

DEPARTMENT OF THE SENATE
PAPER NO. 421
DATE PRESENTED 7 APR 1970
<i>J.R. Odgers</i>
Clerk of the Senate

1970

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed development of

R.A.A.F. BASE

at

Pearce, Western Australia

(FOURTH REPORT OF 1970)

COMMONWEALTH GOVERNMENT PRINTING OFFICE
CANBERRA: 1970

C O N T E N T S

	<u>Paragraph</u>
The Committee's Investigation	1
The Reference	2
R.A.A.F. Base, Pearce	
History	5
Functions and Establishment	9
Pilot Training	13
Other Training and Services	16
Existing Facilities	17
The Need	19
The Building Proposals	26
Operations, Communications, Meteorological and	
Base Radio Workshop	27
Precision Approach Radar Complex	28
Precision Measuring Equipment Laboratory	29
Combined Tanker Maintenance, Fuel Quality Laboratory	
and Tanker Compound	30
Fire Station	31
Barracks Store and Compound	32
Officers' Sleeping Block and Laundry and Extensions	
to Officers' Mess	33
Senior N.C.O.s' Mess	34
Senior N.C.O.s' Sleeping Block and Laundry	35
Improvements to Airmen's Mess	36
Airmen's Sleeping Block	37
Airmen's Laundry	38

	<u>Paragraph</u>
Airmen's Recreation Centre	39
Squash Courts	40
Department of Works Depot	41
Construction of the Proposed Buildings	
Siting	42
Building Work	44
Landscaping	48
Internal Engineering Services	49
External Engineering Services	53
Committee's Conclusion	57
Estimates of Cost	58
Programme	59
Great Northern Highway	60
Water Tower	64
Aircraft Noise	66
Recommendations and Conclusions	69

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

DEVELOPMENT OF R.A.A.F. BASE, PEARCE
WESTERN AUSTRALIA

R E P O R T

On 16 February 1970, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament a proposal for the development of R.A.A.F. Base, Pearce, Western Australia.

The Committee have the honour to report as follows:

THE COMMITTEE'S INVESTIGATION

1. The Committee received written submissions and drawings from the Departments of Air and Works and took evidence from their representatives at a public hearing at R.A.A.F. Base, Pearce. We inspected the existing facilities at the base and the sites for the proposed buildings.

THE REFERENCE

2. The principal components of the reference are the erection of
- an operations, communications, meteorological and base radio workshop;
 - a precision approach radar complex;
 - a precision measuring equipment laboratory;
 - a tanker maintenance and fuel quality laboratory building and tanker compound;

- a fire station;
- a barracks store and compound;
- messes, sleeping quarters and laundries for officers, senior N.C.O.s and airmen;
- an airmen's recreation centre, squash courts, a playing field and tennis courts;
- a Department of Works' depot.

3. Improvements to external engineering services are also proposed.

4. The estimated cost of the work when referred to the Committee was \$5.5 million.

R.A.A.F. BASE, PEARCE

5. History In 1935, the Commonwealth acquired 640 acres at Bullsbrook, 27 miles north-east of Perth for a R.A.A.F. airfield. The site was adjacent to the Great Northern Highway and close to the Perth-Geraldton railway line.

6. The construction of buildings and provision of services followed, and in 1938, No. 23 (City of Perth) Squadron, a Citizen Air Force squadron, moved to Pearce Air Force Station from Laverton, Victoria where it had been formed a year earlier. In 1939, a further unit, No. 14 Squadron, was formed at Pearce as a general reconnaissance bomber squadron.

7. Throughout World War II, R.A.A.F. Station Pearce was an operational base for reconnaissance, anti-submarine patrols, convoy duty and naval co-operation purposes. During this time, No. 33 and No. 47 Radar Stations, No. 2 Airfield Construction Squadron, No. 7 Communication Unit, No. 4 Medical Receiving Station, No. 4 Recruit Depot, No. 17 Repair and Salvage Unit, No. 5 Initial Training School,

No. 3 Telecommunication Unit, No. 4 Aircraft Depot, No. 14 Aircraft Repair Depot, No. 35 Transport Squadron and No. 11 (MR) Squadron were also formed or located at Pearce.

8. In 1952, Base Squadron Pearce was formed to provide base services and the station became known as R.A.A.F. Base Pearce. A Headquarters, R.A.A.F. Pearce, was established in 1956.

