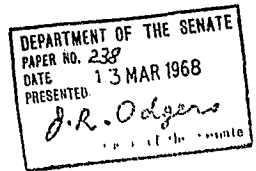


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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T

relating to the proposal to erect an

AVIONICS WORKSHOP

at the

NAVAL AIR STATION, H.M.A.S. ALBATROSS, NOWRA,  
NEW SOUTH WALES

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

AVIONICS WORKSHOP AT NAVAL AIR STATION,  
H.M.A.S. ALBATROSS, NOWRA, N.S.W.

R E P O R T

By resolution on 1 November 1967, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report, the proposal to erect a new avionics workshop at the Naval Air Station, H.M.A.S. Albatross, Nowra, N.S.W.

The Committee have the honour to report as follows:-

THE COMMITTEE'S INVESTIGATION

1. The Committee received submissions and drawings from the Department of the Navy and the Department of Works and took evidence from officers of these departments at a public hearing in Sydney. We studied a model of the proposed building and inspected the facilities at H.M.A.S. Albatross, including the building site.

THE PROPOSAL

2. The proposal submitted to the Committee is to erect at H.M.A.S. Albatross, a single-storey workshop building for servicing the electronic, electrical and instrument systems (collectively known by the term 'avionics') of naval aircraft.

3. The steel-framed, brick building will have an area of about 17,500 square feet and is estimated to cost \$530,000.

H.M.A.S. ALBATROSS

4. Location H.M.A.S. Albatross occupies 1,340 acres of land in undulating country in the Shoalhaven Valley five miles south of the town of Nowra on the south coast of New South Wales. By air it is about 70 miles from both Sydney and Canberra.

5. The station was constructed initially as an operational training base for the R.A.A.F. early in World War II and was taken over by the R.A.N. in 1947.

6. Functions H.M.A.S. Albatross is the shore base for the Fleet Air Arm. It provides aircraft for the Fleet and for operational and training purposes. It provides facilities for the maintenance of these aircraft as well as for maintenance training. The station is also the base for the Australian Joint Anti-Submarine School which provides anti-submarine warfare training for the R.A.N. and R.A.A.F.

7. The Existing Facilities The station is divided roughly into five major zones:

- (i) the airfield proper which comprises two sealed runways (6,650 feet and 6,750 feet), taxiways and hardstandings;
- (ii) the technical area where hangars and workshops are located;
- (iii) the administrative and living-in area;
- (iv) married quarters; and
- (v) playing fields.

8. Future Development The married quarters and playing fields are well established and no further development of these areas is expected in the near future. However, many of the buildings in the second and third zones were built during World War II and now need replacing.

9. The Committee noted that a master plan for the redevelopment of these areas is being considered and that as an early priority, it is proposed to rebuild the living-in accommodation in permanent construction. It is expected that this work will be referred to the Committee in the near future.

#### THE AVIONICS WORKSHOP

10. The Need Aircraft maintenance in the R.A.N. is classified under three headings:

- First Line - Servicing and inspection by the squadron to which the aircraft is attached. This is done aboard ship or at a shore station using the squadron's facilities.
- Second Line - Routine maintenance at a base workshop. This requires the withdrawal of the equipment from the squadron.
- Fourth Line - Maintenance and repairs necessitating the complete dismantling and overhaul of equipment at a base workshop. Fourth line servicing also covers third line servicing which is no longer a separate classification.

Second line avionics servicing of R.A.N. aircraft is carried out at H.M.A.S. Albatross and fourth line servicing is currently done by some 12 civilian firms in Sydney and Melbourne.

11. The buildings being used as workshops at H.M.A.S. Albatross are old, are of temporary construction and cannot be satisfactorily extended. Furthermore, they do not meet the standards of cleanliness, dust control and temperature control required for modern avionics work. There is the added disability that related functions are dispersed in separate buildings which prevents the best use being made of supervisors and operatives alike. Despite these shortcomings it has been possible in the past to provide a satisfactory standard of second line servicing at H.M.A.S. Albatross, but the introduction of Tracker and Skyhawk aircraft and the conversion of the Navy's Wessex helicopters will greatly aggravate the present difficulties.

12. Common to both second and fourth line servicing of the R.A.N.'s new aircraft is a large range of expensive new test equipment. To ensure that this equipment is used to the best advantage it is proposed to change the existing maintenance arrangements. Fourth line servicing, with some exceptions, will be carried out at H.M.A.S. Albatross by a single civilian contractor with Navy equipment instead of by a number of contractors in Sydney and Melbourne as at present. This arrangement will obviate the need to equip several contractors with the same expensive test equipment and it will provide an opportunity for sailors doing second line servicing to acquire additional skills by working alongside civilians engaged on fourth line servicing.

