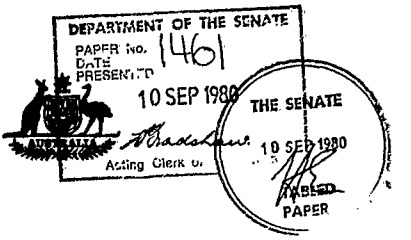


Parliamentary Standing Committee on Public Works

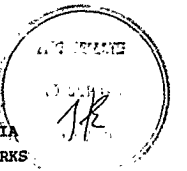
REPORT

relating to the

MODERNISATION OF FLEET BASE AND DOCKYARD, GARDEN ISLAND, NEW SOUTH WALES STAGE 1

(NINTH REPORT OF 1980)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1980



1980

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

REPORT

relating to the

MODERNISATION OF FLEET BASE AND DOCKYARD, GARDEN ISLAND, NEW SOUTH WALES, STAGE 1

(Ninth Report of 1980)

Australian Government Publishing Service
Canberra 1980

Printed by C. J. Thompson, Commonwealth Government Printer, Canberra

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	House of Representatives
Senator Bernard Francis Kilgariff	Stephen Edward Calder, Esq., D.F.C., M.P.
Senator Jean Isabel Melzer	Benjamin Charles Humphreys, Esq., M.P.
Senator Harold William Young	Albert William James, Esq., M.P.
	Murray Evan Sainsbury, Esq., M.P.

PUBLIC WORKS COMMITTEE ACT 1969
ORDER UNDER SUB-SECTION 18(4)

I, SIR ZELMAN COWEN, the Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, in pursuance of Sub-Section 18(4) of the Public Works Committee Act 1969, hereby, by this order, declare that the public work described in the schedule be referred to the Parliamentary Standing Committee on Public Works for consideration and report.

SCHEDULE

CONSTRUCTION OF GARDEN ISLAND, NEW SOUTH WALES, MODERNISATION STAGE ONE.

Given under my Hand and the Great Seal of Australia *on 6 June 1980*

L.S.

ZELMAN COWEN

Governor-General

By His Excellency's Command,

(Signed) R.J. GROOM.

Minister of State for Housing and Construction

WITNESSES

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

Bowden, B., Esq., Senior Consulting Architect, Department of Housing and Construction, ACT.TAB Building, Northbourne Avenue, Dickson, Australian Capital Territory

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

Dover, B., Esq., President, Defence Group, NSW Branch, Professional Officers' Association, Commonwealth Public Service, Box 24, Garden Island Dockyard, New South Wales

Fisher, Commodore T.R., RAN, General Manager, HMA Naval Dockyard, Garden Island, New South Wales

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

Fripp, T.A., Esq., Secretary/Treasurer, Body Corporate for Strata Plan 11452, 15/40 Victoria Street, Potts Point, New South Wales

Gatt, W., Esq., Treasurer, Community Rehabilitation Task Force, 80 Caledonian Street, Bexley, New South Wales

Gibson, T.G., Esq., Municipal Engineer, Ryde Municipal Council, Civic Centre, Devlin Street, Ryde, New South Wales

Henderson, Ms C., 12/40 Victoria Street, Potts Point, New South Wales

Hudson, Commodore M.W., RAN, Director-General, Naval Plans & Policy, Department of Defence, Russell Offices, Canberra, Australian Capital Territory

25064/80—2

Hughes, D.R., Esq., Chairman, Woolloomooloo Dinghy Club, 6 Foley Street, Taylor Square, Sydney, New South Wales

Jackson, M.J., Esq., Secretary, Garden Island Combined Unions Shop Committee, 48 Railway Parade, Annandale, New South Wales

James, C.l., Esq., Woolloomooloo Residents Action Group, Box 402 P.O., Kings Cross, Sydney, New South Wales

James, P.C., Esq., Deputy Director, The National Trust of Australia, National Trust Centre, Observatory Hill, Sydney, New South Wales

Johnson, S.R., Esq., Chief Investigation and Design Engineer, City Engineer's Department, Council of the City of Sydney, Town Hall, Sydney, New South Wales

Leonard, G.E., Esq., Vice-President, Woolloomooloo Residents Action Group, 67 Forbes Street, Woolloomooloo, New South Wales

Ludvik, A.G., Esq., Town Planner, Ryde Municipal Council, Civic Centre, Devlin Street, Ryde, New South Wales

McDonald, K.R., Esq., Principal Planner, Precinct Planning, City Planning Department, Council of the City of Sydney, Town Hall, Sydney, New South Wales

Morphett, Mrs. I.E., Assistant Director, Total Environment Centre, 18 Argyle Street, Sydney, New South Wales

Mulconry, R.J., Esq., Senior Land Planning Officer, Department of Administrative Services, Commonwealth Government Centre, Chifley Square, Sydney, New South Wales

Mulvenna, J.R., Esq., President, Woolloomooloo Residents Action Group, 13 Rae Place, Woolloomooloo, New South Wales

Nelson, W.J., Esq., Junior Vice President, Garden Island Combined Unions Shop Committee, 27 Ramsgate Avenue, Bondi, New South Wales

Oppen, Mrs. A.M.A., President, Sydney Harbour and Foreshores Committee, C/- Total Environment Centre, 18 Argyle Street, Sydney, New South Wales

Rainford, J., Esq., President, Garden Island Combined Unions Shop Committee, 12 Narelle Street, North Bondi, New South Wales

Reed, D.G., Esq., Unit 51, 3 Wylde Street, Potts Point, New South Wales

Rogers, A.K., Esq., Convenor, Garden Island Group Committee, Association of Architects, Engineers and Draftsmen of Australia, Building 48, Garden Island Dockyard, New South Wales

Rolland, D., Esq.,, Executive Member, Garden Island Combined Unions Shop Committee, Flat 10, 113 Wellington Street, Bondi, New South Wales

Silva, M.E., Esq., Project Manager, Garden Island, Department of Housing and Construction, Tower Building, Australia Square, Sydney New South Wales

Slack-Smith, G., Esq., Assistant Chief Engineer, Maritime Works, Department of Housing and Construction, ACT.TAB Building, Northbourne Avenue, Canberra, Australian Capital Territory

Vasey, I.A., Esq., President, Concord and Ryde Sailing Club, P.O. Box 121, Ryde, New South Wales

Warnken, R.K., Esq., Executive Officer (Operations), Department of Administrative Services, Commonwealth Centre, Chifley Square, Sydney, New South Wales

