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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

THE SENATE
31 OCT 1969
Mary Egan
TABLED
PAPER

REPORT

relating to the

DEVELOPMENT OF BEAS STIRLING,
STAGE 2, WESTERN AUSTRALIA

(Sixteenth Report of 1969)

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

(Twenty-ninth Committee)

Mr Colin Hollis MP (Chairman)
Mr Percival Clarence Millar MP (Vice-Chairman)

Senate

Senator Bryant Robert Burns
Senator John Robert Devereux
Senator Dr Glenister Sheil

House of Representatives

Mr George Gear MP
Mr Robert George Halverson OBE MP
Mr John Graham Mountford MP
Mr William Leonard Taylor MP *

* Appointed on 29.9.88 following resignation of
Mr Maxwell Arthur Burr MP

Inquiry Staff: Mr Peter Roberts (Secretary)
Mr David Crawford (Senior Project Officer)
Ms Helen Hutchins (Clerical Support)

EXTRACT FROM VOTES AND PROCEEDINGS OF
THE HOUSE OF REPRESENTATIVES

NO. 124 DATED MONDAY 29 MAY 1989

- 15 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - STAGE 2
DEVELOPMENT, INCLUDING NEW SUBMARINE SCHOOL, HMAS
STIRLING, GARDEN ISLAND, WA: Mr West (Minister for
Administrative Services), 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: Stage 2
development, including new Submarine School, HMAS
STIRLING, Garden Island, WA.

Mr West presented plans in connection with the proposed work.

Debate ensued.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

DEVELOPMENT OF HMAS STIRLING, STAGE 2, GARDEN ISLAND, WA

On 29 May 1989 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposal for the second stage of the development of HMAS STIRLING at Garden Island, Western Australia.

THE REFERENCE

1. The proposal provides for the second stage of development works at the Royal Australian Naval base HMAS STIRLING over the period 1989 to 1996.
2. The stage two works consist of more than thirty five individual projects ranging from additional accommodation and recreational facilities to new workshops, administrative buildings and wharf facilities as well as a new submarine school. Existing maintenance, supply, operational, port berthing and shipside facilities will be enhanced to allow the homeporting of additional ships and submarines.
3. The estimated cost of the stage two works including the submarine school is \$135.6m at April 1989 prices.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions, plans and drawings from the Department of Defence (DOD) and Australian Construction Services (ACS) and took evidence from representatives of these organisations at a public hearing at HMAS STIRLING on 27 June 1989.

5. Several other organisations also made submissions to the Committee and appeared at the public hearing. These were the Defence Housing Authority, the City of Rockingham and the Technology Industry Development Authority of Western Australia.

6. Documentation was also provided by the Australian Heritage Commission and the National Consultative Group of Service Spouses and is incorporated in the Minutes of Evidence.

7. Prior to the commencement of the public hearing, the Committee was briefed by Navy representatives on the proposal and then conducted an inspection of the proposed development sites at HMAS STIRLING. The Committee also inspected a number of Defence Housing Authority houses in the Rockingham area.

8. A list of witnesses who appeared at the hearing is at Appendix A. The Committee's proceedings will be published as Minutes of Evidence.

BACKGROUND

Location

9. HMAS STIRLING is situated on Garden Island in Cockburn Sound, Western Australia and is 60kms by road south of Perth. Garden Island is joined to the mainland by a causeway. Rockingham is the nearest mainland city 11kms from HMAS STIRLING. The Island measures 9kms north to south and 2kms east to west and has a total area of 1214 hectares.

Development of Naval Facilities at Garden Island

10. During 1915 and 1916 the Commonwealth acquired freehold title to the whole of Garden Island for defence purposes. Prior to the Second World War, coastal artillery positions were developed on the Island. Other fortifications were constructed

during the war years and the Island was garrisoned to secure the Fremantle area.

11. Investigations for siting a naval support facility at Cockburn Sound were conducted in the late 1960's. Two proposals of the Department of Defence were subsequently examined by the Public Works Committee in 1970 and 1972.

12. The Committee in 1970 (Twenty-second Report of 1970) approved the construction of a causeway 4.5km long, linking Cape Peron with the Island. Construction commenced in 1971 and was completed in 1973.

13. In 1972 the Committee approved the construction of works comprising a fleet support facility on Garden Island (Fifth Report of 1972). Construction commenced late in 1972 and the majority of the initial fleet support facilities were completed between 1974 and 1978. HMAS STIRLING was commissioned on 28 July 1978.

14. Subsequently in 1985, the Committee examined the proposal for the construction of a submarine escape training facility at STIRLING (Sixth Report of 1985). Parliamentary approval was given in that year and in January 1989 the Navy commenced its training programs at the facility. (For a further discussion of this work see paras 141-145).

HMAS STIRLING Stage One - Naval Support Facility

15. The stage one development provided a fleet base with a capacity to support up to four destroyers and three submarines at a cost of \$30m.

16. These works included:

- . maritime works, wharves, workshops, stores and offices.

- a large ship's wharf, small boat camber and slipway to accommodate naval ships
- barracks, recreational and medical accommodation
- armament depot and jetty
- operations headquarters
- communications facilities.

17. The base was commissioned in July 1978 and now provides technical, logistic, administrative and other port services to seven surface ships (three destroyer escorts, one hydrographic ship and three patrol boats) and one submarine which are currently homeported.

18. Additional works carried out since 1978 include the construction of the gymnasium, the AVCAT fuel facility, the water training facility, accommodation for the Army; and extensions to laundry facilities and to the bulk store.

19. Two officers' accommodation blocks to a value of \$1.2m are currently being constructed. Additional works to the value of \$2m also being carried out are junior and senior sailors accommodation blocks, an extension to the ancillary building on the submarine wharf and associated engineering services.

20. Phase one of a torpedo support facility has recently been completed, phase two is under construction with anticipated completion in December 1989 at a cost of \$1.9m.

Role of HMAS STIRLING

21. HMAS STIRLING provides maintenance, supply and operational support for assigned and visiting warships as well as port, berthing, shipside and administrative services. As noted earlier, seven surface ships and one submarine are located at STIRLING. The base presently supports 1500 naval personnel (520 area and base staff and 980 ships crew).

Two-Ocean Navy Concept

22. In February 1987 the Minister for Defence, the Hon. Kim Beazley, MP tabled the Fleet Base Relocation Study Report in Parliament. The study recommended the relocation of fleet units and facilities to HMAS STIRLING should proceed as a matter of priority.

23. The Minister in his statement to the House of Representatives announced that:

- . "the Government recognises that the defence of Australia requires an increased naval presence in the west and that the Eastern Australia Fleet Base cannot remain in Sydney harbour indefinitely.
- . the Government is committed to further developing HMAS STIRLING, and thereby making a two-ocean navy a reality. The development of HMAS STIRLING reflects a strategic need for maritime operations to be conducted from the west as well as the east coast, and the consequent need to ensure that maintenance support is available in the west.
- . it is the Government's intention to move half the Fleet to HMAS STIRLING ..."

24. This position and the two-ocean navy concept was reiterated by the Commonwealth Government in the 1987 Defence White Paper. This policy has necessitated the further development of HMAS STIRLING in order to provide a secure base on the western seaboard to support additional major fleet units operating in the Indian Ocean, and minor fleet units which operate generally closer to the western and north-western coastline.

THE NEED

25. The need to further develop HMAS STIRLING is the direct consequence of the Commonwealth Government's decision to relocate half of the fleet to Western Australia and the establishment of the two-ocean navy concept.

26. Furthermore, general operations at the base for the support of the hydrographic survey ship HMAS MORESBY, three patrol boats, a number of support craft, as well as the experience of short duration basing of major fleet units and the homeporting of destroyers, have revealed a number of deficiencies at the base which need to be rectified.

27. The deficiencies include inadequate berthing and support arrangements in the small craft harbour which was not designed for patrol boat usage; shortfalls in ship rigging, safety equipment, ship maintenance support, clearance diving, motor transport; aviation (helicopter) fuel storage and naval store facilities. In addition there is a shortage of suitable office accommodation for technical administration and support amenities for port services personnel. There are shortcomings in amenities for base and ships' personnel and cabin accommodation is at a premium.

28. Provision for additional works to overcome some of the foregoing deficiencies, and partially provide for homeporting the first submarine, were initiated prior to the Government's decision to expand the base. With the exception of some medium works proposals all extant items are now included in the current stage two and stage three development proposals.

29. DOD advise that the provisional ship-basing program developed by Navy forms the basis for the further development of facilities at STIRLING.

Ship Basing Program

30. Navy emphasised that the provisional ship basing program is contingent upon there being no consequential changes to strategic environment, resource allocation and operational development requirements.

1990-1995/6 - Stage Two

31. This period will see homeporting of vessels as follows:

- . by the end of 1990 - a second submarine, a fourth destroyer escort (DE) and an auxiliary tanker
- . between 1992 & 1993 - the submarine squadron staff
- . between 1992 & 1995 - a mine counter-measures (MCM) element of five minesweepers (Craft of Opportunity (COOPs)) and three minehunters (MHIs)
- . during 1993/94 - a guided missile frigate (FFG) to replace a DE that will be decommissioned, with a similar event during 1994
- . during 1995 - a third FFG to replace a decommissioned DE
- . during 1996 - one OBERON class submarine to be replaced by a Type 471 submarine.

Committee's Conclusion

32. The Committee acknowledges that as a consequence of the Commonwealth Government's decision to relocate half of the naval fleet to Western Australia, there is a pressing need for the additional facilities proposed in the stage two development of HMAS STIRLING.

THE PROPOSAL

Development of HMAS STIRLING

33. The development of HMAS STIRLING comprises three stages. Stage one involved the establishment of the naval support facility and was largely completed in 1978 with additional works progressing to 1989; this includes all the existing facilities. Stage two covers the development from 1989 to 1996 and stage three from 1996 to 2000.

Purpose of Stage Two Development Program

34. The purpose of the stage two development program is to complete previously planned development of the base and by 1995/6 provide those facilities associated with basing a fourth destroyer, a second submarine, an auxiliary tanker, mine countermeasure vessels and additional support craft. It also provides for the introduction of the FFGs and ANZAC frigates plus the transition to the new 471 category submarines and the different support required for these vessels.

