

227
THE PARLIAMENT

Parliamentary

1979

DEPARTMENT OF THE SENATE
PAPER No. 218
DATE
PRESENTED 22 FEB 1979
<i>J.R. O'Leary</i>

MENT OF THE COMMONWEALTH OF AUSTRALIA
STANDING COMMITTEE ON PUBLIC WORKS

REPORT

relating to the construction of

WORKSHOP, AMENITY BUILDING AND SERVICES

at

Garden Island Dockyard
New South Wales

(FIRST REPORT OF 1979)

TABLED PAPER

Macpherson
22/2/79

1979

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Parliamentary Standing Committee on Public Works

REPORT

relating to the construction of

WORKSHOP, AMENITIES BUILDING AND SERVICES

at

Garden Island Dockyard
New South Wales

(FIRST REPORT OF 1979)

AUSTRALIAN GOVERNMENT PUBLISHING SERVICE

CANBERRA. 1979.

DEPARTMENT OF THE SENATE
PAPER No. 218
DATE
PRESENTED 22 FEB 1979

1979

J.R. O'Gara

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T
relating to the construction of
WORKSHOP, AMENITIES BUILDING
AND SERVICES

at

Garden Island Dockyard,
New South Wales

(First Report of 1979)

Australian Government Publishing Service
Canberra 1979

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Twenty-fifth Committee)

Melville Harold Bungey, Esq., M.P. (Chairman)

Leonard Keith Johnson, Esq., M.P. (Vice-Chairman)

Senate

Senator Bernard Francis Kilgariff

Senator Jean Isabel Melzer

Senator Harold William Young

House of Representatives

Stephen Edward Calder, Esq., D.F.C., M.P.

Benjamin Charles Humphreys, Esq., M.P.

Albert William James, Esq., M.P.

Murray Evan Sainsbury, Esq., M.P.

EXTRACT FROM
THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES
NO. 66 DATED 8 NOVEMBER 1978

- 8 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - GARDEN ISLAND DOCKYARD, N.S.W. - WORKSHOP, AMENITIES BUILDING AND SERVICES: Mr McLeay (Minister for Construction), pursuant to notice, moved - That, in accordance with the provisions of the Public Works Committee Act 1969, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report: Garden Island Dockyard, N.S.W. - Workshop, amenities building and services.

Mr McLeay presented plans in connection with the proposed work.

Question - put and passed.

WITNESSES

Atherton, G.W., Esq., Treasurer, Commonwealth Foremen's Association,
(Garden Island Branch), P.O. Box 5, Garden Island,
New South Wales

Bouden, B., Esq., Chief Architect (Defence), Department of Housing
and Construction, P.O. Box E.286, Canberra,
Australian Capital Territory

Bricknell, F., Esq., Chief Estimator, Paynter & Dixon Pty Ltd.,
161 Clarence Street, Sydney, New South Wales

Buckham, M.W., Esq., First Assistant Secretary, Facilities Division,
Department of Defence, Russell Offices, Canberra,
Australian Capital Territory

Donaldson, A.G., Esq., Project Manager, Department of Housing and
Construction, P.O. Box H. 27, Australia Square,
Sydney, New South Wales

Fox, Captain L.G., R.A.N., Naval Project Director, Garden Island
Dockyard, Department of Defence, Russell Offices,
Canberra, Australian Capital Territory

Hill, S.A., Esq., Federated Engine Drivers and Firemen's Association
of Australasia, 25 George Street, South Hurstville,
New South Wales

Hudson, Captain M.W., R.A.N., Director of Naval Plans, Department
of Defence, Russell Offices, Canberra, Australian
Capital Territory

Jackson, M.J., Esq., Secretary, Garden Island Combined Unions
Shop Committee, 2/21 Ramsay Road, Five Dock, New
South Wales

Johnston, Dr. R.W., 66 Pacific Highway, St. Leonards, New South
Wales

McDonald, K.R., Esq., Principal Planner, Precinct Planning, The
Council of the City of Sydney, Box 1591, G.P.O.,
Sydney, New South Wales

McNeil, R., Esq., Amalgamated Metalworkers and Shipwrights Union,
Flat 7, 444 Maroubra Road, Maroubra, New South Wales

