Parliamentary Standing Committee on Public Works

REPORT

relating to

CONSTRUCTION OF FACILITIES FOR THE AUSTRALIAN FRIGATE PROJECT, WILLIAMSTOWN NAVAL DOCKYARD, VICTORIA, PHASE A

(Sixth Report of 1984)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1984

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

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(Sixth Report of 1984)

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Twenty-Seventh Committee)

Senator Dominic John Foreman (Chairman)
The Honourable Wallace Clyde Fife, M.P. (Vice Chairman)

Senate	House of Representatives
Senator Gerry Norman Jones	David Bruce Cowan, Esq., M.P.
Senator Bernard Francis Kilgariff	Peter Hertford Drummond, Esq., M.P.
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	Eamon John Lindsay, Esq., M.P.
	John Saunderson, Esq., M.P.

EXTRACT FROM
THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES
NO. 49 DATED 8 DECEMBER 1983

14 PUBLIC WORKS COMMITTEE-REFERENCE OF WORK-AUSTRALIAN FRIGATE PROJECT, WILLIAMSTOWN NAVAL DOCKYARD, VIC., PHASE A: Mr Hurford (Minister for Housing and 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 consideration and report: Construction of facilities for the Australian frigate project, Williamstown Naval Dockyard, Vic., phase A.

Mr Hurford presented plans in connection with the proposed work.

Question - put and passed.

C O N T E N T S

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

CONSTRUCTION OF FACILITIES FOR THE AUSTRALIAN FRIGATE PROJECT, WILLIAMSTOWN NAVAL DOCKYARD, VIC, PHASE A

REPORT

By resolution on 8 December 1983 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report the proposed construction of facilities for the Australian frigate project, Williamstown, Naval Dockyard, Vic, Phase A.

The Committee has the honour to report as follows :

THE REFERENCE

1. The major elements of the proposed work are as follows:

- unit blasting facility;
- shipbuilding platens;
- upgrading of cranage;
- kevlar and painters workshops;
- covering of parts marshalling area;
- modifications to dockyard store; and
- miscellaneous engineering services.

2. The estimated cost of the proposed work is $6.4 million at November 1983 prices.

THE COMMITTEE'S INVESTIGATION

3. The Committee received submissions and plans from the Department of Defence Support (DSS) and the Department of Housing and Construction (DHC) and took evidence from their representatives at a public hearing held at Williamstown Naval Dockyard on 10 February 1984.

4. The Committee also received submissions and took evidence from representatives of the Combined Unions Shop Committee and the Combined Staff Associations. A list of witnesses and the organisations they represented is at Appendix A. The Committee received a written submission from the Council of the City of Williamstown. At the conclusion of the public hearing the Committee directed departments to prepare a written response to the Council's submission. The response, received on 8 March 1984 was accepted as evidence.

5. Prior to the public hearing the Committee inspected Williamstown Dockyard, in particular the sites proposed for the work in this reference.

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

BACKGROUND

7. Location Williamstown Naval Dockyard is situated on a peninsula on the southern shore of Port Philip Bay, on the edge of the City of Williamstown about 15 kilometres from the Melbourne Central Business District. The dockyard occupies a 12.97 hectare site, 1.213 hectares of leased land, and is bounded by Port Philip Bay and Hobsons Bay to the south and east and generally by Port of Melbourne Authority property except for a frontage to Nelson Place. (See Location Plan and Site Plan at pages B-1 and B-2).

8. History A patent slip was set up on the site in 1818 and the Alfred Graving Dock was completed in 1873. The ship building yard opened in 1913, when two building slips were completed; two further building slips were completed during 1940-41. The dockyard was officially taken over by the Navy from the Melbourne Harbour Trust in 1942.

9. Existing facilities comprise a number of piers, Alfred Graving Dock, two building berths, administration, workshop and stores buildings and engineering services. A number of facilities are new, others are old although still functional. The Committee examined the provision of new facilities at Williamstown dockyard in 1973 and in 1976.

10. Stage 1 Works These works were put forward in 1973 as the first part of a three stage modernisation of the dockyard to permit the implementation of a ship building program and to enable the dockyard to perform other functions in future years. Stage 1 works were required for hull construction; Stage 2 would involve the construction facilities for outfitting, storage and training while in the longer term it was envisaged that Stage 3 would involve the provision of weapons/electronics workshops. The components of Stage 1 works examined by the Committee in 1973 were :

- a steel stockyard;
- parts making shop;
- parts marshalling area;
- panel prefabricating and jobbing shop;
- unit assembly shop; and
- two building slips with a new 150 foot high crane.

11. The estimated cost of the work was $7.6 million (1973).

12. Stage 2 Works In 1977 the Committee reported on Stage 2 of the modernisation which comprised the following components :

- new Nelson Pier West, cross wharf and workshop;
- extension to existing pipe shop;
- new administration/training/laboratory centre;
- new dockyard store, oil fuel installation and gate house;

- temporary fleet maintenance party workshop;
- extension of electrical, mechanical and hydraulic services, including provision of new boiler house; and
- services tunnel extension.

13. The estimated cost of the work was $24 million at July 1976 prices.

14. At the public hearing into the Stage 2 works the Committee was advised that the light destroyer (DDL) construction project had been abandoned. Details of an extensive ship refitting and modernisation program covering the next 5 years (1977 to 1982) were made available. The facilities comprising Stage 2 would enhance the efficiency of the program.

