	75.0	

B.S.A.A.C.

Category of Staff	Number as at 7th May, 1947	Number per Aircraft (total fleet 21)†	C.T.K.s performed per employee
Aircrew ... ..	138	6.57	} 1570.5
Administrative ... ..	346	16.48	
Industrial ... ..	573	27.29	
Catering (inc. Star Girls)	57	2.71	
TOTAL ... ..	1,114	53.05	

\* Capacity-ton-kilometres (C.T.K.s) = the total weight-carrying capacity of an aircraft multiplied by the number of kilometres flown.

† No. on Scheduled Services — 15.

## APPENDIX VI

*Accounts of certain foreign airline operators (supplied by the Ministry of Civil Aviation)*

(i)

## QANTAS EMPIRE AIRWAYS LIMITED

BALANCE SHEET AS AT 31ST MARCH, 1946

CAPITAL AND LIABILITIES		1946	ASSETS		1946
		31st March			31st March
		£			£
Authorised Capital:			Fixed Assets and Stocks:		
1,000,000 Ordinary Shares of £1 each ... ..		<u>1,000,000</u>	Aircraft, Engines and Wireless (at cost) (see		
			Obsolescence Reserve) ... ..	159,381	
Shareholders' Funds:			Buildings, Hangars and Outsheds (at cost, less		
Share Capital—			depreciation) ... ..	27,821	
523,000 Ordinary Shares of £1 each ... ..	523,000		Plant, Machinery, Tools, Equipment (at cost,		
General Reserve ... ..	40,000		less depreciation) ... ..	25,541	
Profit and Loss Account—			Motor Vehicles ... .. (do.)	10,589	
Balance after allocating Dividend ... ..	<u>45,851</u>		Office Furniture and Fittings ... .. (do.)	12,411	
			Motor Launches ... .. (do.)	359	
			Land ... .. (at cost)	<u>21,333</u>	
Total Shareholders' Fund ... ..		608,851	Total Fixed Assets ... ..	257,435	
Liabilities:			Stock of Stores and Spare Parts (at cost) ... ..	<u>147,188</u>	
Sundry Creditors—			Total Fixed Assets and Stocks ... ..		404,623
(Including Reserve for Taxation) ... ..	785,373		Debtors Cash Funds and Investments:		
Dividend—			Sundry Debtors (less Bad Debts Reserve) ... ..	446,724	
(Declared 28th June, 1946) ... ..	<u>36,610</u>		Progress Payments on incompletd buildings... ..	38,845	
		821,983	Cash at Bankers and on Hand ... ..	493,096	
Obsolescence Reserve:			Australian Consolidated Inscribed Stocks and		
(Aircraft, Engines, Wireless, Stores and Spares)		208,072	War Loans ... ..	<u>301,414</u>	
Aircraft Replacement Reserve ... ..		114,796	Total Debtors Cash Funds and Investments ... ..		1,280,079
			Shares in Tasman Empire Airways Ltd.		
			(at cost) ... ..		69,000
		<u>£1,753,702</u>			<u>£1,753,702</u>

QANTAS EMPIRE AIRWAYS LIMITED  
 PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1946

	1946 31st March £		1946 31st March £
To Operating on costs :		By Subsidies, Receipts from Passengers, Freights, Excess Baggage, Charter and Short Flights, Special Flying, Sundry Receipts, Dividends and Interest on Invest- ments ... ..	1,766,734
Including Petrol, Oils, Maintenance and Repairs of Air- craft and Engines, Wages and Salaries, Insurance, Printing and Stationery, Cables and Telegrams, Office Expenses and Advertising ... ..	1,622,382		
To Obsolescence of Aircraft Engines, Wireless and Stores ...	40,765		
To Depreciation :			
Hangars, Outsheds, Plant, Machinery, Airport Equip- ment, Tools and Utensils, Stores Fixtures, Furniture, Vehicles and Launches ... ..	13,687		
To Portion of Development Expenditure for Empire Mail Scheme Written Off ... ..	—		
To Director's Fees :			
For year ended 31st March, 1946 ... ..	2,150		
Balance carried down ... ..	87,750		
	<u>£1,766,734</u>		<u>£1,766,734</u>

