

1929-30.

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

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PARLIAMENTARY STANDING COMMITTEE  
ON PUBLIC WORKS.

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REPORT

RELATING TO THE PROPOSED DEVELOPMENT OF THE

CIVIL AERODROME

AT

MASCOT, NEW SOUTH WALES.

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*Presented pursuant to Statute ; ordered to be printed, 10th April, 1930.*

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Dated 18th March, 1929.

7. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—DEVELOPMENT OF CIVIL AERODROME AT MASCOT, NEW SOUTH WALES.—Mr. Marr (Minister representing the Minister for Defence) moved, pursuant to notice, That, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-1921*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report, viz. :—Development of the Civil Aerodrome at Mascot, New South Wales.

Mr. Marr having laid on the Table plans, &c., in connexion with the proposed work—  
 Question—put and passed.

## VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES, No. 10.

Dated 5th December, 1929.

5. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—MASCOT, NEW SOUTH WALES—DEVELOPMENT OF CIVIL AERODROME.—Mr. Albert Green (Minister for Defence) moved, pursuant to notice, That, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-1921*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report, viz. :—Development of the Civil Aerodrome at Mascot, New South Wales.
- Question—put and passed.

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# DEVELOPMENT OF THE CIVIL AERODROME AT MASCOT, NEW SOUTH WALES.

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## REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, to which the House of Representatives referred for investigation and Report the question of the Development of the Civil Aerodrome at Mascot, New South Wales, has the honour to report as follows :—

### INTRODUCTORY.

1. The Civil Aviation Branch of the Department of Defence came into being at the end of 1920 to give effect to the Government's decision to foster and control the development of private and commercial aviation. In October, 1921, the Commonwealth acquired at Mascot a site to be used as a civil aerodrome to serve the City of Sydney. A certain amount of levelling, grading, and minor drainage work was carried out to permit of the area being used for the purpose for which it was acquired; and several inexpensive buildings were erected to house aircraft and facilitate the development of civil aviation.

It is now represented that civil aviation activities at Mascot have developed to such an extent that it is essential that the aerodrome be improved to provide facilities for this increased development.

### PRESENT PROPOSAL.

2. The proposal now submitted aims at the systematic development, over a period of years, of the aerodrome, to a stage when the aerial activities shall have increased to several times their present volume, and covers particularly the following items :—

- (a) drainage and improvement of the present landing areas;
- (b) provision of roads, footpaths, water, sewerage, and similar services;
- (c) provision of a suitable building area, including the necessary drainage and facilities for the proper handling of aircraft;
- (d) erection of additional buildings;
- (e) provision of facilities for the public (parking areas, &c.);
- (f) increasing the size of the aerodrome by the acquisition of certain adjacent lands.

### DESCRIPTION OF THE WORK PROPOSED.

#### (a) *Drainage and Improvement to Landing Area.*

3. *Drainage.*—The Mascot Aerodrome site, bounded on the west and south sides by Cook's River, was originally swamp land. The surface now consists of sand and marine shell filling, covered with a few inches of black sandy soil, with grass growing on it. It is generally low-lying, being from 2 feet to 4 feet above mean sea level. It is well protected from Cook's River by a substantial bank, through which the drainage from the site and some adjacent properties is discharged by means of a 24-in. pipe guarded by a flap valve. Some levelling and grading work has been carried out on the area since its acquisition, but it is stated that on occasions of heavy or sustained rains the surface has become very wet, and caused inconvenience in the handling of planes, and to large crowds of visitors assembled.

With the increased use of the area for commercial purposes it is claimed that it should be in a condition to admit of machines taking off and landing in all weathers.

4. The land along Sir Ross Smith-avenue is rough and requires grading, to drain to an open channel, along the northern side. It is proposed to create a false divide along the club house boundary fence, so that all the land to the south of the club house will drain away from the landing ground in shallow open drains with concrete inverts. The ground immediately in front of the club house and hangars will be filled with sand filling, and other low places on the area will be graded to run the water off. Underground drains are proposed to be laid to carry the water from the lowest spots to the existing drains round the area discharging through the protecting bank into the river.