Moffat, D., Esq., Assistant Director, Department of Housing and
Construction, P.O. Box H.27, Australia Square,
Sydney, New South Wales

Reed, D.G., Esq., Unit 41, "The Gateway", 3 Wylde Street, Potts
Point, New South Wales

Rouske, Commodore W.J., R.A.N., General Manager, H.M.A. Naval
Dockyard, Garden Island, Sydney, New South Wales

Roxburgh, R.D., Esq., Associate Director, Department of Housing and
Construction, P.O. Box H.27, Australia Square, Sydney,
New South Wales

Stanborough, T.F., Esq., Federated Engine Drivers and Firemen's
Association of Australasia, 51 Mary Street, St. Peters,
New South Wales

York, R., Esq., Group General Manager - Construction, Paynter & Dixon
Industries Ltd., 161 Clarence Street, Sydney, New
South Wales

C O N T E N T S

	<u>Paragraph</u>
The Reference	1
The Committee's Investigation	4
Background	
Function and Role	6
Development Planning	9
The Need	14
Committee's Conclusion	21
The Proposal	
Workshop	23
Amenities and Refit Building	27
Services to East Dock Wharf	29
60Hz Power	31
East Dock Wharf Crane	34
Construction	
Architectural Factors	37
The Site	38
Committee's Conclusion	40
Workshop	41
Structure	46
Materials and Finishes	47
Fire Protection	50
Electrical	51
Mechanical	52
Hydraulic	53
Landscaping	54
Amenities Building	55
Planning and Design	56
Foundation and Structure	59
Materials and Finishes	60
Fire Protection	62
Electrical and Mechanical Services	63
Hydraulic	66
60Hz Power Supply Augmentation	67

	<u>Paragraph</u>
Machinery Location	68
East Dock Wharf Services	70
Local Authorities	71
Environmental Impact	74
Committee's Conclusion.	76
Project Management	77
Estimate of Cost	80
Program	81
Recommendations and Conclusions	82
Site Plan	A
Workshop	B
Amenities and Refit Control Building	C

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

GARDEN ISLAND DOCKYARD, N.S.W. -
WORKSHOP, AMENITIES BUILDING AND SERVICES

R E P O R T

By resolution on 8 November 1978, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament the proposal for the construction of a workshop, amenities building and services at the Garden Island Dockyard, New South Wales.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal consists of five separate works, each providing a functional facility for the Dockyard, as follows:

- a workshop building of three storeys to house facilities to service the new guided missile frigates;
- an amenities and refit control building of two storeys to house office accommodation for approximately 30 staff, as well as showers, toilets, lunch and change rooms for approximately 240 Dockyard personnel;
- provision of a rotary converter and reticulation to augment the 60 hertz power supply to three wharves;
- provision of a 5-tonne electric-powered portal crane on the East Dock wharf;
- extension of existing East Dock wharf services to the southern end of the wharf with additional provision of general purpose electric light and power and ship-to-shore sewage disposal services. A ship-to-shore telephone connection will also be provided.

2. The works are urgently required for the support of the new guided missile frigates (FFGs), the first of which is due in Australia in August 1981, and to improve amenities and other services.

3. The estimated cost of the proposal when referred to the Committee was \$7.35 million at October 1978 prices.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions from the Department of Defence, the Department of Housing and Construction, the Council of the City of Sydney, three unions representing workers at the Dockyard, two local residents and Paynter and Dixon Industries Ltd. Evidence was taken from these organisations and individuals at a public hearing in Sydney on 12-13 December 1978. Prior to the public hearing on 12 December, the Committee inspected the existing facilities at the Garden Island Dockyard and the sites for the new works.

5. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

6. Function and Role The Garden Island establishment fulfils a dual role, being:

- the focal point of the main Fleet Base which is situated in Sydney; and
- the principal naval dockyard for refit and modernisation of ships of the Royal Australian Navy.

7. The functions of the Fleet Base are to provide:

- base facilities for the direct support of operational ships of H.M.A. Fleet and foreign warships visiting Sydney;
- a Maritime Headquarters and a Fleet Headquarters incorporating operational, technical and administrative sections.