15. The Committee's report (First Report of 1977, Parliamentary Paper 6/1977) expressed concern about the possibility that the absence of a shipbuilding program may lead to the under-utilisation of Stage 1 facilities, and suggested that other avenues be explored to ensure the maximum utilisation of ship construction facilities.

16. Subsequent Changes The Committee's 1977 report mentioned that a property near the dockyard was being considered for acquisition to provide for long term parking requirements. The property would also be suitable for short term use as a store and training facility, and as a temporary fleet maintenance party workshop whilst the modernisation program was underway.

17. In 1978 the Committee was advised that the property had been purchased and that it was proposed to construct the training centre at the first floor level. One of the advantages of this rearrangement was that it would release ground adjacent to the administration building on the dockyard site for future expansion. The Committee was provided with plans and perspective views indicating the revised arrangements.

18. In 1980 the Committee was advised that the mezzanine floor of the new stores building was to be deleted and the size of the building increased.

19. The proposed oil fuel tanks, temporary fleet maintenance party workshop and laboratories, which also formed part of Stage 2 works, were cancelled. The requirement for fuel would be fulfilled by the provision of a fuel lighter which will provide fuel for trials purposes.

20. The future work program would not justify the inclusion of fleet maintenance party workshops.

21. The provision of a new laboratory was not considered to be cost effective. The existing laboratory will continue to be used and excess work will be sub-contracted to facilities outside the dockyard.

22. Stage 1 of the modernisation was completed in 1980; Stage 2 was commenced in 1977 and, to the extent that works have been admitted to works programmes, is physically complete.

23. Dockyard Review In September 1980 the Minister for Defence announced a Government decision to replace the Navy's destroyer escort vessels with the FFG-7 class of guided missile frigates and, subject to satisfactory resolution of some productivity issues at the dockyard, two FFG class frigates would be built at Williamstown.

24. In 1981 a Committee led by Mr Ross Hawke reported on changes necessary to managerial, operational and other arrangements to ensure that a ship construction program, once commenced, would proceed efficienctly. Subsequently, in January 1982, a program of management reforms was implemented which aimed at developing a management structure along the lines of successful overseas warship builders.

25. In May 1982 responsibility for management and operation of the dockyard was transferred from Defence to DDS.

26. A second review was undertaken by Mr Ross Hawke in May 1983 to determine the extent to which expectations and promises since the initiation of management reforms had been fulfilled. Mr Hawke reported that the reforms brought about at the dockyard satisfied the pre-requisites for warship construction and that the dockyard should be capable of building and repairing frigates and similar warships.

27. The Australian Frigate Project In September 1983 the Government decided that the Department of Defence and DDS shall enter into agreements for the dockyard to construct two FFG-7 type warships. Steel cutting would commence in February 1985. The second ship is planned for completion in late 1991.

28. Design of the FFG type frigate commenced in 1970 and 50 FFGs have been built in the US for the United States Navy and other Navies, including the RAN. General specifications of FFGs are:

Weight	3,800 tonnes
Length	135.6 metres
Beam	14.3 metres

29. The method of construction to be adopted, which DDS witnesses described as "state of the art", will involve the fabrication of large three dimensional blocks up to 50 tonnes. After grit blasting and spray painting they will be extensively outfitted with items of equipment prior to consolidation at the building berth.

30. Construction will derive considerable benefit by the provision of a package of detailed drawings from the US which reflect the entire experience of building 50 ships. These drawings will reflect initial designs and feedback based on operational experience of about 20 vessels. Major changes to operational requirements, which may require design changes, are unlikely but procedures for any design changes have been established between the Department of Defence and DDS.

31. Weapons, command and control systems, major propulsion systems and some specialist electrical systems will be obtained from overseas. There will nevertheless be about 40 per cent Australian content in the ships. A US Company with considerable experience in FFG construction is preparing an appreciation of the extent to which Australian industry could participate in the project. BHP has been involved in producing steel specifically designed for the frigate project; the steel is undergoing tests.

32. Construction of the frigates will involve the introduction of new technologies and will require some sections of the dockyard workforce to be trained in new skills. A number of visits to the US have been undertaken by dockyard management and foremen for training and information-gathering purposes. DDS advised that relevant sections of the workforce will be trained in special processes unique to the FFG at Williamstown with support from the US as appropriate.

33. The dockyard at present employs about 2,000 people. DDS does not expect the size of the workforce to vary significantly although there may be changes to its composition.

34. Improvements in Industrial Relations The decision by government in 1980 for FFGs to be constructed at Williamstown was conditional on satisfactory resolution of some productivity issues at the dockyard. DDS advised that unions and management have co-operated to achieve reforms such as agreed dispute procedures, elimination of numerous demarcation work practices, agreed productivity monitoring procedures and the operation of the dockyard along commercial lines. An agreement between management and unions was signed as a necessary preliminary step before the awarding of the ship building contract.

35. The number of manhours lost due to industrial disputes has declined from 300,000 per annum four years ago to 9,000 in 1983. The present level of lost manhours is the best for 16 years. There has also been a considerable reduction in time lost at clock races and the incidence of sickness has dropped markedly. There have also been changes to managerial operation and organisational structure. Six divisions have been created to provide a more functional organisation, and to allow the development of specialisations. A commercial-based accountancy system has been adopted for more effective budgetary control.