Description of Works

35. The stage two works comprise over thirty-five separate projects, these are:

- . extensions to clearance diving team facilities
- . port services building
- . technical services building
- . Commander Australian Submarine Squadron (COMAUSSBRON) Building
- . extension to medical centre
- . additional officers accommodation
- . extensions to officers wardroom
- . additional senior sailors accommodation
- . extensions to senior sailors mess
- . additional junior sailors accommodation
- . extensions to junior sailors galley and cafeteria
- . extensions to junior sailors recreation centre
- . extensions to electronics workshop No. 1
- . electronics workshop No. 2
- . submarine wharf modifications
- . small ships harbour
- . slipway ancillary facilities
- . mine warfare shore support facilities
- . fleet pier
- . fleet base general amenities
- . additional sports facilities
- . swimming pool
- . extensions to fire and damage control training area
- . additional non-explosives store
- . additional explosives workshop
- . sullage facilities and overside services
- . sports pavilion and amenities
- . fleet car-parks
- . extension to helicopter landing pad
- . hull maintenance workshop
- . new submarine school
- . project site office
- . additional naval store
- . extensions to engineering services
- . destroyer wharf dolphin

- . armament wharf fendering
- . boat shed replacement and plant nursery.

Details of the works are set out below.

Extensions to Clearance Diving Team Facilities

36. An extension to the existing building is required to overcome insufficient office space, storage and training areas to accommodate current staff levels and to meet the future operational and training roles. This will increase facility capacity from 12 to 32 and allow Special Duties Unit personnel to undertake six month training courses for classes of up to 20.

Port Services Building

37. The building will be located near the wharves and helicopter pad. The building is to have a central office/amenities block with stores and workshops alongside.

38. The ground floor of the central block will provide accommodation for activities associated with the workshops. The first floor will provide accommodation for the Royal Australian Navy Trials and Assessment Unit. The second floor accommodation for port services, Defence Science Technology Organisation, ablutions and amenities. The control office will be at the fourth level, (16.8m above ground level) to provide an overview of the operational areas.

39. The stores wing will contain laypart stores and a fleet baggage store. The workshop wing will contain the rigging shop survival equipment/fabric workshops.

Technical Services Building

40. The building is to be located to the north of the existing administration building and linked by a covered way.

41. Offices and amenities are to be provided on two levels for 70 personnel including the Commander Fleet Maintenance. A secure library, a print reproduction room and a drawing office will also be provided.

COMAUSSUBRON Building

42. It is planned to transfer the Commander Australian Submarine Squadron (COMAUSSUBRON) and staff to HMAS STIRLING in 1992. A new building for submarine staff administration, with a capacity for 70 personnel will be located adjacent to the administration building and Naval Officer Commanding Western Australia (NOCWA) Headquarters.

Extensions to Medical Centre

43. The existing facility provides medical and dental services with associated administration for Naval personnel serving the base and homeported ships. It is proposed to increase the number of beds from eight to fourteen and the number of dentist chairs from three to four. A physiotherapy room and reception and waiting rooms will be included. The number of medical officers suites will increase from one to four. The extensions will continue the existing design and also allow for future extension.

Additional Accommodation

44. Additional accommodation is required to meet the increased deployment of vessels to HMAS STIRLING. On current occupancy rates, existing base cabin accommodation in the officers', senior

sailors' and junior sailors' quarters will be fully utilised by 1990. So additional base accommodation for all ranks is proposed.

45. In an endeavour to provide a domestic rather than 'barrack' atmosphere the proposed accommodation blocks are all two-storey, with eight single cabins grouped around a common room on each floor. The blocks accommodate a maximum of 16 personnel and all the cabins face either east or north thus making optimum use of sun and sea views.

Extensions to the Messes

46. Extensions are proposed to all messes to meet with Service Scales and Standards of Accommodation provisions. The recreation space included in the officers' wardroom, the senior sailors' mess and the junior sailors' recreation centre will accommodate the population envisaged up to and including stage three as follows: 228 officers, 506 senior sailors and 1360 junior sailors. (ACS advise that stage three numbers were included at this time because they are small).

47. Revised messing arrangements include the introduction of central food processing (CFP) and distribution centred on the junior sailors' galley. The Committee sought from Navy details as to the cost savings associated with the introduction of CFP. Navy replied that the overall galley capacity for the base will have to increase from 560 meals at peak period to 2000 over the ten year period. Under the CFP arrangements 33 cooks will be required to meet this capacity; however, with non-CFP arrangements there is a need for 44 cooks. So the CFP scheme provides for a manpower saving of eleven cooks. Annual savings (with on-costs) arising from this reduction in personnel are expected to be in the order of \$650 000 based on a service manpower cost of \$58 000 per annum for an able seaman.

48. The CFP arrangement proposed for HMAS STIRLING envisages that the main CFP galley will prepare all vegetables and meat for cooking, produce most sweets used in each dining room and prepare dishes up to but not including the cooking stage. Existing galleys in the Wardroom and senior sailors' messes will be retained as finishing galleys (with some minor upgrading work) where the actual cooking of the meals will be completed. CFP provides for a reduction in the duplication of tasks between the galleys and an increase in the proportion of time spent by the average chef in cooking rather than preparation.

Extensions to Electronics Workshop No. 1

49. The existing electronics workshop will be extended to provide extra floor space for the maintenance and repair of additional equipment associated with the homeporting of OBERON class submarines and destroyer escorts. Overhead cranes will service the extension.

Electronics Workshop No. 2

50. An additional electronics workshop is to be built adjacent to the existing electronics workshop to support electrical, electronic and weapon maintenance requirements of homeported surface ships. The building will include a workshop serviced by an overhead 8.9 tonne crane and an electronics maintenance room, store and ablution facilities.

Submarine Wharf Modifications

51. The existing submarine wharf is to be modified to enable berthing of Type 471 submarines prior to the fleet pier becoming available. The modifications involve upgrading the electrical services and the fendering. The major items of equipment will subsequently be transferred to the fleet pier.

Small Ships Harbour Area Facilities

52. Developments in the area entail:

Small Ships Harbour

53. Dredging to expand the harbour area and provide a minimum water depth of three metres; extension of the existing breakwater by 70 metres, demolition of existing piers and construction of 480 metres of major wharves to increase berthing capacity for three patrol boats, three MHIs, five COOPs, two fleet support vessels, one crane store lighter, one water fuel lighter, three flat top lighters and other support craft. The existing 300 tonne capacity slipway will be retained. This is a major development item costed at \$16.84m.

Slipway Ancillary Building

54. An additional building is required for a ship husbandry workshop, glass reinforced plastic workshop, office space and storage areas. Workshops and amenities for up to 50 personnel working in the area are required.

Mine Warfare Support Facility

55. A new facility will be provided to support additional personnel associated with the mine warfare vessels and storage of mine hunting and minesweeping equipment. Facilities include administrative offices, workshop space, amenities, training area, storage space for magnetic and non-magnetic equipment, container storage area and sweep storage area.

Fleet Pier

56. The proposed fleet pier is the largest capital item in the stage two works. The limit of cost estimate for the pier is

\$39.72m (April 1989 prices). The pier is designed to provide sufficient berthing capacity for the number of ships scheduled to be homeported and baseported at HMAS STIRLING.

57. The proposal is for a pier with two deck levels. Utility services and ancillary support buildings are to be located on the lower deck thus minimising congestion of the main operational activities on the upper deck. It will also improve ship/pier deck interaction and provide a lower embarkation/disembarkation level to cater for vessels with lower deck levels such as submarines.

58. The pier is to be 340 metres long (with an effective length of 310 metres) by 24 metres wide overall and consist of reinforced concrete decks supported on driven tubular steel piles with reinforced concrete columns between decks. Floating pneumatic fenders are proposed.

59. Electrical, mechanical and hydraulic utility services are to be provided to enable berthed ships to draw on shore-based utilities, rather than ship board systems, and to facilitate ship maintenance.

60. Dredging will be carried out to provide a minimum water depth of 11 metres below low water tide level. The natural water depth provides 12 metres at the outer berths.

Fleet Base General Amenities

61. With a projected base population of 2453 persons in 1996 there is a need for improvement in amenities. It is proposed to have a small community centre which faces onto an open courtyard for shopping and associated needs of all ranks living on base or on board ship. It will be within easy walking distance of the accommodation areas.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

DEVELOPMENT OF HMAS STIRLING, STAGE 2,
GARDEN ISLAND, WA

On 29 May 1989 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposal for the second stage of the development of HMAS STIRLING at Garden Island, Western Australia.

THE REFERENCE

1. The proposal provides for the second stage of development works at the Royal Australian Naval base HMAS STIRLING over the period 1989 to 1996.
2. The stage two works consist of more than thirty five individual projects ranging from additional accommodation and recreational facilities to new workshops, administrative buildings and wharf facilities as well as a new submarine school. Existing maintenance, supply, operational, port berthing and shipside facilities will be enhanced to allow the homeporting of additional ships and submarines.
3. The estimated cost of the stage two works including the submarine school is \$135.6m at April 1989 prices.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions, plans and drawings from the Department of Defence (DOD) and Australian Construction Services (ACS) and took evidence from representatives of these organisations at a public hearing at HMAS STIRLING on 27 June 1989.

5. Several other organisations also made submissions to the Committee and appeared at the public hearing. These were the Defence Housing Authority, the City of Rockingham and the Technology Industry Development Authority of Western Australia.
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BACKGROUND

Location

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Development of Naval Facilities at Garden Island

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HMAS STIRLING Stage One - Naval Support Facility

15. The stage one development provided a fleet base with a capacity to support up to four destroyers and three submarines at a cost of \$30m.

16. These works included:

- . maritime works, wharves, workshops, stores and offices

- . a large ship's wharf, small boat camber and slipway to accommodate naval ships
- . barracks, recreational and medical accommodation
- . armament depot and jetty
- . operations headquarters
- . communications facilities.

17. The base was commissioned in July 1978 and now provides technical, logistic, administrative and other port services to seven surface ships (three destroyer escorts, one hydrographic ship and three patrol boats) and one submarine which are currently homeported.

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Role of HMAS STIRLING

21. HMAS STIRLING provides maintenance, supply and operational support for assigned and visiting warships as well as port, berthing, shipside and administrative services. As noted earlier, seven surface ships and one submarine are located at STIRLING. The base presently supports 1500 naval personnel (520 area and base staff and 980 ships crew).