CONTENTS

	Paragraph
The Reference	1
The Committee's Investigation	3
Background	7
The Need	11
Committee's Conclusion	18
The Proposal	
Utilities Building	20
Design	25
West Dock Workshop - Module A	26
Design	27
East Dock Wharf - Refit and Amenities Building	29
Design	30
Associated Works	31
East Side Road Works	34
Liquid Waste Facility	35
Design	36
Waterfront Annexe Improvements, Ryde	37
Landscaping	38
Carpark	39
Design - Island Scheme	41
Design Cliff Face	44
Consideration of Alternatives	45
The Sites	
Utilities Building	49
West Dock Workshop - Module A	51
East Dock Wharf - Refit and Amenities Building	52
Liquid Waste Facility	53
Committee's Conclusion	54
Waterfront Annexe - Ryde	55
Committee's Conclusion	57
Carpark - Cliff Face	58
Committee's Conclusion	61
Other Observations	
Carpark Administration	63
Utilities Building	64

	Paragraph
The Disabled	65
The War Memorial	67
Consultations with Authorities	68
Estimate of Cost	69
Program	70
Committee's Conclusion	71
Recommendations and Conclusions	72

APPENDIX A

Construction	
Utilities Building	1
West Dock Workshop Module A	4
East Dock Wharf - Refit and Amenities Building	8
Small Craft Repair Facility, Ryde	15
Carpark - Cliff Face Scheme	16

Garden Island Site Plan	A.
Utilities Building	B.
West Dock Workshop - Module A	C.
West Dock Workshop - Module A - Cross Section	D.
East Dock Wharf - Refit and Amenities Building, North and South Elevations	E.
Waterfront Annexe Site Plan	F.
Garden Island Carpark - Cliff Face Scheme - West Elevation and Section	G.
Garden Island Carpark - Island Scheme - West and East Elevations and Sections	H.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

MODERNISATION OF FLEET BASE AND DOCKYARD, GARDEN ISLAND, N.S.W., STAGE 1

R E P O R T

On 6 June 1980, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for investigation and report to Parliament, the proposal for the construction of a number of facilities at Garden Island, New South Wales, which will comprise the first stage of a program of modernisation of the Fleet Base and Dockyard facilities.

The Committee has the honour to report as follows:

THE REFERENCE

1. The components of the proposal are:
   - a Utilities Building and the upgrading of high voltage electrical distribution on the Island;
   - the first module of a Weapons and Electronics Engineering Workshop Building;
   - a Refit Control and Amenities Building to serve the East Dock Wharf;
   - improvements to the Ryde Waterfront Annexe for the repair of Small Craft;
   - improvements to landscaping and streetscaping on the Island;
   - a Liquid Waste Treatment Plant;
   - a multi-level Carpark in Cowper Wharf Road, Woolloomooloo

2. The estimated cost of the proposal when referred to the Committee was $28.6 million at March 1980 prices.

THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and drawings from the Department of Defence, the Department of

Housing and Construction and the Department of Administrative Services and took evidence from their representatives at a public hearing in Sydney on 28 and 29 July, 1980.

4. The Committee also received written submissions and took evidence from representatives of the Council of the City of Sydney, the ACTU - Combined Unions Shop Committee, the Association of Architects, Engineers, Surveyors and Draftsmen of Australia, the Professional Officers Association, the Commonwealth Foremen's Association, the Woolloomooloo Resident Action Group, the Sydney Harbour Foreshores Committee, the Total Environment Centre, the Community Rehabilitation Task Force, the Woolloomooloo Dinghy Club, Ryde Municipal Council, the Concord and Ryde Sailing Club and the National Trust of Australia (NSW). The Committee also received submissions and took evidence from a number of private citizens.

5. The Committee inspected a number of existing facilities at Garden Island and the Small Craft Repair Facility at Ryde and the sites for the proposed works on 28 July, 1980.

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

BACKGROUND

7. The policy decision for the modernisation and development of Garden Island was announced in the White Paper on Australian Defence in November 1976. A planning team, the Garden Island Modernisation Planning Team (GIMPT) was subsequently established to plan the modernisation. The planning process commenced with a statement of the broad aims of the Fleet Base and Dockyard. From these aims a functional analysis of requirements for the existing and projected Fleet was made to permit assessments of space requirements for Fleet base and Dockyard activities to be determined. These assessments were used by two of Sydney's leading consultant architects to prepare alternative concepts from which more detailed architectural and engineering studies could proceed.

8. The alternative concepts were developed into 16 layout options and after interdepartmental consideration were reduced to two alternative schemes which were developed to a more detailed stage. The two schemes comprise:

- a Preferred Scheme which would involve the use of the Woolloomooloo commercial wharves numbers 2, 3 and 4; and
- an Alternative Scheme which would involve reclamation work and the construction of wharves on the eastern side of Garden Island.

9. The need for the modernisation and the two alternative schemes were the subject of an Environmental Impact Statement.

10. Facilities urgently required for the support of the new guided missile frigates (FFGs), the first of which is due in Australia in 1981, and improved amenities and other services, were referred to the Committee in November 1978. In its First Report of 1979 (Parliamentary Paper 41/79) the Committee endorsed the need for these facilities and noted that they were compatible with whichever long term planning scheme is adopted for the modernisation of the dockyard.

THE NEED

11. At present the Fleet Base and Dockyard are hampered by the inefficient layout of various components. Because of a lack of serviced wharves, operational ships have to be accommodated at wharves more suited for refitting. Double berthing of an operational ship next to one undergoing refit causes power reticulation and personnel movement problems. The present dispersal and location of amenities and workshops for dockyard personnel creates difficulties. The Department of Defence believes that when completed the modernisation program would result in productivity increases of between 20 to 40 percent. The Stage 1 works are the highest priority works identified in the master planning and represent about 25 percent of requirements.

12. When in port for extended periods, ships require much of their machinery used to provide services to be closed down for routine maintenance, to minimise running hours and costs and to reduce smoke and harbour pollution. Consequently, services such

25064/80—4

as electrical power, compressed air, chilled water, boiler feed water and steam need to be provided to ships from connections at wharves. At present the quality and quantity of existing engineering services available to ships are inadequate and require ships to remain under their own power for extended periods.

13. At present facilities for the repair and maintenance of weapons, radar and other electronic systems at Garden Island Dockyard are dispersed in a number of locations. New equipment, involving advanced technologies, is expected to be introduced into the RAN during the next twenty years. Consequently, there is a requirement for workshops for the repair of this new equipment. In addition it will be necessary to overcome the present workshop floor space deficiency estimated by the GIMPT to be 45 percent.