5. *Surfacing*.—Experience in other parts of the world has shown that no turfed surface will indefinitely withstand the wear and tear involved in the frequent landing and departure of heavy aircraft, and it is becoming the practice to lay down at all important aerodromes properly constructed runways to carry such traffic. Such runways comprise only a comparatively small proportion of the level area known as the landing ground. These runways are expensive to construct, consequently it is not proposed to recommend them until experience has proved that they are necessary. In the meantime the Committee ascertained that information is being obtained from America, where runways are being almost universally provided, and experiments are being conducted by the Commonwealth Department of Works, with a view to finding a cheap and efficient form of construction. One method of treatment for these runways, which is being used with some success abroad, is by spraying with oil. Should experiments here be successful it is proposed to so treat the surface adjacent to the building area, which will be required to bear the heaviest traffic.

6. The estimated cost of giving effect to these proposals for drainage and surfacing is as follows :—

	£
Subsoil drainage, 7000 feet at £10 per 100 feet .. .. .	700
Concrete inverts to existing open drains in the south-western portion of the property .. .. .	240
Repairs to flap valves leading to Cook's River .. .. .	100
Cutting and filling to level hillocks and depressions in the additional area being prepared for landing—2,500 cubic yards at 4s. per cubic yard ..	500
General grading and clearing .. .. .	3,000
Oil treatment of area adjacent to hangars .. .. .	2,000
Total .. .. .	6,540

(b) *Roads, Footpaths, &c.*

7. *Roads and Footpaths*.—To improve the approach to the aerodrome and facilitate the circulation of traffic within the area accessible to the public, it is proposed to provide 2,300 feet of road 20 feet wide, 800 feet of road 15 feet wide, and 2,800 feet of footpaths 7 feet wide in the positions indicated on the attached plan. The footpaths are to be of concrete, and the roads are to be of bituminous penetration construction with concrete kerbs and channels.

The estimated cost of these services is as follows :—

	£
Roads 20 feet wide, 2,300 feet .. .. .	2,500
Roads 15 feet wide, 800 feet .. .. .	700
Footpaths, concrete, 7 feet wide .. .. .	825
Total .. .. .	4,025

8. *Sewerage*.—A sewerage system is proposed to serve the club house, refreshment kiosk, and all lavatory blocks proposed under the scheme. On account of the low-lying nature of the area the sewage will be collected in a central pit and then pumped up a rising main to the Water and Sewerage Board's outfall sewer. Estimated cost, £1,500.

9. *Water Service*.—In view of the valuable buildings and contents, it is considered essential that, in case of fire, a water service should be available about which there could be no doubt as to quantity or pressure. About a mile from the aerodrome there is a 20-in. main from the Potts Hill reservoirs, and it is proposed to lay down from this main a 6-in. cast iron main solely for the aerodrome. This main will be taken as a ring main round the hangars with 4-in. connecting pipe lines, and hydrants at convenient intervals.

Estimated cost—

	£
6-in. main from 20-in. main in Coward-street to Aerodrome, via Old Botany-road—1 mile .. .. .	2,750
Service mains, 6-in., 2,300 feet at 10s. foot .. .. .	1,150
Hydrants .. .. .	250
Total .. .. .	4,150



*(c) Provision of Suitable Building Area.*

10. It is proposed to locate all the necessary buildings in a compact area adjacent to Sir Ross Smith-avenue, but to permit of the adoption of this lay-out it will be necessary to acquire certain land to be referred to later. The design provides for a line of large hangars north of the line of Sir Ross Smith-avenue, with a line of intermediate sized hangars parallel to, and south of the large hangars. In the line of large hangars special provision is to be made for two hangars of large span with doors at each end. The line of intermediate hangars provides for four buildings of about 60 to 70 feet span.

11. It is essential that the building area shall be well drained, and to this end this area will be raised by filling. Around the hangars it is proposed to provide certain paved areas to permit of the easy handling of machines and their passage to and from the landing area. On the north side of the large building, to facilitate the handling of aircraft it is proposed to construct aprons of concrete. During the early stages of development it is considered desirable to permit visitors to the aerodrome to have access to the building area, and to better cater for such visitors, certain paved areas not essential for the handling of aircraft at this stage are being provided, but these will be so located that they will be used by aircraft as the aerodrome develops.