THE NEED

36. There is a need for facilities to augment those provided in Stages 1 and 2 of the modernisation, to cater for the particular requirements of the Australian Frigate Project, and to generally improve the efficiency of the dockyard. There is an immediate requirement for the provision of new facilities or the upgrading of a number of specific facilities which will permit the unit construction of large three dimensional ship parts, their subsequent surface treatment, outfitting, and assembly at the building berth.

37. Details of specific requirements are given below.

38. Unit Blasting Facility The method of ship construction to be adopted will entail large three dimensional blocks being assembled in the unit assembly building. These units will require surface treatment - grit blasting and painting before they are fitted out or transported to the building berth. At present major abrasive blasting on new construction is carried out in the open at the building berths, in the Alfred Graving Dock or at the dockyard piers. This arrangement creates occupational health hazards and noise. Open air grit blasting is also adversely affected by inclement weather. Correct and lasting paint coatings on steel to required quality standards are difficult to achieve in the open within time and cost targets.

39. The trend in heavy engineering is to carry out grit blasting and painting in controlled environments. As well as contributing to improvements in occupational health and noise emissions, this method is more efficient.

40. DDS advised that there would be significant productivity advantages in the provision of a dedicated unit blast facility. Any facility to provide such an environment would need to be large enough to accommodate the majority of individual units.

41. Shipbuilding Platens Shipbuilding platens are hard standing areas provided with appropriate engineering services such as electricity and compressed air. They are an integral part of the unit construction method enabling various ship units to be pre-outfitted to the maximum extent before being assembled at the building berth. The process of pre-outfitting hull and superstructure units is a modern shipbuilding techinque which has been proven as the most cost effective and productive method of construction.

42. Platens should be located around building berths and within reach of building berth cranes. There are no shipbuilding platens at the dockyard.

43. Upgrading of Cranage The existing building berth crane, which formed part of the Stage 1 works, has a lifting capacity of 40 tonnes. There is a requirement to increase the lifting capacity to 59 tonnes in order to handle heavy machinery, ship components as well as pre-outfitted ship units between work areas such as the unit assembly building, the shipbuilding platens and the building berth.

44. There is also a requirement to upgrade two overhead travelling cranes in the unit assembly building from 20 to 28 tonnes lifting capacity. The upgraded cranes, operating in tandem, would be able to handle the heavier ship units.

45. Kevlar and Painters Workshops Panels of Kevlar will be used in the frigates to provide anti-ballistic and fire retardation lining. The material comes in sheets which require cutting to specified shapes. The cutting process generates a considerable amount of airborne dust. There is a requirement for a separate and sealed facility which will provide safe working conditions for the workforce engaged in this activity and to contain the release of dust to the atmosphere within limits prescribed by State authorities.

46. The existing painters' workshop is considered to be inadequate and will need to be demolished to make way for the shipbuilding platens Stage 1.

47. Covering of Parts Marshalling Area There is a requirement to provide cover between the parts making and panel fabrication shops which would provide buffer storage and protection from the elements for components awaiting prefabrication. Structural components will also be marshalled in this area prior to assembly into ship units.

48. Modifications to Dockyard Store The Committee was advised there is now a requirement for the installation of an overhead travelling crane in the dockyard store. This building was examined by the Committee in 1976. The requirement for a 10 tonne capacity overhead travelling crane has arisen as a result of a review of current handling systems and the weight and size of equipment for installation in modern warships.

49. There is also a requirement in the store building for an environmentally controlled store room which will be divided into secure and general storage areas.

50. Miscellaneous Engineering Services Engineering services were provided under Stage 2 of the modernisation of the dockyard. The Committee was advised that there is a need to extend a number of services such as natural gas, compressed air, oxygen and electricity to suit the requirements of the shipbuilding project.

51. Committee's Conclusion There is a need to provide additional facilities identified to augment existing facilities for the construction of FFG-7 type frigates at Williamstown Naval Dockyard.

THE PROPOSAL

52. Details of new works and modifications to existing facilities are given below. The location of new works are in accordance with the master plan for the dockyard, which was reviewed in 1981, to identify facilities required for construction of FFGs and to meet the longer term requirements of the dockyard. The master plan is shown at page B-3.

53. Unit Blasting Facility This facility, to be located at the northern end of the unit assembly building, will enable steel ship units to be grit blasted and spray painted under controlled conditions. The facility will be able to handle units up to a maximum of 53 tonnes, 6.5 metres high, 10 metres wide and 16 metres long. The building will contain grit blasting and grit recycling systems, spray painting equipment, heating, ventilation, dehumidification and dust collection plant and auxilliary plant.

54. The facility will be heated, ventilated and dehumidified to achieve conditions required for grit blasting and spray painting independent of outside ambient conditions. During spray painting 100 per cent fresh air will always be provided in accordance with State requirements. During winter months a partial recycling of ventilation air will be utilised for paint curing to conserve heat energy.

55. Noise and dust generated by grit blasting will require operators to wear protective clothing including helmets fitted with reticulated breathing air and earplugs. A high capacity ventilation system will be provided to ensure adequate visibility for grit blasting and spray painting operators and to provide for the efficient collection of dust particles. High efficiency dust collectors will be provided to ensure atmospheric emissions do not exceed Victorian State Environmental Protection Authority requirements. Noise emissions will also be attenuated to acceptable levels by the provision of dense, rigid internal linings, sound absorbent material in selected areas and appropriate seals to all access openings.

