

# **PART 17 – SIGNIFICANT DEVELOPMENT**

## **LOT 804 (No. 124) QUILL WAY AND LOT 4552 HENDERSON AUSTRALIAN MARINE COMPLEX**

**AMC 1 WHARF EXTENSION, NEW FINGER WHARF,  
LAND RECLAMATION AND SERVICING**

PREPARED FOR:  
DEVELOPMENTWA

MARCH 2021



**PLANNING INDUSTRY FRIENDLY  
CITIES + REGIONS**

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### AMC 1 WHARF EXTENSION, NEW FINGER WHARF, LAND RECLAMATION AND SERVICING

**MARCH 2021**

**ISSUE 2B: POST-LODGEMENT REVISION**

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## 1. PROJECT OVERVIEW

SITE planning + design (SITE) and the consultant project team have been engaged by DevelopmentWA to obtain planning approval to construct a wharf extension (AMC 1 wharf) and a new finger wharf, undertake land reclamation and dredging and associated works (including service connections) on Lot 804 (No. 124) Quill Way and a portion of Lot 4552 (abutting Lot 804) in Henderson (the 'site'). The site forms part of the Australian Marine Complex (AMC) and enjoys direct access to the waters of Jervoise Bay and Cockburn Sound.

The AMC is a world class centre for maritime-related manufacturing, fabrication, assembly, maintenance and technology that services the defence, marine, oil/gas and resource industries and is one of two locations identified for shipbuilding under the Commonwealth's first Naval Shipbuilding Plan.

To ensure Western Australia is ready to support future naval work and optimise defence investment, it is critical that AMC infrastructure supports current and future requirements of Defence.

Key to the success of the AMC and the co-located operators is the Western Australian Government owned Common User Facility (CUF), which commenced operations in 2003 and provides facilities for multiple users engaged in strategic maritime related activities. Common user facilities include hardstand laydown areas, a fabrication hall, workshops, offices, a floating dock for ship-lifting, wharves and vessel berths.

The existing wharves and the floating dock, that form part of the AMC CUF, enable ships and other vessels to be launched, docked and/or lifted out of the water and moved to shipbuilding facilities (within the AMC), for maintenance.

The proposed wharf extension, finger wharf and associated works form part of a larger program of works that will enable the AMC to meet committed and future Defence requirements and provide ongoing support for commercial ship fabrication and maintenance.

The key objectives of the project are:

- Support current Royal Australian Navy (RAN) fleet sustainment and upgrade activities for the Anzac class.
- Support the Offshore Patrol Vessel (OPV) in-water commissioning activities.
- Address current berth capacity issues due to the increased level of Defence activity at the CUF.
- Support possible Full Cycle Docking maintenance activities for the existing Collins class and future Attack class submarines (ACSM).
- Support future RAN fleet sustainment and upgrade activities, including Hobart class destroyers and future Hunter class frigates.<sup>1</sup>

The plans lodged in support of this application have been prepared in consultation with DevelopmentWA, AMC Management (WA) Pty Ltd, the Department of Jobs Tourism Science and