	1946 31st March £		1946 31st March £
To Provision for Taxation ... ..	33,689	By Balance brought down ... ..	87,750
Balance Transferred to Appropriation Account ...	54,061		
	<u>£87,750</u>		<u>£87,750</u>

PROFIT AND LOSS APPROPRIATION ACCOUNT AS AT 31ST MARCH, 1946

	1946 31st March £		1945 1st April £
To Dividend to Shareholders declared 28th June, 1946 ...	36,610	By Balance brought forward... ..	28,400
Staff Pension Scheme ... ..	—		
Balance carried forward to 1946-47 ... ..	45,851	By Profit for twelve months ended 31st March, 1946 ...	£54,061
	<u>£82,461</u>		<u>£82,461</u>
		By Balance brought forward... ..	1946 1st April £45,851

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(ii)		BALANCE SHEET AS AT 31ST DECEMBER, 1945	
S.A.B.E.N.A.		ASSETS	LIABILITIES
<i>Locked up Capital</i>			<i>In respect of the company</i>
Preliminary expense	170,282·96		Capital : 40,000 preference shares
Written off ... ..	124,908·61		of 500 francs each... 20,000,000·00
		45,374·35	52,000 participating
Contributions, experi- mental expenses, initial expense...		1·00	shares without desig- nation of value ... As memorandum*
Capital expenditure other than flying material ... ..	14,474,135·89		Legal reserve ... .. 20,000,000·00
Written off ... ..	8,185,148·72	6,288,987·17	787,382·69
			<i>Various funds</i>
Flying material and spare parts ... ..	72,148,987·60		Insurance fund ... .. 11,004,036·50
Written off ... ..	64,592,204·61	7,556,782·99	Fund for renewal of flying material ... .. 44,305,715·29
		13,891,145·51	Provident fund ... .. 2,271,702·66
<i>Realisable</i>			Supplementary pension fund ... 4,700,000·00
Shareholders ... ..		6,000,000·00	Debenture loans guaranteed by the state and the Colony ... 25,594,000·00
Stores ... ..		7,389,156·64	Towards third parties without real guarantee :
Sundry debtors :			<i>Creditors</i>
State ... ..	1,620,770·52		State : payment in application of article 33 of the Articles of Association ... .. 6,809,340·22
Colony ... ..	14,648,447·46		Colony : Account financing pur- chase of flying material ... 77,071,884·35
Sundry debtors ... ..	46,290,627·68	62,559,845·66	Various ... .. 31,259,909·59
		45,000,000·00	115,141,134·16
Victory Loan ... ..		92,000·00	<i>Various</i>
Treasury Certificate...		50,000·00	Provision for interest and writing off of debentures falling due on 1st January, 1946 ... 2,262,242·50
Share in fund for advances and loans		328,627·76	Provision for litigation ... 620,891·32
Doubtful debtors ... ..		121,419,680·06	Provision for doubtful credits 328,627·76
			Provision for reconstitution of stocks ... .. 4,500,000·00
<i>Liquid</i>			Credit accounts ... .. 7,869,011·27
Cash in hand and at bank ... ..		31,398,414·34	Provision for taxes ... .. 2,646,633·00
<i>Various</i>			18,227,405·85
Debit accounts ... ..	953,095·82		
Advances on orders...	65,001,432·69	65,954,528·51	

*Damages*

1. Resulting from the evacuation ordered by the Government	25,567,943·13		
Taken from writings off ... ..	18,290,295·49		
	<u>                    </u>	7,277,647·64	
2. War, seized or requisitioned ... ..	23,832,290·71		
Taken from writings off ... ..	16,532,415·95		
	<u>                    </u>	7,299,874·76	
		<u>                    </u>	14,577,522·40

*Suspense accounts*

Securities provided for by the Articles of Association ... ..	As memorandum*		
State account under the Articles of Association ... ..	83,539,916·74		
Colony account under the Articles of Association ... ..	3,485,925·88		
B.C. service commitments under the Articles of Association ... ..	7,388,565·86		
Agents: Bank of the Belgian Congo securities ... ..	1,887,295·34		
Aid to colonials—share in guarantee fund...	25,000·00		
Sundry transactions and contracts in progress ... ..	As memorandum*		
		<u>                    </u>	96,326,703·82

Fr. 343,567,944·64

\* Not available.

