Australian Government

Department of Defence

NAVY CAPABILITY INFRASTRUCTURE SUB-PROGRAM: FACILITIES AND INFRASTRUCTURE TO SUPPORT NEW NAVY CAPABILITIES

HMAS *Stirling*, Palmer Barracks and Henderson (WA)

HMAS *Cairns* and Cairns (QLD)

HMAS *Coonawarra* and RAAF Darwin (NT)

St Kilda Transmitting Station and Osborne (SA)

STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

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Attachments

Navy Capability Infrastructure Sub-program: Facilities and Infrastructure to Support New Navy Capabilities

1. The purpose of this Statement of Evidence is to provide information to the Australian public to comment on, and the Parliamentary Standing Committee on Public Works to enquire into, the proposed Navy Capability Infrastructure Sub-program: Facilities and Infrastructure to Support New Navy Capabilities (the Project).

Need for the Project

Aim of the Project

2. The Project aims to provide fit for purpose facilities and infrastructure to support the introduction into service of the Hunter Class Frigates and the Arafura Class Offshore Patrol Vessels at nine locations in Australia, and support the Navy Training Pipeline Simulation Requirements at HMAS *Stirling* (WA).

Location of the Project

3. The Project proposes to deliver works at:

   a. HMAS *Stirling*, Palmer Barracks and Henderson (in WA). HMAS *Stirling* is located approximately 50 kilometres south of the City of Perth. Henderson is located approximately 30 kilometres south of Perth. Palmer Barracks is located approximately 16 kilometres northeast of Perth.

   b. HMAS *Coonawarra* and RAAF Darwin (both in the NT). HMAS *Coonawarra* is located approximately three kilometres from the City of Darwin. RAAF Darwin is located approximately six kilometres from the City of Darwin.

   c. HMAS *Cairns*, and another location yet to be determined in the Cairns area (both in QLD). HMAS *Cairns* is located approximately three kilometres from the City of Cairns.

d. St Kilda Transmitting Station and Osborne (both in SA). St Kilda Transmitting Station is located in the City of Salisbury (SA), approximately 30 kilometres north of Adelaide. The Osborne Naval Shipyards are located approximately 25 kilometres north-west of Adelaide.

4. Attachment 1 depicts the locations for the Project works. The fleet of Hunter Class Frigates will be homeported at HMAS *Stirling* (WA) and at the Garden Island Defence Precinct (NSW)[1]. The fleet of Arafura Class Offshore Patrol Vessels will be homeported at HMAS *Stirling* (WA), HMAS *Coonawarra* (NT) and HMAS *Cairns* (QLD). Under the Project, Defence intends to acquire and develop properties at Henderson (WA), in the Cairns area, and at Osborne (SA).

Need for the Project

5. The Project aims to provide fit-for-purpose facilities and infrastructure to support the introduction into service of new Government-approved naval capabilities; nine Hunter Class Frigates that will replace the existing Anzac Class Frigates, and 12 Arafura Class Offshore Patrol Vessels which will replace the existing Armidale Class Patrol Boats.

Capability (Hunter Class Frigates)

6. The incoming fleet of Hunter Class Frigates will provide the Australian Defence Force with the highest levels of lethality and deterrence that Australia's major surface combatants need during times of global uncertainty. While this capability is optimised for antisubmarine warfare, it will also be capable of supporting a wide spectrum of operations, from low-level constabulary[2] operations to high-end war fighting. The Frigates will be able to conduct missions independently or as part of a task group, and will have sufficient range and endurance to operate effectively. The Frigates will also have the flexibility to support humanitarian assistance and disaster relief.

7. The transition from Anzac Class Frigates to the new Hunter Class Frigate capability will take place between the late 2020s and the early 2040s. The first six Hunter Class Frigates will be homeported at HMAS *Stirling*, and the remaining three will be homeported at the Garden Island Defence Precinct in Sydney (NSW)[1].

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[1] Facilities required at Garden Island Defence Precinct will be addressed in a later referral or medium works notification to the Parliamentary Standing Committee on Public Works (refer to Paragraph 66.)

[2] Constabulary operations are associated with the protection of Australia's sovereignty in the maritime domain and the maintenance of good order at sea.

Capability (Arafura Class Offshore Patrol Vessels)

8. The primary role of the Arafura Class Offshore Patrol Vessels will be to undertake constabulary missions, maritime patrol and response duties. State of the art sensors and command and communications systems will enable the vessels to operate alongside Australian Border Force vessels, other Australian Defence Force units and regional partners. The design of these vessels will support specialist mission packages, such as a maritime tactical unmanned aerial system. The range and associated operational endurance of the Arafura Class Offshore Patrol Vessels will permit support of most Australian Defence Force operations.

9. The transition period from Armidale Class Patrol Boats to the Arafura Class Offshore Patrol Vessels is scheduled from late 2021 through to 2030.

Naval Shipbuilding Plan

10. The 2016 Defence White Paper articulates the Government's plan for the recapitalisation of the Royal Australian Navy. In support of this, the Government launched the 2017 Naval Shipbuilding Plan to establish a sustainable long-term Australian naval shipbuilding enterprise of which the Australian Defence Force is a key partner. Under the Naval Shipbuilding Plan, Australia will consolidate its shipbuilding capacity at the Australian Naval Infrastructure's Osborne Naval Shipyard (SA), and at the Australian Marine Complex at Henderson (WA).

11. Construction commenced in November 2018 on the first of two Arafura Class Offshore Patrol Vessel at the Osborne Naval Shipyard. The Arafura Class Offshore Patrol Vessel shipbuild will be transferred to Henderson (Australian Marine Complex) for the remaining ten vessels. The Hunter Class Frigates will be built at the Osborne Naval Shipyard, commencing in 2020.

Existing Defence Facilities and Infrastructure

12. **HMAS *Stirling*** is the homeport for five Anzac Class frigates, one Auxiliary Oiler and six Collins Class Submarines. The Base supports frequent visits from non-homeported Royal Australian Navy and foreign Navy ships transiting through WA or conducting operations and training activities in the Western Australian Exercise Area west of HMAS *Stirling*. Explosive ordnance, marine diesel and aviation turbine fuel are stored at this

Base. HMAS *Stirling* does not have sufficient berth space to accommodate homeported Arafura Class Offshore Patrol Vessels and Hunter Class Frigate. Increases in the submarine force announced in the 2016 Defence White Paper will further limit the berth space available in the future.

13. **HMAS *Coonawarra*** is the main support base and homeport for twelve Armidale Class Patrol Boats and other vessels. The Base supports frequent visits of non-homeported ships conducting operations and training activities to the north of Australia. Wharf facilities at HMAS *Coonawarra* were originally developed in the early 1980s for the smaller Fremantle Class Patrol Boats. The wharf facilities were extended in the period 2007-2008 when the Armidale Class Patrol Boats were introduced into service. Explosive ordnance for the Patrol Boats is stored at RAAF Darwin and marine diesel is stored in bulk fuel facilities[3] at HMAS *Coonawarra*. HMAS *Coonawarra* does not have sufficient berth space for homeported Arafura Class Offshore Patrol Vessels.

14. **HMAS *Cairns*** is the homeport to one Armidale Class Patrol Boat, two Cape Class Patrol Boats, two Hydrographic Ships and four Survey Motor Launches. The Base also supports frequent visits of non-homeported ships conducting operations and training activities to the north of Australia. Defence leases the adjacent Sugar Wharf to supplement berthing capacity at HMAS *Cairns*. The lease allows Defence access to the Sugar Wharf for 300 days per year, until 2039. Marine diesel fuel is stored at the Base. Local storage for explosive ordnance is provided at a Queensland Government facility, located approximately ten kilometres from Cairns. Explosive ordnance is transferred to barges at Swallows Landing, located approximately 10 kilometres from HMAS *Cairns*, and is principally loaded at an ammunition buoy in Trinity Inlet near Swallows Landing in accordance with Defence explosive ordnance regulations. HMAS *Cairns* is also home to Australian Navy Cadets' Training Ship *Endeavour*. HMAS *Cairns* does not have sufficient berth space for homeported Arafura Class Offshore Patrol Vessels.

15. Joint Logistics Unit – West is headquartered at **Palmer Barracks**, Guildford (WA) and provides logistic support to Australian Defence Force units in Western Australia, including HMAS *Stirling* and its vessels home-ported and transiting ships.

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[3] The existing marine diesel fuel facility is being upgraded as part of the Facilities to Support Naval Operations in the North Project that was approved by Parliament in 2018.

16. **St Kilda Transmitting Station (SA)** supports a number of Defence Science and Technology Group activities. It is the preferred site for the Land Based Test Site (Development and Sustainment) facility that will support the Hunter Class Frigates.

Commercial Facilities and Infrastructure

17. **Henderson.** External maintenance of the vessels homeported at HMAS *Stirling* is usually undertaken at the Australian Marine Complex at Henderson. Defence leases three buildings in the Common User Facility (124 Quill Way), under the Warship Asset Alliance Management Agreement. The Anzac Systems Program Office leases premises at Rockingham, a few kilometres from HMAS *Stirling*.

18. **Osborne Naval Shipyards.** Australian Naval Infrastructure is heavily invested in developing its shipbuilding facilities at the Osborne Naval Shipyard precinct. The precinct is home to Australia's two largest naval projects, the Collins Class submarine sustainment and Hobart Class Air Warfare Destroyer construction programs. The Osborne South Shipyard will focus on the continuous build of major surface combatant warships such as the Hunter Class Frigates, while the Osborne North Shipyard will focus on the Future Submarine program.

Facilities and Infrastructure Requirements

19. The key drivers for the Project are:

a. the number and timing of the incoming Hunter Class Frigates and the Arafura Class Offshore Patrol Vessels being delivered;

b. the berthing requirements for these incoming capabilities, which are additional to other homeported vessels at HMAS *Stirling*, HMAS *Coonawarra* and HMAS *Cairns;*

c. the future capacity of HMAS *Stirling* as a homeport for the Hunter Class Frigates and Arafura Class Offshore Patrol Vessels, the Future Submarines, a Supply Class Auxiliary Oiler Replenishment vessel and support vessels;

d. the increased size of crews and changes in the number of crews for the Hunter Class Frigates and Arafura Class Offshore Patrol Vessels;

e. the facilities required to effectively support the integration of combat systems for these incoming capabilities;

f. the implications of the Naval Shipbuilding Plan on the requirements for training, logistics support and maintenance support;

g. the implications for programming facilities delivery arising from the extended production and delivery schedules for the Arafura Class Offshore Patrol Vessels, and the Hunter Class Frigates (which are planned to be delivered in three batches); and

h. the opportunities for integrating the facilities and infrastructure requirements of various Navy capability projects.