9. Functions and Establishment R.A.A.F. Pearce is a major permanent base of the R.A.A.F. Primarily, it is responsible for flying and ground instruction, up to graduation, for all trainee pilots. Also, it is designated as a base to be developed to a standard for use by the operational component of the R.A.A.F. in an emergency and for operational and redeployment training in peace time.

10. Now located at Pearce are Headquarters R.A.A.F. Base, Base Squadron Pearce, No. 2 Flying Training School, No. 3 Telecommunications Unit and No. 25 (City of Perth) Auxiliary Squadron (Citizen Air Force).

11. The establishment at Pearce has increased from 765, 814 and 998 in 1964, 1966 and 1968 respectively to 1,239 in January 1970. The latter figure includes 136 officers, 1,089 other ranks and 14 civilians but not the 108 cadets under training. The forecast establishment in 1972 is 1,392.

12. The increases in establishment reflect the R.A.A.F.'s expansion programme in recent years during which it has been or is being re-equipped with modern aircraft and major items of complex equipment.

13. Pilot Training In particular, these increases reflect the decision of the Government to introduce jet training of pilots through all stages to graduation and following acquisition of the Macchi jet trainer aircraft, to concentrate this activity at Pearce. Previously, the R.A.A.F.'s flying

training was conducted by No. 1 Basic Flying Training School, Point Cook, using Winjeel aircraft and at No. 1 Advanced Flying Training School, Pearce, using Vampire aircraft. The nett result of consolidation of training at Pearce has been a marked increase in flying activities.

14. In the R.A.A.F. aircrew training scheme, the cadet now undergoes an 11 week period of general service training and flight assessment at Point Cook, then moves to R.A.A.F. Pearce where for the next 48 weeks he receives flying training on Macchi aircraft and ground training leading to his graduation as a pilot. Graduates of the R.A.A.F. Academy, Point Cook, and trainee pilots from the Royal Australian Navy also receive their training to graduation standard at No. 2 Flying Training School, Pearce.

15. Currently, there are 43 Macchi aircraft at Pearce, also Dakota and Iroquois aircraft, and some Vampires awaiting disposal. For effective operation of this number of aircraft and to cope with the increased flying activities at the base, it was found necessary to establish a satellite airfield in 1968 at Gin Gin, about 17 miles north-west of Pearce, under the control of and manned from R.A.A.F. Pearce.

16. Other Training and Services The base is also responsible for logistic and technical maintenance services to support aircraft and their associated equipments, the operation and maintenance of aerodrome and air traffic control facilities and the provision of base operation room, communications and meteorological services. It provides facilities for R.A.A.F. transport aircraft in transit and maritime aircraft on detachment, the provisioning of air search and rescue facilities in the area, and is responsible for conversion to aircraft type technical training, the oversight and inspection of facilities at Learmonth and the provision of facilities for No. 25 (City of Perth) Auxiliary Squadron.

17. Existing Facilities The permanent buildings at Pearce are of brick construction some having been built pre-war and others in more recent times. When the Basic Flying Training School was transferred from Point Cook, technical facilities for Macchi training, a satellite airfield at Gin Gin, concrete hardstanding, administrative and training facilities, improved airfield aids and accommodation for cadet pilots, airmen and W.R.A.A.F. were provided to meet immediate needs.

18. But many buildings at the base are temporary wartime structures of corrugated iron, timber or fibro construction and are no longer satisfactory for their purpose or are quickly becoming so.

THE NEED

19. Additional works are required at Pearce to bring supporting facilities up to the standard or capacity necessary to enable the base to meet its expanded commitments.

20. In particular, air traffic control at present uses a ground controlled approach which is outdated and has limited surveillance and precision approach capability as both cannot be performed simultaneously. The air traffic increase, combined with higher speed aircraft, necessitates ground controlled approach equipment and facilities capable of continuous operation during flying hours.

21. The communications, base operational and meteorological facilities and base squadron radio workshops are inadequately housed and are dispersed. As such they are unsuitable for the control of flying operations and their locations preclude further expansion or housing of modern equipment. Accordingly, a need exists for these sections to be centralised in the one building complex.