*Suspense accounts*

Securities provided for by the Articles of Association ... ..	As memorandum*	
State account under the Articles of Association ... ..	83,539,916·74	
Colony account under the Articles of Association ... ..	3,483,925·88	
B.C. service commitment under the Articles of Association ... ..	7,388,565·86	
Agents: Bank of the Belgian Congo Securities ... ..	1,887,295·34	
Aid to colonials—share in guarantee fund ... ..	25,000·00	
Sundry transactions and contracts in progress ... ..	As memorandum*	
	<u>                    </u>	96,326,703·82
<i>Profit and loss</i>		
Credit for the financial year under review ... ..		5,209,863·67

Fr. 343,567,944·64

PROFIT AND LOSS ACCOUNT FOR THE FINANCIAL YEAR, 1945

EXPENDITURE

	<i>Europe</i>	<i>Africa</i>	<i>Belgian Congo Service</i>	<i>Totals</i>
General administrative expenses ... ..	338,642·84	338,642·85	169,321·42	846,607·11
Expenses of reinstallation of Haren aerodrome ... ..	1,934,742·67	—	—	1,934,742·67
Operational expenses ... ..	5,141,103·59	42,676,174·98	14,241,554·67	62,058,833·24
Insurance, flights and flying material ... ..	87,996·22	3,406,066·52	1,013,092·56	4,507,155·30
Preliminary expenses written off ... ..	3,241·03	3,241·03	—	6,482·06
Capital expenditure other than flying material written off ... ..	149,973·22	1,092,277·26	376,034·68	1,618,285·16
Flying material and spare parts written off ... ..	579,549·02	27,655,755·82	9,520,955·87	37,756,260·71
Obligatory charges (interest and taxes) ... ..	773,273·30	314,148·04	108,150·71	1,195,572·05
Provision for doubtful debts ... ..	75,250·00	279,375·87	—	354,625·87
	<u>9,083,711·89</u>	<u>75,765,682·37</u>	<u>25,429,109·91</u>	<u>110,278,564·17</u>
Refund to the State (Article 33-litt. C of the Articles of Association) ... ..	—	—	6,809,340·22	6,809,340·22
Provision for taxes ... ..	—	—	—	2,646,633·00
	<u>—</u>	<u>—</u>	<u>—</u>	<u>119,734,537·39</u>
Credit balance ... ..	—	—	—	5,209,863·67
	<u>—</u>	<u>—</u>	<u>—</u>	<u>Fr. 124,944,401·06</u>
	INCOME			
Operational and various receipts ... ..	5,290,008·58	76,859,515·92	39,047,790·35	121,197,314·85
Interests deriving from the operation of guest-houses ... ..	16,644·18	3,730,442·03	—	3,747,086·21
	<u>5,306,652·76</u>	<u>80,589,957·95</u>	<u>39,047,790·35</u>	<u>Fr. 124,944,401·06</u>

DISTRIBUTION OF PROFITS

Legal reserve : 5 per cent. on 5,209,863·67 ... ..	260,493·18
First dividend of 6 per cent. on capital paid up ... ..	840,000·00
Board of directors' percentage of profits ... ..	410,937·05
College of auditors' percentage of profits ... ..	28,537·48
Second dividend on capital paid up ... ..	280,000·00
Bonuses to personnel ... ..	205,468·52
	<u>3,056,871·32</u>
Refund to the State under the Articles of Association ... ..	127,556·12
Refund to the Colony under the Articles of Association ... ..	—
	<u>5,209,863·67</u>



(iii) SOUTH AFRICAN RAILWAYS AND HARBOURS ADMINISTRATION  
SOUTH AFRICAN AIRWAYSAIRWAYS REVENUE ACCOUNT FOR THE PERIOD (TWELVE MONTHS) 1ST APRIL, 1945, TO  
31ST MARCH, 1946

Dr.

Cr.