The estimated cost of these developments of the building area is set down at—

First (immediate) stage—		£	s.	d.
Filling and gravelling 4,000 square yards at 6s.	.. ..	1,200	0	0
Spraying with bitumen 7,000 square yards at 1s. 3d.	.. ..	437	10	0
Sand filling, grading and grassing 4,000 square yards at 6s.	.. ..	1,200	0	0
Concrete aprons, 6 inches thick, 1,000 square yards at 20s.	.. ..	1,000	0	0
Concrete drains, grated, 2,610 feet at 5s.	.. ..	652	10	0
Concrete drains, oval pipe, 360 feet at 20s.	.. ..	360	0	0
Raising existing portable hangar and provision of floor thereto	.. ..	200	0	0
Contingencies .. ..	.. ..	250	0	0
<b>Total .. ..</b>	<b>.. ..</b>	<b>5,300</b>	<b>0</b>	<b>0</b>
Second stage—		£	s.	d.
Metalling and spraying with bitumen 2,000 square yards at 5s.	.. ..	500	0	0
Filling and gravelling 3,000 square yards at 6s.	.. ..	900	0	0
Spraying with bitumen 3,000 square yards at 1s. 3d.	.. ..	187	10	0
Sand filling and grassing 7,000 cubic yards at 6s.	.. ..	2,100	0	0
Concrete aprons, 6 inches thick, 1,000 square yards at 20s.	.. ..	1,000	0	0
Concrete drains, grated, 600 feet at 4s.	.. ..	120	0	0
Drain pipes (two 12 inches), 210 feet at 7s. 6d.	.. ..	78	15	0
Contingencies .. ..	.. ..	313	15	0
<b>Total .. ..</b>	<b>.. ..</b>	<b>5,200</b>	<b>0</b>	<b>0</b>

*(d) Erection of Additional Buildings.*

12. In addition to the buildings already in existence, it is proposed to provide—

	£
Caretaker's quarters, at an estimated cost of .. ..	1,300
Refreshment kiosk, at an estimated cost of .. ..	2,250
Administrative building and control tower .. ..	3,500
Lavatory buildings .. ..	2,000
<b>Total .. ..</b>	<b>9,050</b>

13. The refreshment kiosk is designed as a simple brick building with a galvanized iron roof, and a verandah 8 feet high on the front, returning on each side for a distance of 8 feet. It is proposed that there shall be a tea-room, 25 feet by 16 ft. 6 in. and 11 feet high, with another room of the same size adjoining it. There is to be also a kitchen 13 feet by 13 feet, as well as a scullery, a larder, and a back verandah. Off the back verandah it is proposed to have a cafeteria, 13 feet by 12 feet.



14. The administrative building and control tower has been designed to meet the wishes of the air authorities. The plan provides for a building of three stories with a flat roof and a lantern room on top to act as a beacon for air pilots. On account of the nature of the ground it will be necessary to erect this building on a raft of concrete. The building is to be of brick, while the lantern room is to be of timber, lined with plaster, and with glass windows all round. The ground plan shows a building 35 feet by 35 feet. The ground floor is to be used for administrative purposes, and is proposed to contain four offices and an entrance about 10 feet wide. Two of the rooms are to be 16 feet by 16 feet, and two 16 feet by 10 ft. 6 in. The first floor is designed to have exactly the same accommodation as the ground floor. The top floor is to contain one room 32 ft. 6 in. by 32 ft. 6 in. The lantern room is designed to be octagonal, 16 feet across, and roofed with a bituminous material. The top of the lantern-room is designed to have an opening about 3 ft. 6 in. square, through which a vertical beam of light can be projected skywards.

15. Arrangements are also being made for the erection, at the expense of the companies concerned, of hangars for Air Travel Ltd., Australian National Airways Ltd., and the De Havilland Aircraft Coy.

*(e) Provision of Facilities for the Public.*

16. The area for use by the public visiting the aerodrome is proposed to be provided to the south of the Aero Club Reserve. This area will require a considerable amount of filling; also some fences to restrict such visitors to certain areas.

The estimated cost of this is set down at—		£
Filling with sand 36,000 cubic yards at 2s. 6d. cubic yard	.. ..	4,500
Fencing, permanent type, 1,000 feet at 4s. per foot	.. ..	200
Fencing, wire fence, 2,050 feet at 2s. per foot	.. ..	205
Total .. ..	.. ..	<u>4,905</u>