14. Office space, tool stores and storage space for dockyard personnel engaged in refitting tasks aboard ships at East Dock Wharf are housed in transportable units. Ablutions, lunch rooms and other amenities are unsatisfactory. There is a need for facilities comparable to those being provided in the West Amenities Building, previously endorsed by the Committee, to reduce inefficiencies.

15. Early in the GIMPT design study it was determined that congestion on Garden Island be relieved by relocating some dockyard activities, which by their nature did not require to be near warships. The repair of small craft was one such activity. Following an investigation of possible sites, the Department of Defence purchased a property on the Parramatta River at Ryde and the transfer of the small craft repair facility to that location took place in April 1980. Some work, to renovate the existing property and to instal permanent amenities and refurbish slipways is required.

16. One of the major deficiencies at Garden Island is the congestion caused by car parks on the Island. Dockyard and Fleet base personnel are heavily dependent on privatevehicles. The 1120 private car parking spaces presently available would be reduced to about 450 with the construction of new buildings

and services. Off-street parking in the Woolloomooloo and Potts Point areas is being reduced by Council ordinance. There is a need, in these circumstances, for additional car parking to be made available for Fleet Base and Dockyard personnel outside the Garden Island area.

17. In summary, the modernisation will allow the more efficient and effective functioning of the Fleet Base and Dockyard well into the 1990s.

18. Committee's Conclusion Existing engineering services and facilities at Garden Island are inadequate, congested and unsuitable for both present and future fleet requirements. The Committee is satisfied that the proposed Stage 1 of the modernisation plans have been satisfactorily researched and will lead to greater efficiency in berthing, refitting and modernising RAN ships.

THE PROPOSAL

19. The works proposed in this reference are the first stage of the planned modernisation of the Fleet Base and Dockyard, the details of which are as follows:

20. Utilities Building This building will provide standby electrical power, chilled water and compressed air as well as the conversion of power from 50 Hz to 60 Hz for reticulation to ships and workshops. Two 2.3mw - 2.5mw diesel powered alternators will provide standby power generation and space has been provided for a third alternator of similar capacity.

21. Sixty hertz power for ships and workshops will be converted from 50Hz by rotary-type machines in the utilities building. In all, the building will house three converters, two 2 MVA machines and a new 5 MVA machine for which construction of a temporary enclosure was referred to the Committee under the Advanced Works program. Space for a second 5 MVA machine is available and further capacity increases would be achieved by replacing the two 2 MVA machines by 5 MVA units. The machine hall area will be serviced by a 20-tonne overhead travelling crane.

22. Two 3000 kW water chillers and one standby unit will be located in the utilities building to provide the dockyard with approximately half of its chilled water requirements. Likewise, half of the dockyard's compressed air requirements will be generated by two 1150 litre/second air compressors; there will also be space for a standby machine. Air will be reticulated to working areas and to ships.

23. All machinery will be water cooled by a closed fresh water loop system which in turn will be cooled by two sea water-cooling heat exchangers. They will draw their water from the vicinity of the North East Boat Pound and discharge near the northern end of the Island.

24. The commissioning of the utilities building will increase the primary distribution voltage for the reticulation system from 5 kV to 11 kV. This will necessitate replacement of some transformers, switchgear and cabling.

25. Design The site proposed for the building, on the eastern slope of the northern headland, requires an unobtrusive design. It is therefore proposed to recess the building into the headland, the roof being landscaped. This will mean that only the eastern wall will be exposed and views of the building from the harbour will be lessened because it will be located immediately behind Buildings 7 and 8. In evidence a number of witnesses commented on the prominent height and location of the generator exhaust chimneys. It was argued their height would make them visible above the roofline of Buildings 7 and 8. The Committee believes the exhaust stacks should be designed to be as unobtrusive as possible.

26. West Dock Workshop - Module A The overall deficiency in modern workshops and the functional requirements to have engineering groups near ships in dry dock were factors which determined the western side of Captain Cook Dock be developed for workshops. Module A, located in the north-west side of Captain Cook Dock will be the first stage of workshop development for weapons, electronics and electrical engineering groups.

It will provide workshop space for the repair and maintenance of gun mounts and launchers, radar, radio and secure communications as well as housing amenities, administration offices, tool and transit stores, distribution office and various items of plant.

27. Design Functional activities require three distinct workshop heights. The heavy workshop and high lift area (9.5 to 10.5m crane hook height) will be on the eastern side, adjacent to the dock area. The medium workshop and medium lift area (6.3 to 6.5m crane hook height) will be on the western side. Both heavy and medium areas will be at ground level. Light workshop areas will be on the intermediate and upper levels. All workshops will be serviced by a core of amenities and offices located on the south-western side, which can be expanded to accommodate the requirements of the future Module B, proposed for Stage 2 of the modernisation.

28. The heavy and medium lift areas will be serviced by a number of overhead cranes designed to pass through two high doors at the northern end to an open storage and loading area.

29. East Dock Wharf - Refit and Amenities Building At present office space and amenities to support personnel engaged in refit tasks at East Dock Wharf are housed in transportable units. It is proposed to construct a building near the south-eastern end of East Dock Wharf to provide permanent and modern office space and amenities for the 320 personnel engaged in refit tasks.

30. Design The proposed building will have a basement and three upper levels and will house amenities, refit control offices, tool stores and workshops as well as the dockyard cash office. Each floor will be divided into service zones and flexible office, workshop and dining zones. The first, second and third floors will be surrounded by a verandah to provide access, amenity and to complement visually the nearby historic Barracks Block Building, No. 32.

31. Associated Works To permit construction of the building, it will be necessary to demolish the Medical Centre (Building 125) which will be rehoused on the ground floor of

25064/80—5

the EDP Building (Building 2). It will also be necessary to relocate building 294 a prefabricated office building, to another site and to demolish buildings 34 and 42.

32. Buildings 37 (the Chapel and former rigging shed) and 32 (the former barracks) are both historic buildings listed on the register of the National Estate. It is proposed to partially restore and refurnish Building 37 by removing the external staircases and providing office space and a small chapel and sacristry on the first floor. The exterior of the building will be painted in 19th Century style.

33. Building 31 (the former barracks kitchen) is also an historic building listed on the register of the National Estate and will be restored externally and fitted out internally to provide store facilities. The historic linkway between this building and Building 32 will be restored.

34. East Side Road Works Traffic congestion was highlighted as a significant problem by the GIMPT in considering modernisation planning. The proposal to improve traffic flow on the eastern side of Garden Island will require some reclamation between the Gun Mounting Wharf and the Boatshed on the alignment of the final reclamation. Some 2450 square metres of harbour bed will be involved. The material to be used in the reclamation will come from the sites of other works under reference. The land gained will be landscaped and will accommodate the first stage of a new perimeter road.