22. Expected future requirements point up the inadequacy of the fuel tanker compound, and the fuel quality control facilities are unsuitable. In addition, there is no suitable laboratory for the calibration and repair of aircraft check and test equipment. The provision of a measuring equipment laboratory similar to those being provided at other R.A.A.F. bases will overcome these deficiencies and permit improvement of equipment maintenance standards.

23. In the domestic area, there is insufficient permanent sleeping accommodation for officers, senior N.C.O.s and airmen to satisfy forecast demands. Due to the growth of the base, extensions are necessary to the officers' mess, the senior N.C.O.s' mess is inadequate and the airmen's kitchen requires enlargement. The airmen's recreation centre, whilst of pre-war permanent construction, is now too small and poorly located for its purpose. A new centre is planned and the existing building will be converted for use by Base Squadron administrative sections at present in temporary accommodation.

24. The proposals submitted to the Committee on this occasion represent the more immediate works required over a three to four year period to replace inadequate and unsatisfactory facilities and to enable the base to fulfil its role and training and other commitments. We noted that additional works will be necessary subsequently and that the reference of these proposals to the Committee, if required, will occur when the need arises.

25. The Committee concluded that there is a need for the works in this reference.

THE BUILDING PROPOSALS

26. Outlines of the building proposals are given below.

27. Operations, Communications, Meteorological and Base Radio Workshop
This building is to be similar to those recently constructed at the R.A.A.F.

bases at Townsville, Darwin and Amberley. It will centralise facilities for the conduct and control of flying operations in a secure controlled environment housing sophisticated communication and other equipment. Special engineering features will include a high degree of filtration and temperature control for the air conditioning system, a P.A.B.X., a central fire alarm control panel, electrical screening and earthing, "no-break" power supply, under floor cabling, security measures, a high level of illumination, acoustical treatment and attenuation against aircraft noise.

28. Precision Approach Radar Complex This complex will comprise a single-storey air conditioned approach control system building, extensions to the power house near the control tower and a radar head to be sited east of the 175⁰ runway. "No-break" electrical plant and emergency lighting will be provided.

29. Precision Measuring Equipment Laboratory This single-storey building, for the repair and calibration of instruments, will be air conditioned and will include a vibration and dust free laboratory.

30. Combined Tanker Maintenance, Fuel Quality Laboratory and Tanker Compound The building in this complex will be designed for the dual purpose of maintaining fuel tankers and for testing and controlling the quality of aircraft fuel. The tanker compound will have divided and kerbed parking bays for 10 tankers, with each bay having a fuel leakage pit to dispose of spillage. Security fencing will enclose the compound.

31. Fire Station The standard fire station proposed will house four fire engines, duty crew sleeping quarters and will include a duplicate display panel for the fire alarm system.

32. Barracks Store and Compound These buildings, which will be enclosed by security fencing, include barracks administration offices, stores, workshops and a flammable materials store.
33. Officers' Sleeping Block and Laundry and Extensions to Officers' Mess The mess, at present designed for 78 officers, will be upgraded for 109 officers. Extensive alterations and some extension of the ground floor as well as modernising and re-equipping the kitchen will be required. In addition, a two-storey sleeping block, accommodating five senior and 24 junior officers, will be constructed adjacent to the mess. Laundry facilities will be provided within the block and a new laundry will be built to replace the substandard facility serving the existing domestic accommodation.
34. Senior N.C.O.s' Mess Due to foundation problems and the need for substantial demolition of the kitchen, the senior N.C.O.s' mess cannot be economically extended. A new building is therefore planned having full mess facilities for 85 senior N.C.O.s and a kitchen catering for 190 to provide for the additional "living-out" staff who use the mess during the day.
35. Senior N.C.O.s' Sleeping Block and Laundry The sleeping block will accommodate 48 senior N.C.O.s on three floors with the bedrooms grouped around a central service core. A laundry will be constructed as a separate unit.
36. Improvements to Airmen's Mess The airmen's mess which currently caters for 450 will be improved to cater for 866. The substandard kitchen will be demolished and rebuilt, and new cooking equipment and cool storage will be provided where necessary. New cloak room and pantry facilities will be provided by extending the building entrance.
37. Airmen's Sleeping Block This standard three-storey building will accommodate 148 airmen.