Expenditure	Total	Earnings	Total
	£ s. d.		£ s. d.
To Superintendence ...	17,186 3 10	By Passengers ...	570,321 4 5
„ Air Station Expenses ...	41,973 14 6	„ Mails ...	9,286 8 0
„ Running Expenses ...	174,383 17 7	„ Freight ...	11,544 12 4
„ Repairs and Upkeep ...	160,799 19 7	„ Miscellaneous... ..	2,564 0 11
„ Agency Fees ...	21,097 12 3		
„ Advertising ...	617 4 5		
„ Insurance ...	9,225 15 1		
„ Miscellaneous Expenses	37,678 6 5		
Total Ordinary Working Expenditure... ..	462,962 13 8		
„ Depreciation ... ..	64,743 0 1		
Total Working Expenditure ... ..	527,705 13 9		
„ Balance (carried to Net Revenue Account) ...	66,010 11 11		
	593,716 5 8		593,716 5 8

AIRWAYS NET REVENUE ACCOUNT FOR THE PERIOD (TWELVE MONTHS) 1ST APRIL, 1945,  
TO 31ST MARCH, 1946

Dr.

Cr.

	Total		Total
	£ s. d.		£ s. d.
To Interest on Capital ...	6,060 17 7	By Balance (from Revenue Account) ... ..	66,010 11 11
„ Miscellaneous Expenditure—		„ Miscellaneous Receipts	1,367 9 1
Special Cost of Living Allowance	31,145 3 2		
Difference between Civil and Military Emoluments of Staff on Active Service ... ..	1,034 16 2		
Miscellaneous ... ..	10,847 9 9		
„ Balance (carried to Net Revenue Appropriation Account) ...	18,289 14 4		
	67,378 1 0		67,378 1 0

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## TASMAN EMPIRE AIRWAYS LIMITED

BALANCE SHEET AS AT 31ST MARCH, 1946 (FIGURES ADJUSTED TO NEAREST £1)

CAPITAL AND LIABILITIES				ASSETS			
	£	£		£	£	£	
Authorized Capital :			Fixed Assets :				
500,000 Shares of £1 each ... ..		500,000	Flying Boats, Engines, Propellers and Wireless (at cost—see Obsolescence Reserve) ... ..	195,246			
Issued and Paid Up Capital.			Delivery Costs of Flying Boats and Spare Engines (at Cost, less amounts written off) ... ..	1,405			
300,004 Shares of £1 each ... ..		300,004	House and Land (as Cost, less Depreciation) ... ..		196,651		
Sundry Creditors (including Provision for Dividend and Taxation) ... ..		91,133	Plant, Equipment and Tools (at Cost, less Depreciation) ... ..		2,952		
Reserve for Obsolescence Aircraft, Engines, Propellers and Wireless ... ..	162,583		Motor Vehicles and Launches (at Cost, less Depreciation) ... ..		7,197		
Stores and Spares ... ..	38,035		Office Furniture and Fittings (at Cost, less Depreciation) ... ..		1,447		
		200,618				209,474	
General Reserve Account... ..		19,000	Stores and Spare Parts :				
Profit and Loss Appropriation Account ... ..		5,647	Stores and Spare Parts (at Cost—see Obsolescence Reserve) ... ..	50,752			
			Obsolete Airscrews, Wireless and Spares Suspense Account (protected by Governments—Company Agreement) ... ..	2,919			
					53,671		
			Sundry Debtors ... ..		12,290		263,145
			Investments :				
			New Zealand Government Stock, including Interest Accrued ... ..	70,675			
			Loan on Mortgage (Staff) ... ..	177			
					70,852		

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	<u>£616,402</u>	<p>Cash Funds :</p> <p>Cash at Bankers, on Fixed Deposit and In Hand, including Accrued Interest ... .. 265,491</p> <p>Post Office Savings Bank (Staff Superannuation Trust Account)... 360</p> <hr style="width: 10%; margin-left: 0;"/> <p style="text-align: right;">348,993</p> <p>Development Expenditure :</p> <p>(Balance at 31st March, 1945) ... 8,311</p> <p>Less Refund by Subsidy ... .. 4,047</p> <hr style="width: 10%; margin-left: 0;"/> <p style="text-align: right;">4,264</p> <hr style="width: 10%; margin-left: 0;"/> <p style="text-align: right;"><u>£616,402</u></p>
<hr/>		
CONTINGENT LIABILITIES—		
Retrospective Labour Claim estimates ... ..	£3,000	
Customs Bond ... ..	£500	
Customs Agents Bond ... ..		