Two-Ocean Navy Concept

22. In February 1987 the Minister for Defence, the Hon. Kim Beazley, MP tabled the Fleet Base Relocation Study Report in Parliament. The study recommended the relocation of fleet units and facilities to HMAS STIRLING should proceed as a matter of priority.

23. The Minister in his statement to the House of Representatives announced that:

- . "the Government recognises that the defence of Australia requires an increased naval presence in the west and that the Eastern Australia Fleet Base cannot remain in Sydney harbour indefinitely.
- . the Government is committed to further developing HMAS STIRLING, and thereby making a two-ocean navy a reality. The development of HMAS STIRLING reflects a strategic need for maritime operations to be conducted from the west as well as the east coast, and the consequent need to ensure that maintenance support is available in the west.
- . it is the Government's intention to move half the Fleet to HMAS STIRLING ..."

24. This position and the two-ocean navy concept was reiterated by the Commonwealth Government in the 1987 Defence White Paper. This policy has necessitated the further development of HMAS STIRLING in order to provide a secure base on the western seaboard to support additional major fleet units operating in the Indian Ocean, and minor fleet units which operate generally closer to the western and north-western coastline.

THE NEED

25. The need to further develop HMAS STIRLING is the direct consequence of the Commonwealth Government's decision to relocate half of the fleet to Western Australia and the establishment of the two-ocean navy concept.

26. Furthermore, general operations at the base for the support of the hydrographic survey ship HMAS MORESEY, three patrol boats, a number of support craft, as well as the experience of short duration basing of major fleet units and the homeporting of destroyers, have revealed a number of deficiencies at the base which need to be rectified.

27. The deficiencies include inadequate berthing and support arrangements in the small craft harbour which was not designed for patrol boat usage; shortfalls in ship rigging, safety equipment, ship maintenance support, clearance diving, motor transport; aviation (helicopter) fuel storage and naval store facilities. In addition there is a shortage of suitable office accommodation for technical administration and support amenities for port services personnel. There are shortcomings in amenities for base and ships' personnel and cabin accommodation is at a premium.

28. Provision for additional works to overcome some of the foregoing deficiencies, and partially provide for homeporting the first submarine, were initiated prior to the Government's decision to expand the base. With the exception of some medium works proposals all extant items are now included in the current stage two and stage three development proposals.

29. DOD advise that the provisional ship-basing program developed by Navy forms the basis for the further development of facilities at STIRLING.

Ship Basing Program

30. Navy emphasised that the provisional ship basing program is contingent upon there being no consequential changes to strategic environment, resource allocation and operational development requirements.

1990-1995/6 - Stage Two

31. This period will see homeporting of vessels as follows:

- . by the end of 1990 - a second submarine, a fourth destroyer escort (DE) and an auxiliary tanker
- . between 1992 & 1993 - the submarine squadron staff
- . between 1992 & 1995 - a mine counter-measures (MCM) element of five minesweepers (Craft of Opportunity {COOPs}) and three minehunters (MHIs)
- . during 1993/94 - a guided missile frigate (FFG) to replace a DE that will be decommissioned, with a similar event during 1994
- . during 1995 - a third FFG to replace a decommissioned DE
- . during 1996 - one OBERON class submarine to be replaced by a Type 471 submarine.

Committee's Conclusion

32. The Committee acknowledges that as a consequence of the Commonwealth Government's decision to relocate half of the naval fleet to Western Australia, there is a pressing need for the additional facilities proposed in the stage two development of HMAS STIRLING.

THE PROPOSAL

Development of HMAS STIRLING

33. The development of HMAS STIRLING comprises three stages. Stage one involved the establishment of the naval support facility and was largely completed in 1978 with additional works progressing to 1989; this includes all the existing facilities. Stage two covers the development from 1989 to 1996 and stage three from 1996 to 2000.

Purpose of Stage Two Development Program

34. The purpose of the stage two development program is to complete previously planned development of the base and by 1995/6 provide those facilities associated with basing a fourth destroyer, a second submarine, an auxiliary tanker, mine countermeasure vessels and additional support craft. It also provides for the introduction of the FFGs and ANZAC frigates plus the transition to the new 471 category submarines and the different support required for these vessels.

Description of Works

35. The stage two works comprise over thirty-five separate projects, these are:

- . extensions to clearance diving team facilities
- . port services building
- . technical services building
- . Commander Australian Submarine Squadron (COMAUSSBRON) Building
- . extension to medical centre
- . additional officers accommodation
- . extensions to officers wardroom
- . additional senior sailors accommodation
- . extensions to senior sailors mess
- . additional junior sailors accommodation
- . extensions to junior sailors galley and cafeteria
- . extensions to junior sailors recreation centre
- . extensions to electronics workshop No. 1
- . electronics workshop No. 2
- . submarine wharf modifications
- . small ships harbour
- . slipway ancillary facilities
- . mine warfare shore support facilities
- . fleet pier
- . fleet base general amenities
- . additional sports facilities
- . swimming pool
- . extensions to fire and damage control training area
- . additional non-explosives store
- . additional explosives workshop
- . sullage facilities and overside services
- . sports pavilion and amenities
- . fleet car-parks
- . extension to helicopter landing pad
- . hull maintenance workshop
- . new submarine school
- . project site office
- . additional naval store
- . extensions to engineering services
- . destroyer wharf dolphin

- . armament wharf fendering
- . boat shed replacement and plant nursery.

Details of the works are set out below.

Extensions to Clearance Diving Team Facilities

36. An extension to the existing building is required to overcome insufficient office space, storage and training areas to accommodate current staff levels and to meet the future operational and training roles. This will increase facility capacity from 12 to 32 and allow Special Duties Unit personnel to undertake six month training courses for classes of up to 20.

Port Services Building

37. The building will be located near the wharves and helicopter pad. The building is to have a central office/amenities block with stores and workshops alongside.

38. The ground floor of the central block will provide accommodation for activities associated with the workshops. The first floor will provide accommodation for the Royal Australian Navy Trials and Assessment Unit. The second floor accommodation for port services, Defence Science Technology Organisation, ablutions and amenities. The control office will be at the fourth level, (16.8m above ground level) to provide an overview of the operational areas.

39. The stores wing will contain laypart stores and a fleet baggage store. The workshop wing will contain the rigging shop survival equipment/fabric workshops.

Technical Services Building

40. The building is to be located to the north of the existing administration building and linked by a covered way.

41. Offices and amenities are to be provided on two levels for 70 personnel including the Commander Fleet Maintenance. A secure library, a print reproduction room and a drawing office will also be provided.

COMAUSSUBRON Building

42. It is planned to transfer the Commander Australian Submarine Squadron (COMAUSSUBRON) and staff to HMAS STIRLING in 1992. A new building for submarine staff administration, with a capacity for 70 personnel will be located adjacent to the administration building and Naval Officer Commanding Western Australia (NOCWA) Headquarters.

Extensions to Medical Centre

43. The existing facility provides medical and dental services with associated administration for Naval personnel serving the base and homeported ships. It is proposed to increase the number of beds from eight to fourteen and the number of dentist chairs from three to four. A physiotherapy room and reception and waiting rooms will be included. The number of medical officers suites will increase from one to four. The extensions will continue the existing design and also allow for future extension.

Additional Accommodation

44. Additional accommodation is required to meet the increased deployment of vessels to HMAS STIRLING. On current occupancy rates, existing base cabin accommodation in the officers', senior

sailors' and junior sailors' quarters will be fully utilised by 1990. So additional base accommodation for all ranks is proposed.

45. In an endeavour to provide a domestic rather than 'barrack' atmosphere the proposed accommodation blocks are all two-storey, with eight single cabins grouped around a common room on each floor. The blocks accommodate a maximum of 16 personnel and all the cabins face either east or north thus making optimum use of sun and sea views.

Extensions to the Messes

46. Extensions are proposed to all messes to meet with Service Scales and Standards of Accommodation provisions. The recreation space included in the officers' wardroom, the senior sailors' mess and the junior sailors' recreation centre will accommodate the population envisaged up to and including stage three as follows: 228 officers, 506 senior sailors and 1360 junior sailors. (ACS advise that stage three numbers were included at this time because they are small).

47. Revised messing arrangements include the introduction of central food processing (CFP) and distribution centred on the junior sailors' galley. The Committee sought from Navy details as to the cost savings associated with the introduction of CFP. Navy replied that the overall galley capacity for the base will have to increase from 560 meals at peak period to 2000 over the ten year period. Under the CFP arrangements 33 cooks will be required to meet this capacity; however, with non-CFP arrangements there is a need for 44 cooks. So the CFP scheme provides for a manpower saving of eleven cooks. Annual savings (with on-costs) arising from this reduction in personnel are expected to be in the order of \$650 000 based on a service manpower cost of \$58 000 per annum for an able seaman.

48. The CFP arrangement proposed for HMAS STIRLING envisages that the main CFP galley will prepare all vegetables and meat for cooking, produce most sweets used in each dining room and prepare dishes up to but not including the cooking stage. Existing galleys in the Wardroom and senior sailors' messes will be retained as finishing galleys (with some minor upgrading work) where the actual cooking of the meals will be completed. CFP provides for a reduction in the duplication of tasks between the galleys and an increase in the proportion of time spent by the average chef in cooking rather than preparation.

Extensions to Electronics Workshop No. 1

49. The existing electronics workshop will be extended to provide extra floor space for the maintenance and repair of additional equipment associated with the homeporting of OBERON class submarines and destroyer escorts. Overhead cranes will service the extension.

Electronics Workshop No. 2

50. An additional electronics workshop is to be built adjacent to the existing electronics workshop to support electrical, electronic and weapon maintenance requirements of homeported surface ships. The building will include a workshop serviced by an overhead 8.9 tonne crane and an electronics maintenance room, store and ablution facilities.

Submarine Wharf Modifications

51. The existing submarine wharf is to be modified to enable berthing of Type 471 submarines prior to the fleet pier becoming available. The modifications involve upgrading the electrical services and the fendering. The major items of equipment will subsequently be transferred to the fleet pier.

Small Ships Harbour Area Facilities

52. Developments in the area entail:

Small Ships Harbour

53. Dredging to expand the harbour area and provide a minimum water depth of three metres; extension of the existing breakwater by 70 metres, demolition of existing piers and construction of 480 metres of major wharves to increase berthing capacity for three patrol boats, three MHIs, five COOPs, two fleet support vessels, one crane store lighter, one water fuel lighter, three flat top lighters and other support craft. The existing 300 tonne capacity slipway will be retained. This is a major development item costed at \$16.84m.