35. Liquid Waste Facility It is proposed to provide a system for the collection, transportation, treatment and disposal of industrial wastes at Garden Island. Present practice is to discharge largely untreated industrial wastes into sewers and the stormwater drainage system on the Island. The proposed system will bring heavily contaminated substances to a standard which complies with the requirements of the Metropolitan Water, Sewerage and Drainage Board (MWS & DB) prior to discharge into its sewer system.

36. Design Collection of effluents from repaved and regraded areas will be by a series of cast iron and concrete gravity mains discharging into five small sumps and pumping stations and thence reticulated to a central treatment plant at the southern end of Captain Cook Dock. The treatment plant will be designed to treat wastes to reduce biochemical oxygen demand, grease, phenol, suspended solids, volatile solvents and toxic chemicals prior to its discharge into the MWS & DB sewers. Residues will be transported to approved disposal areas.

37. Waterfront Annexe Improvements, Ryde A number of remedial works, including the construction of permanent facilities, are proposed for the Small Craft Repair Facility at Ryde. There has been some expenditure on providing demountable buildings for amenities on the site since it was purchased by the Commonwealth. These will be replaced by a permanent amenities building for the 150 personnel working at the facility. In addition, maintenance dredging of approaches to the slipway and around the jetty and services to facilitate working on small craft are proposed. Construction of additional moorings, improved ventilation in the fibreglass workshop, some renovations to the workshop building, improvements to site stormwater drainage, off street car parking areas for 50 vehicles and the upgrading of the fire protection services are also proposed. The Committee commends the workforce at Ryde for substantially improving the appearance of the facility in the short time since it commenced operations in April 1980.

38. Landscaping Three zones of landscaping improvements have been identified - the southeast zone, being a strip from the southern end of Building 52 (the dockside workshop) to the temporary car parks at the southern end of the site, the historic buildings zone adjacent to Buildings 31, 32 and 37, and the Northern zone around the headland including the area near the Utilities Building.

39. Car Park In considering the most effective means of providing parking for the 1700 cars belonging to the Dockyard and Fleetbase personnel, the GIMPT recommended provision for 450 car parking spaces on the Island, the balance to be accommodated in a multi-level carpark located close to the Dockyard.

40. Two alternative carpark proposals were put to the Committee. Both attempted to overcome problems of site, traffic flow and aesthetics whilst remaining functional. One was to be linear in shape and the other slightly angled; and both would be located in Cowper Wharf Road. One, as based on the concept indicated in the Final Environmental Impact Statement, being located against the Cowper Wharf Road cliff face, the "cliff face scheme", the other scheme consisting of an "island" scheme located away from the cliff, in Cowper Wharf Road. Both schemes consisted of five storeys, the cliff face scheme accommodating 1159 cars, the island scheme accommodating 1180. Both schemes would offer local residents recreational facilities and would to some extent be landscaped at ground and roof levels.

41. Design - Island Scheme The design of the island scheme was prompted mainly by traffic engineering and envionmental considerations. Its location, some distance from the cliff face, would require a realignment of Cowper Wharf Road. Its roof level would be at about the same height as the top of the cliff. Entrances would be at the northbound side and exits on the southbound side. Access to parking bays would be by a central aisle, parking bays being slightly angled to facilitate a one-way circulation system.

42. The western facade, facing Woolloomooloo Bay, would be horizontally unbroken except for nine vertical fire escapes and entrances/exits which extend to the top floor. The eastern facade has its horizontal lines broken by rapid exit ramps originating from levels 5, 3 and 1.

43. The roof area of the car park, amounting to 0.65 hectares would be landscaped and designed for public recreation purposes. The roof will be linked to the northern end of Victoria Street by a pedestrian bridge. A second public park will be at the south-eastern end, near the McIlhone stairs, between the realigned Cowper Wharf Road and the cliff face. This park will also be landscaped.

44. Design - Cliff Face This scheme has the car park located closer to the cliff; its roof area extended to butt on to the cliff along the south-eastern edge. There would be a 6 metre height difference between the top of the cliff and the roof at the southern end. The 0.75 hectare roof area will be a landscaped public park. The linear western facade, facing Woolloomooloo Bay will have its horizontal lines broken by rapid exit ramps from levels 3, 4 and 5. The parking layout and circulation system will be similar to the Island scheme. Cowper Wharf Road would need to be realigned. To avoid right hand turn conflict between vehicles intending to use the car park and through traffic, it is proposed to have the carriageways at different heights. This means the southbound carriageway will be elevated. The scheme will also require some modifications to the cliff to provide adequate bearing for the car park roof. In addition, the World War I Memorial, at the northern end of the site would require relocation.

45. Consideration of Alternatives The Department of Defence considers both schemes acceptable; the Department of Housing and Construction put forward the Island scheme because it provides for more efficient traffic movement, would not affect the cliff face or war memorial and would have better ventilation and lighting. In addition, it would not involve the Commonwealth in any land acquisition and would be cheaper per car space.

46. The disadvantages of the Island scheme are:

- it would be visually more intrusive, restricting views of Woolloomooloo Bay from the higher levels of Victoria and Grantham Streets;

- it would mean the landscaped areas on the roof would be isolated from Victoria Street except for an access bridge;
- the recreation area at ground level near the McIlhone stairs would be remote from the residential area;
- it does not satisfactorily overcome all traffic engineering problems, particularly those relating to driver visibility and is at variance with conventional practice, i.e. under this scheme departing traffic enters the fast moving right hand lane, which is the reverse of conventional practice;
- it would create an undesirable canyon between the cliff face and its eastern wall.

47. The Committee received a number of submissions from private individuals and groups which in the main favour the cliff face scheme. The Department of Defence and the Department of Housing and Construction advised the Committee during the public hearing that in view of the general opposition to the Island scheme, the cliff face car park would be acceptable. Whilst the cliff face proposal will cost marginally more than the Island scheme, the Committee believes it to be the better solution.

48. The scale of the proposed car park, capable of accommodating 1159 cars, is based on a requirement calculated during the modernisation study. The requirement for parking spaces necessitated a car park of the scale proposed. Any significant reduction would not overcome the problems of congestion on Garden Island.

THE SITES

49. Utilities Building The decision to locate the utilities building on the north-east side of the historic landscaped headland was made after careful examination of possible alternative sites. One alternative, using Building 104 located on the western side of the headland, was considered

impractical because it occupies valuable workshop space which would need to be replaced. It would also require substantial structural alterations to be made.