20. **Ship Zero**. In addition to these considerations, the introduction of the 'Ship Zero' concept for the Hunter Class Frigates and the Arafura Class Offshore Patrol Vessel capabilities has significant implications for the Project. Navy's Ship Zero concept is a whole of capability management concept that facilitates ongoing life-cycle management of each capability, de-risks a capability's introduction into service, enhances continuous improvement through the life-cycle of a capability, ensures availability and lethality needs are met and resources optimised. To achieve these outcomes, Defence and Industry collaboration is a key principle. This concept requires facilities to accommodate high-level functions encompassing management, material sustainment, logistics engineering, management of capability evolution, crew support, Class-specific training, professional skills development and organisational learning, and procedural and tactical development.

21. The elements of the Project can be categorised into one of the following functional groups:

a. **Maritime Structures.** These are wharves and associated structures and services required to support the berthing of vessels. The existing wharf structures cannot accommodate the increased size or number of Hunter Class Frigates and Arafura Class Offshore Patrol Vessels planned for homeporting at HMAS *Stirling*, HMAS *Coonawarra* and HMAS *Cairns*. Existing wharf services will also need to be upgraded to support the new vessels.

b. **Operational Support Facilities.** These facilities are required to accommodate a range of support functions and address requirements for the remote monitoring of berthed vessels, including duty watch and general crew support needs; vessel maintenance services; equipment storage; and warehousing for the storage and management vessel spares.

Existing operational support facilities at the homeports do not meet the requirements of the new capabilities due to:

(1) the functions required to support the new capabilities being significantly different to the extant functions;

(2) existing facilities not being located to effectively support the new capabilities; or

(3) existing facilities not being available to meet the new operational support requirements as the facilities continue to support the existing Armidale and Anzac Class capabilities during the transition periods.

c. **Ship Zero Facilities.** The proposed Ship Zero facilities will accommodate Class-specific training, sustainment, logistics, engineering and management of the evolution of these complex capabilities. The Navy Training Pipeline Simulation Requirements are included as part of the Ship Zero training facilities.

d. **Shipbuild Program Facilities.** These facilities support the mature requirements of the Ship Build Program Office, and Crew Zero[4] at each ship construction location. For Hunter Class Frigates, these facilities need to be located in close proximity to the shipbuilding contractor facilities at Osborne (SA). Similarly, the Arafura Class Offshore Patrol Vessel Ship Build Program Office will require working accommodation at Henderson (WA). There are no existing or suitable facilities to meet either requirement.

e. **Domestic Support Facilities.** Domestic support requirements include facilities for living in accommodation, recreation and fitness, messing and medical services. The increases in crew size and training programs for the Arafura Class Offshore Patrol Vessels and the Hunter Class Frigate capabilities will exceed the capacities of the existing facilities at HMAS *Stirling*.

[4] The 'Crew Zero' concept has been developed to allow Navy to more sustainably support shipbuilding activities at multiple dockyards. It is based on a permanent crew for each vessel type; a Hunter Class crew at Osborne (SA) and an Arafura Class crew at Henderson (WA).

f. **Engineering Services.** Engineering services infrastructure on existing Defence establishments and on the new development sites need to be upgraded or installed to support the new capabilities.

Proposed Facilities Solution

Scope of Project Works

22. Defence has undertaken comprehensive master planning, site investigations, stakeholder consultation, whole-of-life cost analysis, and design development during the development phase of the Project to establish the capital facilities and infrastructure works required to support the introduction into service and sustainment of these capabilities.

Program Approach

23. Early in the facilities planning process and in support of the Hunter Class Frigate and Arafura Class Offshore Patrol Vessel capabilities, Defence recognised the potential to achieve improved infrastructure solutions. The program approach adopted to address the overall facilities requirements as a single program of works has been designed to optimise value for money and capability outcomes.

24. Key benefits achieved by utilising a program approach to develop a facilities solution include:

a. a coordinated planning and design effort that has:

(1) enabled the proposed Hunter Class Frigate and Arafura Class Offshore Patrol Vessel facilities to be designed and sited to optimise the use of the available land at HMAS *Stirling* and Henderson (WA), and to provide flexibility for locating possible future capability requirements;

(2) avoided duplication of planning and design effort; and

(3) produced integrated facilities solutions, that have reduced capital and operating costs.

b. improved effectiveness of the Commonwealth resources required to manage the proposed works program; and

c. a single environmental strategy for each proposed location.

25. In the delivery phase, key benefits anticipated from the program approach include:

a. achieving greater value for money for the Commonwealth through the efficiencies of scale that will be realised from a location-based (rather than a capability project-based) contracting strategy;

b. minimising disruption to base operations; and

c. improved effectiveness of the Commonwealth resources required to manage the proposed works.

Options Considered to Fulfil the Identified Need

26. Defence considered a range of design options for each of the six functional categories identified above in Paragraph 21. Paragraphs 28 to 33 address the options considered during the design development phase.

27. In developing the options, Defence determined that some of the Government-approved facilities requirements are unable to be funded within the available capital provision. These 'below the line' items are addressed at paragraph 111.

28. **Maritime Structures.** Defence considered a number of design options for upgrading the maritime structures at HMAS *Stirling*, HMAS *Coonawarra* and HMAS *Cairns*. Consideration was given to providing some flexibility to meet future capability requirements. The proposed maritime structure designs are an optimal balance of functionality, flexibility and cost.

29. **Operational Support Facilities.** The options considered refurbishment or upgrading existing facilities, or building new facilities. The extended transition period between replacing the Armidale Class Patrol Boat with the Arafura Class Offshore Patrol Vessels and replacing the Anzac Class Frigates with the Hunter Class Frigates reduced the opportunity to adapt existing operational support facilities to the new requirements. Some existing facilities are needed to support the existing vessels during the proposed transition periods. Where practical and cost-effective, existing facilities are proposed to be refurbished or upgraded to meet the needs of the new capabilities. Where this is not practical, new facilities are proposed. At HMAS *Stirling*, a mix of new, refurbished or upgraded facilities will provide the most cost-effective design solution. Some of the proposed facilities will be located near the Australian Marine Complex at Henderson

(WA). The proposed new Defence site at Henderson will meet this need. New facilities proposed for HMAS *Stirling* and Henderson will be shared by the Hunter Class Frigate and Arafura Class Offshore Patrol Vessel programs to reduce project costs. Engineering services work is proposed for HMAS *Cairns*.

30. **Ship Zero Facilities.** There are no suitable or surplus facilities that can meet the Ship Zero requirements and new facilities are proposed. Location options for these facilities, either on Defence land or on available commercial properties in close proximity to existing shipbuilding hubs, were considered. Facilities for individual and collective training are proposed at HMAS *Stirling.* Facilities to accommodate Navy's sustainment functions are proposed at HMAS *Stirling, HMAS Coonawarra* and HMAS *Cairns* and at the Henderson site. To support the engineering, sustainment and installation of the combat management systems for Hunter Class Frigates, a Land Based Test Site (Development and Sustainment is proposed for St. Kilda (SA) and a Land Based Test Site (Production) is proposed for Osborne, in proximity to the shipyard. For East Coast-based Hunter Class Frigate crews, Navy's training establishment at HMAS *Watson* will provide the optimum solution[5].

31. **Shipbuild Program Facilities.** The primary consideration for the Shipbuild Program Facilities is the proximity to the shipbuilding contractors' shipyard. In addition to leasing options at Osborne (SA), existing Defence properties were considered as potential sites for some of these requirements. New construction is the optimum solution to meet these needs, given the long-term requirement for these facilities. Consequently, a new site at Osborne is proposed for the Hunter Class Frigate Shipbuild Program Office and Land Base Test Site (Production) facility. It will need to be in close proximity to the Australian Naval Infrastructure's shipyard. For the Arafura Class Offshore Patrol Vessel Program, it is proposed to develop working accommodation at Henderson (WA). This accommodation will need to be in close proximity to the Australian Marine Complex contractor's infrastructure. Constructing this facility at Henderson in conjunction with other proposed facilities will enable common services and infrastructure to be shared across a number of functional groups and reduce development costs.

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5 The facilities required at HMAS *Watson* will be subject of a future referral or medium works notification to the Parliamentary Standing Committee on Public Works.

32. **Domestic Support Facilities.** To meet the requirements for new living in accommodation, it is proposed to construct facilities on Defence property. Considerations includes using a traditional design and construct contracting approach, a private public partnership solution on Defence property, and leasing suitable accommodation from the commercial accommodation market. To meet the requirements at HMAS *Stirling*, a traditional design and construct approach is proposed. Various designs have been considered, and a medium density scheme is considered most effective from land use planning and cost perspectives. Requirements for messing and medical services will be best met by making improvements to existing facilities.

33. **Engineering Services Infrastructure.** Existing engineering services on Defence bases and establishments need to be upgraded or extended to support the proposed new and upgraded facilities. The engineering services infrastructure proposed at HMAS *Stirling* and HMAS *Coonawarra* will complement the engineering services infrastructure being delivered as part of the HMAS *Stirling* Redevelopment Stage 3A Project[6] and the Larrakeyah Barracks Redevelopment Project[7]. New engineering services infrastructure will be provided at the Osborne and Henderson sites to support the proposed developments.

Detailed Description of the Works

34. The proposed facilities and infrastructure involve new works and refurbishment or upgrading of existing facilities and infrastructure at each of the proposed locations. The following paragraphs address the proposed scope of works, by location and by the functional facilities groups described in Paragraph 21.

HMAS *Stirling*

35. Works proposed at HMAS *Stirling* will be within the Base's property boundary. Attachment 2 is a site plan of HMAS *Stirling* depicting the locations of the proposed facilities and infrastructure on the Base.

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6 The HMAS *Stirling* Redevelopment Stage 3A Project was approved by Parliament in 2015.

7 The Larrakeyah Barracks Redevelopment Project was approved by Parliament in 2018.

Project Element 1 – Maritime Structures

36. An artist's impression of the proposed maritime structures works (Parkes Wharf and Oxley Wharf) is at Attachment 3. The proposed works include:

a. extending the length of Parkes Wharf from approximately 310 metres to approximately 630 metres in length, and providing additional services and wharf furniture;

b. extending Oxley Wharf from approximately 210 metres to approximately 350 metres in length, and providing additional services and wharf furniture; and

c. providing shore power for the Arafura Class Offshore Patrol Vessels on the Parkes and Oxley wharves.