38. Airmen's Laundry This building will provide laundry, drying and ironing facilities for 356 airmen.
39. Airmen's Recreation Centre Trading facilities for 596 persons, including W.R.A.A.F.s, and recreational facilities for 556 airmen will be provided in this standard building. Public rooms will be mechanically ventilated and fitted with ceiling fans and infra-red strip heaters.
40. Squash Courts Two squash courts and change rooms will be provided.
41. Department of Works Depot The depot, which will be similar to others on defence establishments, will consist of a two-storey store, an office, an amenities section and two single-storey workshop blocks. The area will be paved and fenced.

CONSTRUCTION OF THE PROPOSED BUILDINGS

42. Siting A master plan for the development of the base has been agreed jointly by the Departments of Air and Works. The Committee believe that the sitings of the individual buildings accord with the master plan and functional requirements and are unlikely to prejudice future development proposals.
43. The sites adjoin buildings with similar functions and are convenient to working and recreation areas. The Committee consider that the sites selected are suitable.
44. Building Work The Committee noted that the "Scales and Standards of Accommodation for the Services in Peace" have been followed where applicable.
45. Generally, buildings will be brick with concrete or timber floors. Modular false floors will be used in sections of the precision approach radar complex and the operations, communications, meteorological and base radio workshop building to permit access to the cables, etc. below. Flat roofs will be

galvanised ribbed steel decking, whilst pitched roofs will be corrugated asbestos cement to match existing buildings. Insulation will be provided under roofs.

46. The squash courts, fire station, operations, communications, meteorological and base radio workshop, senior N.C.O.s' mess, airmen's recreation centre, airmen's kitchen and barrack store and compound will be in steel frame construction. Other buildings will be in load bearing brickwork.

47. External walls generally will be face brickwork with aluminium framed windows, and aluminium or timber doors to match existing permanent structures. Internally, walls will be face brickwork, rendered and painted or vinyl finish as appropriate. Kitchens, toilets and similar areas will be tiled. Generally, vinyl tiles will be used on floors, but kitchens, toilets and wet areas will have ceramic tiles. Stores and plant rooms will have a granolithic finish. The ante room, visitors' room and corridors in the officers' mess and the ante room and visitors' room in the senior N.C.O.s' mess, will be carpeted. Ceilings will be mainly fibrous plaster but acoustic tiles or sprayed vermiculite will be used in areas where noise reduction is desirable.

48. Landscaping The surroundings of the buildings will be grassed and landscaped and a screen of trees and shrubs will be provided along the base's eastern boundary for an aesthetic appearance and privacy and to reduce traffic noise and headlamp glare.

49. Internal Engineering Services Each building will have an automatic fire alarm system and hydrants, hoses and portable extinguishers will be provided as appropriate. The proposed fire station will cater for general emergencies.

50. Hot water will be reticulated as required from boilers within the buildings, from electric storage heaters or where possible, from a central boiler house serving a number of buildings.

51. Sleeping blocks, messes and dining rooms will have infra-red strip heaters and ceiling fans will be installed in the airmen's recreation centre.

52. Connections will be made to the existing electrical and hydraulic reticulation and to sewerage and stormwater drains.

53. External Engineering Services Electrical reticulation and distribution is to be augmented and the emergency power supply facilities, including "no-break" supply where necessary, will be improved.

54. The base's busiest roads will be widened from 20 ft to 24 ft and a new road will be constructed from the Great Northern Highway to the fuel storage area. Some additional sealed car parking areas will be provided.

55. The first stage of improvements to the water supply designed to allow supply and storage of a maximum demand of one million gallons per day is nearing completion. Stage 2 of the scheme, which is part of this reference, aims at improving the supply for fire protection purposes. It will provide flows to rapidly replenish two fire tenders and sufficient pressure throughout the built-up area for fire fighting. The existing reticulation and stage 1 improvements do not fulfil these requirements. An 8 in. ring main encircling the base building area with cross connections to the existing reticulation are included.

56. A rugby-sized playing field and two tennis courts will be constructed in the recreation zone adjacent to the oval.

57. Committee's Conclusion The Committee recommend the construction of the work in this reference.

ESTIMATES OF COST

58. The estimated cost of the work when referred to the Committee was rounded off to \$5.5 million. The actual estimate is \$5.475 million made up as follows:

	\$	\$
<u>Buildings</u>		
Building work	2,590,000	
Electrical services	510,000	
Mechanical services	850,000	
Civil services	400,000	
External hydraulic services	90,000	4,440,000
<u>External Services</u>		
Landscaping	35,000	
Improvements to electrical services	600,000	
Improvements to roadworks and stormwater drainage	260,000	
Improvements to hydraulic services	100,000	
Playing field and tennis courts	40,000	1,035,000
		<u>5,475,000</u>

PROGRAMME

59. The buildings will be programmed for construction progressively and it is expected that the work will be completed over a period of three to four years.