*(f) Increasing the Size of the Aerodromes.*

17. The Mascot Aerodrome at present comprises some 161 acres, as indicated on the attached plan. It is now represented that to permit of the building lay-out contemplated, it is absolutely necessary to acquire an area of  $21\frac{1}{2}$  acres lying to the east of the property, as indicated by cross-hatching on the plan. In addition to providing sites for the buildings contemplated, the acquisition of this area will increase the ultimate dimensions of the landing area in an east and west direction; give a second means of access to the aerodrome; and make available a hillock, which will supply some of the filling for the aerodrome. This area comprises four separately-owned properties, and the estimated cost of acquisition is set down at £6,730. It is suggested that the area of 41 acres lying to the north of the aerodrome, and indicated by diagonal hatching on the plan, should also be acquired. This area is somewhat low-lying, and is liable to flooding from Cook's River and Shea's Creek. A large portion of it is under water at high spring tides, and the drainage from adjoining lands to the north-east also discharges under the railway and on to the property. The Works Department has recommended the acquisition of this area on the score that its eventual development in the hands of private owners would complicate the problem and increase the cost of adequately draining the aerodrome. The Civil Aviation Branch is desirous of acquiring it to increase the size of the aerodrome to an area compatible with the importance of an airport for Sydney. There is also a possibility that if allowed to remain in private hands the erection of tall buildings on the area might seriously interfere with the usefulness of the aerodrome. If acquired, this area will eventually have to be filled, but it is claimed that this can be done at a reasonable cost with the dredgings from Cook's River. The estimated cost of acquiring this land is said to be £10,760.

18. The Department also proposes to negotiate with the New South Wales Government for the use of the State lands lying to the south and west of the aerodrome, as indicated by vertical hatching on the plan. This area comprises about  $159\frac{1}{2}$  acres. It is largely low-lying and subject to inundation, but can be filled with dredging at a reasonable cost. It is represented that its acquisition would increase the aerodrome to what may be safely regarded as an adequate size; and would give access to the river at a point reasonably close to Botany Bay. If this area is not reserved for aerodrome purposes it is feared that the State may ultimately allow it to be utilized for factory sites, which would lead to the erection of buildings which would be prejudicial to the aerodrome. The valuation of this area is given at £36,685.



## ESTIMATED COST.

19. Summarizing the details given above, it will be seen that the total estimated cost of this project, as outlined, would be—

	£
(a) Drainage and improvement of landing area .. .. .	6,540
(b) Roads, footpaths, &c. .. .. .	4,025
(c) Sewerage .. .. .	1,500
(d) Water Service .. .. .	4,150
(e) Provision of suitable building area—	£
First stage .. .. .	5,300
Second stage .. .. .	5,200
	10,500
(f) Erection of additional buildings .. .. .	9,050
(g) Provision of facilities for the public .. .. .	4,905
(h) Increasing size of the aerodrome—	
Acquisition of land to the east .. .. .	6,730
Acquisition of land to the north .. .. .	10,760
Acquisition of State land .. .. .	36,685
	54,175
Total .. .. .	94,845

## COMMITTEE'S INVESTIGATIONS.

20. The Committee visited the aerodrome at Mascot, inspected the existing buildings, carefully scrutinized the plans submitted, and took evidence from officers of the Civil Aviation Branch and the Department of Works, representatives of commercial aviation companies, &c.

21. Before the Sixth Committee had time to present its report Parliament dissolved, and the Committee ceased to have legal existence. On the 22nd November, 1929, the Seventh Committee was appointed, and a fresh reference on the subject was made to that Committee on the 5th December, 1929.

## POPULARITY OF AVIATION.

22. It was stated in evidence that the popularity of aviation has greatly increased in recent years, and that steps are being taken in all important centres in the world to make the necessary provision of landing grounds for civil aircraft. Australia, with its wide open spaces and almost perfect flying atmosphere, will probably witness a greater proportionate increase in the development of flying than other less-favoured countries. In 1923 there were in Australia 37 aircraft on the official register, while at 31st March, 1930, the number had grown to 226. In 1924 there were only four machines more or less regularly operating from Mascot, whereas at the present date there are, approximately, 33. For the quarter ended 30th December, 1922, it was shown that in Australia machines had flown 61,447 miles, and carried 2,138 passengers and 1,212 pounds of goods, while for the quarter ended 30th June, 1929, the number of miles flown was 640,562, the number of passengers carried 21,575, and the amount of goods carried 42,876 pounds. The opinion is general that this interest in civil aviation is likely to be maintained, and that it therefore becomes necessary to make suitable provision for landing grounds.