Project Element 2 – Operational Support Facilities

37. Proposed works include:

a. Constructing a facility for maintenance and equipment storage, comprising workshop and hardstand space for maintenance contractors undertaking maintenance of the Arafura Class Offshore Patrol Vessels and the Hunter Class Frigate vessels; constructing a Arafura Class Offshore Patrol Vessel and Frigate Support Facility, adjacent to the Parkes and Oxley wharves, to support duty watch, provide general crew support functions, accommodate the Systems Program Office (Detachment), and the Fleet Information and Communication Technology Systems group, provide a first-aid post and secure storage.

b. Constructing a logistics support facility that includes warehousing, dry and cold storage, covered and uncovered hardstand areas, and associated administration areas.

c. Expanding maintenance facilities by providing annexes to existing workshop buildings that will support maintenance of the Arafura Class Offshore Patrol Vessels and Hunter Class Frigates.

d. Constructing a new covered storage facility for Rigid Hull Inflatable Boats.

e. Constructing secure storage for homeported Arafura Class Offshore Patrol Vessel crews.

Project Element 3 – Ship Zero Facilities

38. To meet the Ship Zero requirements at HMAS *Stirling*, an integrated training precinct centred on the proposed Navy Training Systems Centre – West will provide Class-specific individual and collective training for the Arafura Class Offshore Patrol Boat and Hunter Class Frigate crews. An artist's impression of the proposed Navy Training Systems Centre – West is at Attachment 4. This new training precinct includes:

a. a training centre building with a theatrette, and classrooms, command team trainers, specialist training rooms, a bridge simulator, and associated training staff office accommodation;

b. a Weapons Systems Maintenance Training building; and

c. A Hunter Class Frigate Mission Bay training building.

Project Element 4 – Domestic Support Facilities

39. Proposed works include constructing new medium density living in accommodation to Defence standards for 91 personnel posted to HMAS *Stirling* (permanent staff) and 360 personnel under training at HMAS *Stirling* (trainees):

40. Proposed modifications to existing facilities include:

a. upgrading the existing Senior Sailors Mess facilities to support higher personnel numbers; and

b. refurbishing the existing medical facility to improve functional space.

Project Element 5 – Engineering Services Infrastructure

41. It is proposed to extend the existing engineering services trunk infrastructure at HMAS *Stirling* to provide services to the new, upgraded or refurbished facilities. The existing wastewater treatment plant will also be upgraded to address additional demand.

Henderson

42. The proposed development site at Henderson (WA) will accommodate new facilities that will share security, access control, parking and engineering services infrastructure. The proposed site plan for Henderson is at Attachment 5. Details of the proposed property acquisition are discussed at Paragraph 72.

Project Element 6 – Operational Support Facilities

43. The facilities proposed at Henderson (WA) will support crew undertaking external maintenance activities at the nearby Australian Marine Complex. The crew support area will include office working space, and provide fitness, medical and messing facilities. Facilities for the Hunter Class Frigate duty watch are also required, including working accommodation, a sleeping area and stations for remote monitoring of berthed vessels.

Project Element 7 – Ship Zero Facilities

44. The proposed Capability Centre will provide accommodation for a range of Ship Zero-related functions. An artist's impression of the proposed Capability Centre is at Attachment 6. This facility will provide working accommodation for the:

a. Surface Combatant Group Headquarters;

b. Offshore Patrol Vessel Headquarters;

c. Systems Program Offices for the Arafura Class Offshore Patrol Vessels, the Hunter Class Frigates, and the Anzac Class Frigates;

d. Through Life Support Facility for the Hunter Class Frigates; and

e. Ship Build Program Office for the Arafura Class Offshore Patrol Vessels.

Project Element 8 – Shipbuild Program Facilities

45. The Land Based Test Site designed to meet the shipbuild program requirement for the *Arafura* Class Offshore Patrol Vessel is not affordable within the project's budget. The proposed scope is included in the 'below the line' items at Paragraph 111, should funding become available.

Project Element 9 – Engineering Services Infrastructure

46. Engineering services infrastructure is proposed for each of the facilities. These services will include electrical supply and distribution, roads and car-parking, site access control, and stormwater and sewerage.

Palmer Barracks

Project Element 10 – Operational Support Facilities

47. Expanding Joint Logistics Unit – West warehousing at Palmer Barracks, to provide additional warehousing for Hunter Class Frigate spares, is not affordable within the project's budget. This proposed scope is included in the 'below the line' items at Paragraph 111.

HMAS *Coonawarra*

48. The proposed works at HMAS *Coonawarra* will be located within the Larrakeyah Defence Precinct (comprising Larrakeyah Barracks and HMAS *Coonawarra*) property boundary. Attachment 7 provides a site plan of HMAS *Coonawarra* depicting the locations of the proposed facilities and infrastructure.

Project Element 11 – Maritime Structures

49. Proposed works include:

a. dredging the Coonawarra Basin to enable the Arafura Class Offshore Patrol Vessels to safely approach and berth at either the Attack Wharf or Fremantle Wharf;

b. strengthening the wharf structure and upgrading the services on the Fremantle Wharf;

c. extending the Attack Wharf structure from approximately 160 metres to approximately 270 metres in length, and upgrading the services;

d. providing new or upgrading fixings, fittings and equipment to support berthing of both the Armidale Class Patrol Boats and the Arafura Class Offshore Patrol Vessels; and

e. providing shore power services suitable for Arafura Class Offshore Patrol Vessel operations on the new outer wharf[8].

[8] Construction of the outer wharf part of the Facilities to Support Naval Operations in the North Project that received Parliamentary approval in 2018.

Project Element 12 – Operational Support Facilities

50. Proposed Operational Support Facilities include constructing:

a. An Arafura Class Offshore Patrol Vessel Support Facility to accommodate the functions of duty watch and remote monitoring of berthed vessels, maintenance and logistics support. An artist's impression of the Offshore Patrol Vessel Support Facility – North is at Attachment 8.

b. A storage facility for Rigid Hull Inflatable Boats.

c. A secure storage space for homeported Arafura Class Offshore Patrol Vessels.

d. A Dangerous Goods store.

Project Element 13 – Engineering Services Infrastructure

51. The existing engineering services infrastructure will be extended or upgraded as required to service each of the new or upgraded facilities. These services will include electrical supply and distribution, roads and car-parking, and stormwater and sewerage.

RAAF Darwin

Project Element 14 – Operational Support Facilities

52. A new earth-covered explosive ordnance storage building is proposed to be constructed within the existing explosive ordnance depot at the RAAF Darwin to meet Arafura Class Offshore Patrol Vessel requirements.

HMAS *Cairns*

53. The proposed works at HMAS *Cairns* are located within the Base's property boundary or on Defence leased property, known as Lot 485, and opposite the Base's main entrance. Attachment 9 is a site plan of HMAS *Cairns* depicting the proposed facilities and infrastructure.

Project Element 15 – Maritime Structures

54. Proposed works at HMAS *Cairns* include a new wharf that will connect to and extend the existing Sugar Wharf, and demolishing the existing Naval Wharf and supporting undercover maintenance facility. Existing wharf services will be upgraded and extended to

the new wharf. An adjacent liquids berth mooring dolphin is also proposed to be replaced to facilitate access to the inner berth by the larger Arafura Class Offshore Patrol Vessels. An artist's impression of the proposed extension to the Sugar Wharf is at Attachment 10.

Project Element 16 – Operational Support Facilities

55. Proposed works include:

a. upgrading the existing logistics facility to provide additional storage;

b. upgrading the existing maintenance facility by providing a new crane in the engine workshop;

c. constructing working accommodation for a duty watch, for remote monitoring of berthed vessels, and an office for the maintenance contractor;

d. constructing an Offshore Patrol Vessel Support Facility to accommodate Headquarters and Systems Program Office detachments and crew support functions;

e. constructing a Rigid Hull Inflatable Boat storage facility;

f. constructing a secure storage space for homeported Arafura Class Offshore Patrol Vessel crews; and

g. constructing a Dangerous Goods store.

Project Element 17 – Cadet Facility (Training Ship *Endeavour*)

56. To enable the proposed wharf access road to be constructed, Training Ship *Endeavour's* existing facilities will be demolished and a new facility constructed on Lot 485.

Project Element 18 – Engineering Services Infrastructure

57. The existing engineering services infrastructure will be extended or upgraded as required to service each of the new or upgraded facilities. These services will include electrical supply and distribution, roads and car-parking, and stormwater and sewerage.

Cairns – Other Locations

Project Element 19 – Operational Support Facilities

58. **Explosive Ordnance Loading Buoy.** The existing explosive ordnance loading buoy in Trinity Inlet will the upgraded.

59. **Explosive Ordnance Storage.** A new explosive ordnance storage facility is proposed, to meet Arafura Class Offshore Patrol Vessel requirements. While a site is yet to be selected by Defence, a proposed design has been completed.

Osborne

60. The proposed development site at Osborne will accommodate a number of functions that need to be close to the Osborne South shipyard (where the *Hunter* Class Frigates will be constructed). The proposed design of the integrated facility will enable shared security, access control, parking and engineering services infrastructure. A site plan for the Osborne development is at Attachment 11.

Project Element 20 – Shipbuild Program Facilities

61. The integrated facility proposed at Osborne will accommodate the Land Based Test Site (Production), the Hunter Class Frigate Ship Build Program Office and the Navy Headquarters - South Australia requirements. A perspective of the proposed facility is at Attachment 12. Proposed works include:

a. working accommodation for Land Based Test Site (Production) staff, the Hunter Class Frigate Ship Build Program Office and Navy Headquarters - South Australia;

b. laboratories for the Hunter Class Frigate systems;

c. a production area for the Hunter Class Frigate weapons systems; and

d. shared amenities and support areas, including a theatrette, gymnasium, ablutions, café and break-out areas.

Project Element 21 – Engineering Services Infrastructure

62. New engineering services infrastructure is proposed to service the new development. These services will include electrical supply and distribution, roads and car-parking, site access control, and stormwater and sewerage.

St Kilda Transmitting Station

63. The site plan for the proposed development at St Kilda (at Attachment 13) indicates the proposed works in relation to existing facilities and infrastructure.

Project Element 22 – Shipbuild Program Facilities

64. A Land Based Test Site (Development and Sustainment) facility is proposed for St Kilda (SA). A perspective of the proposed facility is at Attachment 14. Existing engineering services infrastructure will be extended and upgraded to service the new facility. This proposed facility comprises:

a. working accommodation for Land Based Test Site (Development and Sustainment) staff and contractors' personnel;

b. laboratories for the Hunter Class Frigate systems;

c. a Hunter Class Frigate mission module loading area;

d. a secure storage area; and

e. shared amenities, including a theatrette, ablutions and break-out areas.

Interim Facilities at Osborne

65. It is proposed to lease the existing Air Warfare Program Office facility at Osborne from June 2021 to June 2024 to provide an interim working accommodation solution for the Shipbuild Program Office[9], while the proposed facilities are constructed. The building has sufficient workspace and support facilities to meet the user requirements without any upgrading or additional fit-out works.