56. The facility will be constructed on piles founded on rock between four and five metres below the natural surface.

57. Operation Units or assemblies requiring treatment in the unit blast facility will generally be constructed in the adjacent unit assembly building. The Committee was advised that arrangements are currently under consideration whereby the overhead travelling cranes in the unit assembly building would lift units sufficiently close to the doorway so that the building berth crane would be able to position them outside the unit blasting facility. It was stated that the method of transferring units into the facility was being finalised following a study of similar facilities in overseas dockyards undertaken by departmental officers in January 1984. An aerial perspective of the proposed facility shows an arrangement of fixed rails and trolleys for unit transfer in and out of the facility. The aerial perspective is reproduced at page B-4.

58. Units will not require turning once inside the facility, although it will be necessary to make arrangements for temporary support to areas where permanent blocking abuts units. Movable staging will provide operators with access to any external surface. The Committee was advised that internal compartments, which may form elements of structural units, are normally of little more than standing height.

59. Shipbuilding Platens Stage 1 It is proposed to provide three shipbuilding platens for the outfitting of steel or aluminium units prior to consolidation at the building berth.

60. Basic hull or superstructure units will be placed on the platens where they will be outfitted with ductwork, cable trays, electrical wiring, pipework and fixed equipment.

61. Each platen will consist of a large reinforced concrete area located within reach of an upgraded building berth crane and provided with one or more service points. The service points will consist of outlets for the distribution of reticulated compressed air, oxygen, natural gas, freshwater and electricty. Outlets will be sized to the maximum anticipated for services at each platen. The functional relationship between the unit blast facility and platens is shown in the aerial perspective at page B-4.

62. Upgrading of Cranage Pre-outfitted ship units and mechanical equipment will require to be lifted from within or outside the unit assembly building to the building berth. Increased cranage capacity is required to lift equipment such as ship gearboxes which weigh 59 tonnes.

63. DHC advised that the most cost-effective solution to increasing cranage capacity is to upgrade the existing building berth crane. The proposed modifications will involve upgrading the jib, stiffening existing members and modifying the hydraulics. A section of the building berth crane, the extent of its lifting reach and the location of the unit blast facility and the shipbuilding platens is at page B-5.

64. It is also proposed to upgrade the twin 20 tonne capacity overhead travelling cranes in the unit assembly building to 28 tonnes each. The increased capacity will provide a lifting capability to move large units from the unit assembly building to any location within the lifting radius of the building berth crane.

65. Kevlar and Painters Workshops A new single floor building will be provided to accommodate the Kevlar cutting and professional painters workshop. The two functional areas will not be connected.

66. The Kevlar workshop will be totally sealed and provided with an exhaust filter system to extract and trap and dust produced by Kevlar cutting. Shower and changing facilities will be provided to ensure that operators leave the workshop completely free of dust. A breathing air supply will be provided for the operator.

67. The professional painters workshop will provide for all the functions carried out by this trade which includes minor spray painting, signwriting and glass cutting.

68. The building will be of steel framed, metal clad construction on a concrete raft foundation and has been designed so that it may be readily dismantled in the future to make way for future long term development. Plans, elevations and sections of the proposed buildings are at page B-6.

69. Covering of Parts Marshalling Area The parts marshalling area consists of a concrete hardstanding area located between the parts making and fabrication workshops and is serviced by a 10 tonne capacity overhead travelling crane.

70. It is proposed to construct a steel deck roof over the area with a wall at the northern end. A roller shutter door will be provided in the end wall. Appropriate lighting, natural ventilation and translucent roof panels will also be provided. The area will be protected by thermal fire detectors.

71. Modifications to Dockyard Store Modifications to the dockyard store will comprise the installation of a 10 tonne capacity overhead travelling crane over three bays of the store and the construction of an environmentally controlled storeroom in one corner of the store.

72. Provision was made in the design of the store for the installation of the overhead crane.

73. The environmentally controlled storeroom will comprise an inner secure room and an outer area for general storage. Equipment will be installed to provide temperature, humidity and dust control within both areas. Fire protection will consist of Halon gas flooding for the secure room and an extension of the existing sprinkler system for the general store.

74. Committee's Conclusion Work comprising Phase A of the modernisation of Williamstown Naval Dockyard will supplement existing modern ship construction facilities constructed earlier, appears to be adequate and should result in improvements to productivity.

REACTIONS TO THE PROPOSAL

75. Williamstown City Council, the Combined Unions Shop Committee and the Combined Staff Associations criticised the lack of facilities and measures in Phase A to rectify long standing parking problems and to improve amenities for the workforce.

76. Parking DDS advised that a recent survey showed that about 70 per cent of the dockyard workforce use their own vehicles for transport to and from work. The requirement for car parking spaces has grown from 850 spaces in 1977 to 1200-1400 spaces in 1983. The availability of off-street car parking has remained static at about 550 spaces.

77. As mentioned above, the Committee was advised at the 1976 hearing that consideration was being given to the purchase of a property near the dockyard for eventual use as a ground level car park. In 1979 the Committee was advised that the property, the Kanowna Street Annex, had been acquired. All of the building structure on the site was used until recently for training, office accommodation and stores.

The training function has now been dispersed to localities within the dockyard due to potential health hazards from asbestos. Use of the building for car parking is limited to 30 spaces.