Slipway Ancillary Building

54. An additional building is required for a ship husbandry workshop, glass reinforced plastic workshop, office space and storage areas. Workshops and amenities for up to 50 personnel working in the area are required.

Mine Warfare Support Facility

55. A new facility will be provided to support additional personnel associated with the mine warfare vessels and storage of minehunting and minesweeping equipment. Facilities include administrative offices, workshop space, amenities, training area, storage space for magnetic and non-magnetic equipment, container storage area and sweep storage area.

Fleet Pier

56. The proposed fleet pier is the largest capital item in the stage two works. The limit of cost estimate for the pier is

\$39.72m (April 1989 prices). The pier is designed to provide sufficient berthing capacity for the number of ships scheduled to be homeported and baseported at HMAS STIRLING.

57. The proposal is for a pier with two deck levels. Utility services and ancillary support buildings are to be located on the lower deck thus minimising congestion of the main operational activities on the upper deck. It will also improve ship/pier deck interaction and provide a lower embarkation/disembarkation level to cater for vessels with lower deck levels such as submarines.

58. The pier is to be 340 metres long (with an effective length of 310 metres) by 24 metres wide overall and consist of reinforced concrete decks supported on driven tubular steel piles with reinforced concrete columns between decks. Floating pneumatic fenders are proposed.

59. Electrical, mechanical and hydraulic utility services are to be provided to enable berthed ships to draw on shore-based utilities, rather than ship board systems, and to facilitate ship maintenance.

60. Dredging will be carried out to provide a minimum water depth of 11 metres below low water tide level. The natural water depth provides 12 metres at the outer berths.

Fleet Base General Amenities

61. With a projected base population of 2453 persons in 1996 there is a need for improvement in amenities. It is proposed to have a small community centre which faces onto an open courtyard for shopping and associated needs of all ranks living on base or on board ship. It will be within easy walking distance of the accommodation areas.

62. Hair salon, bank, credit union, post office, dry cleaners and tailors shops will be at the north of the courtyard. A hobby room, small games, lounge, community area and library are to be to the south with a small supermarket and cafe seating 40 people to the west. Design and construction are to be similar to the accommodation and recreation buildings.

Sports Facilities

63. Additional sport and recreational facilities allowed under Service, Scales and Standards of Accommodation (SSSA) provisions for the number of ship and base personnel comprise:

- . an additional squash court
- . an additional sports oval with cricket pitch
- . six additional tennis courts
- . lighting for oval and tennis courts
- . a 50 metre, eight lane outdoor swimming pool.

Extensions to Fire and Damage Control Area

64. A ship section module mock-up and fire pits are to be provided for fire-fighting and damage control training.

65. Appropriate methods of collecting, treating and disposing of waste by-products are to be provided.

Armament Depot

66. An additional non-explosives stores is required to hold current and future armament stores. An additional explosives workshop is also required to cope with the increased repair, modification and inspection of explosives associated with further homeporting.

Wharf Sullage System and Overside Services

67. The existing system for collection and purification of sullage water (bilge and ballast waste) discharged from ships and submarines has insufficient capacity to allow submarines to refuel in an operationally acceptable period; and the purification standards are below current environmental guidelines. A new sullage treatment plant with a larger holding tank and improved filtration system is proposed to meet requirements for the foreseeable future. An additional high pressure air compressor is required to improve the output and reliability of air services for submarines. Both items are required early to support submarine operations. The treated water will comply with relevant State regulations and will discharge into Cockburn Sound.

Sports Pavillion and Amenities

68. Additional change rooms, a storage area for sports equipment and groundsman's equipment and a covered spectator seating area are needed to support the expanded sports facilities. A general purpose area for post-match entertainment is included in this facility. (It is provided as part of the mess and recreation scale entitlement).

Fleet Car-parks

69. Two main car-parks are planned for the two existing wharves and adjacent facilities. One car-park will provide 400 open bays with provision for 210 of these bays to be covered for ship personnel living on board. A second car-park will provide 90 open bays.

Extension to Helicopter Landing Pad

70. This will be a temporary facility, double the size of the existing helicopter landing pad. It will provide a durable all-weather concreted landing area with lighting to enable 24 hour operations. This facility will be required for ten years service and will be replaced with a larger facility in the long term.

Hull Maintenance Workshop

71. This building is to provide facilities for the storage, processing, fabrication and fitting of sheetmetal, blacksmithing and welding of steel plate and pipe components for boats and ships. Associated offices, store and staff amenities are also to be provided.

Project Site Office

72. A project site office is required over the ten to twelve year design and construction period to accommodate project personnel (ACS and Defence). On completion of stage three the building will be used as the administration offices for the base works and property organisation.

Additional Naval Store

73. Additional storage capacity for off-loading and mustering ship's stores and the assembly of naval stores will be required. A third stores building is proposed to provide this extra capacity. Office areas for supply administration staff are included.

Engineering Services

74. The extension and upgrading of existing services is required to meet the increased demand; these are:

- . first and second class water supplies
- . sewerage
- . stormwater drainage
- . roads
- . electricity
- . telephones
- . security and fire alarms
- . compressed air
- . chilled water
- . heating water
- . diesel fuel
- . aviation fuel (AVCAT)
- . gas
- . domestic hot water
- . sullage
- . seawater
- . distilled water.

Destroyer Wharf Dolphin

75. By 1990 the homeported vessels will not be able to be berthed in a satisfactory way due to insufficient length of the existing two main wharves. To provide extra capacity at the longest wharf to allow large ships to utilise a shorter destroyer berth, a mooring dolphin is proposed to be constructed about 40 metres beyond the seaward end of the wharf. This effectively increases the length of the wharf to about 350 metres and will allow a destroyer and an auxiliary tanker to be berthed in line with satisfactory berthing line arrangements.

Armament Wharf Fendering

76. The fendering on the existing armament jetty is to be upgraded to improve working conditions for armament handling. Presently there can be considerable movement of ships and submarines alongside the jetty making ammunition transfer unsafe at times.

Boat Shed Replacement and Plant Nursery

77. A boat shed to house recreational and training sailing craft is to be built to replace the existing boat shed which is to be converted into laypart stores for use in conjunction with mine warfare shore support facilities.

78. A nursery is to be established for the supply of plants and the maintenance of landscaping.

New Submarine School

79. A new submarine school (NSS) is required as part of the new Type 471 submarine project. There is insufficient space in the existing OBERON class training school at HMAS PLATYPUS in Sydney to add Type 471 equipment. Navy establishments in the Sydney area do not have sufficient land for a new school. There are of course operational and training advantages in having the school near a submarine home port.

80. In order to meet the tight program for the introduction of the Type 471 submarines, construction of the school will need to have reached a stage, by the end of 1990, where fitout of training equipment can be started by the contractor, the Australian Submarine Corporation; with completion scheduled for October 1991.

81. The proposed facility will support the following functions:

- . basic submarine training
- . organisational and intermediate level maintenance training
- . specialist equipment courses for Type 471 submarine sailor-maintainers
- . operator training in type 471 systems
- . submarine and base support photography
- . acoustic analysis training
- . electronic warfare operator training.

82. The facility which is costed at \$12.4m will have administrative offices, classrooms, computer areas, simulator training areas, a photographic and library suite and a cinema/lecture theatre.

83. The cinema/lecture theatre will also serve the base and will be located beside the main entry foyer for security reasons.

84. The planning provides a flexible layout to meet both current and future training and operational needs. Expansion can be accommodated by extending the wings. Security provisions will include electronic intruder detection and door access control systems.

85. The school will have 40 staff and from 50 to 120 students who will undertake specialist training for up six months prior to posting to a submarine.

STAGE THREE DEVELOPMENT

86. The aim of the stage three development program (1996-2000), which will be the subject of a separate reference to the Committee in the future, is to provide additional facilities required to support homeporting of a further two destroyers, two

submarines, an anti-submarine towed array support ship and baseporting two destroyers and the various associated support requirements.

87. The basing of these additional ships will involve relocation of about 485 personnel comprising some 85 base support staff and 400 ships crews. At the end of stage three the total naval population will be about 3000. This number could increase if the ship/shore roster is better balanced by the transfer of other support or training facilities to the west.

88. The works proposed for the stage three development include the following items:

- . additional engineering workshop
- . extensions to powerhouse
- . extensions to NOCWA Operational Headquarters
- . helicopter support facility
- . Diving School and School of Underwater Medicine
- . tactical trainer
- . training schools
- . additional accommodation
- . quarantine waste disposal unit
- . additional car-parks.

SOCIO-ECONOMIC IMPACTS OF THE PROPOSED DEVELOPMENT

Projected Population and Demand for Facilities

89. The Committee raised with Defence at the public hearing the likely social consequences of the development of the base. Reference was made to a study released in 1988 entitled, The Social & Economic Setting for the Further Development of HMAS STIRLING (Working Paper No. 3), which examined the likely social impacts of the proposal.

90. At present 1500 naval personnel are located at HMAS STIRLING, it is projected that this figure will increase to over 3000 by the year 2000. Currently naval families in Rockingham constitute approximately 5% of the total population of 34 000, whereas in Kwinana they make up 1% of the total population. About 75% of all married personnel live in the suburbs of Rockingham and approximately 8% live in Kwinana.

91. It is expected that not all naval families will live in Rockingham and Kwinana. By June 1994 the naval community in Rockingham could be between 2250 to 3300, approximately 6-9% of the population. By the year 2000 the naval community of between 2300 to 4100 could constitute 4-10% of the total population depending on the annual growth rate of the city over that period.

92. Between 1989 and 1994 the proportion of population growth in Rockingham attributable to naval families could range between 8-47%. For the total ten year period the proportion could lie between 5-31%. On the assumption that the annual population growth rate of Rockingham is 3%, then for the period 1988 to 2001 the growth in total population of Rockingham attributed to the naval community would be between 10-14%.

93. Projections were made in the study of the numbers and age structures of the children of naval personnel over the ten year period. It was identified that naval families require more preschool and childcare facilities compared to the host community. Whilst these facilities are required throughout the local community due to the young age structure of the population, Defence states that the additional requirement for naval families has been identified and is being addressed through self help by naval wives and through governmental channels.