Future Works

66. The facilities required to support the three Hunter Class Frigates to be homeported at the Garden Island Defence Precinct (NSW) are proposed to be constructed in the mid 2030s. It is anticipated that these works will include refurbishing existing facilities within the Precinct, and providing new training facilities at HMAS *Watson* (NSW). These proposed works will be subject of a future referral or medium works notification to the Parliamentary Standing Committee on Public Works.

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9 Navy Headquarters – South Australia will remain in its current facilities at Keswick Barracks (SA) until the proposed new facility is completed at Osborne.

Planning and Design Concepts

67. The general philosophy for the design of the proposed works is based on:

a. providing cost-effective, functional, low maintenance, energy efficient design options compatible with proposed functions and existing aesthetics;

b. at HMAS *Stirling* and Henderson (WA), where the Hunter Class Frigate and Arafura Class Offshore Patrol Vessel capabilities have similar functional requirements, optimising the opportunities for sharing common areas;

c. where possible, adopting conventional construction techniques and materials commonly used by the construction industry that are consistent with those already used at the project's proposed locations;

d. maximising the use of existing infrastructure and facilities;

e. using readily available and durable materials and applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life;

f. recognising the site constraints, security requirements, and approved Base Plans for each of the project locations; and the functional relationships of the proposed facilities to existing facilities; and

g. providing flexible services and infrastructure to accommodate growth and capability evolution.

Relevant Legislation, Codes and Standards

68. The following legislation, standards, codes and guidelines are applicable:

a. *Environmental Protection and Biodiversity Conservation Act 1999 (Cth);*
b. *Fair Work Act 2009 (Cth);*
c. *Fair Work (Building Industry) Act 2012 (Cth);*
d. *Work Health and Safety Act 2011 (Cth);*
e. *Disability Discrimination Act 1992 (Cth);*
f. National Construction Code - Building Code of Australia;

g. Defence's Manual of Infrastructure Engineering - Electrical;

h. Defence's Smart Infrastructure Manual;

i. Defence's Manual of Fire Protection Engineering;

j. the Defence Estate Quality Management System;

k. the Defence Security Principles Framework; and

l. Defence's Pollution Prevention Management Manual.

69. Accredited Building Certifiers will certify the compliance of each design and the compliance of the completed works.

70. No civilian authority or design approvals are required, although Defence intends to meet applicable standards and regulations.

Land and Zoning

71. Site selection boards have been, or will be, completed for each of the proposed new buildings, to ensure the proposed developments are consistent with the approved Base Plans for each of the Defence bases or establishments, and the Defence Estate "Principles of Development". The site selection boards typically considered the suitability of sites for proposed functions, the locations of related functions, access to services and infrastructure, movement by vehicles and pedestrians to and from the site, and heritage and environmental management factors.

Proposed Property Acquisitions

72. Lot 802 (103 Quill Way), Henderson (WA), and Lot 101 Victoria Road, Osborne (SA), have both been identified for acquisition. It is proposed to locate some Operational Support and Ship Zero facilities and the Land Based Test Site for the Arafura Class Offshore Patrol Vessel at Henderson, and the facilities for Hunter Class Shipbuild Program Office, Land Based Test Site (Production) and the Navy Headquarters – South Australia at Osborne. Acquiring these properties is progressing on schedule. A further acquisition is planned to enable Defence to develop a new explosive ordnance storage to support the Arafura Class Offshore Patrol Vessels to be homeported at HMAS *Cairns*.

Leased Properties

73. In addition to the proposed property acquisitions, some facilities are proposed to be constructed on leased property:

a. **HMAS *Cairns* - Maritime Structures.** Proposed works at HMAS *Cairns* include a new wharf that will connect to and extend the existing Sugar Wharf. Defence leases the Sugar Wharf from Ports North. The lease commenced in 2009 for a period of 15 years, with an option to extend the lease for one further 15-year period. This effectively provides Defence access to the wharf until 2039, prior to which Defence will review the options for purchasing or leasing the Sugar Wharf beyond 2039.

b. **Cairns - Lot 485.** Lot 485 is situated opposite the main entrance to HMAS *Cairns*, and is bounded by Draper and Cook Streets. Lot 485 is the preferred site to develop the proposed Training Ship *Endeavour*, Rigid Hull Inflatable Boat storage and additional car parking. Defence has a 50-year lease for Lot 485 from Ports North that expires in 2056. Defence holds first right of refusal to purchase the land, and will consult with the owner and all relevant State approval authorities prior to developing the land.

74. **Seabed Lease - Cairns.** Defence will be required to extend the existing seabed lease or undertake a new lease to accommodate the proposed vessel mooring arrangements at HMAS *Cairns*. A seabed lease extension into Trinity Inlet for rafted vessels at the parallel berth is required, and extending the seabed lease to the north of the Base may be required. The Queensland State Government's approving authority has been consulted to arrange the re-gazettal of the existing seabed lease.

Structure

75. The structural design of each wharf's proposed extension considers a number of geotechnical, marine environmental factors and durability issues.

76. The structural forms of the proposed buildings consider local geotechnical conditions and will be consistent with existing building forms where appropriate, taking into account the limitations of the Defence estate.

Mechanical Services

77. Mechanical services have been designed according to the function and needs of each building. Proposed services will meet specific user needs, relevant ventilation, thermal comfort and air quality requirements, and the mandatory requirements of the Building Code of Australia.

Hydraulic Services

78. Existing natural gas, sewerage and storm water services will be extended to each new facility to suit design requirements.

79. Where new stormwater systems are required for proposed facilities and civil works infrastructure, such as roads and car parks, those services will be constructed in reinforced concrete pipes if subjected to significant external loads. All new stormwater pits and modifications to existing pits will be constructed in steel reinforced concrete to the relevant standards to meet a 100-year design life.

80. Potable water will be connected to the existing supply via sub-metering in each new building. Rainwater will be collected and stored in above-ground storage tanks and may be plumbed for use in toilet flushing and landscape irrigation or drained to soak-wells and infiltration tanks.

Electrical Services

81. Lighting, power and lightning protection will be installed in accordance with Australian Standards and Defence engineering requirements. Generally, there is sufficient capacity in the existing electrical services network to support the proposed developments. Where this is not the case, a new substation will be provided. New electrical infrastructure and switchboards will have spare capacity to allow for future growth. Sub-metering will be included to each refurbished and new building.

82. Facility meters will be monitored through the existing building management systems at each base and establishment. New metering and building management systems will be provided at the new development sites of Henderson (WA), Osborne (SA) and St Kilda (SA).

Fire Protection

83. Fire protection requirements will comply with Defence's Manual of Fire Protection Engineering and the Building Code of Australia. Assessments of the asset classification and criticality have been completed to determine the fire protection systems to be implemented in each facility. Where required, the upgrading of existing fire systems in existing facilities has been included in the proposed scope of works.

Security Measures

84. Advice from Defence security authorities has been incorporated in the proposed facilities designs to comply with the Defence Security Principles Framework. New security services will be compatible with any existing security systems.

Acoustics

85. New facilities will comply with the National Construction Code and Australian Standards for noise and acoustics in working and living accommodation.

86. Acoustic separation has been considered between rooms, and the proposed acoustic design measures will meet user requirements. Where required, additional acoustic design measures will be undertaken to comply with Defence security requirements.

Work Health and Safety

87. The Project will comply with the *Work Health and Safety (WHS) Act 2011 (Cth)*, Work Health and Safety (Commonwealth Employment – National Standards) Regulations, and relevant Defence policies. In accordance with Section 35 (4) of the *Building and Construction Industry Improvement Act 2005 (Cth)*, project contractors will be required to hold work health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme.

88. Safety aspects of the Project have been addressed during the design development process and have been documented in Safety in Design Reports. Before construction

commences, a Work Health Safety Plan will be required to be developed for that site. This plan will include the requirement to appropriately secure all construction sites to prevent public access, or access by unauthorised Defence personnel, during the construction period.

Materials and Furnishings

89. External wall materials for proposed new buildings or significant extensions of existing buildings will be a mixture of precast concrete, metal cladding, masonry and curtain wall glazing. Metal deck roofing will be used on all proposed new buildings. All external materials have been selected for their resilience to the harsh coastal environments at each location.

Landscaping

90. Proposed landscape works will complement and enhance the character of each site. The landscape design will focus on a functional, low-maintenance, water-sensitive approach, using indigenous plants wherever practical. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices that are consistent with local environmental conditions.

Childcare Provisions

91. There is no requirement for childcare facilities under this project.

Provisions for People with Disabilities

92. Access for people with disabilities will be provided in accordance with the Building Code of Australia, Australian Standard AS 1428 – 2010: Design for Access and Mobility, the *Disability Discrimination Act 1992* and the Defence Policy 'Disabled Access and other Facilities for Disabled Persons'.

93. Access for people with disabilities is not required to some areas of the proposed new facilities, which will be exempt under section D3.4 of the Building Code of Australia, because of the particular purpose of the area.

Environmental Sustainability

94. Defence is committed to ecologically sustainable development and reducing greenhouse gas emissions. The Project has adopted cost effective ecologically sustainable development measures as a key objective in the design and development of the proposed works. These measures include:

a. **Meeting Applicable Energy Targets.** The requirements of Defence's Smart Infrastructure Manual: Design and Construction Version 1.0 (April 2015) and Building Energy Performance Manual Version 4 (December 2012) have been adopted for this project. Energy targets include:

(1) tenant light and power: to be less than 7,500 megajoules per person per annum;

(2) central services: to be less than 400 megajoules per person per annum; and

(3) operational equipment load general power intensity average (computers and other equipment): no more than nine watts per square metre.

b. **Reducing Greenhouse Gas Emissions and Energy Use.** Measures proposed to reduce greenhouse gas emissions and energy use include:

(1) passive building design principles for new facilities;

(2) energy efficient heating ventilation and air conditioning systems, lighting and intelligent control systems;

(3) waste storage, disposal and potential for recycling;

(4) maximising natural ventilation, and installing energy management systems; and

(5) selecting sustainable materials considering procurement, production and environmental performance.

c. **Reducing Water Use.** Measures proposed to reduce water use include:

(1) specifying water efficient fixtures and fittings;

(2) rainwater harvesting;

(3) where landscaping works are proposed, adopting water sensitive urban design principles; and

(4) selecting native, low-water usage plant species requiring irrigation only for establishment.

d. **Improving Indoor Environments.** Measures proposed to improve the indoor environments of new facilities include:

(1) improving daylight in occupied spaces;

(2) shading for privacy and glare control;

(3) optimising building orientation; and

(4) using low volatile organic compound paints, carpets and adhesives, as well as low emission wood products.

e. **Metering.** Electrical services metering will be installed in accordance with the requirements of the Defence National Sub-meter Program and will be suitable for connection to Defence National Resource Data Management System. Hydraulic services metering will also be installed and connected directly to a building management system.

f. **Re-using Structures.** In addition to the proposed extension of the existing maritime structures at HMAS *Stirling*, HMAS *Coonawarra* and HMAS *Cairns*, the Project includes some minor refurbishment of areas as a resource-effective alternative to new construction.

g. **Demolishing and Disposing of Existing Structures.** The Project includes the decommissioning, demolition and disposal of redundant facilities including the N1 Building and synchrolift at HMAS *Coonawarra* and the existing Ship Shed and Training Ship *Endeavour* facilities at HMAS *Cairns*.