8. The functions of the Dockyard are:

- to provide depot level maintenance for H.M.A. ships and to modernise and convert major H.M.A. surface ships;
- to test and tune weapons, control and communications systems in H.M.A. ships including those refitted, modernised or converted at other yards;

- to manufacture, install and maintain specialised plant and equipment for naval establishments in the East Australia area;
- to construct, repair, refit, modernise and convert naval support craft;
- to manufacture and repair stores for the naval supply organisation; and
- to act as Technical Authority for certain classes of ships.

DEVELOPMENT PLANNING

9. The White Paper on Australian Defence, November 1976, stated: "The Government intends that the major naval base at Garden Island, N.S.W. should remain, but be modernised and developed in a way which pays careful attention to environmental considerations and improved aesthetics. Efficiency of the Fleet as well as of the Dockyard is presently hampered by the poor condition of the wharves and other facilities. A start will be made in the coming years to refurbish the wharves and to commence modernising the facilities".

10. In March 1977, the Garden Island Modernisation Planning Team (GIMPT) was established and consisted of officers of the Department of Defence and the then Department of Construction and private consultants. The GIMPT was asked to examine options for the modernisation and, under direction of the Department of Defence, determine a development plan which outlined the extent, manner, timing and costs of modernisation over a period of 15 to 20 years.

11. Planning has developed to the stage where two primary development options have been identified. One would involve reclamation and major new construction, including wharves, on the eastern side of the island. The other would require some naval berths on the western side in Woolloomooloo Bay. Whilst the latter option closely accords with modernisation objectives, consultation with all authorities concerned has not yet proceeded to the point where either could be selected for the long term plan.

12. It is hoped to have the modernisation plan completed and submitted for consideration by Government in mid-1979. As part of this process, an environmental impact statement is being prepared.

13. There is a planning core of facilities common to both options. The majority of the facilities presently proposed are part of this planning

core. Thus they can be permanently constructed and will be compatible with whichever planning option is decided. The exception is the item for 60Hz power supply for which some temporary facilities are proposed pending decisions on overall modernisation.

THE NEED

14. The infrastructure at Garden Island has been developed progressively since its establishment in the 1860s. Extensive additions were made during World War II. Subsequent facilities were constructed in a largely piecemeal manner. This, together with under investment in capital works and repairs and maintenance has resulted in the present inefficient and unsatisfactory disposition and quality of facilities. In recent years only the most urgent of new facilities have been authorised. Many others which should have been implemented on grounds of overall efficiency were deferred pending resolution of a long term development plan. Consequently, facilities generally and in particular wharves and services, are deficient.

15. The inadequacy of changing facilities and amenities of the workforce on Garden Island has been a source of industrial unrest for many years, with a consequent reduction in workforce productivity.

16. The planning and supervisory functions involved in the refitting of ships require accommodation which should ideally be located adjacent to the ship under refit. This requirement is met at present by using temporary facilities such as converted bus bodies sited close to refitting berths. These are both visually and functionally unsatisfactory.

17. The need for the proposed works to be undertaken now, in advance of final resolution of development planning, is primarily related to the need to provide facilities for the support of the FFGs. The construction of the first FFG, to be named H.M.A.S. Adelaide, is on schedule and delivery is expected in mid-1981. The remaining two FFGs are scheduled for delivery in late 1981 and 1983 respectively.

18. The FFGs incorporate a different maintenance and repair concept from other ships in the Royal Australian Navy. Complete units will be replaced from serviced spares in stock and these units serviced on shore. The FFGs are the first R.A.N. ships to be powered by gas turbine engines, which will require special testing equipment. Sewage from FFGs will be pumped on shore and special disposal facilities are therefore required.

19. It is therefore planned to provide new facilities in such a way that they will contribute to the development of the overall infrastructure on Garden Island and provide the essential facilities and services required for support of the FFGs.

20. The focus of activity and planning in the Dockyard is the Captain Cook Dock. Its approaches are flanked by East and West Dock wharves, which themselves become basic elements of the planning core. The East Dock wharf, has been designated as the berth for mooring and refitting of FFGs and it will be provided with the full range of services required by the FFGs, including power, water, sewerage connection and a crane. The major FFG support workshop will be located nearby. The West Dock wharf will continue to be used as a refit berth for other warships.