78. Williamstown City Council Williamstown City Council has consistently criticised car parking arrangements for vehicles belonging to the dockyard workforce, especially the parking of cars in public streets around the dockyard. The Council advised in a written submission that on-street parking has now reached chaotic levels which has necessitated the imposition of parking restrictions in certain streets. Council suggested a number of inexpensive measures, which could be immediately implemented, designed to make available more off-street car parking spaces. For example, parking in the "silos" carpark area is at present haphazard because parking spaces are not marked to achieve optimal space utilization. Council believes that marking, and where necessary rearranging car parking spaces, within and outside the dockyard site would increase present car parking capacity.

79. Combined Unions and Staff Associations Both organisations were critical of present parking arrangements. The Combined Unions Shop Committee stated that the industrial workforce had agreed to the temporary relocation of the clock races from the main entrance, which is adjacent to the "silos" car park, to a site adjacent to Nelson House on the understanding that the relocation would be for 12-14 months while a new gate house was being built on the site. The relocated clock races are now some distance from the "silos" car park which is not now being fully utilised.

80. DDS witnesses acknowledged at the public hearing that more could have been done in the past to mark car parking spaces as suggested by Council. The relocation of the clock races was admitted as having been premature and based on an understanding that a new gate house would be included in Phase A which now is restricted to the provision of facilities directly related to ship construction.

81. Consideration The Committee was advised that it is planned that the Phase B works, which it is understood will be referred later in 1984, will include measures designed to remedy parking problems. As a first step, DHC was in the process of engaging a specialist consultant to fully investigate car parking arrangements and to make recommendations which would enable a satisfactory resolution of the car parking problem to be achieved.

82. It is clear nevertheless that very little has been achieved since 1973 and 1976 to resolve the car parking problem which, according to Williamstown City Council and figures provided by DDS, has become progressively worse. The Committee is critical of this lack of progress, especially since in 1973 and in 1976 the Department of Defence gave implicit assurances that measures to improve the situation were in train. The Committee believes that as an employer the Commonwealth has a responsibility to provide adequate off-street parking for private vehicles belonging to its employees, particularly in circumstances where alternative on-street parking generates criticism from local councils.

83. While it may be argued that progress in resolving parking problems has been delayed due to financial constraints and higher priority works, the Williamstown City Council suggestion to re-orientate car parking and the marking of parking spaces, which cannot be regarded as expensive, should be implemented as an interim measure between now and when works associated with car parking in Phase B are completed.

Similarly, special interim arrangements should be made to increase the number of entry points to the dockyard to enhance the convenience and utilisation of existing off-street car parks.

84. Committee's Conclusion Interim measures designed to optimise the utilisation of existing off-street car parks, including the provision of additional entry points should be implemented.

85. Amenities The Combined Unions Shop Committee and the Combined Staff Associations also put forward requests for improved amenities such as canteen facilities and lunch rooms. The Committee was advised by departments that part of Phase B works will include upgrading the existing canteen and the new Administrative Annex will be provided with lunch rooms. A new gate house will form part of a new Support Services and Occupational Health Centre.

ENVIRONMENTAL CONSIDERATIONS

86. A Notice of Intent was lodged with the Department of Home Affairs and Environment. Following examination of this information and consultations with the Victorian Ministry for Planning and Environment it was determined that the preparation of the environmental impact statement for the proposal would not be necessary. This determination was made on the understanding that all safeguards and standards for environmental protection described to the department will be adopted.

87. The Committee was advised that the Victorian Environmental Protection Authority and the Metropolitan Board of Works were consulted about discharges to atmosphere and sewer respectively. Their current requirements will be met.

88. The health aspects of Kevlar cutting were investigated and the proposed facilities have been designed to reflect the most cautious opinion given.

89. Williamstown City Council sought an assurance that the disposal of Kevlar dust would not create problems either during transportation or disposal for the residents of Williamstown. DDS has advised the Committee that to ensure ongoing safety of dockyard workers and the community, Kevlar dust will be treated in the same manner as asbestos waste. Kevlar dust will be sealed in heavy duty plastic bags before disposal which will be subject to negotiation by a contractor with appropriate Council Authorities.

ESTIMATED COST

90. The estimated cost of the work is $6.1 million at December 1983 prices made up as follows:

	$M
Building works	1.8
Siteworks and Engineering Services	4.3
	6.1

91. The estimated cost of the work when referred to the Committee was $6.4 million. DHC advised the $300,000 cost reduction was due to:

a) a saving of $50,000 due to the deletion of a fully automative grit recovery system in the unit blasting facility.

b) a saving of $250,000 due to the deletion of a requirement for the re-routing of a Melbourne Metropolitan Board of Works sewer main which runs underneath the parts marshalling area.

TIMING

92. DHC advised the sequence of construction has been planned in detail in conjunction with DDS. As far as possible completion times are geared to the requirements of the frigate construction program which will commence in February 1985. To meet this timing DHC advised that their aim was to call tenders in late March - early April 1984.