<sup>1</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

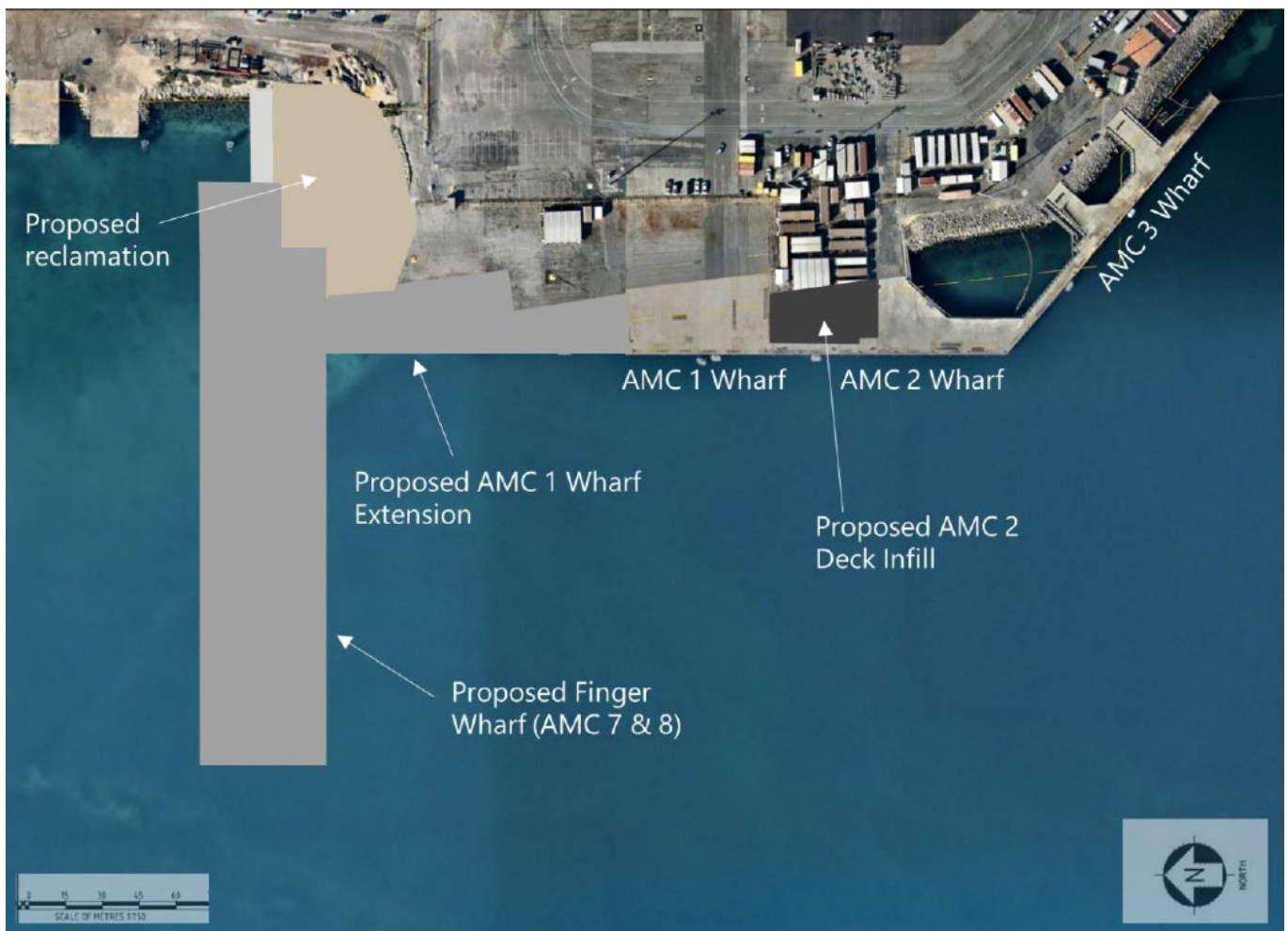


Innovation (JTSI) and Defence West. The proposed infrastructure meets the specifications for the RAN fleet of existing and future vessels.

A high level project description is outlined as follows and illustrated in **Figure 1** below:

- Design and construction of an extension to AMC 1 wharf in a northerly direction.
- Design and construction of a new finger wharf heading in an east west direction providing two additional berths (AMC 7 & 8).
- Design and construction of land reclamation to the rear of the wharves, to cater for future offices for use by Defence and sustainment contractors, with provision of services to suit.
- Design of structural infill for the gap to the rear of AMC 2 wharf and additional removable bollards along the berthing face of AMC 1 wharf.
- Design and construction of associated services upgrades – including power, water and secure communications to the existing AMC 1, 2 and 3 wharves and the new AMC 1 extension and design of associated services upgrades to the new AMC 7 & 8 wharves.<sup>2</sup>

**FIGURE 1 PROJECT DESCRIPTION**



Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>2</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C



The proposed works will be delivered by a building contractor, on behalf of DevelopmentWA, through a Design and Construct model. Once engaged, the building contractor undertakes detailed design, satisfies development approval conditions, secures necessary approvals (i.e. building permits) and undertakes construction through to the completion and delivery of the wharf extension, finger wharf and associated works.

The proposed development is entirely consistent with the industrial intent of the zoning of the land under the local and region planning schemes and the State Government's high level objectives for the precinct.

The proposed works are estimated to cost \$102.8 million and the project program forecasts that the works will be complete by late 2023.

This proposal is one of a series of projects intended to support the State Governments drive to expediate economic recovery as a consequence of the significant economic impact of COVID-19 and that also reflect the State's ongoing commitment to support the important strategic role of AMC in WA's maritime industry.

## PROJECT TEAM

The development application has been prepared by a project team, comprising:

- DevelopmentWA – Landowner and Development Manager
- AMC Management (WA) Pty Ltd – AMC Operational Manager
- Proven PM – Project Manager
- SITE planning + design – Town Planning Consultant
- Advisian – Civil, Structural, Electrical and Hydraulic Engineering Consultant
- Advisian – Environmental Consultant
- Advisian – Geotechnical Consultant

## LIST OF ABBREVIATIONS

ACSM	Attack Class Submarines
AMC	Australian Marin Complex
CUF	Common User Facility
DA15	Development Area (DA15) under the City of Cockburn Town Planning Scheme No. 3
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
FCD	Full Cycle Docking
LPP 3.9	Local Planning Policy 3.9: Industrial Development
OPV	Offshore Patrol Vessel
RAN	Royal Australian Navy
RAV	Restricted Vehicle Access
S45C	Section 45C Application under the <i>Environmental Protection Act 1986</i>
SILUP	Strategic Infrastructure and Land Use Plan
SPMT	Self-Propelled Modular Transporters



SPP 3.7	State Planning Policy 3.7: Planning in Bushfire Prone Areas
SU 2	Special Use 2 under the City of Cockburn Town Planning Scheme No. 3
The site	Lot 804 (124) Quill Way and a portion of Lot 4552 Henderson
TPS 3	City of Cockburn Town Planning Scheme No. 3



## 2. AUSTRALIAN MARINE COMPLEX OVERVIEW

The AMC lies within the suburb of Henderson, approximately 23km south west of the Perth CBD, and abutting the waters of Jervoise Bay and Cockburn Sound. Refer to **Figure 2 – Location Plan**.