21. Committee's Conclusion There is a need to provide facilities at the Garden Island Dockyard, New South Wales for the support of the guided missile frigates (FFGs). The facilities should be ready by mid-1981 when the first ship in this class is due for delivery. The Committee notes that the proposed facilities are compatible with whichever long term planning option is adopted for the modernisation of the Dockyard. The Committee therefore agrees that the facilities be constructed in advance of the proposed long-term modernisation program.

22. Amenities for the Dockyard workforce are inadequate and have been the source of industrial unrest for many years. The proposed improvements to the amenities are long overdue and should not be delayed.

THE PROPOSAL

23. Workshop A feature of the present infrastructure at Garden Island is the poor disposition and quality of factory and workshop facilities. A prime objective of the modernisation studies has been to improve workshop siting and layout so as to improve operating efficiency and promote increased productivity.

24. The repair by replacement philosophy dictates the provision of workshop facilities near the FFG berths. In view of the present limitations on workshop capacity and because the equipment types on the FFG will vary significantly from those used in current R.A.N. ships, a new maintenance workshop located as close as possible to the East Dock wharf is proposed. The major elements which it is required to provide include a pump repair and

test facility, an hydraulics workshop constructed to clean room standards, an electronic and control equipment workshop, a machine shop, calibration laboratory and training area.

25. Although required in the first instance for support of FFGs, this workshop will also be used in the future for other new ships which will have similar equipments and will also be maintained on a repair by replacement basis.

26. The presently identifiable workshop requirements could be met in a building of some 5000 square metres floor area. However, because the land area available on Garden Island for workshop activities is so limited and future extension of this building would be disruptive and relatively costly, it is proposed to construct a building which optimises use of the available site volume. This will result in a building shell of 6000 square metres floor area with only 5000 square metres being fitted out with power, lighting and other services. The remaining 1000 square metres would be fitted out when its future use is determined.

27. Amenities and Refit Building Whilst this facility is not related to support for the FFGs, it is nonetheless important that it be provided without further delay for the industrial relations reasons outlined earlier. The amenities components of the building are to cater for 240 personnel and are to replace the substandard, temporary facilities now provided.

28. The refit components of the proposed building are to provide offices, tool stores and space for storage of equipment and materials involved in the refitting of ships on West Dock wharf. The facilities will replace the converted buses and caravans currently used for refit offices.

29. Services to East Dock Wharf When ships berth at the Fleet Base, it is important that as much of the machinery required to provide vital services while at sea be closed down for routine maintenance and to reduce noise, smoke and harbour pollution. It is also desirable that only the minimum number of personnel consistent with shipboard safety and security be retained on board as duty personnel. For these reasons, it is necessary that ships be provided with services such as electrical power, water, compressed air and connections for discharge of sewage from wharf side facilities. It is proposed to provide these services at a number of points along East Dock wharf.

30. It has been possible to make some provision for these services under the project now nearing completion for extensions to the East Dock wharf. However, it was necessary to await clarification of FFG requirements before final arrangements for provision of all services was possible.

31. 60Hz Power R.A.N. ships' systems are operated on electrical power rated at a frequency of 60 cycles per second (60Hz). Ships of the Royal Navy and the United States Navy also operate on 60Hz power which is also the N.A.T.O. standard. The New South Wales electricity supply grid provides power at 50Hz. Frequency converters must therefore be provided to enable berthed ships to be supplied from the shore power system.

32. The capacity of 60Hz power supplies at Garden Island is substantially below the level of demand. Assessments indicate that a total capacity in the order of 14 MVA will be required against the current capacity of some 4 MVA. The demand of one FFG alone is approximately 1.2 MVA. To meet the assessed total demand, it is proposed eventually to supplement the 2 x 2 MVA units with 2 x 5 MVA units, thus allowing one machine to be out of service without unduly reducing the capacity of the system. Under this proposal it is intended to provide one 5 MVA frequency converter now and reticulate 60Hz power to East Dock wharf to cater for the FFGs and to two other wharves on the western side of Captain Cook Dock.

33. Until the overall development plan has been agreed and it is possible to construct a permanent utilities building, it will be necessary to site the first new 5 MVA frequency converter in a temporary enclosure. The majority of the reticulation will, however, be installed permanently as an element of the ultimate reticulation system on the island.