93. Committee's Recommendation The Committee recommends the construction of the work in this reference.

RECOMMENDATIONS AND CONCLUSIONS

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

		Paragraph
1.	THERE IS A NEED TO PROVIDE ADDITIONAL FACILITIES IDENTIFIED TO AUGMENT EXISTING FACILITIES FOR THE CONSTRUCTION OF FFG-7 TYPE FRIGATES AT WILLIAMSTOWN NAVAL DOCKYARD	51
2.	WORK COMPRISING PHASE A OF THE MODERNISATION OF WILLIAMSTOWN NAVAL DOCKYARD WILL SUPPLEMENT EXISTING MODERN SHIP CONSTRUCTION FACILITIES CONSTRUCTED EARLIER, APPEARS TO BE ADEQUATE AND SHOULD RESULT IN IMPROVEMENTS TO PRODUCTIVITY	74

3.	INTERIM MEASURES DESIGNED TO OPTIMISE THE UTILISATION OF EXISTING OFF-STREET CAR PARKS, INCLUDING THE PROVISION OF ADDITIONAL ENTRY POINTS SHOULD BE IMPLEMENTED.	84
4.	THE ESTIMATED COST OF THE WORK IS $6.1 MILLION AT DECEMBER 1983 PRICES	90
5.	THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	93

D. J. Foreman.

(D.J. FOREMAN)
Chairman

Parliamentary Standing Committee
on Public Works,
Parliament House,
CANBERRA
29 March 1984