GREAT NORTHERN HIGHWAY

60. R.A.A.F. Base, Pearce has for its eastern boundary the Great Northern Highway which separates it from State-owned land on which some 300 houses have been built or are planned for construction, mainly by the State Housing Commission

with Commonwealth aid. As most of the houses are occupied by R.A.A.F. personnel there is a good deal of both vehicular and pedestrian traffic across the highway, which itself is a fairly busy road.

61. The master plan for the base has been drawn up on the basis that the highway will eventually be re-routed to skirt the housing development on its eastern side. It is thought that the diverted road, involving the making of 3.6 miles of additional road, will in the long term be four lanes wide. The cost to the Commonwealth of the diversion which, in the first instance will only be two lanes wide, has not been determined as the terms of the arrangement with the State have not been finalised. The Committee were told, however, that the total cost of the diversion might be of the order of \$160,000.

62. The Committee were convinced that although in the present circumstances the proximity of the highway to the base and particularly to the threshold of the north-east/south-west runway, presents no insurmountable operational problems, the situation will deteriorate as traffic on the highway increases. We were also concerned that the increasing use of the highway could jeopardise the safety of R.A.A.F. personnel and their families moving between the housing area and the base.

63. It is our belief that it will eventually be necessary to divert the highway in accordance with the master plan. In the circumstances, we suggest that the Government should examine the matter closely with a view to the work being carried out in the short term, but without, in any way, prejudicing the construction of any of the works in this reference.

WATER TOWER

64. The evidence submitted by the Department of Works stated that it was planned to demolish a redundant water tower inside the base near the main gate in order to improve the road alignment. The cost of demolition is about equal to the extra cost of the road improvements if the tower is retained.

65. On enquiry, we found that it was not a requirement of the Department of Air that the tower be removed. Because of this and the fact that the tower has some aesthetic merit and is not a hazard to aircraft, we believe that it should be retained.

AIRCRAFT NOISE

66. The written departmental submissions did not mention whether the siting and designs of the proposed buildings took account of the views of the House of Representatives Select Committee on Aircraft Noise as expressed in the interim report tabled in September 1969.


67. We did, however, examine this matter particularly in relation to the noise nuisance which could occur in the sleeping accommodation proposed in this reference, i.e. for officers, senior N.C.O.s and airmen. The Committee noted that the Department of Air, in collaboration with the Commonwealth Acoustics Laboratory, is conducting investigations into aircraft noise nuisance at R.A.A.F. bases but, at this stage, the studies at R.A.A.F. Base, Pearce have not been completed neither have any firm conclusions been reached. There was a preliminary suggestion, however, that of the sleeping quarters in this reference only those for officers, which are closest to the main operating areas on the base, may call for special alleviation measures.

68. Until the investigations are completed, we are not prepared to concede that there will not be an aircraft noise problem in any of the proposed sleeping quarters, but in the light of the stage these investigations have reached and the need for the proposed quarters, we do not propose to recommend the deferment of construction or the modification of designs.

RECOMMENDATIONS AND CONCLUSIONS.

69. The summary of recommendations and conclusions of the Committee is set out below. Alongside each is shown the paragraph in the report to which it refers.

	<u>Paragraph</u>
1. THERE IS A NEED FOR THE WORKS IN THIS REFERENCE.	25
2. THE SITES SELECTED ARE SUITABLE.	43
3. THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	57
4. THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS \$5.5 MILLION.	58
5. THE GOVERNMENT SHOULD EXAMINE THE DIVERSION OF THE GREAT NORTHERN HIGHWAY WITH A VIEW TO THE WORK BEING CARRIED OUT IN THE SHORT TERM.	63
6. THE WATER TOWER SHOULD BE RETAINED.	65


(C.R. KELLY)
Chairman.

Parliamentary Standing Committee on Public Works,
Parliament House,
CANBERRA, A.C.T.

19 March 1970.