34. East Dock Wharf Crane As with other ships, the FFG class will require the services of a crane when undergoing refit or major maintenance. A particular feature of FFG maintenance is that its major equipment is to be maintained on a repair by replacement basis from a pool of spare equipment. A crane with a capacity of 5 tonnes, with a radius of action sufficient to handle such a lift from the outer of the two FFGs berthed side by side at the wharf will be required to remove and replace major equipment items including gas turbines.

35. In a submission to the Committee, the Federated Engine Drivers and Firemen Association of Australasia (FED & FA) made a number of suggestions regarding the crane with the aim of improving safety, e.g. the

position of the hoist drum and the provision of an electric control system.

36. The Committee understands that the matters raised by the FED & FA will be closely examined by the Departments of Defence and Housing and Construction before the final design of the crane is determined.

CONSTRUCTION

37. Architectural Factors Considerable emphasis was placed on the need to ensure that any construction which occurs in advance of an approved modernisation plan for the Dockyard is compatible with the likely options which may arise from that program. Apart from functional compatibility, there is the important need to ensure that the environment is improved by whatever is constructed at any time in the future. For these reasons, aesthetic and environmental matters have been most carefully considered in the design of the current proposals. The Department of Housing and Construction is satisfied that the proposals embody the necessary standards of aesthetic and environmental quality.

38. The Site The Garden Island Dockyard occupies a prominent peninsula in Sydney Harbour within 2 km of the Central Business District. As indicated above, the Government has decided that Garden Island will continue to be used as a major naval base but that the base will be modernised and developed with careful attention being paid to environmental considerations and improved aesthetics.

39. In selecting the sites for the works proposed in the reference, careful attention has been paid to functional efficiency and compatibility with the long term modernisation program.

40. Committee's Conclusion The sites selected are suitable.

41. Workshop Due to the complex and varying nature of the work to be undertaken in the workshop, the main design objective has been to provide maximum flexibility for space allocation, materials handling and mechanical services.

42. Flexibility in the use of workshop space and materials handling has been achieved by a large span structural system designed to permit gantry cranes to service any or all of the working areas. Flexibility of mechanical services is achieved through an "external duct" concept to the full facade area of the west and east sides of the building.

43. This concept consciously accepts that all vertical ducting and piping will be placed externally and may therefore be altered, increased or removed in the future when technological functions within the building change. This degree of flexibility can be achieved by simple penetrations through the external fabric of the building without any effect on the structural frame.

44. The three-storey workshop is connected to the existing Building 52 by a "link" structure containing staff amenities, plant and storage space. This section has four levels incorporating lower ceiling heights to achieve the same overall roof level as the workshop. The staff amenities area is planned to permit variation in numbers of male and female staff, foremen and contractors.

45. Two major factors have influenced the massing and external appearance of the workshop:

- to avoid increasing the apparent bulk of Building 52, the workshop has been visually separated from it by a recessed link section;
- the facade treatment of the workshop is quite different from that of Building 52 which gives additional visual separation.

46. Structure The workshop will be concrete framed, supported on steel piles driven to bedrock. The approximate bedrock depth, ascertained from site investigations, is 20 metres below natural ground level.

47. Materials and Finishes The external finish to the exposed workshop structure will be smooth off-form concrete, while the link building and workshop wall cladding will be of compressed asbestos panels with grey tinted glazing. These materials are consistent with practical needs and with desirable visual effects. The roof will be finished with an asbestos asphalt laminate.

48. Internal finishes in the workshop area will be off-form concrete ceilings with applied acoustic panels. Walls will be of concrete block and the concrete flooring will be covered with an epoxy compound industrial floor finish.

49. In the link building, ceilings will be off-form concrete. The floors will be finished with rubber tiles and the walls will be concrete

block with the exception of toilet and shower areas which will have ceramic tile floors and walls with laminated type partitions.

50. Fire Protection Fire sprinklers will be provided throughout the workshop together with fire hose reels and hand appliances.

51. Electrical The existing substation at the north end of Building 52 will be replaced with a new substation in the link section of the new workshop. This substation will accommodate transformers for both 50Hz and 60Hz supplies. The former is required for normal building services and the latter for testing ship-board equipment. The 50Hz transformers will be adequate to supply the existing Building 52 plus the new workshop. General lighting will be fluorescent.