94. As Rockingham is a rapidly growing district, existing capacity in schools will be quickly taken up and there will be requirements for additional schools in the next decade to meet

normal population growth. The requirements of naval families will need to be anticipated in future school planning and this is to be coordinated through the Western Australian Governments' Defence Liaison Officer.

95. There is sufficient land in Rockingham and surrounding areas suitable for urban development. In providing naval married quarters attempts will be made to avoid the creation of naval ghettos or isolating families in new development areas. Naval housing will constitute about 10% of the total housing in an area.

96. Public transport problems, there being no public bus service to Garden Island, which currently exist in the Rockingham and Kwinana areas affect the entire community. There is a need for consultation with and between State and local authorities on the provision of public transport.

97. Unemployment is endemic in the Rockingham-Kwinana area and trends indicate that this will continue. Employment opportunities for spouses and dependents of naval personnel are limited in the area, this may necessitate spouses and dependents seeking employment in the greater south west metropolitan area.

98. Local employment opportunities will increase as part of the multiplier effect of expanding the local naval community. However it is not expected to overcome the immediate unemployment problems. The multiplier effects of the establishment of the Marine Support Facility at Jervoise Bay should combine to increase employment opportunity in Rockingham and Kwinana. (The support facility includes a shiplift and other shore infrastructure facilities for naval repair, refitting, maintenance and construction work. It was built at a cost of \$40m by Australian Shipbuilding Industries (ASI) with some assistance from the Commonwealth and Western Australian governments). Employment opportunity could be further increased

by the Western Australian Government's initiatives for technology-based defence industry firms to locate in the subregion. Collectively, these could have some spin off for the employment of spouses of naval personnel, as well as school leavers.

Naval Support Services

99. DOD provides a support service to assist naval families relocating to the west. The Command Personal Services Organisation (CPSD) at Rockingham has a staff of fourteen, with three social workers and two family liaison officers who are experienced in cushioning settlement problems and introducing defence families into the community. The CPSD also assists in facilitating self-help for children day care.

Concerns of the National Consultative Group of Service Spouses (NCGSS)

100. The Group is concerned about the possible social consequences of the relocation of naval personnel and their families. It raises several of the matters mentioned in the Defence study as potential problems.

101. The NCGSS highlight the need for a huge housing project to accommodate naval families and stresses the need to avoid housing located on the fringes of Rockingham. It also emphasizes the inevitable increased demand for community facilities, including health services, schools, public transport and commercial outlets. The NCGSS conclude that it appears little thought has been given to these matters and that little liaison has occurred with local and state government about the provision of such facilities.

102. The Committee believes the Group have indicated matters of considerable concern but it does not appear to have been adequately informed by Defence authorities about social planning for the relocation. The Committee suggests that Defence brief the NCGSS about its planning and proposals to meet the social consequences of the relocation of naval personnel to HMAS STIRLING.

Navy Contribution to the Local Economy and Facilities

103. It is estimated in 1988 that Navy personnel contributed some \$16m to the local economy, while the provision of goods and services to HMAS STIRLING and homeported ships contributed some \$8m. By the year 2000 the naval community could be contributing over \$30m annually to the local economy (June 1988 dollars) and an extra \$40m from the provision of goods and services for the base and ships.

104. Additionally the Commonwealth has already contributed \$40m to the Western Australian Government for infrastructure and community facilities in the local region.

Committee's Conclusion

105. The Committee is satisfied that both Commonwealth and State agencies have considered the likely social consequences of the expansion of HMAS STIRLING. The Committee supports the continued monitoring of developments in the area, by the relevant agencies, to ensure that adequate services and facilities are planned and in place to meet the demand caused by the influx of naval personnel and their families.

106. The Committee suggests that Defence brief the National Consultative Group of Service Spouses as soon as possible about the housing program and proposals to meet the social consequences of the relocation of naval personnel to HMAS Stirling.

DEFENCE HOUSING

Strategy to Meet Demand for Navy Housing

107. The expansion of HMAS STIRLING has necessitated the development of strategies by the Defence Housing Authority (DHA) to meet the forthcoming demand for naval housing.

108. Currently DHA have 571 navy houses in Western Australia, all of which are off-base in communities adjacent to HMAS STIRLING. The DHA maintain that the housing currently available to Navy families in the area is of a high standard. By the year 2000 demand is expected to grow to 1065 homes due to the increase in personnel associated with the long-term development of the base.

109. In its Five Year Housing Program (FYHP) to 1994, the DHA intends to provide 272 houses for Navy at a cost of \$20.19m with a further 222 houses to be provided by 2000.

110. The Authority's current strategy is to provide housing through a mixture of project home construction and spot purchase of existing dwellings on the local market. DHA also has a land purchase program to provide building sites in the latter part of the FYHP. It is planned from 1990/91 to eliminate the spot purchase element.

111. Housing management centres will provide shop-front access for tenants to the Authority on a daily basis. The local centre managers will be responsible for the delivery of services and the performance of repair and maintenance contractors. The main centre in Perth is at Karrakatta on an Army base, but a smaller centre has been established in Rockingham.

112. As noted earlier the NCGSS raised some concerns about the provision of community facilities and housing. In particular DHA is actively seeking to avoid the problem identified by NCGSS of navy families being isolated on new developments on the fringe of Rockingham.

Committee's Conclusion

113. The provision of good quality housing for naval families relocating to HMAS STIRLING is a major priority. The Committee supports the attempts of the Defence Housing Authority to integrate naval families into the community at large.

COOPERATION WITH STATE AND LOCAL GOVERNMENT

Cooperation with the Western Australian Government

114. Shortly after the announcement of the decision to move half of the Royal Australian Navy fleet to HMAS STIRLING, the Premier and Deputy Premier of Western Australia appointed a defence liaison officer to coordinate the State's resources and facilities with respect to the development.

115. State departments maintain a dialogue through a State Consultative Committee and informal channels. Liaison with the Commonwealth is formalised through a Joint Consultative Committee.

116. As mentioned earlier the Western Australian Government in association with ASI has established a marine support facility at Jervoise Bay on Cockburn Sound opposite Garden Island. This facility is used by the navy for repairs and maintenance to its ships. Indeed when the Committee visited HMAS STIRLING, the destroyer escort HMAS SWAN was being refitted at the facility.

117. The State Government is attempting to attract defence industries to Western Australia and has proposed the development of a defence technology park in the area adjacent to the ASI facility.

118. In evidence to the Committee the representative of the Western Australian Government mentioned that the State Government is concerned that necessary social facilities such as schools, public transport are provided to meet increased demand. State authorities are monitoring developments in the local area in an attempt to meet likely demand. Also of concern to the State Government is the transport of munitions through built-up areas and the continued use of the small arms firing range on the western side of the Island.

119. DOD replied to these concerns by advising that it will be monitoring the relocation of units to HMAS STIRLING and will use the intergovernmental mechanisms to provide figures to the Western Australian Government well in advance of the movement of large numbers of personnel and their families. The matter of movement of munitions should be kept in perspective as there are daily movements of LPG and petrol tankers through metropolitan areas. However all road movements comply with Commonwealth Explosive Regulations (all munitions are moved in an unarmed state), no specific route is given for the movement of vehicles to Garden Island and on average there are only six vehicle movements per month.

120. The zone shown for a small arms firing range on the western side of Garden Island is for contingency purposes. DOD states there is no intention to establish a range facility at this site except to meet a wartime requirement. Hence, there will be no disruption in the foreseeable future to recreational use of the offshore areas.

Cooperation with Local Government

121. The City of Rockingham in its submission emphasised its support for the continued development of HMAS STIRLING. It pointed out that there would inevitably be an increased demand for community facilities which will need to be funded and provided by the three levels of government. The Council also stated that it had established a Homeporting Advisory Committee consisting of representatives of Council, Navy, state and federal parliamentarians and the local community to consider the likely demand for services in the local region due to the development.

122. The Council also stressed the high degree of cooperation between the Council and Defence authorities and its wish for this to continue.

Committee's Conclusion

123. The Committee believes there has been a high degree of consultation and cooperation between the Commonwealth, State and local government bodies and hopes that this will continue to ensure the provision of necessary community infrastructure facilities.

ENVIRONMENTAL IMPACTS OF THE PROPOSED DEVELOPMENT

Land Management of Garden Island

124. Commitment of the Commonwealth to the conservation of the natural areas of Garden Island was given in the 1972 report of the Public Works Committee. A study for the environmental management of the Island, by a working group convened by the Western Australian Government, was completed in 1974. A Department of Defence Land Management Plan for the terrestrial environment of Garden Island was issued in 1980. This plan has

provided the basis for the environmental management of the Island to date.

125. The Commanding Officer HMAS STIRLING has overall responsibility for the management of the Island. The Garden Island Environmental Advisory Committee, with representation from Commonwealth and State Government bodies and chaired by the Commanding Officer HMAS STIRLING, provides advice to the Commonwealth on all aspects of the environmental management of the Island. A ranger, seconded from the Western Australian Department of Conservation and Land Management, provides the expertise to implement this advice in the public access areas (approximately 70% of the Island is available to the public under controlled access). The Western Australian Government funds the provision of facilities at the areas used by the public for recreational purposes as well as half the cost of providing the ranger from the Department of Conservation and Land Management.

Zone and Master Plans for HMAS STIRLING

126. Throughout the development of HMAS STIRLING attention has been given to protection of the local environment. This attention is reflected in both the zone and master plans. The zone plan (see Appendix C) allocates land for facilities development. The planned layout of facilities was to ensure minimal physical impacts to the environment. The master plan (see Appendix C) was prepared to facilitate environmental development within the zones and has provided a situation which permits efficient fleet support and training while maintaining as much natural environment as practical.

Effect of Proposed Works - Public Environment Report

127. The work proposed at HMAS STIRLING is within the boundary of the present base and will require some minor modification of the original Master plan. A Notice of Intent (NOI) setting out

the proposed additional development was forwarded to the Department of Arts, Sport, the Environment, Tourism and Territories (DASETT) in early February 1988.

128. The proposal is subject to the Commonwealth Environment Protection (Impact of Proposals) Act 1974, accordingly a Public Environment Report (PER) was prepared and released for comment in April of this year by the Department of Defence. The report and the public response is assessed by DASETT, who are the responsible Department for providing environmental clearance for the works to proceed.