50. Originally, it was proposed to locate the utilities building on a site occupied by five residences. However, as these residences are within an area which is on the register of the National Estate, another site immediately to the north of the original site was preferred and would not affect the residences. The proposed building has been designed to recess into the knoll on the headland. The excavation will require the removal of some tress and the roof of the building will subsequently be covered with soil. The existing parkland atmosphere will be retained and the building will be visually unobtrusive.

51. West Dock Workshop - Module A The site selected is on the north-west corner of Captain Cook Dock, giving the dock personnel easy access to workshops and amenities. Originally, it was proposed to locate the building further south. Location at the site now proposed was prompted by public reaction to the Environmental Impact Statement.

52. East Dock Wharf - Refit and Amenities Building The site proposed for this building is within the Garden Island historic precinct. The building has been designed so as not to detract from the existing historic fabric of the area. In evidence the Committee was advised that both the National Trust and the Australian Heritage Commission regard the design as very suitable and would complement the other buildings in that area.

53. Liquid Waste Facility The central treatment plant, fed by pumped waste pipelines from holding sumps, which are routed to give the dockyard adequate coverage, will be located at the southern end of Captain Cook Dock.

54. Committee's Conclusion The Committee is satisfied with the design and siting of the proposed works at Garden Island, including the Preferred site for the Utilities Building. The Committee notes the additional expenditure involved in landscaping the roof of the Utilities Building is necessary to retain the integrity of the parkland area.

55. Waterfront Annexe - Ryde The property comprises an area of 1.54 hectares acquired by the Commonwealth for $1.6 million in April 1980.

56. In evidence, Ryde Municipal Council requested that improvements to the facility include a number of features to ensure its compatibility with Council policy and planning. These involve kerbing and guttering on the eastern side, provision of off-street parking, stormwater drainage, emission controls and the sewerage system. The Council also requested the dedication of a 6 metre wide strip of land across the eastern side for public road purposes, for an eventual bikeway and jogging track which will extend from Ryde Bridge to Putney. This proposal would not affect the tree line along the eastern side. The Council also requested reimbursement of rate losses and grants to repair damage to the road system due to increased traffic.

57. Committee's Conclusion The Committee is satisfied with the design and siting of proposed work at the Ryde Waterfront Annexe. The Committee agrees that a 6 metre wide strip along the eastern side of the Ryde property should be used for public recreation purposes. Where practicable, the other matters raised by Ryde Council should be accommodated in the detailed design.

58. Car Park - Cliff Face The proposed site is elongated and extends southward along Cowper Wharf Road from near the Wylde Street junction to the corner of McIlhone Street. The majority of the site, two parcels of land on either side of Cowper Wharf Road, is being acquired from the New South Wales Government. Construction of the car park against the cliff will necessitate the acquisition of a parcel of private land and a parcel owned by the Sydney City Council. Both parcels form part of the cliff face.

59. In evidence, the Committee was advised that a geotechnical survey of the cliff face indicated it would cost about $50 000 to stabilise. The report did not reveal any problem regarding the stability of the houses at the top of the cliff.

60. The cliff forms part of the boundary of the Victoria Street, Potts Point and Brougham precincts classified by the National Trust. In evidence, the Trust did not wish to see the cliff face affected but a car park immediately against it would, in their view, be preferable to the Island scheme.

61. Committee's Conclusion The site proposed for a car park as close to the cliff face as possible in Cowper Wharf Road is satisfactory and preferable to the Island scheme.

62. Construction details of the proposed work are set out in Appendix A.

OTHER OBSERVATIONS

63. Car Park Administration The Committee was advised that no firm plans for the administration of the car park had been formulated. The Committee believes this to be a serious deficiency and omission. In evidence, the Committee was informed that the public park on the roof of the car park building would involve the Commonwealth in an expenditure of about $1.5 million. The Committee believes that as this park is to be a public recreation amenity, the State and City Council be financially involved in providing and maintaining it.

64. Utilities Building Location of the Utilities Building in a recess on the north-east corner of the landscaped parkland will necessitate the removal of a number of mature trees. The Committee is satisfied this is unavoidable and believes there to be merit in the suggestion made by the Sydney Harbour Foreshores Committee that qualified botanists/horticulturalists be consulted on the feasibility of transplanting affected trees, the selection and location of new trees for the roof, the ground works improvements and the public recreation area on the roof of the car park.

65. The Disabled The Committee was impressed by the evidence put forward by Mr. William Gatt of the Community Rehabilitation Task Force. Employment opportunities for the disabled on Garden Island, as in most areas, are limited to a degree by lack of facilities. The Committee notes that the

weapons electrical workshop in the proposed West Dock Workshop Module A has been designed to cater for disabled people.

66. The Department of Housing and Construction will be involved in the extensive activities program as part of the International Year of Disabled Persons - 1981. The Committee commends the Department for initiating this worthwhile program and believes considerable scope exists for the employment of qualified disabled people on Garden Island and that the lack of facilities should not preclude their chances of finding employment.

67. The War Memorial Construction of the car park against the Cowper Wharf Road cliff face necessitates the relocation of the World War I Memorial presently set into the northern end of the cliff face. The RSL agrees in principle to the relocation, subject to ratification of RSL State Council. It is planned to resite the memorial on the western side of Cowper Wharf Road and preserve it in its present form. A small plinth, fitted with a plaque indicating the memorial's original site will be located at the new site. Gates will be provided in a fence to be erected between the realigned road and the Woolloomooloo wharves to give relevance to the memorial's inscription. The cost of the relocation will be borne by the Department of Defence.

CONSULTATIONS WITH AUTHORITIES

68. The overall modernisation of the Fleet Base and Dockyard has been the subject of discussions between the Commonwealth and the New South Wales Government. The State Government favours the Preferred scheme, and is in the processes of selling to the Commonwealth Woolloomooloo Wharves 2, 3 and 4 and the State owned land required for the car park. The car park forms part of the modernisation and was included in Stage 1 at the request of the NSW Government.

ESTIMATE OF COST

69. The estimated cost of the work when referred to the Committee was $28.6 million at March 1980 prices made up as follows:

	$
Utilities building and upgrading HV electrical distribution	8 050 000
West Dock workshop - Module A	6 560 000
East Dock refit and amenities building	2 805 000
Groundworks (i.e. partial construction of East Side Road, liquid waste treatment and landscaping)	1 035 000
Waterfront annexe improvements	720 000
Garden Island Car Park (Island Scheme)	9 430 000
	28 600 000
Additional cost for Garden Island Car Park - Cliff Face Scheme	600 000

PROGRAM

70. Subject to the necessary approvals, tenders for the works will be staged in such a way to permit all work being completed by December 1983. The initial tender will be invited in December 1980.