52. Mechanical The initial use of the workshop will require some areas to be ventilated; other areas will be supplied with filtered air or be air conditioned. Over the life of the building, the areas so treated will grow or diminish with changes in maintenance practices. Mechanical systems which can be varied to suit particular areas of the building without disruption to other areas are required. A central boiler and cooling tower system which distributes heating and condenser water piping throughout the building and to which small local plants can be connected, is proposed for this duty. Compressed air for hand tools and cleaning will be reticulated to each workshop.

53. Hydraulic Water and sewerage connections will be provided to the existing site systems. Trade wastes from the cleaning and stripping bay will be collected in holding tanks and removed by road tanker.

54. Landscaping The areas to the east and north of the workshop will be landscaped. The treatment on the east side will include an earth mound, incorporating bunds for the test fluid tanks with trees and ground cover.

55. Amenities Building The amenities building accommodates two functions relating to the civilian ship-board workforce:

- amenities in the form of showers, change rooms, lockers, toilets and lunch rooms;
- refit control offices, tool store and lay-apart store.

56. Planning and Design The amenities building is sited on one of the most prominent and publicly visible areas of the Dockyard. Because of this, it has been necessary to design the building in such a way that it will integrate with its surroundings whilst maintaining high individual aesthetic qualities. The building is designed as a complementary element of a relatively unique grouping of cranes, transformer housings, workshops and, on frequent occasions, ships at berth. The design provides a long low profile building with carefully defined window and door openings resulting in an overall industrial and "maritime" appearance. Options such as conventional concrete or masonry structure were considered during the design phase and were rejected as inappropriate for the particular setting in which the amenities building is placed.

57. The two-storey design has been adopted to minimise ground usage in a restricted area and the building orientation aligns it with the main axis of the Captain Cook Dock.

58. Showers and toilets have mainly been located on the ground floor, above a base which accommodates the associated plumbing pipes. The main store is also located on the ground floor for ease of vehicle access. Because the lunch rooms and main office require less frequent access by personnel, these are located on the upper floor.

59. Foundation and Structure The building frame will be of reinforced concrete with steel roof trusses. The building will be supported generally on strip footings placed on the existing concrete slab on the site.

60. Materials and Finishes The external cladding will be of composite panels. Three materials are being considered for the outer facings viz. metal, asbestos cement and fibreglass. A final decision on materials will be made during design development. The necessary analyses and tests are presently being arranged. The roof finish will be asbestos asphalt laminate.

61. The internal finishes in the change rooms will consist of ceramic wall and floor tiles and the shower cubicles will be finished with laminates. The corridors, offices and lunch room floors will be covered with industrial type rubber flooring while the upstairs ceiling will be of compressed fibre-board panels located above the exposed roof trusses.

62. Fire Protection Thermal fire detectors will be provided throughout the building, together with a fire hose reel and hand appliances on each floor. The layout incorporates two fire isolated stairs.

63. Electrical and Mechanical Services Electricity supply will be provided from an adjacent substation and this will be used for general light and power, water heating, ventilation and air conditioning.

64. The change rooms will have separate mechanical ventilation for the toilet and shower areas and air conditioning will be provided for the office area on the upper floor only.

65. The use of solar energy for water and space heating in this building has been investigated and found to be uneconomic. The use of solar energy in future Dockyard installations will be considered as each development proposal arises.

66. Hydraulic Water and sewerage connections will be provided to the existing site systems.

67. 60Hz Power Supply Augmentation To meet the requirement for increased 60Hz power, an additional rotary frequency converter of 5 MVA is proposed. This rating is also suitable for the installation planned for the overall modernisation. It is planned to ultimately locate this machine in a separate building. However, pending a final decision on siting, a temporary installation in an acoustically treated structure is therefore proposed.

68. Machinery Location Shore-to-ship connection points will be provided at the following berths:

- East Dock wharf (new outlets);
- Fitting Out wharf (upgraded outlets);
- Woolloomooloo No. 2 (new outlets).

69. Associated with the electrical installation at each berth is a small berth services unit structure. This is required primarily to accommodate transformers and switchgear, but in addition provides space for storage of shore-to-ship connection cables and hoses, wheeled equipment such as mobile rectifiers and cable trailers and miscellaneous rigging and lighting equipment.