## SUITABILITY OF MASCOT.

23. At the outset of its investigations the Committee sought to ascertain whether the site selected at Mascot was suitable, and was informed that, although it has certain disadvantages, an extensive search had failed to discover any equally suitable area within a reasonable distance of Sydney. During the course of its investigations, several areas were submitted to the Committee as suitable for aerodrome purposes. In the opinion of the Committee, the most likely of these was an area of 400 acres situated on the banks of the Georges River, near Bankstown. An inspection was made of this land, and a report obtained in regard to it. It was shown that about 235 acres of the area could be developed for aerodrome purposes at comparatively small cost, and three suitable runways of, approximately, 800 yards in length, and two of over 1,000 yards obtained without great expense.

24. Portion of the remaining area offered some difficulties in regard to drainage, but might be suitable for building sites. A considerable amount of clearing would be necessary to make this area available for aircraft, and it has the disadvantage of being some 17 or 18 miles distant from Sydney, compared with Mascot's 6 miles—an important factor when considering the transport of mails and passengers.



25. The officials of the Aviation Department and representatives of commercial aviation companies are insistent that it is essential, for the purposes of civil aviation, that an aerodrome should be within as short a distance as possible of the centre of population by convenient means of access, and that the absence of this condition offsets to a considerable extent any advantages offered by an area available at a greater distance.

26. It was ascertained in evidence that the total amount spent or authorized to be spent on Mascot Aerodrome to date is—

	£
Acquisition of land .. .. .	15,500
Surface works, drainage, levelling, &c. .. .. .	4,463
Roads and engineering services .. .. .	3,560
Buildings .. .. .	16,836
Making a total of .. .. .	40,359

and it is probable that any other area acquired would require at least some preliminary expenditure before it would be as suitable as Mascot. After due consideration, therefore, and provided the additional land considered necessary can be obtained, the Committee agrees that it would be preferable to develop Mascot to its full capacity before considering the acquisition of any area at a greater distance from Sydney.

27. Representations were made that in most continental and American cities the development of civil aviation has necessitated the provision of more than one aerodrome to serve large cities, and it was urged that with the growth of the population of Sydney, and the rapid alienation of any large level areas in the vicinity of the city, it would be difficult in the future to secure land suitable for an aerodrome, except at high cost. It was therefore suggested that it might be advisable for the Commonwealth to provide for future needs by reserving, when now possible, the land which may be needed when considerably more air services are in operation.

It is estimated, however, that Mascot, fully developed, would serve all needs for the next twenty years; that it is impossible to anticipate what class of aerodrome may be necessary for the aircraft of the future; and that the loss of interest on capital for the period until Bankstown will be necessary for a second aerodrome is not warranted. The majority of the Committee, therefore, were of opinion that it would not be wise at this juncture to expend any large sum of money on the provision of an aerodrome for such a long time ahead.

28. *Drainage.*—On account of the necessity of obtaining a fairly flat area, some difficulties of drainage were naturally to be expected in the case of Mascot, but these are not insuperable, and, after an examination of the plans put forward, and consultation with officers of the Works Department and Civil Aviation Branch, the Committee is satisfied that the proposals submitted will meet the necessities of the case, and should be adopted.

29. *Surfacing.*—During its visit to the aerodrome members of the Committee witnessed two accidents to aeroplanes which turned over when landing. The impression was that these, and perhaps other accidents which have occurred, might have been avoided if the landing surface had been in a more favorable condition. The disadvantages apparent after heavy rain, or when a large crowd attends the aerodrome, would also be considerably lessened by a proper grading of the area, and the Committee considers that this work should be carried out as soon as practicable.

30. *Roads and Footpaths.*—In the opinion of the Committee it is essential that provision should be made to enable large crowds of people and numbers of vehicles to have orderly access to, and egress from the aerodrome, especially on days of pageants, or the arrival of overseas fliers, &c. This provision, it is thought, should include a proper system of one-way traffic roads to avoid congestion. The plan of road development placed before the Committee appears to meet all present needs, and is recommended.

31. *Provision of Building Area.*—The Committee considers that the proposals put forward for the first stage of the preparation of the building area, with the necessary provision of water and sewerage services, are reasonable, and should be adopted.

The proposals outlined under the heading Second Stage need not at present be considered, as it is possible that experience may lead to considerable modification before the necessity arises to undertake the work proposed therein.



32. *Fire Service.*—During the course of its investigations the Committee gave consideration to the equipment available for dealing with possible outbreaks of fire. As it is estimated that within the next two years there will be at Mascot upwards of £100,000 worth of destructible property, this question merits careful attention. It was stated in evidence that, on the advice of the Commonwealth Fire Consultant, arrangements had been made for the laying of a ring main around the whole of the buildings, with pillar hydrants at convenient locations. The mains will provide an ample water supply, and it is stated that the water pressure will be adequate for all purposes. The proposals made will be sufficient to deal with any possible outbreak of fire among the aircraft up to a distance of 2,000 feet from the hangars.