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

RECOMMENDATIONS AND CONCLUSIONS

72. 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.	EXISTING ENGINEERING SERVICES AND FACILITIES AT GARDEN ISLAND ARE INADEQUATE, CONGESTED AND UNSUITABLE FOR BOTH PRESENT AND FUTURE FLEET REQUIREMENTS.	18.

		Paragraph
2.	THE COMMITTEE IS SATISFIED THAT THE PROPOSED STAGE 1 OF THE MODERNISATION PLANS HAVE BEEN SATISFACTORILY RESEARCHED AND WILL LEAD TO GREATER EFFICIENCY IN BERTHING, REFITTING AND MODERNISING RAN SHIPS.	18.
3.	THE COMMITTEE IS SATISFIED WITH THE DESIGN AND SITING OF THE PROPOSED WORKS AT GARDEN ISLAND, INCLUDING THE PREFERRED SITE FOR THE UTILITIES BUILDING.	54.
4.	THE COMMITTEE NOTES THE ADDITIONAL EXPENDITURE INVOLVED IN LANDSCAPING THE ROOF OF THE UTILITIES BUILDING IS NECESSARY TO RETAIN THE INTEGRITY OF THE PARKLAND AREA.	54.
5.	THE COMMITTEE IS SATISFIED WITH THE DESIGN AND SITING OF PROPOSED WORK AT THE RYDE WATERFRONT ANNEXE.	57.
6.	THE COMMITTEE AGREES THAT A 6 METRE WIDE STRIP ALONG THE EASTERN SIDE OF THE RYDE PROPERTY SHOULD BE USED FOR PUBLIC RECREATION PURPOSES.	57.
7.	WHERE PRACTICABLE, THE OTHER MATTERS RAISED BY RYDE COUNCIL SHOULD BE ACCOMMODATED IN THE DETAILED DESIGN.	57.
8.	THE SITE PROPOSED FOR A CAR PARK AS CLOSE TO THE CLIFF FACE AS POSSIBLE IN COWPER WHARF ROAD IS SATISFACTORY AND PREFERABLE TO THE ISLAND SCHEME.	61.
9.	THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS $28.6 MILLION AT MARCH 1980 PRICES.	69
10.	THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORKS IN THIS REFERENCE.	71

(M.H. BUNGEY)
Chairman

Parliamentary Standing Committee
on Public Works,
Parliament House,
CANBERRA.
28 August 1980.

APPENDIX A

CONSTRUCTION

Details of construction are as follows:

1. Utilities Building The building will be constructed on rock foundations and the roof will be post tensioned concrete. External finishes will be sand blasted smooth concrete. Internally, appropriate areas will have oil resistant, rubber or ceramic tile floor treatments and lightweight concrete internal walls to permit noise absorption. The eastern facade of the building will be extensively glazed to permit natural lighting.

2. The control room will be air conditioned and other areas will be mechanically ventilated. Exhaust ventilation from the building itself will be through the landscaped roof area within concrete enclosures. Diesel generator exhausts will be intercepted by silencers before emission by three exhaust stacks to the outside air.

3. Reticulation of services within the building will be by underfloor ducting. Services to and from the building will be via the main services tunnel to the south.

4. West Dock Workshop Module A The main structural members will be concrete with sandblasted finish. External cladding will be pre-cast, pre-stressed, flat concrete planks with an exposed aggregate finish. The roof will be membrane covered with pre-cast concrete paving tiles. Ceilings and walls in the workshop areas will be off form concrete and painted. The floors in the heavy workshops will be finished with an epoxy compound. Sheet vinyl will be used on the floors in light workshops, lunch room and circulation areas and offices will be carpeted. Toilets, showers and change areas will have ceramic tile floors with terrazo partitions. The building will have its own sub-station and switch room which will provide necessary power throughout workshop areas.

5. Lighting in the light workshops and office areas will be indirect fluorescent. High ceiling workshops will be lit by high bay downlights.

6. Level 1 will have natural ventilation with provision for mechanical exhausting of spray paint, abrasive blast and chemical cleaning bays. Light workshops on Levels 2 and 3 and office areas in the core will be air conditioned. Compressed air will be reticulated to each floor.

7. The thermal and smoke fire detection system will be connected to the Navy Fire Station on Garden Island and to a N.S.W. Fire Brigade Station. Water and sewerage services will be connected to existing site systems. Trade waste from throughout the building will be collected and piped to the proposed waste treatment plant at the southern end of Captain Cook Dock.

8. East Dock Wharf - Refit and Amenities Building The footings will be steel pipes taken through fill to the bedrock; the frame and floor slabs will be reinforced concrete with steel roof trusses. The basement will be reinforced concrete.

9. The external cladding materials were selected for low maintenance and to blend with adjacent historic buildings. The brickwork pattern around the service core will complement the brickwork of Building 89. The roof will be pre-finished metal decking.

10. Internal finishes will be generally painted cement. Heavy wear and wet areas will have ceramic tiles and laminated plastic. Amenities areas will have ceramic and rubber floor tiles; offices will be carpeted and workshop floors will be of heavy duty oil resistant granolithic topping.

11. The thermal fire detection system, fitted throughout the building, will be connected to the Navy Fire Station and to a N.S.W. Fire Brigade Station. Each floor will have fire reels and extinguishers.

12. The dining area on Level 3 will be heated; office areas will be air conditioned and workshops, shower and change rooms will be mechanically ventilated and heated. Compressed air will be provided to workshop areas.

13. An internal hoist will be provided to permit vertical movement of equipment to workshops. A hot water heating, storage and reticulation system will be installed.

14. A sub-station in this building will replace Building 108 and will provide all power requirements. It will also serve other buildings, including Building 37.

15. Small Craft Repair Facility, Ryde With the exception of the new amenities building, works proposed at Ryde mainly involve renovations to existing buildings and structures. The new amenities building will have a concrete floor slab supporting steel portal frames. External walls will be compressed asbestos cement; internal lining will be plasterboard and ceramic tiles and ceilings will be plasterboard. Roofing will be corrugated asbestos cement sheeting. Floor finishes will be vinyl tiles with ceramic tiles in wet areas. Toilet and shower partitions will be terrazo.