Potential Impacts

95. Defence has conducted rigorous assessments to identify potential environmental and local community impacts and propose suitable mitigation measures. As a consequence of this work, Defence has determined that the Project will not have a significant impact on existing environmental and heritage values and is not required to be referred to the Minister for the Environment under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth).*

96. While the construction activities are not expected to cause noticeable disruption to businesses and residences located in the vicinity of the project's locations, all construction activities will be managed in accordance with site-specific Construction Environmental Management Plans. These plans will be designed to minimise any potential disruption to the Defence and local communities. Typically, these plans will include measures to address potential impacts such as increased on-base and local traffic movements; noise, dust and vibration generated during construction activities; and erosion and sediment controls during construction to protect the local environment.

97. Site-specific potential issues and risks include:

a. **HMAS *Stirling*, HMAS *Cairns* and HMAS *Coonawarra***:

(1) disturbance of marine sediments, contaminated land and buildings,

(2) uncontrolled discharges to marine environments, and

(3) direct impacts to marine species during construction, including collisions and marine plant clearance.

b. **HMAS *Stirling***:

(1) loss of penguin habitat and impacts on individual penguins through shoreline disturbance,

(2) impact on penguin travel routes, and

(3) clearing native vegetation.

c. **HMAS *Coonawarra and* HMAS *Cairns*:** managing the disposal of dredge spoil.

d. **Osborne (Lot 1 Victoria Road, Outer Harbour)**: possible contaminated soil or groundwater.

e. **St Kilda Transmitting Station**:

(1) flooding and inundation of the site that may result in damage to site infrastructure and potential spread of contaminants,

(2) possible contamination,

(3) clearing of isolated trees on site including significant trees, and

(4) impact on native vegetation.

98. A number of key mitigation measures are proposed to avoid, minimise or manage these potential risks and issues. These measures include the following:

a. A detailed Construction Environmental Management Plan will be prepared for each location, to address as a minimum:

(1) marine fauna management, collision avoidance and spotters,

(2) demarcation of the approved development footprint to protect adjacent vegetation,

(3) contamination management,

(4) erosion and sediment management,

(5) pollution and spill response plans,

(6) traffic management, and

(7) waste management.

b. For proposed Defence sites, the results of the per- and poly-fluoroalkyl substances investigations will be reviewed to determine the extent of investigations within the footprint of the proposed works and if required, undertaking additional investigations to characterise the quality of soils.

c. Where possible, the proposed works will be scheduled to avoid works occurring during significant periods for affected species and habitats.

d. Specific measures to be implemented at HMAS *Stirling* will include implementing a Little Penguin monitoring program, restricting clearing of threatened ecological species, to avoid fragmentation and maintain connectivity of vegetation, and protecting remnant threatened ecological communities.

e. Specific measures to be implemented at HMAS *Coonawarra* and HMAS *Cairns* will include the preparation of dredge spoil management plans, addressing spoil composition, dewatering and decontamination requirements, bulking factors, and spoil transport to placement areas including transfer from dredge hopper to maritime or terrestrial locations and road transport.

f. At Henderson (WA), a site investigation will be undertaken to identify potential contamination.

g. Specific measures to be implemented at Osborne (SA) and St Kilda (SA) will include completing site investigations to confirm there are no contaminated soils or groundwater at the site.

Climate Change Considerations

99. Sea level rise level rise forecasts for the year 2100 have been considered in the design of the proposed wharf structures and services at HMAS *Stirling*, HMAS *Coonawarra* and HMAS *Cairns*. The land-based facilities at HMAS *Stirling* are proposed to be built outside the forecast year 2100 coastal inundation area.

100. At HMAS *Coonawarra*, the deck of the proposed extension of the Attack Wharf is 1.2 metres higher than the existing wharf deck, to accommodate the forecast sea-level rise. The ground floor level of the proposed facilities will be able to be modified to accommodate the forecast sea level rise in the year 2100.

101. At HMAS *Cairns*, the deck of the proposed extension of the Sugar Wharf is 1.2 metres higher than the existing wharf deck to accommodate the forecast sea level rise. The land-based facilities at HMAS *Cairns* and Lot 485 will accommodate the forecast sea level rise and the potential for storm surge and wave events.

102. At the St Kilda Transmitting Station site, the proposed design of the Land Based Test Site (Development and Sustainment) facility and the associated substation has taken account of the sea level rise forecast by the year 2100, and the flood modelling for site. At Osborne, the risk of inundation due to forecast year 2100 sea level rise and storm events is considered as low.

Consultation with Key Stakeholders

103. Defence has developed a community consultation and communications strategy that recognises the importance of providing local residents and other interested stakeholders an opportunity to provide input into, or raise concerns relating to the proposed works.

104. Defence has engaged with a variety of internal and external stakeholders during project development to date, and further consultation will be conducted to support the Parliamentary Standing Committee on Public Works' inquiry into the proposed works. The external stakeholders include:

a. For HMAS *Stirling*:

(1) Federal Member for Brand, Ms Madeleine King MP,

(2) State Member for Rockingham and Premier of Western Australia, Hon Mark McGowan MLA,

(3) Rockingham City Council, Mayor Barry Samuels,

(4) local and affected utility authorities including Western Power and Water Corporation of Western Australia, and

(5) local community and business groups including:

i. Master Builders Western Australia;

ii. Rockingham Kwinana Chamber of Commerce;

iii. Rockingham District Historical Society;

iv. Mangles Bay Fishing Club Inc;

v. WA Naturalists Club Inc; and

vi. Rockingham Navy Club.

b. For Henderson:

(1) Federal Member for Fremantle, Mr Josh Wilson MP,

(2) State Member for Kwinana, Hon. Roger Hugh Cook MLA,

(3) Cockburn City Council, Mayor Logan K. Howlett,

(4) Australian Marine Complex,

(5) local and affected utility authorities including Western Power and Water Corporation of Western Australia, and

(6) local community and business groups including:

i. Fremantle Chamber of Commerce; and

ii. Melville Cockburn Chamber of Commerce.

c. For Palmer Barracks, Guildford:

(1) Federal Member for Hasluck, Hon Ken Wyatt AM, MP,

(2) State Member for Belmont, Ms Cassandra Michelle Rowe, MLA,

(3) City of Swan, Mayor David Lucas,

(4) local and affected utility authorities including Western Power and Water Corporation of Western Australia, and

(5) local community and business groups including the Master Builders Western Australia.

d. For Darwin (HMAS *Coonawarra* and RAAF Darwin):

(1) Federal Member for Solomon, Mr Luke Gosling OAM, MP,

(2) Territory Member for Port Darwin, Mr Michael Kirby MP

(3) City of Darwin, Mayor Con Vatskalis,

(4) Darwin Ports Corporation,

(5) Defence Housing Australia,

(6) local and affected utility authorities including the Power and Water Corporation, and

(7) local business groups, community groups, and businesses including:

iii. Master Builders Northern Territory;

iv. Northern Territory Chamber of Commerce;

v. Paspaley Group;

vi. Larrakeyah Primary School;

vii. Larrakeyah Residents Group;

viii. Amateur Fishermen's Association of the Northern Territory; and

ix. Larrakia People.

e. For Cairns (HMAS *Cairns*):

(1) Federal Member for Leichhardt, Hon Warren Entsch MP,

(2) State Member for Cairns, Mr Michael Healy,

(3) City of Cairns, Mayor Bob Manning OAM,

(4) local and affected utility authorities including Ergon Energy, and

(5) local community, business groups and businesses including:

i. Master Builders Queensland;

ii. Ports North;

iii. Sugar Terminals Limited;

iv. Queensland Sugar Limited; and

v. Navy League of Australia.

f. For Osborne:

(1) Federal Member for Hindmarsh, Hon Mark Butler MP,

(2) State Member for Port Adelaide, Dr Susan Close MP,

(3) City of Port Adelaide Enfield, Mayor Claire Boan,

(4) Australian Naval Infrastructure,

(5) Renewal SA,

(6) Department of Planning, Transport and Infrastructure,

(7) local and affected utility authorities including SA Power Networks and SA Water, and

(8) local community and business groups including:

i. Master Builders South Australia;

ii. Lefevre Community Group;

iii. North Haven School;

iv. Port Adelaide Residents Environment Protection Group; and

v. Port Adelaide Bicycle Users Group.

g. For St Kilda Transmitting Station:

(1) Federal Member for Hindmarsh, Hon Mark Butler MP,

(2) State Member for Port Adelaide, Dr Susan Close MP,

(3) City of Playford, Mayor Glenn Docherty,

(4) City of Salisbury, Mayor Gillian Aldridge,

(5) Department of Planning Transport and Infrastructure,

(6) local and affected utility authorities including SA Power Networks and SA Water,

(7) National Parks South Australia, and

(8) local community and business groups including:

i. Master Builders South Australia;

ii. Port Adelaide Residents Environment Protection Group; and

iii. Port Adelaide Bicycle Users Group.

Cost Effectiveness and Public Value

Project Costs

105. The estimated total capital out-turned cost of the Project is $1.8 billion including Defence contingency. This estimate excludes the Goods and Services Tax, except for the proposed living in accommodation project elements at HMAS *Stirling.* It includes project management, contract management and design fees; other professional services fees related

to the design or construction activities; construction costs; active information and communications technology; furniture, fittings and equipment cots; and provisions for risk and escalation.

106. An increase in annual future sustainment costs is expected as a result of the proposed works, from $15.5 million to $68.9 million. This is due to the additional maintenance, cleaning and utilities expenses that will be required in the proposed new and upgraded facilities and infrastructure.

Project Delivery System

107. Subject to Parliamentary expediency, a Project Manager and Contract Administrator will be appointed to manage the delivery phase of this project. A design services contractor and other professional services providers will also be engaged to support the delivery of the Project.

108. Defence's proposes to contract the works in a series of contract packages, based geographically and temporally over a seven-year period, utilising both the Head Contract and Managing Contract forms of agreement. Works at HMAS *Stirling* and at Henderson will be the first construction contract package to be tendered. These works are best suited to the Managing Contractor Contract as this form of delivery provides the Commonwealth with buildability input into the design, while promoting opportunities for small-to-medium enterprises by sub-contracting design and construction trade packages. The proposed maritime structures at HMAS *Coonawarra*, which include works to the Fremantle Wharf and the Attack Wharf, will be the next to tender. The contracting strategy for the balance of the project's works will be tailored to suit the scope of works and the market conditions at the time of tendering.