To obtain the full benefit from this installation it is suggested that arrangements be made with the local fire brigade, situated about a mile from the aerodrome, to deal with all fires. This will involve a periodical inspection of equipment, and the knowledge that expert assistance will be available at all times, and the cost will be only a few pounds per annum. For the more effective safeguarding of the contents of the hangars, it is also recommended that chemical fire extinguishers of the foam system be made available for dealing with small fires.

33. *Erection of Additional Buildings.*—The inquiries of the Committee have satisfied it that the caretaker's quarters, refreshment kiosk, lavatories, and administrative buildings and control tower will be essential to the ultimate development of the aerodrome.

The Committee considers that one of the buildings already on the private land to be acquired may reasonably be made suitable for the caretaker. If not, it is considered that the amount to be provided for such purposes should be restricted to approximately £850.

While the matter was under consideration, however, information was received that the New South Wales Aero Club had purchased land for their purpose elsewhere, and were arranging to leave Mascot at an early date. Under these circumstances the Committee considers that the club house now occupied by the New South Wales Aero Club might be utilized, at any rate for the present, for administrative building and refreshment kiosk, thus saving the expense of providing these buildings and the control tower as originally suggested.

In connexion with the provision of hangars for large machines, the Committee recommends that such hangars be so located and constructed as to enable the machines to have ingress and egress from either the front or back as may be necessary.

34. *Lighting of the Aerodrome.*—Under the proposal as originally submitted, provision was made for the projection from a 3ft. 6in. opening in the top of the control tower of a vertical beam of light for the purpose of guiding fliers to the aerodrome at night. Inquiries made by the Committee, however, indicated that in this climate the range of visibility of a vertical beam of light is not sufficiently great to warrant the expenditure proposed. It is suggested that a more satisfactory system of lighting would be the provision of a revolving beacon light of the latest approved pattern, which, for the present, could be established on one of the higher buildings of the aerodrome. At some aerodromes, which are extensively used for landing at night, a system of flood lighting the ground is provided, but the information placed before the Committee indicated that no generally satisfactory system for such lighting has yet been evolved; moreover, the only company likely to be using the aerodrome for regular night flying for some time has provided its own system of flood lighting, which would also be available on special occasions for belated pilots if asked for. The Committee is therefore of opinion that no action in regard to the provision of flood lighting at Mascot need be considered for the present.

On the other hand the Committee recommends that early steps should be taken to provide boundary lights and obstruction lights at the earliest opportunity.

35. *Provision of Facilities for the Public.*—It is proposed to provide, in a suitable position, an area for use by the public visiting the aerodrome. This area will require a considerable amount of filling, and some fences will need to be erected to restrict visitors to certain areas. It was stated in evidence that members of the public, to the number of several thousands, visit the aerodrome at week ends to watch the flying, and many partake in short flights. On occasions, such as aerial displays or the arrival of overseas fliers, it has been estimated that up to 100,000 people have been in attendance. Under these circumstances it is obvious that arrangements should be made to prevent the public from approaching the machines when manoeuvring, or after having landed, to preclude the possibilities of accident to the fliers, or danger to the public. The Committee, therefore, is unanimously of opinion that a suitable public area should be prepared and fenced at an estimated cost of £4,905.



36. *Increasing the Size of the Aerodrome.*—Considerable thought was given by the Committee to this question, in view of the large expense involved. While the Committee is of opinion that the existing area at Mascot is sufficient for present needs, all the evidence obtained indicated that, with the rapid development of commercial aviation, it would be essential to obtain a larger area within the next five or six years. The present area of 161 acres will not meet the ultimate requirements of an aerodrome to serve an important city like Sydney, and, with the employment of larger machines, and the use of the aerodrome for night landings, it is considered essential that an area of at least 250 acres should be made available. The indications are that the Mascot district is developing rapidly, so that in the interests of commercial aviation, and to prevent undue expenditure for land, it is necessary that steps be taken at once to obtain the comparatively useless land now available near the aerodrome, to obviate the payment of high prices, when it shall have been reclaimed and improvements erected thereon. In addition there is the danger of the erection of tall buildings or factory chimneys, which might seriously interfere with the use of the aerodrome.