WITNESSES

Bethell, J. F., Esq., President,
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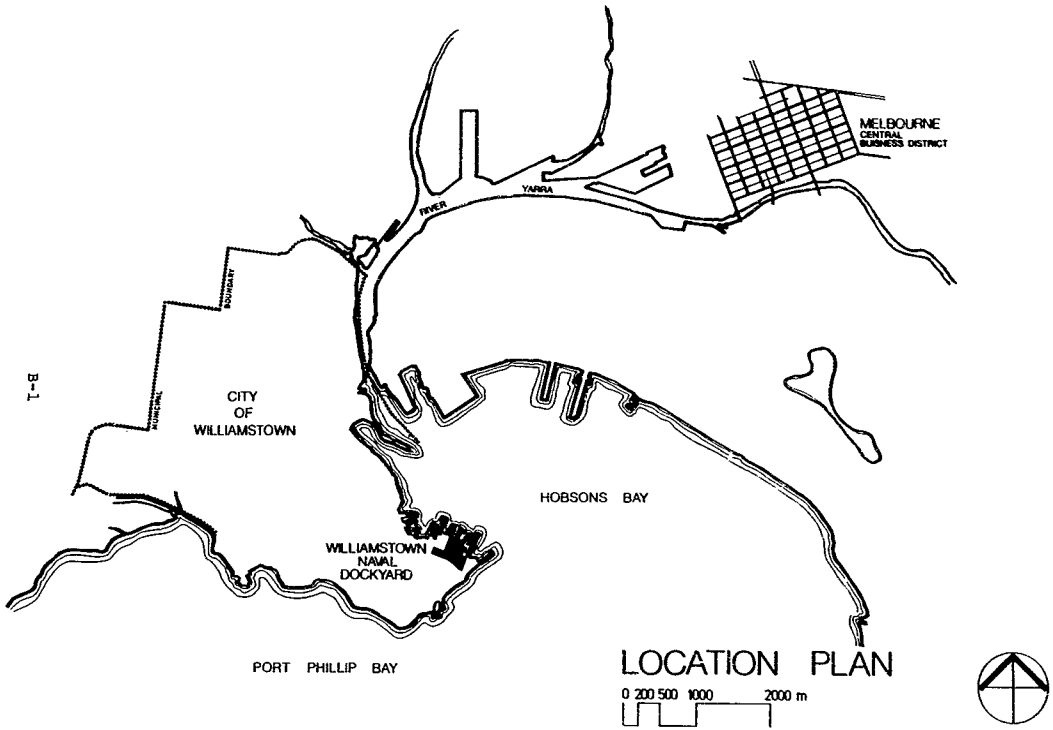
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CENTRAL
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YARRA
RIVER
MUNICIPAL
BOUNDARY
CITY
OF
WILLIAMSTOWN
HOBSONS BAY
WILLIAMSTOWN
NAVAL
DOCKYARD
PORT PHILLIP BAY
LOCATION PLAN
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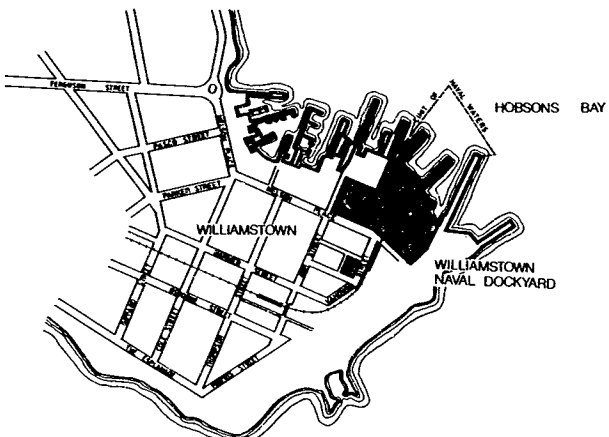
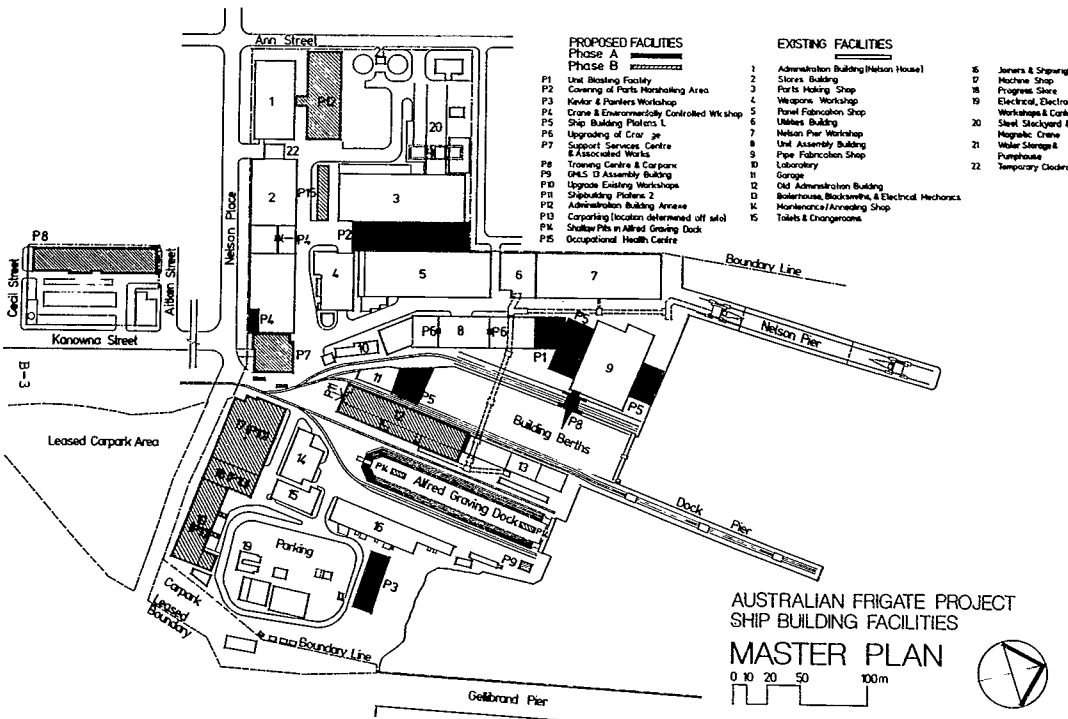
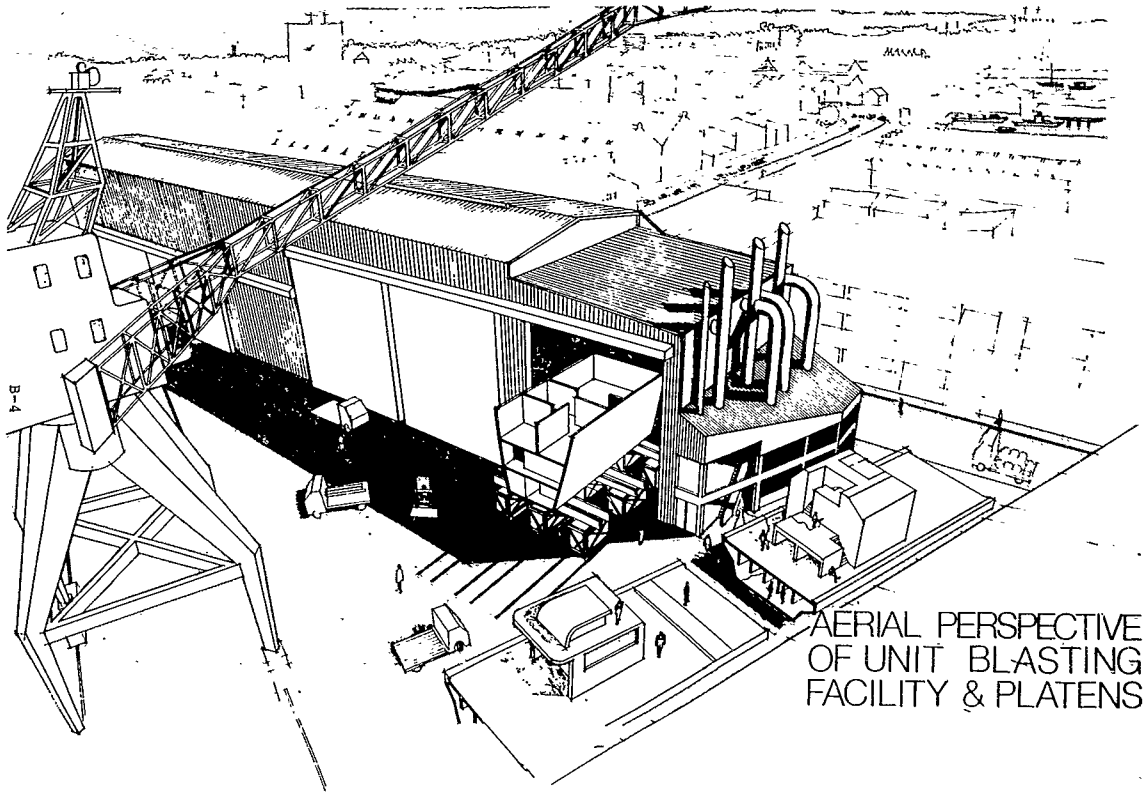