16. Car Park - Cliff Face Scheme The foundations will be concrete pad footings cast in the rock material. The post tensioned concrete floor slabs and roof will be supported by reinforced concrete columns. Steel reinforcements will be covered by additional concrete to reduce the impact of the marine environment. All concrete work will be poured in situ and will have a smooth surface finish.

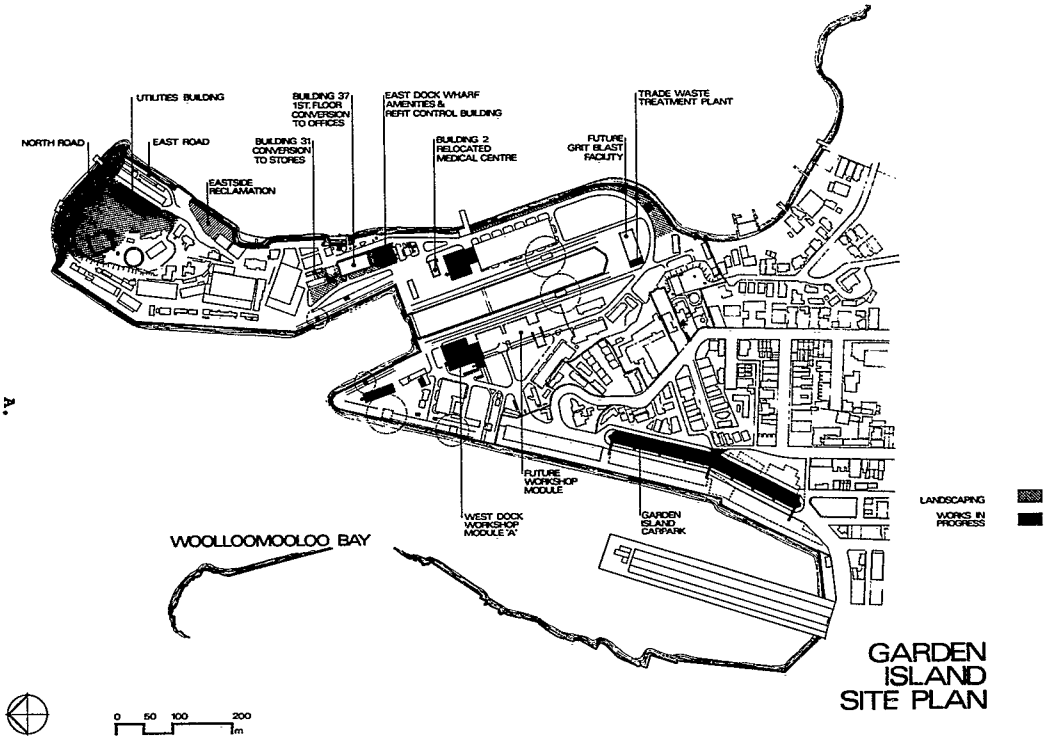
17. To prevent vandalism and unauthorised usage the carpark will be fully enclosed; each level being enclosed with steel mesh screens and supports. Mesh and safety rails will be heavily galvanised to avoid corrosion.

18. Ground level finish will be asphaltic concrete and upper floor slabs will be hardened, oil-resistant, concrete finish.

19. The building will be ventilated by natural cross ventilation. Interior lighting will be fluorescent; external light spill and glare will be kept to a minimum. Lighting to the park area will be specially designed to provide public security whilst blending with the landscape concepts.

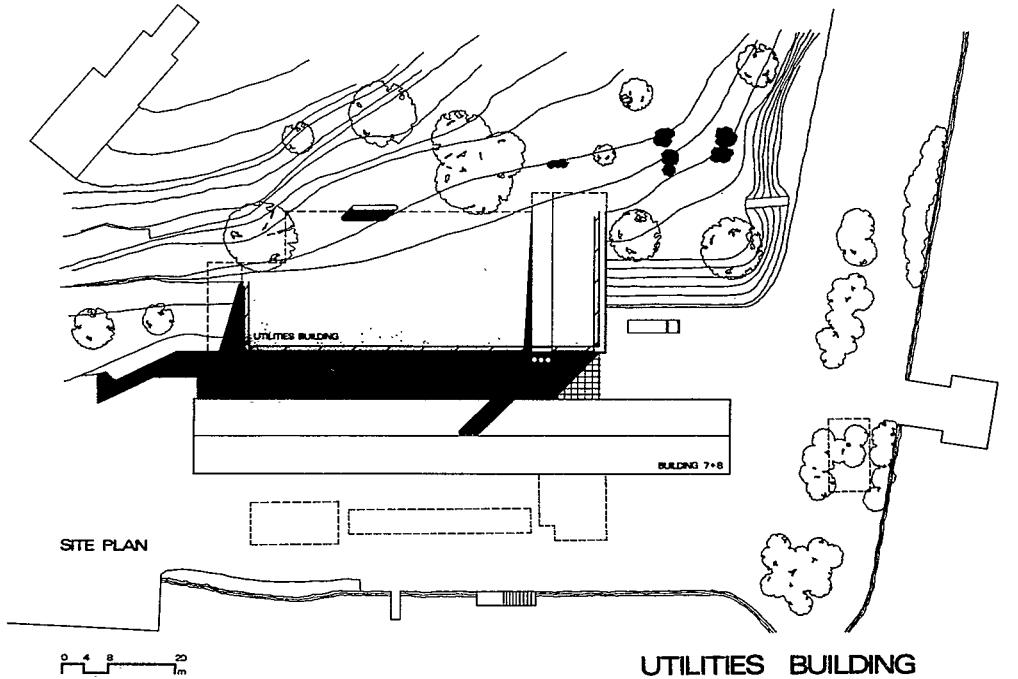
20. The scheme requires the elevation of a section of Cowper Wharf Road and the relocation of below ground services.

21. Some removal of trees on the cliff face and the cutting of sections of shelving to provide bearing for the extended roof structure are also involved.