37. The programme outlined for the erection of additional buildings is dependent on the acquisition of the 21½ acres of privately-owned land on the east of the aerodrome, and the general scheme of work on the area submitted is not considered by some witnesses to be justified, unless, by the acquisition of the additional area asked for, the aerodrome can be developed into a first-class air-port for the city of Sydney.

38. It is considered that the privately-owned land, comprising 41 acres lying north of the aerodrome, must also be acquired, as if by filling its level were raised, it would have the effect of throwing more surface water on to the aerodrome and increase the difficulties and expense of drainage. In addition, its acquisition will increase the length of take-off or landing space when required for heavier machines. For these reasons the Committee is unanimously of opinion that steps should be taken at once to acquire for the Commonwealth the privately-owned land indicated, as any delay is likely to lead to a considerable increase in the price which would have to be paid for it.

39. With regard to the State-owned land lying to the south and west of the aerodrome, it is not considered that the Commonwealth should be put to the expense of purchasing this land outright from the State. With the realization of the advantage that the development of a first-class airport at Mascot will offer to the City of Sydney and the State of New South Wales generally, it is thought that an endeavour should be made to arrange with the State Government to make the land available for aerodrome purposes at a nominal cost. It was stated in evidence that, in the United States, although large sums are being spent in connexion with civil aviation, the Government is not spending any money in the acquisition of aerodromes. The various city authorities provide aerodromes and assist in other directions, because they regard civil aviation as a sound business undertaking.

40. In the event of the State Authorities declining to make available this land at a nominal price, however, it is recommended that steps be taken forthwith to acquire the privately-owned land lying to the north-east and south-east of the aerodrome, as indicated by letters E, F, H and K on the plan. It is suggested, however, that the occupants of the area F be left undisturbed until such time as that area is actually required for the purposes of the aerodrome.

41. *Special Runway.*—Representations were made to the Committee that fears are entertained that the heavy machines now engaged and to be engaged in the Sydney to Brisbane service, may not be able to successfully take off and land in all weathers at Mascot under existing conditions, and it was urged that at least one special runway, about 600 yards long by 50 yards wide, should be constructed in a suitable position to enable this to be done. The Committee agrees that all reasonable facilities should be provided to encourage the operations of regular interstate commercial services, and recommends that action in the direction desired should be taken at the earliest possible moment.

#### METEOROLOGICAL INFORMATION.

42. During the course of the inquiry, representations were made to the Committee that pilots undertaking long flights are at a considerable disadvantage, owing to the lack of information in regard to prospective weather conditions, direction and velocity of upper air currents, probable occurrence of fogs, &c. The existence of fog conditions, particularly on the mountains, is a source of considerable danger to pilots, and has resulted in at least one recent fatal accident.



43. It was ascertained by the Committee that much valuable information is collected by the Commonwealth Meteorologist which would be useful to pilots, and that on application considerable trouble is taken to provide any intending flier with all the information at the department's disposal. Up to the present, however, circumstances have prevented the dissemination of weather information for airmen to the same extent as it is done in other parts of the world, but the Committee thinks that, with perhaps some little additional expense, a great deal more might be done than is attempted at present. It therefore recommends that the Commonwealth Meteorologist be invited to prepare a scheme for the most effective dissemination possible of meteorological information likely to be of use to fliers, and that the Government give sympathetic consideration to the question of providing the necessary funds therefor.

44. During the course of its investigations it was stated in evidence that, with the establishment of a network of air routes throughout Australia, the cost of the provision of necessary aerodromes and emergency landing grounds will reach considerable proportions. It is represented that in some other parts of the world the responsibility in this direction is undertaken by the local governing bodies, thus relieving the central Government of a considerable burden. This system commends itself to the Committee, and it is recommended that, with the exception of terminal airports, an effort should be made at once to have landing grounds on air routes provided and maintained by the various municipalities concerned.

As civil aviation develops, however, the Committee is of opinion that ultimately the whole of the landing grounds on air routes, including terminal ports, should be under the control of local authorities.

45. Fully realizing the growing importance of civil aviation, the Committee is unanimously in agreement with the laying down of a scheme of progressive development of the Mascot Aerodrome which will ultimately lead to it becoming a first-class airport. With the use of very large heavy machines, probably concrete runways will be required, and, with the inauguration of night flying, a scheme of flood lighting the landing ground will be found essential in the future. The Committee, however, considers that these and some other items of the proposal may very well be left to the future, and, without wishing to hinder the development of the aerodrome in any way, recommends that only those works which are absolutely necessary at the present time be undertaken now.

