

1969

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REPORT

relating to the proposed construction of

INSTRUCTIONAL BUILDINGS

at

H.M.A.S. Cerberus, Westernport
Victoria

(Fifteenth Report of 1969)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

INSTRUCTIONAL BUILDINGS AT H.M.A.S. CERBERUS
WESTERNPORT, VICTORIA

R E P O R T

By resolution on 28 August 1969, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report, the proposal to construct instructional buildings at H.M.A.S. Cerberus, Westernport, Victoria.

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 the Navy and Works and took evidence from their representatives at a public hearing in Canberra. A Sectional Committee inspected H.M.A.S. Cerberus, including the training facilities of the marine engineering and electrical engineering schools and the sites for the proposed buildings.

THE REFERENCE

2. The proposal referred to the Committee involves the construction of
- a marine engineering demonstration building;
 - a marine engineering classroom block; and
 - a weapon electrical engineering demonstration building.

3. The estimated cost of the proposed work is \$1.35 million.

H.M.A.S. CERBERUS

4. Functions The principal training establishment of the Royal Australian Navy is at H.M.A.S. Cerberus, Westernport, Victoria, where under the administration of the Commodore, Superintendent of Training, the following training divisions are conducted:

Officer	Supply and Secretariat
Academic	Medical and Dental
Naval Education Service	Nuclear, Bacteriological, Chemical
Adult Male Recruit Training and Junior Musician	Warfare and Damage Control
Musician	Musician
Gunnery	Petty Officers' Leadership
Weapon and Electrical Engineering	Physical
Marine Engineering	W.R.A.N.S.
Seamanship	
Communications	

5. The annual training output of H.M.A.S. Cerberus is about 4,500 ratings and officers.

6. The works proposed in this reference are concerned with augmenting the existing facilities of the marine engineering and weapon electrical engineering divisions. The former has an annual output of about 550 covering 41 different courses. The corresponding figures for the weapon electrical engineering division are 610 and 101 respectively.

7. Facilities The original development at H.M.A.S. Cerborus commenced in 1912 in permanent construction. Subsequently, a good deal of building has taken place, some of a temporary nature during World War II and in permanent materials since then. The most recent reference dealt with by the Committee at H.M.A.S. Cerborus concerned the construction of four barracks blocks for junior ratings. The report on this reference was made in November, 1964.

8. Master Plan A master plan agreed between the Departments of the Navy and Works has been used since 1960 as the basis for long term development and in it space has been allocated for domestic accommodation, administrative purposes, supply, academic and technical instruction, amenities and medical purposes.

9. Development since then has generally taken place in accordance with the master plan. This has included barracks blocks for junior ratings, modernisation and extension of the wardroom, accommodation for W.R.A.N.S., new victualling, clothing, bedding and naval stores and extensions to the electrical and signals schools.

THE REQUIREMENT

10. Outline In 1965, a detailed review of Royal Australian Navy training methods and facilities was undertaken. It was found that there were inadequacies in some elements of the Navy's training, particularly as the complex modern weapon, communication and propulsion systems use more space in current ships and there is a limit to the extent and thoroughness of the training which now can be given at sea.

11. The Committee were told that it has been found that unless it is possible to provide more thorough instruction at training establishments than has hitherto been the practice, and in particular practical experience under simulated conditions, the standard of maintenance carried out on this complex equipment at sea is likely to decline. The demonstration facilities to be provided in this reference are designed to provide the opportunity for this practical work.

12. Marine Engineering Demonstration Building At the present time, only limited space is available for static displays, there are no working examples of currently used major items of machinery and there is no appropriate accommodation in which working machinery of the type likely to be encountered at sea can be set up and worked on.

13. The proposal is to provide a demonstration building containing

- a range of typical modern diesel engines, widely fitted in the Navy with facilities and equipment for running and stripping;
- a steaming boiler, with associated plant, automatic combustion control and facilities for running auxiliary machinery under steam;
- an automatic combustion control simulator; and
- refrigeration and air conditioning plant.

14. Marine Engineering Classroom Block The marine engineering school is unable to meet its classroom needs from the accommodation available within its own resources, and has to depend on ad hoc arrangements with other schools for some classrooms. This arrangement is not satisfactory to either the

marine engineering school or the other schools and the scarcity of classrooms is becoming more acute as the demands on training facilities from all sources grow. Further increases in the number of courses are expected.

15. The existing classroom accommodation is not entirely satisfactory as it is located in old buildings not constructed for the purpose and requires improvement.

16. Weapon Electrical Engineering Demonstration Building The existing demonstration facilities for weapon electrical equipment and machinery are generally below standard or overcrowded. They are at present located in buildings which are unsatisfactory for demonstrating complex modern equipment or are becoming unserviceable.