70. East Dock Wharf Services The existing services on East Dock wharf comprise salt water, fresh water and compressed air to the northern end only. These services will be extended via the existing wharf services duct to the southern end of the wharf and the following additional services provided throughout the wharf:

- 50Hz electricity for general purpose light and power loads plus wharf crane supply;
- sewage piping and pumps to permit ships alongside to discharge into the shore sewerage system;
- telephone ship-to-shore connection point.

71. Local Authorities The proposals were discussed with the officers of the Woollahra Municipal Council who emphasised the importance of landscaping planned for the eastern side of the workshop building. The Sydney County Council, Maritime Services Board, the Metropolitan Water, Sewerage and Drainage Board were consulted during preparation of the designs and have not raised objections to the proposal.

72. In a submission to the Committee, the Council of the City of Sydney expressed its opposition to the continued use of Garden Island as a major naval facility. However, in view of the Commonwealth Government's decision that the naval facility will remain, the Council is anxious that measures be taken to improve the visual appearance of the Dockyard, both through building design and appropriate landscaping and also to reduce atmospheric and noise pollution. The Council also expressed concern regarding car parking and traffic generation. Evidence from the Department of Housing and Construction indicated that the works proposed in this reference will not have any significant effect on existing traffic patterns in the general area of the Dockyard.

73. The proposed workshop occupies an area now used to park approximately 60 cars. During construction, an additional temporary loss of car parking spaces will occur to provide builders' working areas. Both the temporary and long term losses will be made up by the allocation of additional space within the Dockyard.

74. Environmental Impact Particular emphasis has been placed on substantial environmental and aesthetic improvement being achieved as part of the overall modernisation planning. Areas requiring specific attention

and which have been examined in detail in relation to the works now proposed include:

- reduction in smoke, noise and harbour pollution;
- the removal of temporary, unsightly structures;
- careful architectural treatment of new buildings particularly those to be prominently located, consistent with an overall theme for the total visual impact of the island.

75. The proposal was examined and cleared by the then Department of Environment, Housing and Community Development in accordance with the provisions of the Environment Protection (Impact of Proposals) Act 1974/75.

76. Committee's Conclusion The Committee recommends the construction of the works proposed in this reference.

PROJECT MANAGEMENT

77. Paynter & Dixon Industries Ltd, in evidence to the Committee, stated that the works proposed in this reference could be provided at a lower cost and in a shorter time if the work was undertaken by a competent firm of project managers, experienced in design and construction and working within financial limitations.

78. In its report relating to the Development of Army Site Stage 1 at Bonegilla, Victoria (Sixth Report of 1978), the Committee in commenting on a similar proposal by Civil & Civic Pty Ltd, concluded (paragraph 132) "The Department of Construction should undertake a thorough examination of the proposal regarding project management put to the Committee by Civil & Civic Pty Ltd". Any recommendation by the Committee regarding project management should await the examination by the Department of Housing and Construction.

79. The Committee does not believe that the evidence put before it on this occasion warrants a departure from established Commonwealth practices in the planning and construction of these works.

ESTIMATE OF COST

80. The estimated cost of the work when referred to the Committee was \$7.35 million at October 1978 prices, made up as follows:

	\$
Workshop for Guided Missile Frigates	3 600 000
Amenities building	940 000
60Hz power supply augmentation	1 830 000
East Dock wharf crane	750 000
East Dock wharf services	230 000
	7 350 000

PROGRAM

81. Construction will be completed approximately 28 months from the date approval to proceed is given. Due to the urgent nature of the works, Cabinet gave approval for design and documentation to proceed concurrently with the Committee's inquiry.

RECOMMENDATIONS AND CONCLUSIONS

82. 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.