13. The proposed concentration of avionics servicing activities at H.M.A.S. Albatross would not be possible without the proposed new workshop.

14. Committee's Conclusion The buildings now being used for avionics servicing are not suited to this work and cannot be satisfactorily extended or converted to provide the maintenance facilities required for the new aircraft being introduced. The Committee agree therefore that there is a need to erect a modern avionics workshop at H.M.A.S. Albatross.

DESIGN AND CONSTRUCTION OF THE PROPOSED BUILDING

15. The building has been designed to provide at the one level a large main workshop area and space for the following:

- heavy rotary shop
- process cleaning area
- radar work space
- clean room
- administrative and library area
- stores
- toilets and change rooms
- plant room.

16. Site The site selected for the building, which is at the junction of Fulmar and Skua Roads, is in the zone in the draft master plan in which hangars and workshops are to be located. From the information we received on the principles underlying the replanning, we consider that the site is suitable.

17. Structure The workshop is to be a steel framed building 145 feet long by 102 feet wide with the plant room occupying a 55 feet by 42 feet extension on the north-eastern side. The foundations proposed are reinforced

concrete piers which will bear on shale which occurs 10 feet below the natural ground level. Reinforced concrete footing beams will be provided around the perimeter under the external walls and columns. The internal columns will be boxed steel sections while the roof space framing will comprise three main longitudinal lattice-type girders at 25 feet centres, carrying the roof and ceiling beams. The roof system is designed to provide a five feet clear space between roof and ceiling to accommodate ducts and service lines and to facilitate maintenance and the addition of new services in the future.

18. Materials and Finishes The roof will be galvanised steel decking with aluminium gutters and downpipes. The external walls are to be light-coloured face brick with smooth joints. Windows will be aluminium framed, those in airconditioned areas being double glazed. Perforated brick panels will screen windows to the toilets and change rooms. The floor will be concrete. A feature of the design will be a deep projecting fascia of copper-coloured, vinyl-covered steel decking with vertical ribs.

19. In selecting internal finishes regard has been had to the type of work to be performed in the various sections of the building as well as to durability and economic maintenance. The floors will generally be covered with sheet vinyl but those in the stores, process cleaning and plant room areas will be finished with a granolithic concrete. The toilet floors will be ceramic tiled. Permanent internal walls will generally be cement rendered and finished with a PVC spray. The toilet walls will be finished with glazed tiles while those in the plant room will be unpainted common brick. Demountable partitions will be used in office areas and to separate bays in the process cleaning area. With the exception of the heavy rotary shop and



the plant room, ceilings will be painted fibrous plaster and insulated. There will be no ceiling in the plant room where unlined insulation will be clipped to the underside of the metal roof. The walls and ceilings of the heavy rotary shop are to be specially constructed to isolate the noise in this section of the building as much as possible. Stud walls will be erected clear of the brickwork, insulated, lined with fibreglass blanket and faced with slotboard, while the ceiling will be perforated zincanneal sheets insulated with sound absorbent material.

20. Engineering Services Except for the plant room, heavy rotary shop, process cleaning room, stores, toilets and changerooms, the building will be airconditioned. The plant for this will comprise a centrifugal fan and the conditioner unit with heating and cooling coils. Cooling will be by two refrigeration compressors and heating by an automatic oil-fired boiler. The heavy rotary shop, process cleaning room and stores will be heated and ventilated.

21. A vacuum system is to be provided in the clean room and the main workshop area. A 2-inch ring main around the work area will supply compressed air.

22. Electricity will be drawn from a nearby substation, the capacity of which is to be increased to 600 KVA to meet the demands of the workshop. To compensate for the overall increased load on the station's reticulation, a new substation is to be erected near the control tower. As well as the normal 240V supply, 115V and 120V power will be available in the workshop.

23. The station's existing public address and call systems are to be connected to the new building.

24. Water, sewerage and waste disposal services will be connected to the station's existing systems.

25. Road connections will be made to Fulmar and Skua Roads and hardstanding areas will be provided adjacent to the plant room and the stores loading points. Parking space will be provided for 16 light vehicles.

26. Fire Protection Thermal and smoke detectors are to be installed throughout the building, including the ceiling space. They will be connected to the station's existing alarm system. Hosereels, hydrants and extinguishers will also be provided. The proposed fire protection measures comply with the requirements of the Department of the Navy and the Commonwealth Fire Board.

27. Committee's Recommendation The Committee recommend the construction of the work in this reference.

ESTIMATE OF COST

28. The estimated cost of the proposed work when referred to the Committee was \$530,000 made up as follows:

	\$
Building work	243,000
Engineering services	278,000
Installation of machines	
to be supplied by Navy	9,000
	<u>530,000</u>