17. Classroom accommodation also requires up-dating. We agree that the most satisfactory method of doing this is to provide new classroom accommodation.

18. Committee's Conclusion The Committee concluded that there is a need for the accommodation and facilities to be provided in this reference.

PROPOSED ACCOMMODATION

19. Marine Engineering Demonstration Building This single-storey building, measuring 254 ft by 78 ft, will include a dynamometer test house, boiler room, machine demonstration room with a part mezzanine floor, steam and diesel workshops and testing bays, laboratories, stores and office accommodation. The building will be designed to permit the inclusion of alternative machinery as it is brought into service.

20. Workshops and rooms housing machinery and heavy equipment will have travelling cranes or hoists on monorails for the installation and renewal of machines and plant.

21. The floor of the machinery room and boiler room will be four feet above the main floor to provide duct space for installation of services to machines. It will be of chequer plate, supported on a steel frame. A 90 ft steel smoke stack will be provided as part of the boiler installation. Cooling towers will be provided for steam and diesel engines.

22. Marine Engineering Classroom Block This will be a two-storey building 97 ft long by 61 ft, providing facilities for up to 210 students.

23. The ground floor will contain three large and two small classrooms as well as stores accommodation, a plant room and toilets. The first floor accommodation will include two small classrooms, a large instructional theatre, a mechanical drawing office for 30 students and an instructors' common room.

24. Weapon Electrical Engineering Demonstration Building This building, also to be two storeys high, is to be 170 ft long by 55 ft. It is designed to permit a future extension on the northern end and for the installation of instructional equipment on the dock roof.

25. Besides providing divisional offices, the lower floor will contain six laboratory classrooms, accommodation for officer instructors, a workshop, a crypto vault, plant room and toilets. The upper level will be devoted principally to rooms for the demonstration of various items of equipment and will have an instructors' common room, offices and a test equipment laboratory.

THE BUILDING PROPOSALS

26. Siting Only one of the sites for the three buildings is at present occupied. The weapon electrical engineering demonstration building site is occupied by a weapon electrical engineering building which is in a poor state of repair and is to be demolished.

27. All three buildings are to be built within the appropriate functional zones defined on the master plan. Within those zones they will be located conveniently to other buildings and facilities with which they have a relationship.

28. Construction of the buildings will not unduly disrupt training activities at H.M.A.S. Cerberus and access is available to each site from existing roads.

29. The Committee believe that the sites selected are satisfactory in each instance.

30. Construction and Materials The marine engineering demonstration building will be of steel frame construction, encased in concrete for fireproofing purposes, with brick infill panels and concrete floors. It will be supported on spread and strip footings.

31. The other two buildings will be of reinforced concrete construction with concrete floors, walls generally being brick infill panels. They will be founded on systems of piles which are required by the poor soil conditions.

32. Internal finishes will be selected for durability and low maintenance costs. Walls will mostly be coated with plastic finish, except in toilets, where ceramic tiles will be used. Floors will be screeded and finished with vinyl except in machinery areas where the finish will be hardened concrete.

33. Engineering Services Areas to be air conditioned will include selected parts of the marine engineering demonstration building and all of the weapon electrical engineering demonstration building. Other occupied areas will be heated for winter comfort and ventilated.

34. Existing electrical, hydraulic and civil engineering services will be extended to the proposed building from existing services.

35. Fire protection of the buildings will comply with the standards of the Commonwealth Fire Board, measures to be taken including automatic fire alarms, hydrants and hoses and hand extinguishers as necessary. There is adequate water supply for fire fighting purposes.

36. The marine engineering demonstration building will have hose reels connected to a carbon dioxide supply to cover test cells and machinery and boiler rooms. Automatic sprinklers will protect the boiler and machinery room and the space under the false floor.

37. The Committee's Recommendation The Committee recommend the construction of the buildings in this reference.

PROGRAMME

38. Due to the complexity of the marine engineering demonstration building, it is thought that documentation of the proposals ready for the calling of tenders will take about nine months after an approval to proceed is given. A building contract is expected to take 12 months to complete.

ESTIMATE OF COST


39. The estimated cost of the work when referred to the Committee was \$1.35 million as follows:

	\$
Marine engineering demonstration building	620,000
Marine engineering classroom block	250,000
Weapon electrical engineering demonstration building	<u>480,000</u>
	<u>1,350,000</u>

RECOMMENDATIONS AND CONCLUSIONS

40. 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 ACCOMMODATION AND FACILITIES TO BE PROVIDED IN THIS REFERENCE.	18
2. THE SITES SELECTED ARE SATISFACTORY IN EACH INSTANCE.	29
3. THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE BUILDINGS IN THIS REFERENCE.	37
4. THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS \$1.35 MILLION.	39



(F.C. CHANEY)
Chairman.

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

16 September 1969.