Paragraph

1. THERE IS A NEED TO PROVIDE FACILITIES AT THE GARDEN ISLAND DOCKYARD, NEW SOUTH WALES FOR THE SUPPORT OF THE GUIDED MISSILE FRIGATES (FFGs). THE FACILITIES SHOULD BE READY BY MID-1981 WHEN THE FIRST SHIP IN THIS CLASS IS DUE FOR DELIVERY. THE COMMITTEE NOTES THAT THE PROPOSED FACILITIES ARE COMPATIBLE WITH WHICHEVER LONG TERM PLANNING OPTION IS ADOPTED FOR THE MODERNISATION OF THE DOCKYARD. 21
2. THE COMMITTEE THEREFORE AGREES THAT THE FACILITIES BE CONSTRUCTED IN ADVANCE OF THE PROPOSED LONG-TERM MODERNISATION PROGRAM. 21
3. AMENITIES FOR THE DOCKYARD WORKFORCE ARE INADEQUATE AND HAVE BEEN THE SOURCE OF INDUSTRIAL UNREST FOR MANY YEARS. THE PROPOSED IMPROVEMENTS TO THE AMENITIES ARE LONG OVERDUE AND SHOULD NOT BE DELAYED. 22
4. THE SITES SELECTED ARE SUITABLE. 40

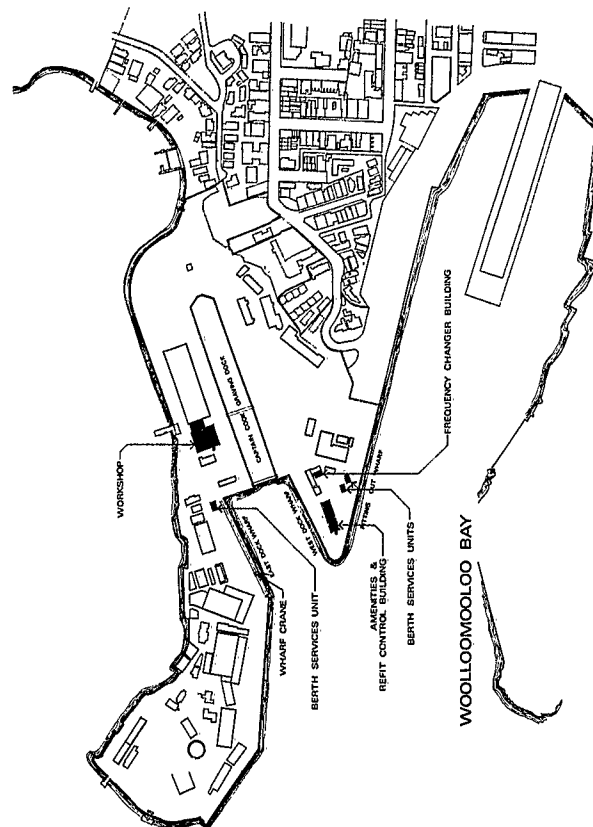
Paragraph

5. THE COMMITTEE, RECOMMENDS THE CONSTRUCTION OF THE WORKS PROPOSED IN THIS REFERENCE. 76
6. THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS \$7.35 MILLION AT OCTOBER 1978 PRICES. 80

L.K. Johnson
(M.H. BUNGEY) *vice*
Chairman *Chairman*

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

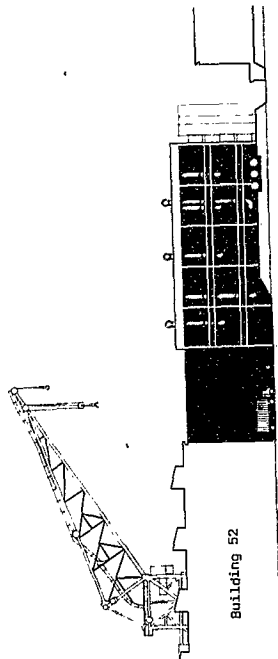
22 January 1979.



SITE PLAN

0 50 100 200
m

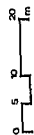




Building 52

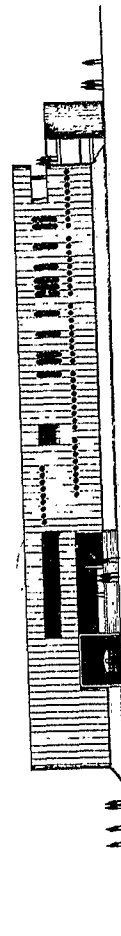
EAST ELEVATION

WORKSHOP



B.

24102/79-L



EAST ELEVATION

AMENITIES AND
REFIT CONTROL BUILDING



C.

R78/1042