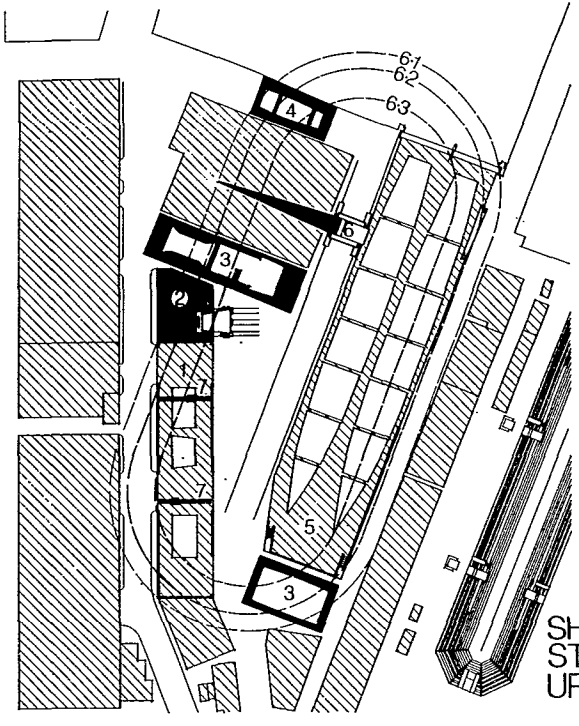
SITE PLAN

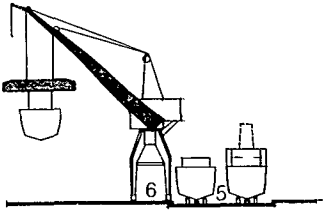
0 100 300 600 1000 m


Ann Street
Nelson Place
Cecil Street
Aitken Street
Kanowna Street
Leased Carpark Area
Carpark Leased Boundary
Boundary Line
Nelson Pier
Building Berths
Alfred Graving Dock
Dock Pier
Parking
Gellibrand Pier
PROPOSED FACILITIES
Phase A
Phase B
P1 Unit Blasting Facility
P2 Covering of Parts Marshalling Area
P3 Kevlar & Painters Workshop
P4 Crane & Environmentally Controlled Wkshop
P5 Ship Building Platens 1
P6 Upgrading of Crane
P7 Support Services Centre & Associated Works
P8 Training Centre & Carpark
P9 GMLS 13 Assembly Building
P10 Upgrade Existing Workshops
P11 Shipbuilding Platens 2
P12 Administration Building Annexe
P13 Carparking (location determined off site)
P14 Shelter Pits in Alfred Graving Dock
P15 Occupational Health Centre
EXISTING FACILITIES
1 Administration Building (Nelson House)
2 Stores Building
3 Parts Making Shop
4 Weapons Workshop
5 Panel Fabrication Shop
6 Utilities Building
7 Nelson Pier Workshop
8 Unit Assembly Building
9 Pipe Fabrication Shop
10 Laboratory
11 Garage
12 Old Administration Building
13 Boilerhouse, Blacksmiths, & Electrical Mechanics
14 Maintenance/Annealing Shop
15 Toilets & Changerooms
16 Joiners & Shipwrights
17 Machine Shop
18 Progress Store
19 Electrical, Electronic Workshops & Canteen
20 Steel Stockyard & Magnetic Crane
21 Water Storage & Pumphouse
22 Temporary Clockrooms
AUSTRALIAN FRIGATE PROJECT
SHIP BUILDING FACILITIES
MASTER PLAN
0 10 20 50 100m



AERIAL PERSPECTIVE
OF UNIT BLASTING
FACILITY & PLATENS





SECTION

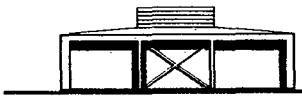
LEGEND

- EXISTING FACILITIES
- PROPOSED NEW FACILITIES
- PROPOSED UPGRADING OF EXISTING FACILITIES

1 Units Assembly
2 Unit Blast and Spray Painting
3 Platens
4 Light Duty Platen
5 Building Berth
6 Upgrade Existing Crane / New Lifting Beam
6.1 10 Tonnes 50m reach
6.2 40 Tonnes 44m reach
6.3 59 Tonnes 34m reach
7 Upgraded Existing Overhead Cranes / New Lifting Beams

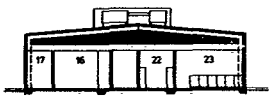
SHIPBUILDING PLATENS STAGE ONE AND THE UPGRADING OF CRANAGE

0 5 10 20 30 50 m



EAST ELEVATION

NORTH ELEVATION

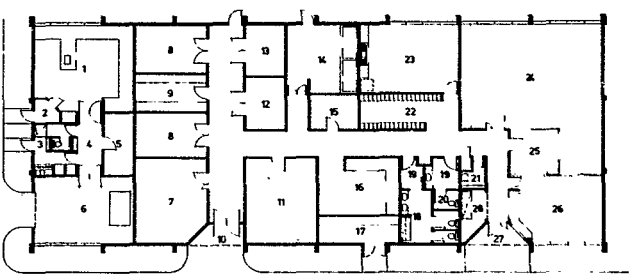


CROSS SECTION

SOUTH ELEVATION

LEGEND

1 Kevlar Workshop
2 Waste Disposal
3 Entry Change
4 Airlock
5 Plant Room
6 Store Room
7 Receipt and Issue Store
8 Spray Booth
9 Paint Preparation and Equipment Store
10 Parts Entry
11 Paints Store
12 Ambient Drying
13 Forced Drying
14 Chemical Cleaning
15 Store
16 Glass Cutting
17 Ladder Store
18 Male Toilet
19 Airlock
20 Female Toilet
21 Cleaner
22 Locker Room
23 Lunch Room
24 Signwriters Studio
25 Brush Hand
26 Office
27 Personnel Entry
28 Switch Room



FLOOR PLAN

PLANS, ELEVATIONS AND SECTIONS

KEVLAR AND PAINTERS WORKSHOPS

0 1 3 5 10m