Construction Program

109. Subject to Parliamentary expediency, design and procurement activities will be progressively completed over the next three years, with the first construction works expected to commence in early 2020. Construction is expected to be completed by early 2027.

Public Value

110. Defence has comprehensively assessed public value, opportunities and benefit to the community as a result of the proposed works:

a. **Meeting capability needs.** The Project will contribute significantly to Defence capability by directly supporting the introduction into service and sustainment of the *Arafura* Class Offshore Patrol Vessels and the *Hunter* Class Frigates. The proposed works will provide a broad range of facilities that are fit-for-purpose. The proposed training facilities will be essential to providing a training environment that will prepare personnel for their roles in delivering the new capabilities. The works are expected to improve personnel morale and impact positively on recruitment and retention, which will have a flow on impact on capability support levels.

b. **Employment opportunities.** The Project is expected to employ a diverse range of skilled consultants, contractors and construction workers across the nation that could also include opportunities for up-skilling and job training to improve individual skills and employability on future projects.

c. **Economic Impacts, and Local Industry and Indigenous Business Involvement Opportunities.** Defence and its prime contractors will actively promote opportunities for local small-to-medium enterprises through construction subcontractor packages. There will be opportunities for indigenous business involvement in accordance with Indigenous Procurement Policy. Defence's contractors will required to deliver all the works in accordance with, but not limited to, Building Code 2016 guidelines, relevant Australian Standards, relevant Defence policy, and workplace health and safety legislation.

Below the Line Items

111. Additional project elements have been identified and approved by Government for delivery, which are unfunded within the available capital provision. Should funds become available within the budget, for example through competitive tendering or retired risk provisions, these will be allocated to the unfunded project elements. The unfunded project elements are listed in the table below.

Below the Line Items

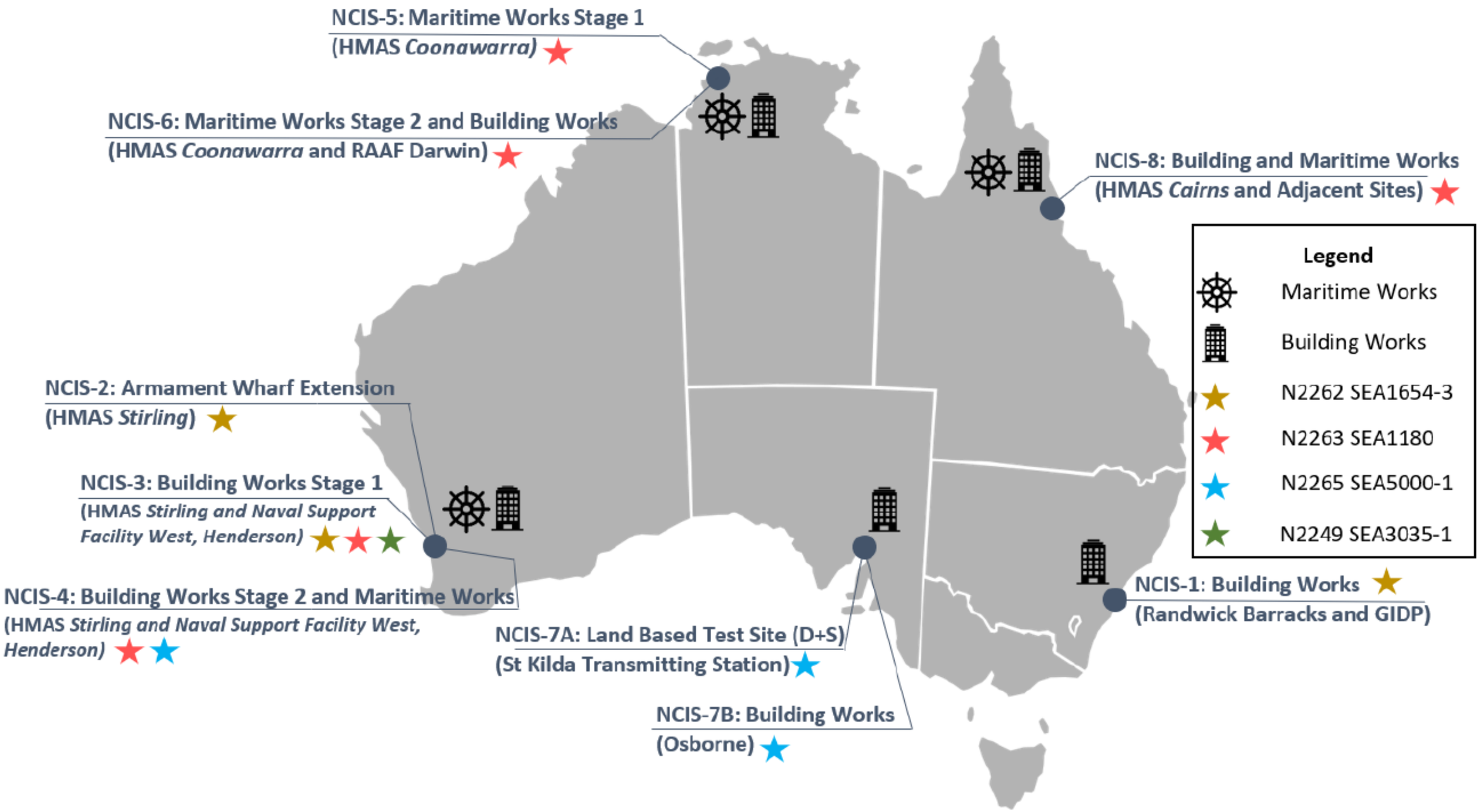
Location	Project Element / Sub-element No	Description
HMAS *Stirling* (WA)	2-6	Mission Module container storage
HMAS *Stirling* (WA)	3-2	External training facilities for Rigid Hull Inflatable Boat handling
HMAS *Stirling* (WA)	3-2	External training facility for seamanship skills
HMAS *Stirling* (WA)	4-1	Additional living in accommodation for permanent staff
HMAS *Stirling* (WA)	4-2	Additional living in accommodation for trainees
HMAS *Stirling* (WA)	4-5	Sport and recreational facilities
Henderson (WA)	6-2	Maintenance facility
Henderson (WA)	6-3	Logistics facility
Henderson (WA)	8-1	Land Based Test Site (for *Arafura* Class Offshore Patrol Vessels)
Palmer Barracks (WA)	10-1	Warehousing upgrade
HMAS *Coonawarra* (NT)	12-3	Mission Module container storage
HMAS *Coonawarra* (NT)	12-6	Armoury expansion
HMAS Cairns (QLD)	16-6	Mission Module container storage

Revenue

112. No revenue is expected to be derived from this project.

Attachments:

1. Delivery Locations: Navy Capability Infrastructure Sub-program
2. Site Plan: HMAS *Stirling* (WA)
3. Artist Impression: HMAS *Stirling* (WA) - Maritime Structures - Parkes Wharf and Oxley Wharf
4. Artist Impression: HMAS *Stirling* (WA) - Ship Zero Facilities - Navy Training Systems Centre
5. Site Plan: Henderson (WA)
6. Artist Impression: Henderson (WA) - Ship Zero and Operational Support Facilities Capability Centre
7. Site Plan: HMAS *Coonawarra* (NT)
8. Artist Impression: HMAS *Coonawarra* (NT) - Operational Support Facilities for Offshore Patrol Vessel
9. Site Plan: HMAS *Cairns* (QLD)
10. Artist Impression: HMAS *Cairns* (QLD) - Maritime Structures - Sugar Wharf
11. Site Plan: Osborne (SA)
12. Artist Impression: Osborne (SA) - Shipbuild Program Facilities - Land Based Test Site (Production), Hunter Class Frigate Ship Build Program Office, and Navy Headquarters – South Australia
13. Site Plan: St Kilda (SA)
14. Artist Impression: St Kilda Transmitting Station (SA) - Shipbuild Program Facilities Land Based Test Site (Development and Sustainment)



LOCATION MAP
NCIS Works

4-1 CONSTRUCT PERMANENT LIA

4-3 UPGRADE THE EXISTING MESS FOOD STORAGE

4-4 EXTEND THE EXISTING MEDICAL FACILITY TO PROVIDE ADDITIONAL MEDICAL SUPPLIES STORAGE

4-5 CONSTRUCT ADDITIONAL SPORTS AND RECREATIONAL SUPPORT FACILITES

3-1 CONSTRUCT A NAVY TRAINING SYSTEMS CENTRE (WEST) FOR CLASS SPECIFIC TRAINING, INCLUDING A CTT AND A WEAPONS SYSTEM MAINTENANCE TRAINING (WSMT)FACILITY

2-3 CONSTRUCT A FLSE FACILITY

3-2 CONSTRUCT EXTERNAL TRAINING FACILITIES

LEGEND:

- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

4-1 CONSTRUCT PERMANENT LIA

4-2 CONSTRUCT PERMANENT LIA TRAINING

3-2 CONSTRUCT EXTERNAL TRAINING FACILITIES

2-4 UPGRADE EXISTING FSU FACILITY TO PROVIDE FSU/CONTRACTOR WORKING ACCOMMODATION

2-5 CONSTRUCT RHIB STORAGE

2-6 CONSTRUCT MMS CONTAINER HARDSTAND

2-1 CONSTRUCT MAINENANCE FACILITY AND EQUIPMENT STORAGE

2-7 CONSTRUCT A LAY APART STORE - CONSTRUCT NEW FACILITY

2-2 CONSTRUCT A OFF SHORE PATROL VESSEL AND FRIGATE SUPPORT FACILITY- WEST (OPVFSF-W) INCLUDING CREW SUPPORT FACILITY/DUTY WATCH/IPMS RMS/SPO DET/FICTS/AID POST WORKING ACCOMMODATION