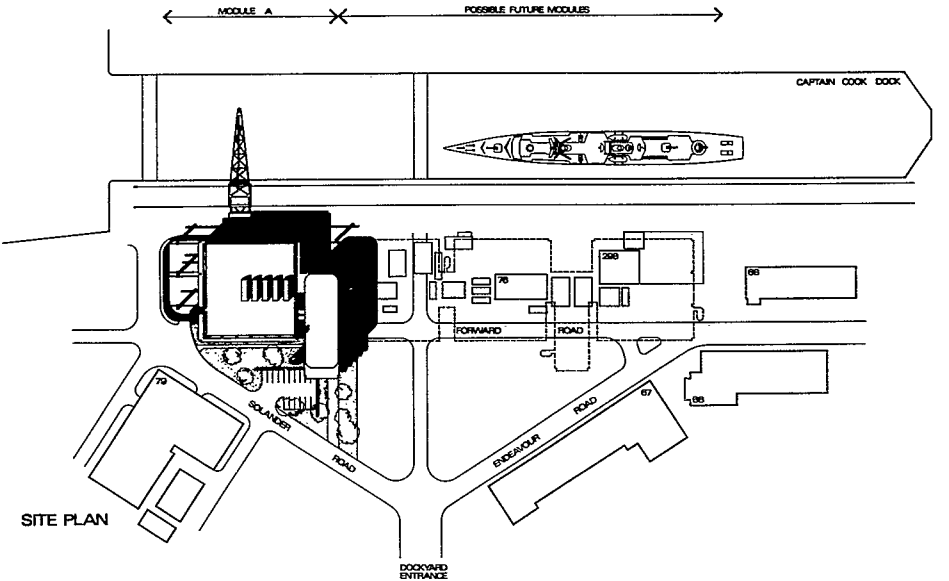


GARDEN ISLAND SITE PLAN

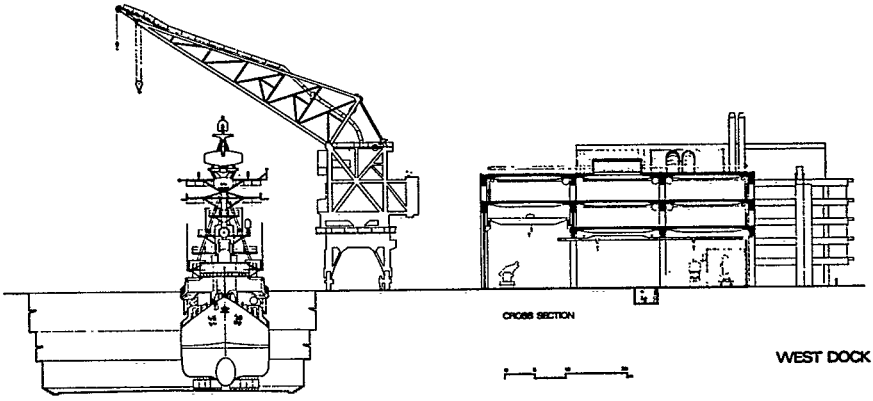
A.



UTILITIES BUILDING

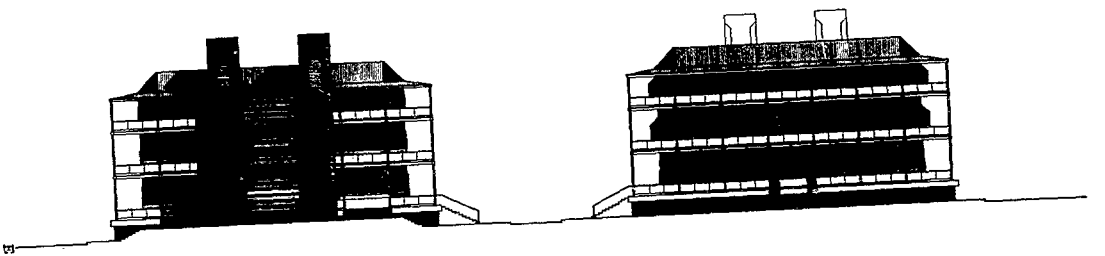


WEST DOCK WORKSHOP
MODULE A



WEST DOCK WORKSHOP
MODULE A

D.



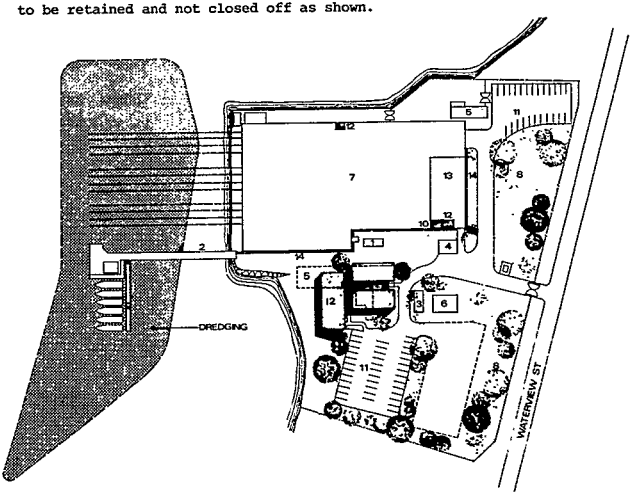
NORTH ELEVATION

SOUTH ELEVATION

0 2 4 10 m

EAST DOCK WHARF REFIT AND AMENITIES BUILDING

The entrance at the western end of the site is to be retained and not closed off as shown.



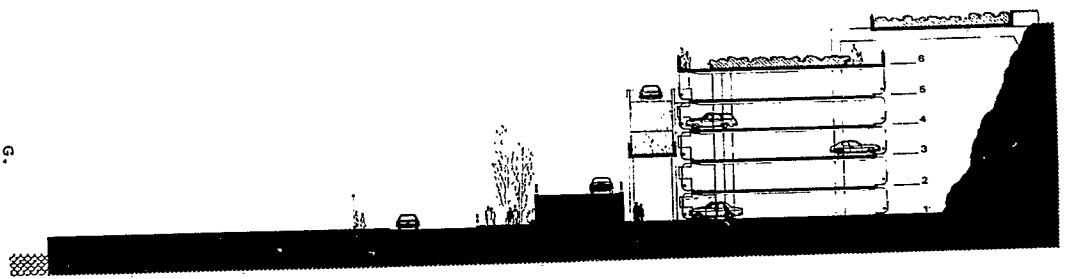
EXISTING
SHED 1
JETTY 2
GARAGE 3
CARPORT 4
AMENITIES 5
RESIDENCE 6
WORKSHOP 7
LANDSCAPING 8

STAGE ONE
MOORING FACILITY /SERVICES 9
CUTTING ROOM 10
SEALED CARPARK 11
AMENITIES 12
FIBREGLASS WORKSHOP 13
STORMWATER 14

0 10 20 50 m

WATERFRONT ANNEX SITE PLAN

ELEVATION · WEST



SECTION

0 10 20 50 elev.
0 2 4 10 sect.
m

GARDEN ISLAND CARPARK

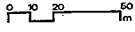
CLIFF FACE SCHEME

SECTION 1

SECTION 2

WEST ELEVATION

EAST ELEVATION



GARDEN ISLAND CARPARK

ISLAND SCHEME

H.

2396/90-1