SELECT COMMITTEE ON ESTIMATES

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PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1946

31st March, 1946		31st March, 1946	
To Operating Costs, including Petrol and Oil, Repair and Maintenance of Aircraft, Engines and Wireless, Salaries and Wages, Insurance, Delivery Charges, Launch Costs, Workshop Costs, Agency Fees, Rent, Printing and Stationery, Telegrams, Cables and Telephones, Office Expenses, Advertising, Travelling, Audit, Legal, Annual License, and General Expenses ... ..	£ 169,399	By Net Subsidy, Receipts from Passengers, Freight, Excess Baggage, Interest and Sundry Revenue (after provision for usual Revenue Charges and portion Development Expenditure) ... ..	£ 245,547
„ Obsolescence of Aircraft, Engines, Propellers, Wireless, Stores and Spares ... ..	40,820		
„ Depreciation of Plant, Equipment and Tools, Furniture and Fittings, Launches and Vehicles... ..	4,397		
„ Amount Written Off Delivery Costs of Aircraft and Engines ... ..	1,274		
„ Provision for Industrial Claim ... ..	1,000		
„ Directors' Fees for Year ended 31st March, 1946	1,300		
	218,190		
„ Balance Carried Down ... ..	27,357		
	<u>£245,547</u>		<u>£245,547</u>
„ Provision for Taxation ... ..	19,016	„ Balance Brought Down ... ..	27,357
„ Balance to Appropriation Account ... ..	8,341		
	<u>£27,357</u>		<u>£27,357</u>

PROFIT AND LOSS APPROPRIATION ACCOUNT

31st March, 1946		1st April, 1945	
To Provision for Interim Dividend to Shareholders (3 per cent. per annum) ... ..	£ 9,000	By Balance Brought Forward after Adjustment for Subsidy and Insurance ... ..	£ 6,306
„ Transfer to General Reserve ... ..	4,000		
„ Balance Carried Forward ... ..	5,647	31st March, 1946	
		„ Balance from Profit and Loss Account ... ..	8,341
		„ Transfer from Taxation Reserve ... ..	4,000
	<u>£18,647</u>		<u>£18,647</u>
		1st April, 1946	
		By Balance Brought Forward... ..	£5,647

## (v) TRANS-CANADA AIRLINES

## PUBLISHED BALANCE SHEET AND ACCOUNTS FOR THE YEAR ENDED 31ST DECEMBER, 1946

ASSETS				LIABILITIES			
		\$	\$			\$	\$
<b>CURRENT ASSETS :</b>				<b>CURRENT LIABILITIES :</b>			
Cash... ..	...	674,454·88		Audited Accounts Payable ...	...	1,509,826·60	
Working Fund Advances... ..	...	26,456·76		Accrued Accounts Payable ...	...	2,352,435·21	
Special Deposits ... ..	...	1,647·55		Traffic Balances Payable ...	...	51,701·92	
Accounts Receivable ... ..	...	1,528,760·35		Air Travel Plan Deposits ...	...	652,375·00	
Traffic Balances Receivable ...	...	369,174·78		Salaries and Wages ... ..	...	325,798·51	
Balances Receivable from Agents	...	73,685·54		Other Current Liabilities ...	...	565,349·70	
Material and Supplies ... ..	...	1,551,403·21					5,457,486·94
Other Current Assets ... ..	...	140,041·54					
			4,365,624·61	<b>RESERVES :</b>			
				Insurance ... ..	...	1,514,273·38	
				Inventory... ..	...	100,000·00	
							1,614,273·38
<b>DEFERRED CHARGES :</b>				<b>CAPITAL STOCK :</b>			
Prepaid Charges ... ..	...	18,089·21		Common Stock Authorized—Par	Value \$25,000,000.		
Prepaid Group Life Insurance ...	...	13,961·69		Common Stock Subscribed—Par	Value... ..	8,000,000·00	
Research and Development Ex-	pense ... ..	413,067·43		Less Uncalled Subscriptions to	Common Stock ... ..	1,400,000·00	
Other Deferred Charges ... ..	...	58,409·42					6,600,000·00
			503,527·75	<b>SURPLUS</b> ... ..			
							255,061·23
<b>INSURANCE FUND</b> ... ..	...		1,514,273·38				
<b>INVESTMENTS IN AFFILIATED COM-</b>							
<b>PANIES</b> ... ..							
			6,287·00				
<b>CAPITAL ASSETS :</b>							
Property and Equipment... ..	...	12,981,186·01					
Less Accrued Depreciation ... ..	...	5,444,077·20					
			7,537,108·81				
			<u>\$13,926,821·55</u>				<u>\$13,926,821·55</u>