1-3 PROVIDE SHORE POWER FOR 2 ACOPV ON EXISTING PARKS & OXLEY WHARVES

3-2 CONSTRUCT EXTERNAL TRAINING FACILITIES

1-2 EXTEND OXLEY WHARF AND UPGRADE SERVICES

1-1 EXTEND PARKS WHARF AND UPGRADE SERVICES

N

HMAS STIRLING MASTERPLAN

0 30 60 90 120 150m
SCALE 1: 3000AT ORIGINAL SIZE

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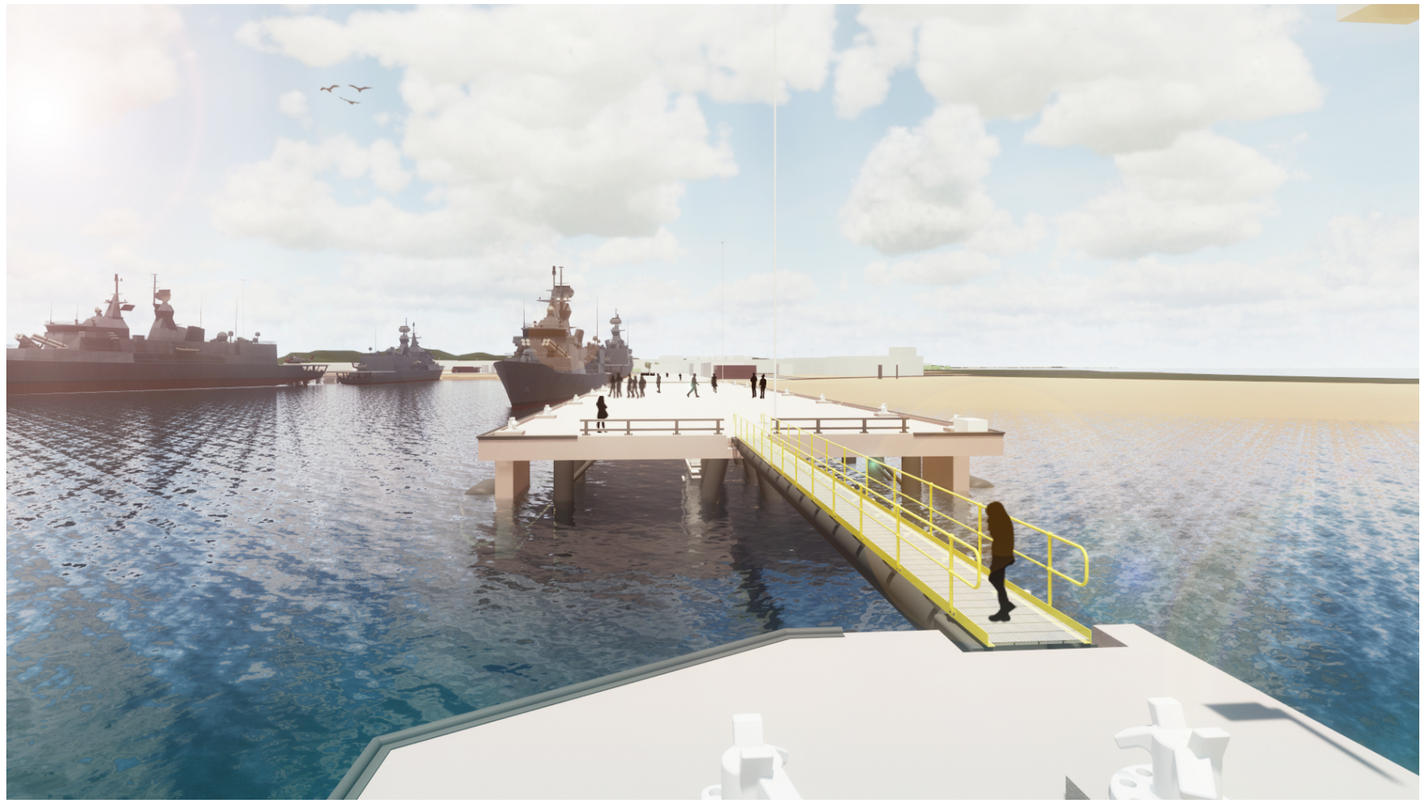
SITE PLAN
HMAS Stirling - Western Australia

Navy Capability Infrastructure Sub-program
Submission 1

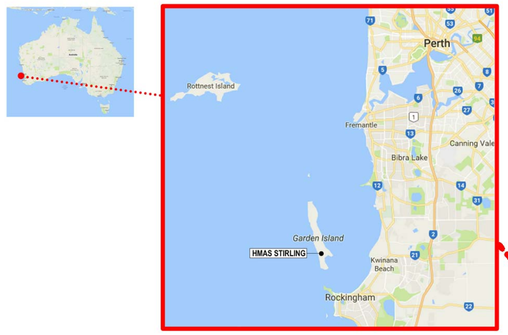
Parkes Wharf



Oxley Wharf

ARTISTS IMPRESSION
HMAS Stirling- Western Australia
Parkes and Oxley Wharves

ARTISTS IMPRESSION
HMAS Stirling - Western Australia
Navy Training Systems Centre - West



LEGEND:

- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

6-1 CONSTRUCT CREW SUPPORT FACILITY FOR EXTERNAL MAINTENANCE

7-1 CONSTRUCT THE CAPABILITY CENTRE

QUILL WAY

PLANT SERVICE ROAD

DOUBLE STOREY

3 STOREY

DOUBLE STOREY

DOUBLE STOREY

3 STOREY

DOUBLE STOREY

25000

25000

25000

PROPOSED NEW CARPARK
APPROX 550 PARKS
APPROX AREA 15860m2

SITE AREA PROPOSED FOR FUTURE SEA 1000

QUILL WAY

ENTRY/EXIT

AREA: 1000m²
HARDSTAND

SINGLE STOREY (7m High)

HARDSTAND

AREA: 1000m²
500m² covered
500m² uncovered

SINGLE STOREY (7m High)

25000

25000

25000

SPARKS ROAD

6-2 CONSTRUCT FSU MAINTENANCE FACILITY

6-3 CONSTRUCT FLSE FACILITIES (LOGISTICS HUB)

8-1 CONSTRUCT A LBTS (FOR ACOPV)

TO COCKBURN ROAD

Matrix Composites & Engineering

Quill Way

Sparks Rd

Northcliffe

SITE MASTERPLAN

0 10 20 30 40 50 m
SCALE 1:1000AT ORIGINAL SIZE

Plot Date: 26/03/2019 9:57:37 AM

N

SITE PLAN
Henderson - Western Australia

ARTISTS IMPRESSION
Henderson - Western Australia
Capability Centre

LEGEND:

- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

12-4 CONSTRUCT A NEW LAY APART STORE

12-3 CONSTRUCT A MISSION SYSTEM STORAGE HARDSTAND

12-5 CONSTRUCT A NEW D.G. STORE

12-2 CONSTRUCT A LIGHT FRAMED OPEN RHIB STORAGE SHELTER

12-1 CONSTRUCT OFF SHORE PATROL VESSEL FACILITY - NORTH (OPVSF-N)A DUTY WATCH (MONITORING IPMS RMS), ACOPV VESSEL CREW, 36 WATER TROOP, FLSE(FLEET LOGISTICS SUPPORT ELEMENT), FORCE SUPPORT UNIT

12.6 EXPAND THE EXISTING ARMOURY

11-2 EXTEND THE ATTACK WHARF AND UPGRADE SERVICES

11.4 PROVIDE SHORE POWER AND OTHER SERVICES REQUIRED BY ACOPV AT THE FSNON WHARF

11-3 DREDGE THE COONAWARRA BASIN

11-1 STRENGTHEN FREEMANTLE WHARF AND UPGRADE SERVICES

HMAS COONAWARRA MASTERPLAN

0 10 20 30 40 50 m
SCALE 1:1000 AT ORIGINAL SIZE

Plot Date: 26/03/2019 4:08:55 PM

N

SITE PLAN
HMAS Coonawarra - Northern Territory

ARTISTS IMPRESSION
HMAS Coonawarra - Northern Territory
Offshore Patrol Vessel Support Facility - North

16-8 CONSTRUCT A NEW DANGEROUS GOODS STORE.

16-2 UPGRADE FSU WORKING ACCOMMODATION.

16-1 UPGRADE FLSE WORKING ACCOMMODATION.

16-7 CONSTRUCT A NEW LAYAPART STORE

16-6 CONSTRUCT A HARDSTAND FOR MISSION SYSTEM STORAGE (LOT 485)

16-5 CONSTRUCT RHIB STORAGE

LEGEND:

- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

15-2 RELOCATE THE LIQUIDS BERTH MOORING DOLPHIN

15-1 EXTEND SUGAR WHARF AND PROVIDE NEW ACCESS

16-4 OFF SHORE PATROL VESSEL FACILITY - NORTH QUEENSLAND (OPVSF-NQ) CONSTRUCT A HQ/SPO/CREW FACILITY

16-3 CONSTRUCT A FACILITY FOR DUTY WATCH/IPMS PM AND CONTRACTOR WORKING ACCOMMODATION (ON THE WHARF)

18-1 PROVIDE ENGINEERING SERVICES TO SUPPORT NEW AND UPGRADED FACILIES

17-1 CONSTRUCT A NEW CADET FACILITY FOR TS ENDEVOUR (ON LOT 485)

0 10 20 30 40 50 m
SCALE 1:1000 AT ORIGINAL SIZE

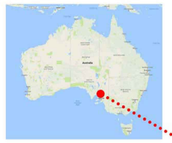
Plot Date: 26/03/2019 4:28:57 PM

HMAS CAIRNS MASTERPLAN

N

SITE PLAN
HMAS Cairns - Queensland

ARTISTS IMPRESSION
HMAS Cairns- Queensland
Naval Wharf

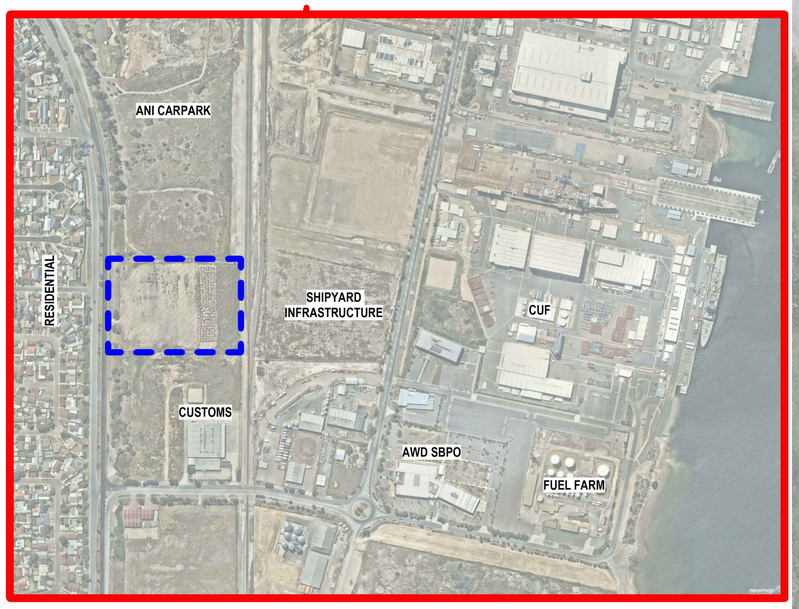


LEGEND:

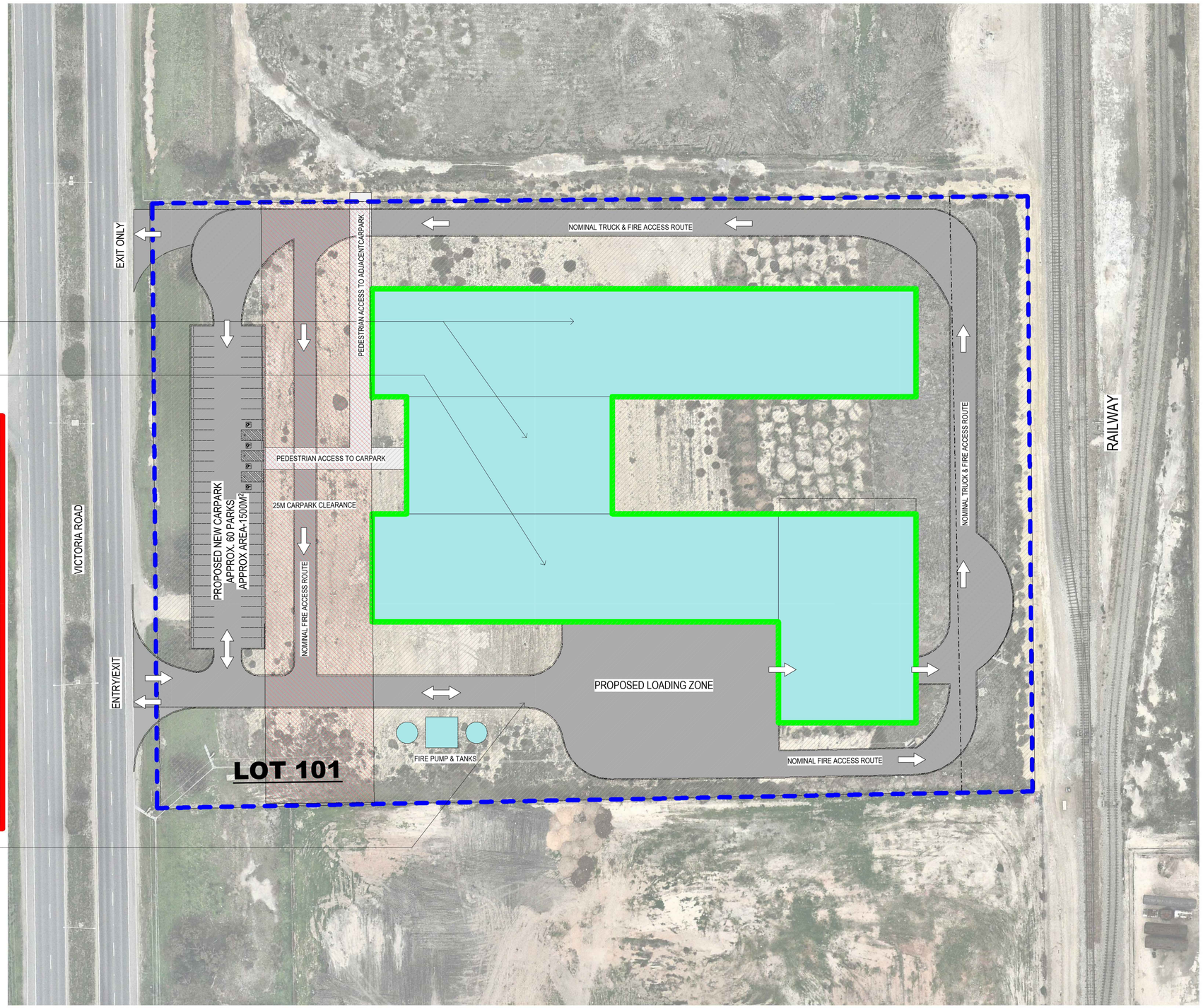
- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

20-1 CONSTRUCT A FACILITY FOR THE SBPO & NHQ-SA

20-2 CONSTRUCT A LBTS(P)



21-1 PROVIDE ENGINEERING SUPPORT SERVICES TO SUPPORT NEW FACILITIES



SHIP BUILD PROGRAM FACILTIES

0 5 10 15 20 25 m
SCALE 1: 500 AT ORIGINAL SIZE

Plot Date: 26/03/2019 4:33:50 PM

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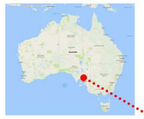
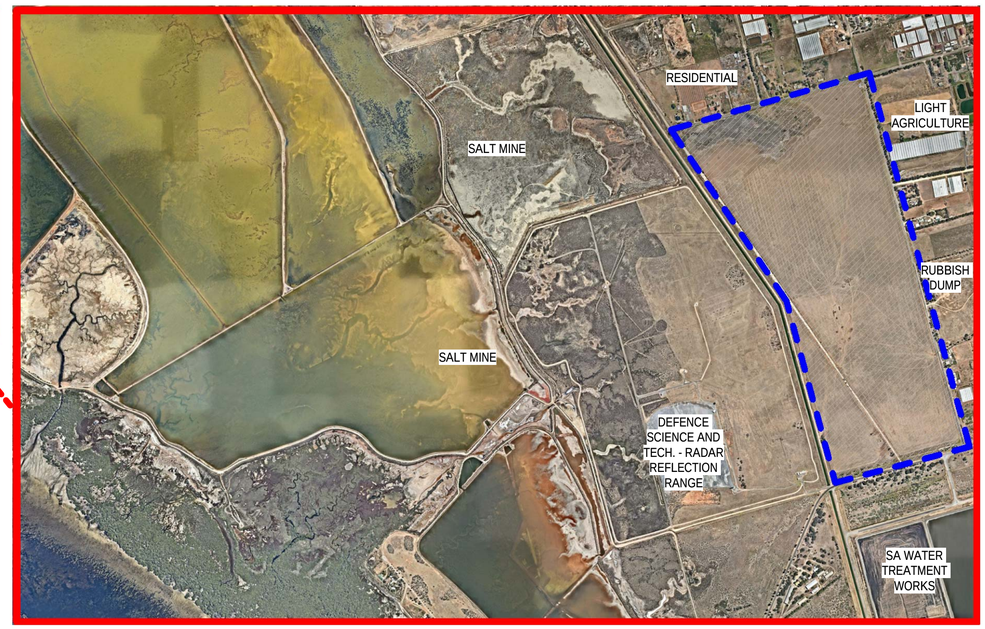
SITE PLAN
Osborne - South Australia
Shipbuild Program Facilities

ARTISTS IMPRESSION
Osborne - South Australia
Shipbuild Program Facilities

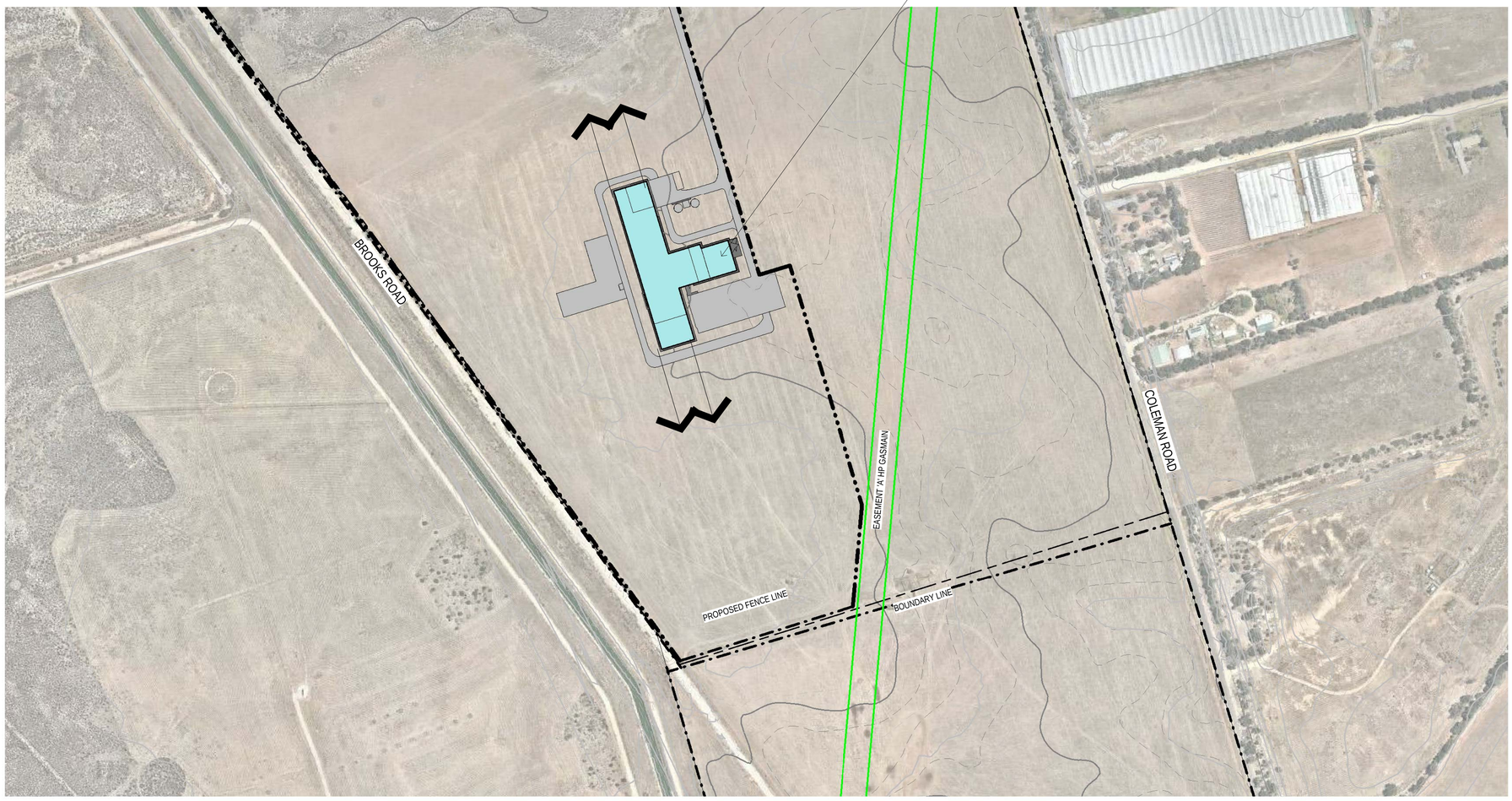




LEGEND:

- N2265 SEA5000 FACILITY
- N2263 SEA1180 FACILITY
- N2262 SEA1654 FACILITY
- SHARED FACILITIES

22-1 CONSTRUCT AN LBTS(D&S) FACILITY



ST KILDA TRANSMITTING STATION

0 25 50 75 100 125m
SCALE 1: 2500AT ORIGINAL SIZE

Plot Date: 25/03/2019 8:02:36 PM

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SITE PLAN
St Kilda - South Australia

ARTISTS IMPRESSION
St Kilda Transmitting Station - South Australia
Land Based Test Site