129. The PER noted that the following proposed works could have an effect on the physical and biological component of the environment:

- . construction of the fleet pier
- . , provision of additional berths for small ships
- . construction of new buildings
- . extensions to existing facilities
- . development of new sports grounds.

130. All of these works are at sites zoned for development. These sites have been cleared, semi-cleared or designated to be cleared of natural vegetation.

131. The PER assessment found that the development will improve the environmental conditions on the Island in that:

- . the sewage and sullage treatment service will be upgraded
- . freshwater requirements should not vary significantly from present usage
- . car-parking and access will be upgraded
- . a new environmental management plan will work towards enhancing the amenity of the Island.

Defence Response to PER Process

132. Defence informed the Committee at the hearing that 119 submissions were received from government bodies, conservation groups, people advocating peace and nuclear disarmament and private individuals (interestingly 103 of the submissions were in the form of a circular letter on a matter unrelated to the project).

133. Defence examined the responses and in its view:

- . no issues or grounds for concern have been raised in the submissions, regarding the environmental impacts of the Navy proposals, which should impede the further development of HMAS STIRLING
- . areas of issue raised by Federal and State authorities can be handled either through inter-governmental and inter-departmental consultations or through the established mechanism of the Garden Island Environmental Advisory Committee (GIEAC)
- . all public comments received will be taken into account, where they apply, during the preparation of the Environmental Management Plan which, subject to governmental review and endorsement, should be ready for implementation by the end of 1990.

134. The Committee was informed that a decision by DASETT was expected by mid August 1989. In late September Defence advised that it had received clearance from DASETT.

135. The Committee notes that its enquiry into the proposed stage two development works at HMAS STIRLING coincided with the public environment report review process provided by the Environment Protection Act of 1974. The Committee is most concerned that this review process was not complete before the Committee commenced its enquiry.

Committee's Recommendation

136. The Committee believes that environmental reviews of Commonwealth projects required under the Environment Protection (Impact of Proposals) Act 1974, should be completed before a particular project is referred to it for examination.

CONSULTATIONS

137. The proposal has been the subject of extensive consultation between a wide range of interested parties including:

- . Government of Western Australia
- . Department of Conservation and Land Management (Western Australia)
- . Technology and Industry Development Authority of Western Australia
- . Environment Protection Authority of Western Australia
- . Water Authority of Western Australia
- . City of Rockingham
- . Town of Kwinana
- . State Energy Commission (Western Australia)
- . Australian Telecommunications Commission
- . Commonwealth Department of Arts, Sport, the Environment, Tourism and Territories
- . Australian Submarine Corporation.

HERITAGE

138. The Australian Heritage Commission (AHC) stated that the Cliff Head site, which is the site of the first colonial settlement in Western Australia in 1829, is entered in the Interim List of the Register of the National Estate. The remains of two shipwrecks located in Careening Bay are also listed in the Register. AHC is also concerned about proposals to move the shipwreck DAYDAWN. Defence subsequently advised that discussions have been held with AHC about the proposal to move the remains of the wreck into deeper waters to facilitate dredging associated with construction of the small ships harbour, and that this matter has been resolved.

139. AHC also makes an important point that no mechanism is outlined in the Defence and ACS submissions for the results of the PER review process to be integrated into the development plans. AHC would like to see environmental safeguards and monitoring proposals incorporated into the operational plans. Defence replied that this is actually a matter for consideration by DASETT under whose guidelines the PER was produced.

140. Defence stated on-going consultation will take place with AHC and its participation in the upgrading of the existing land management plan to an Environmental Management Plan will be sought.

THE SUBMARINE ESCAPE TRAINING FACILITY

141. In 1985 the Committee approved the construction of the submarine escape training facility at HMAS STIRLING at a cost estimate of \$10.3m at February 1985 prices, plus a \$0.8m contingency allowance. At the public hearing on HMAS STIRLING the Committee asked for details of the final cost of the project.

142. ACS forwarded a detailed response to the Committee in August which indicated that the project cost to date is \$18.754m.

143. Factors that contributed to the escalation in cost identified by ACS are building price indexation, market conditions associated with high levels of building activity prior to the America's Cup, exchange rate variations on imported equipment, subdivision of sub-contract work into smaller packages and retendering, additional safety improvement work, rise and fall payments and various contractual claims (see Financial Statement at Appendix D).

144. There are currently \$3.78m of unresolved claims being addressed under the dispute resolution processes of the contracts. The final cost of the project is dependent upon the resolution of these outstanding contractual claims.

Committee's Recommendation

145. The Committee is concerned at the cost escalation of the submarine escape training facility and recommends that Australian Construction Services keep it informed of cost developments.

CONSTRUCTION PROGRAM

146. In August 1988 Cabinet approved concurrent documentation of the stage two works and the new submarine school. Tenders will be called for construction of the new submarine school and some other components of stage two immediately following parliamentary approval to proceed.

147. To achieve completion of the new submarine school in time to satisfy Navy's training program, construction must commence no later than January 1990.

148. The project has a long duration and comprises many discrete works. It is proposed that some of the works will be broken into specific items and others packaged into groups determined by accommodation needs and the required expenditure program. The works are scheduled for completion in 1996.

LIMIT OF COST

149. The limit of cost estimate for the stage two developments and submarine school is \$135.35M (122.95m + 12.4m) at April 1989 prices. The project has a high priority due to the excessive demands already placed on existing facilities and the necessity to provide suitable facilities to support the two-ocean navy policy.

150. The proposed expenditure (\$M) is:

<u>89/98</u>	<u>90/91</u>	<u>91/92</u>	<u>92/93</u>	<u>93/94</u>	<u>94/95</u>	<u>95/96</u>
2.90	21.00	24.70	28.50	19.00	21.44	17.81

COMMITTEE'S RECOMMENDATION

151. The Committee recommends the construction of those works that comprise stage two of the development of HMAS STIRLING in order to accommodate the relocation of half of the Royal Australian Navy fleet to Western Australia, at a total estimated cost of \$135.35m at April 1989 prices.

CONCLUSIONS AND RECOMMENDATIONS

152. The conclusions and recommendations of the Committee are set out below with the paragraph in the report to which each refers:

- | | Paragraph |
|--|-----------|
| 1. The Committee acknowledges that as a consequence of the Commonwealth Government's decision to relocate half of the naval fleet to Western Australia, there is a pressing need for the additional facilities proposed in the stage two development of HMAS STIRLING. | 32 |
| 2. The Committee is satisfied that both Commonwealth and State agencies have considered the likely social consequences of the expansion of HMAS STIRLING. The Committee supports the continued monitoring of developments in the area, by the relevant agencies, to ensure that adequate services and facilities are planned and in place to meet the demand caused by the influx of naval personnel and their families. | 105 |
| 3. The Committee suggests that Defence brief the National Consultative Group of Service Spouses as soon as possible about the housing program and proposals to meet the social consequences of the relocation of naval personnel to HMAS Stirling. | 106 |
| 4. The provision of good quality housing for naval families relocating to HMAS STIRLING is a major priority. The Committee supports the attempts of the Defence Housing Authority to integrate naval families into the community at large. | 113 |

5. The Committee believes there has been a high degree of consultation and cooperation between the Commonwealth, State and local government bodies and hopes that this will continue to ensure the provision of necessary community infrastructure facilities. 123
6. The Committee believes that environmental reviews of Commonwealth projects required under the Environment Protection (Impact of Proposals) Act 1974, should be completed before a particular project is referred to it for examination. 136
7. The Committee is concerned at the cost escalation of the submarine escape training facility and recommends that Australian Construction Services keep it informed of cost developments. 145
8. The Committee recommends the construction of those works that comprise stage two of the development of HMAS STIRLING in order to accommodate the relocation of half of the Royal Australian Navy fleet to Western Australia, at a total estimated cost of \$135.35m at April 1989 prices. 151



Colin Hollis
Chairman

26 October 1989

LIST OF WITNESSES

- BYNON, Mr Geoffrey David, Manager, Defence Housing Authority,
Irwin Barracks, Karrakatta, WA, 6010
- CLARKE, Mr Albert George, Acting Deputy State Manager, Project
Services, Australian Construction Services, 204 Adelaide
Terrace, Perth, WA, 6000
- COURTNEY, Mr Christopher, Project Manager, Australian
Construction Services, 204 Adelaide Terrace, Perth,
WA, 6000
- EARLEY, Captain Geoffrey John, Commanding Officer, HMAS Stirling,
PO Box 228, Rockingham, WA, 6168
- FOSTER, Mr Graham Thomas, Defence Liaison Officer, Technology and
Industry Development Authority of Western Australia,
170 St George Terrace, Perth, WA, 6000
- HOLLAND, Mr Gary George, Town Clerk, City of Rockingham, PO Box
42, Rockingham, WA, 6168
- KNIGHT, Colonel Peter Donald, Manager, Program Coordination,
Defence Housing Authority, Brisbane Avenue, Barton, ACT,
2600
- PICKERING, Mr John, Principal Design Architect, Australian
Construction Services, 204 Adelaide Terrace, Perth,
WA, 6000
- THOMSON, Commodore David Henry, Director-General Facilities, Navy
Office, Department of Defence, Russell Offices,
Canberra, ACT, 2600
- WATERMAN, Mr Peter, Environmental Consultant, Department of
Defence, Russell Offices, Canberra, ACT, 2600

CONSTRUCTION DETAILS**Design Philosophy**

An architectural design philosophy for the Stage 2 development has been prepared and approved by Navy. Generally new buildings will reflect and be in sympathy with the existing buildings but will not necessarily be identical in form and treatment. Flexibility to allow for future expansion has been provided.

Most buildings in the accommodation zone are characterised by red brick and tile roofs. This philosophy continues in the other zones to the extent that Stage 2 buildings immediately adjacent to Stage 1 buildings are to be of similar form and material. The design of some industrial type buildings has been rationalised for economy.

Marine Environment

The selection of materials will recognise the high corrosion factor of the moist salt-laden environment. Durable materials will be used with due regard to cost restraints.

BUILDING WORKS AND SERVICES**Construction, Material and Finishes**

The range of materials and finishes to be used will generally reflect those selected for Stage 1 buildings. The selection of materials is based on an assessment of performance in a coastal environment which recognises factors such as function, economy, durability and ease of maintenance.