46. During the course of the Committee's investigations it was made clear that on occasions inconvenience and possible danger is caused by reason of the fact that no proper control has been exercised over fliers or the public visiting the aerodrome. Attention was drawn to this fact by the Committee, and an official has been placed in charge. The Committee is strongly of opinion that, having selected a suitable officer, he should be given a uniform, and invested with sufficient powers to enable him to control all persons and machines using the aerodrome at all times.

#### PROSPECTIVE REVENUE.

47. It was ascertained in evidence that in other parts of the world there are varying charges for landing, housing machines, taxes on fuel, accommodation, &c., which in some places make the airport self-supporting. In the case of Mascot the Commonwealth is making available sites for petrol plants from which supplies will be obtained by fliers from private companies. It is also being left to private enterprise to make available the services of mechanics to owners of aeroplanes. It is anticipated, however, that there will be some revenue from the rental of hangars, landing fees, admission charges on special occasions, parking fees for motor cars, &c. It has not been possible to make any accurate calculation as to the amount of possible revenue, although the Director of Civil Aviation estimated that at the end of five years it might reach the sum of £5,000 per annum.

#### RECREATION GROUND.

48. During the course of the Committee's investigations it was ascertained that of the area acquired for aerodrome purposes at Mascot in 1921, about 10 acres adjacent to Old Botany-road has been leased to the Council of the Municipality of Mascot for the purpose of a recreation ground. This lease is for a term of twenty years from 1st August, 1924, at a nominal rental, but is subject to cancellation should the whole or any part of the land be required by the Commonwealth for public purposes. The position and shape of this area militate against its usefulness as portion of the landing ground, although it may be possible to utilize it for building purposes. In a locality such as Mascot, however, the Committee is reluctant to curtail any recreation area, and considers that if the extra land now sought for aerodrome purposes can be obtained, it will not be necessary to resume this recreation area for many years, if at all.



## SUMMARY OF RECOMMENDATIONS.

49. Briefly summarized, the recommendations of the Committee are :—

- (a) That immediate steps be taken to acquire (at an estimated cost of £17,490) the privately-owned areas of 21½ acres and 41 acres, respectively, lying to the east and to the north of the existing aerodrome. (Paragraphs 37 and 38.)
- (b) That arrangements be entered into with the State Government for the transfer to the Commonwealth, for a nominal consideration, the 159½ acres of State land lying to the south and west of the aerodrome. (Paragraph 39.)
- (c) That if the State be unwilling to make available its land at a nominal rate, the Commonwealth should immediately acquire the privately-owned land lying to the north-east and south-east, indicated by letters E, F, H and K on the plan. (Paragraph 40.)
- (d) That the necessary work of drainage and surfacing the landing ground, at an estimated cost of £6,540, be undertaken as early as possible. (Paragraphs 28 and 29.)
- (e) That the construction of roads and footpaths, at an estimated cost of £4,025, be proceeded with. (Paragraph 30.)
- (f) That the proposal for the first stage of the preparation of the building area, with water, sewerage, and fire protection, be undertaken. (Paragraph 31.)
- (g) That the erection of caretaker's quarters, and lavatory accommodation, at an estimated cost of £2,880, be proceeded with. (Paragraph 33.)
- (h) That chemical extinguishers be provided for hangars. (Paragraph 32.)
- (i) That the preparation and fencing of the area reserved for the public, at an estimated cost of £4,905, be carried out. (Paragraph 35.)
- (j) That the Commonwealth Meteorologist be invited to prepare a scheme for the most effective dissemination possible of meteorological information likely to be of use to fliers. (Paragraph 43.)
- (k) That an effort be made to have landing grounds on air routes provided and maintained by municipalities. (Paragraph 44.)
- (l) That a suitable officer be appointed to control the aerodrome. (Paragraph 46.)

50. The total amount involved in the above recommendations, excluding acquisition of land, is, approximately, £40,000, by the expenditure of which sum the Committee considers that the Mascot aerodrome will be made quite suitable for the next five or six years. Having then the requisite area for a first-class aerodrome, it can, by progressive steps, be developed to the ultimate limit of its capacity as an airport worthy of the City of Sydney.

A. W. LACEY,  
Chairman.

Office of the Parliamentary Standing Committee on Public Works,  
Parliament House,  
Canberra, 1st April, 1930.

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