T. H. COOPER,  
Comptroller.

## CERTIFICATE OF AUDITORS

We have examined the books and records of the Trans-Canada Air Lines for the year ended the 31st December, 1946, and subject to our report to Parliament, we certify that, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the affairs of the Air Lines as at the 31st December, 1946, and that the relative Income and Surplus Accounts for the year ended the 31st December, 1946, are correctly stated.

15th March, 1947.

GEORGE A. TOUCHE & Co.  
Chartered Accountants.

## INCOME ACCOUNT

	1946	1945
OPERATING REVENUES:		
	\$	\$
Passenger ... ..	8,065,477·04	5,462,939·77
Mail ... ..	3,780,508·72	4,250,939·06
Express ... ..	305,238·69	307,386·62
Excess Baggage ... ..	72,946·77	53,790·04
Incidental Services—Net ... ..	586,633·88	437,532·49
Total ... ..	\$12,810,805·10	\$10,512,587·98
OPERATING EXPENSES:		
	\$	\$
Flight Operations ... ..	3,500,618·71	2,589,201·53
Flight Equipment Maintenance ... ..	1,445,757·05	1,459,572·02
Flight Equipment Depreciation ... ..	1,388,635·49	785,660·34
Ground Operations ... ..	3,638,415·45	2,851,379·15
Ground Facilities Maintenance ... ..	215,906·47	212,139·38
Ground Facilities Depreciation ... ..	125,776·33	118,995·41
Indirect Maintenance ... ..	843,058·45	553,932·04
Passenger Service ... ..	945,570·75	620,105·89
Traffic and Sales ... ..	921,238·31	511,576·29
Advertising and Publicity ... ..	220,758·29	64,197·83
General and Administrative ... ..	689,203·79	484,411·70
Interest Income ... ..	\$13,943,939·09	\$10,250,271·58
Miscellaneous Income—Net ... ..	8,899·87	29,620·64
Interest on Capital Invested ... ..	8,978·21	—29,164·55
Total ... ..	\$13,926,061·01	\$10,479,815·49
Deficit, 1946—Surplus, 1945 ... ..	\$1,115,255·91	\$32,772·49

SURPLUS ACCOUNT  
at 31st December, 1946

	1946	1945
Balance at 1st January, 1946 ... ..	—	1,524,685·62
Net Loss in Operations, Year 1946 ... ..	1,115,255·91	—
Dividend Appropriation of Surplus ... ..	154,368·48	—
Balance at 31st December, 1946 ... ..	255,061·23	—
	\$1,524,685·62	\$1,524,685·62

## STATISTICAL DATA

	1946	1945
Route Miles Operated ... ..	6,511	5,299
Plane Miles Flown—Revenue ... ..	14,162,377	10,506,075
Plane Miles Flown—Non-Revenue ... ..	1,702,293	1,040,152
Revenue Passengers Carried ... ..	305,442	183,121
Average Passenger Journey—Miles ... ..	510	579
Percentage of Passenger Occupancy ... ..	76	84
Mail—Ton Miles ... ..	1,210,716	1,571,180
Express—Ton Miles ... ..	380,557	400,577
Excess Baggage—Ton Miles ... ..	132,935	100,110