Generally building materials to be used include:

- | | | |
|------------------|---|---|
| External: | - | Red metric modular clay bricks |
| | - | anodised aluminium window frames |
| | - | painted steel structural frames |
| | - | painted steel door frames |
| | - | galvanised steel roller shutters |
| | - | lightweight cladding |
| | - | terracotta tiles and aluminium sheeting. |
| Internal | - | Masonry |
| | - | plasterboard on steel stud walls |
| | - | carpet to offices and living accommodation |
| | - | ceramic tiles to floors and walls in toilets |
| | - | concrete grano floors |
| | - | ceilings of plasterboard and plaster skim to underside of concrete floor slabs. |

Generally construction can be described for categories of facilities as follows:

Workshops and Stores:	Steel portal frame on concrete footings with concrete floor slab. Brick and lightweight cladding to walls and aluminium roofing.
Accommodation blocks:	Concrete footings and floor slabs. Load bearing brick work. Aluminium windows. Clay tile roofing.
Recreation Buildings:	Concrete footings, steel portal frame. Brickwork with clay tile roofing. Extensions to existing buildings will have laminated and timber trusses to match.
Individual facilities with special requirements: eg. Explosives store	Frangible compressed fibre wall and roof sheeting and toughened glass.
Office buildings:	Concrete footings, ground and upper floor slabs. Concrete framed construction. Brick walls and light weight cladding. Aluminium windows and roofing.

Engineering Design

Structural, mechanical, electrical, civil and hydraulic design has been carried out in accordance with relevant Australian Codes and Standards and Departmental Technical Directives.

Mechanical Engineering Services

Air-conditioning will be provided to offices and other areas where required.

The large open areas of the engineering workshop-type buildings will be naturally ventilated. Space heating will be provided to workshops where required.

Toilets, cleaners rooms and some storage areas will be mechanically exhausted. Localised exhaust systems will be provided where required.

Generally domestic hot water will be provided by liquified petroleum gas-fired plant or small electric units. Hot water generated by use of solar energy will be used for the swimming pool changerooms only.

Solar hot water supply to other proposed facilities is uneconomic based on life cycle costing and current energy costs. Review of the economic situation will be carried out during project documentation and solar energy will be used if proved economic.

Compressed air will be provided where required.

Electrical Engineering Services

The existing high voltage distribution system will be extended to cater for the new facilities.

New substations will be required to major load centres.

All external power cabling will be underground.

External electrical services will include conduits and cables for telephone, security, fire alarm, public address systems and fault monitoring systems.

Lighting will be provided to roadworks, car-parks, pathways and recreation areas.

Civil Engineering Services

Roadworks and car-parks will generally be provided as extensions to the established road network to service the individual facilities.

Buildings will be constructed on natural sand fill which in some cases will be located over dredged spoil.

Generally pavements will be graded to drains which either connect to the existing stormwater system or into soakwells as appropriate. Some modification of the existing drainage system is necessary. Building gutters and downpipes will discharge direct to local soakwells or the existing drainage system which will then discharge to sumps or the existing ocean outfalls.

Paved access will be provided to all facilities.

In general, facilities will connect into the established (or extension of the established) water main, fire main and sewer systems adjacent to the individual sites.

The existing sewage plant will be upgraded by separating freshwater sewage from saline sewage, the saline sewage to be treated by the existing lagoon system and a new treatment plant provided to treat freshwater sewage. The existing reticulation system will be extended to serve new facilities.

The existing water mains across the causeway and storage tanks are adequate for the projected increased demand. The existing reticulation system will be extended to the new facilities.

Landscaping will be in accordance with a Landscape Master Plan.

Fire Protection

Generally all buildings will be monitored by thermal-type fire detectors connected through local indicator panels to the Base Security building.

Fire points with fire hose reels supplemented by hand held extinguishers will be provided to each building and facility as appropriate.

The existing external fire hydrant system will be extended as required.

PROJECT DRAWINGS

Location Plan

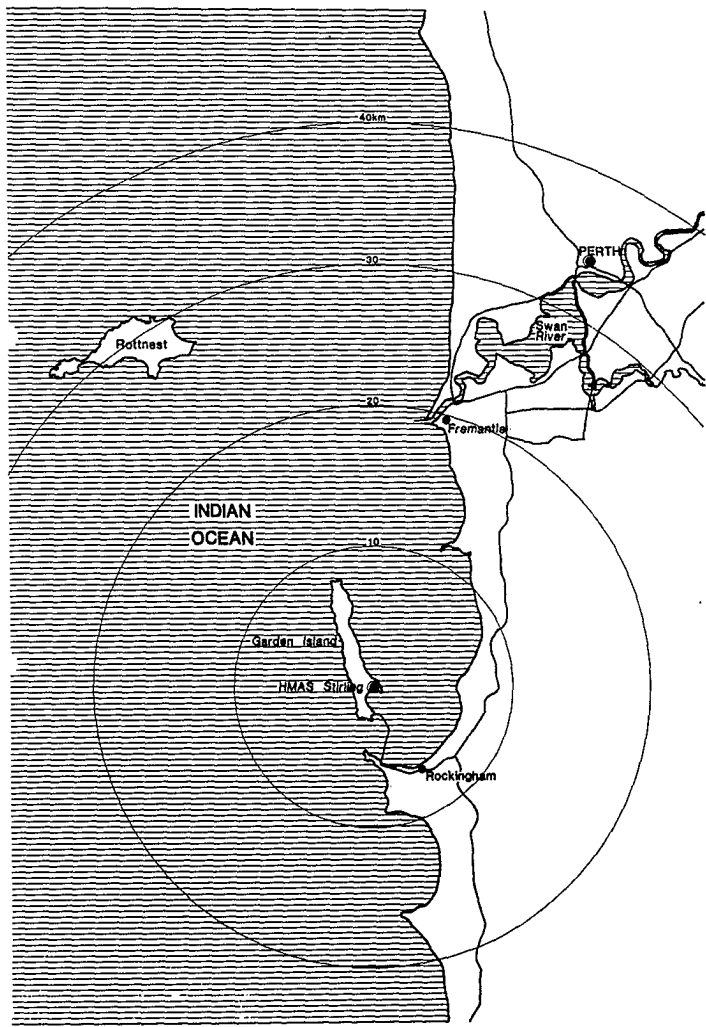
Figure 1 - Zone Plan

Figure 2 - Stage 1 - Existing Master Plan - South

Figure 3 - Stage 2 - Master Plan - South

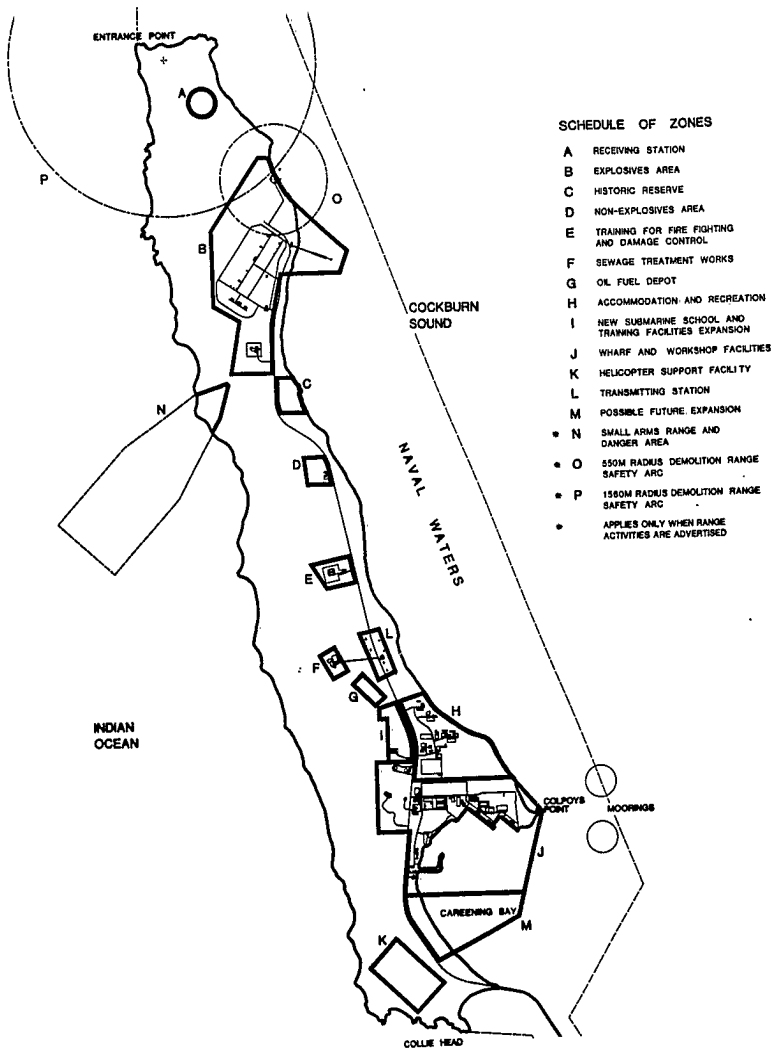
Figure 4 - Stage 2, Stage 3 & Future Master Plan - South

Figure 5 - Stage 2 and Stage 3 - Master Plan - North



LOCATION PLAN

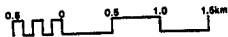


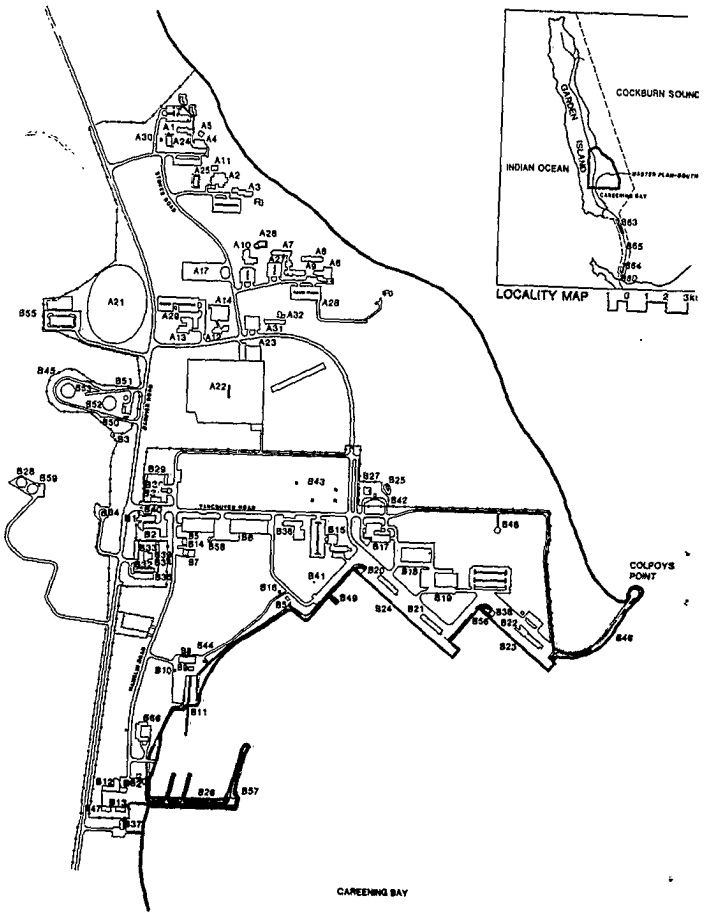


ZONE PLAN

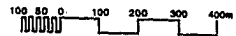


C3

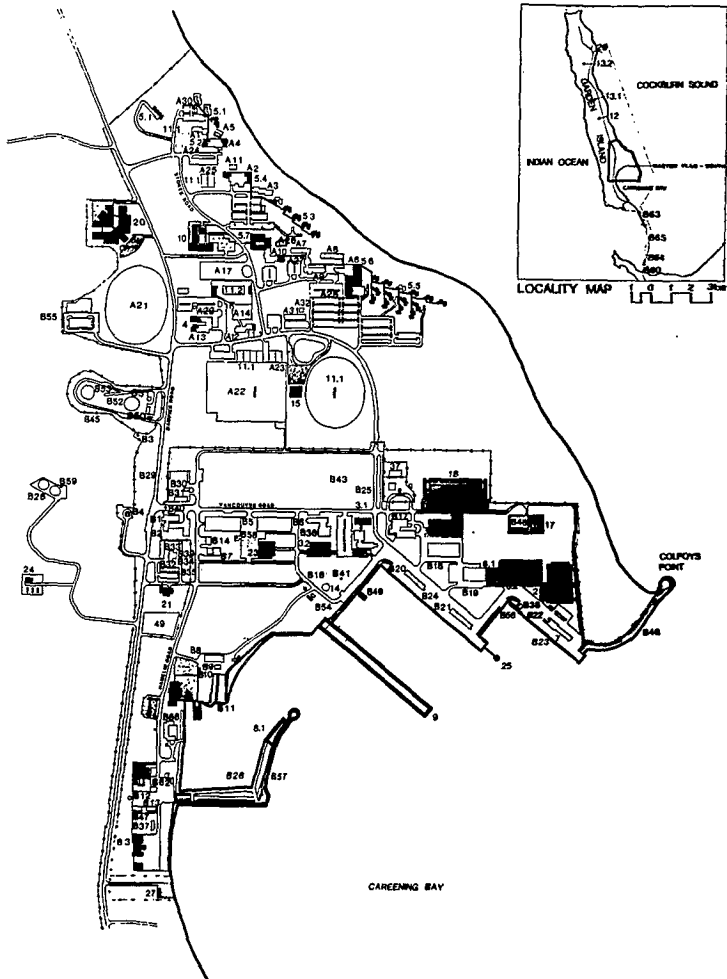




**STAGE 1 - EXISTING
MASTER PLAN - SOUTH**

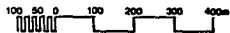


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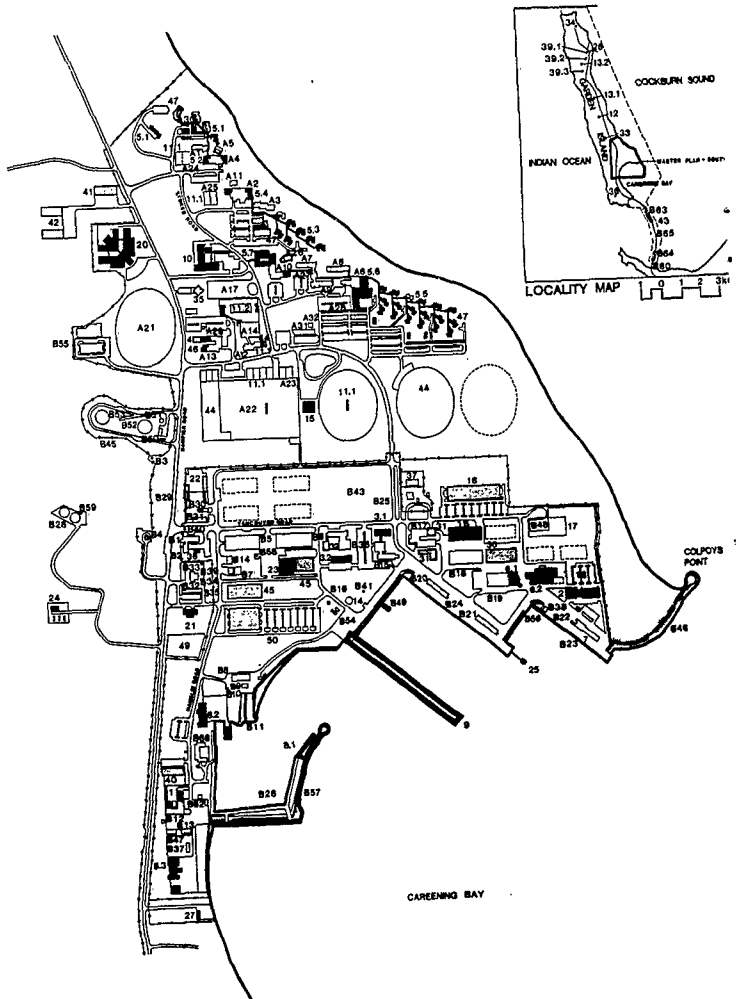
- EXISTING FACILITIES
- STAGE 2 FACILITIES
- STAGE 2 ROADWORKS

**STAGE 2
MASTER PLAN - SOUTH**



3

C5

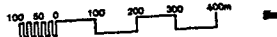


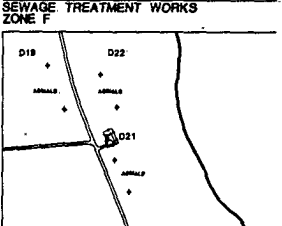
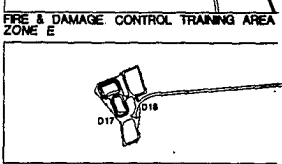
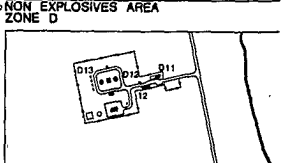
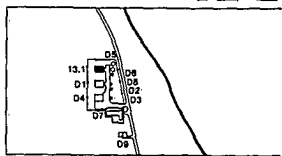
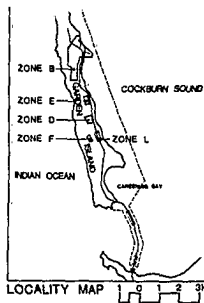
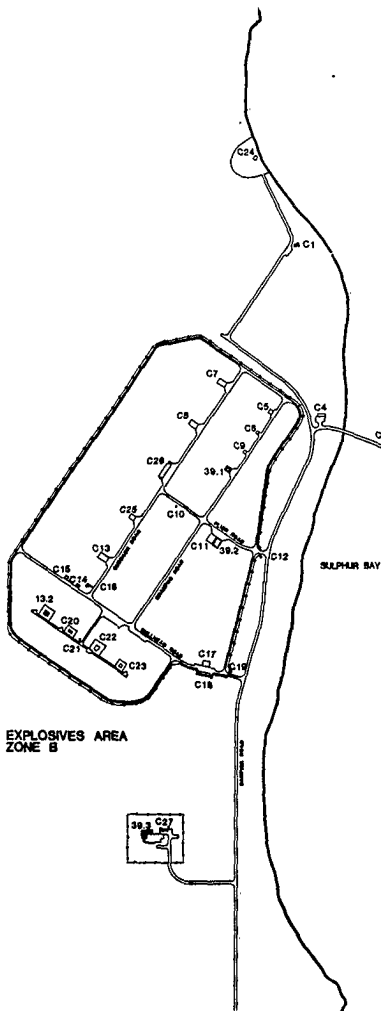
- EXISTING FACILITIES
- STAGE 2 FACILITIES
- ▣ STAGE 3 AND DEFERRED FACILITIES
- FUTURE FACILITIES

**STAGE 2, STAGE 3 AND FUTURE
MASTER PLAN - SOUTH**



C6





- EXISTING
- STAGE 2
- STAGE 3

**STAGE 2 AND STAGE 3
MASTER PLAN - NORTH**



C7



5

APPENDIX D

HMAS STIRLING SUBMARINE ESCAPE TRAINING FACILITY PROJECT - FINANCIAL STATEMENT

		\$M	\$M
FEB 1985	FWC evidence at Feb '85 prices (plus construction & commissioning contingency \$0.8m)		10.300
APR 1985	Program provision at 1/4/85 prices		10.500
DEC 1985	(a) Main Contract		
	(i) Indexation 1/4/85 - 1/12/85	1.390	
	(ii) Market conditions due to high level of building activity in Perth which increased prices of concrete, metal work & roofing.	0.860	
	(b) Provisional sums		
	(i) Market conditions in structural steel/fabrication industry.	0.400	
	(ii) Exchange rates variation on \$2.2M of imported equipment (April '85 - January '86)	<u>0.550</u>	13.700
DEC 1985	Project formally authorised at:		13.728
SEP 1986	Re-arrangement of the main tank and associated services into smaller NSC packages and re-tendering.	0.823	14.551
	Tender stage write-up used for acceptance of nominated sub-contracts	<u>0.390</u>	14.941
JAN 1988	Indexation 1/4/86 - 1/3/87	<u>0.716</u>	15.657
JUL 1988	Additional safety improvement work required by Navy and Det Norske Veritas to the mechanical and electrical services during the commissioning phase. (reference FWC evidence contingency of \$0.8M).	<u>0.700</u>	16.357
JUN 1989	Additional authorisation received for settlement of contractual claims.	<u>0.735</u>	17.092
JUL 1989	Rise & Fall used to date	1.262	
	Permissible contingency used for minor construction variations.	<u>0.400</u>	18.754

NOTE: The final cost of the project will depend on resolution of outstanding contractual claims.