The AMC commenced operations in 2003 and has since gained a reputation as a world class centre for maritime-related manufacturing, fabrication, assembly, maintenance and technology that services the defence, marine, oil/gas and resource industries.

The AMC is one of two locations identified for shipbuilding under the Commonwealth's first Naval Shipbuilding Plan and for that reason it is of strategic national importance.

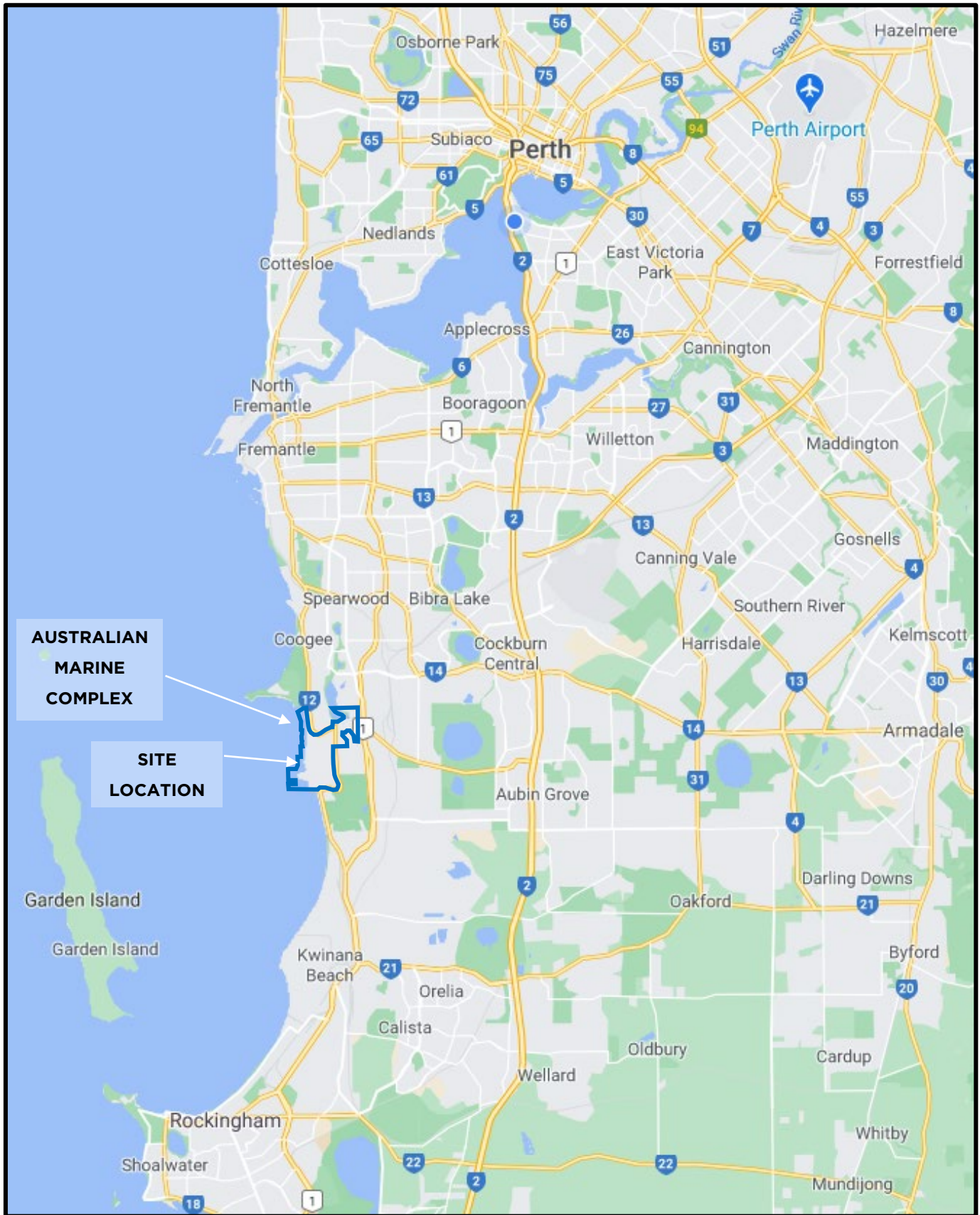
The AMC comprises 5 key precincts, being:

- Shipbuilding Precinct
- Technology Precinct
- Support Industry Precinct
- Fabrication Precinct (including the CUF, Floating Dock and existing wharves)
- Recreational Boat Precinct

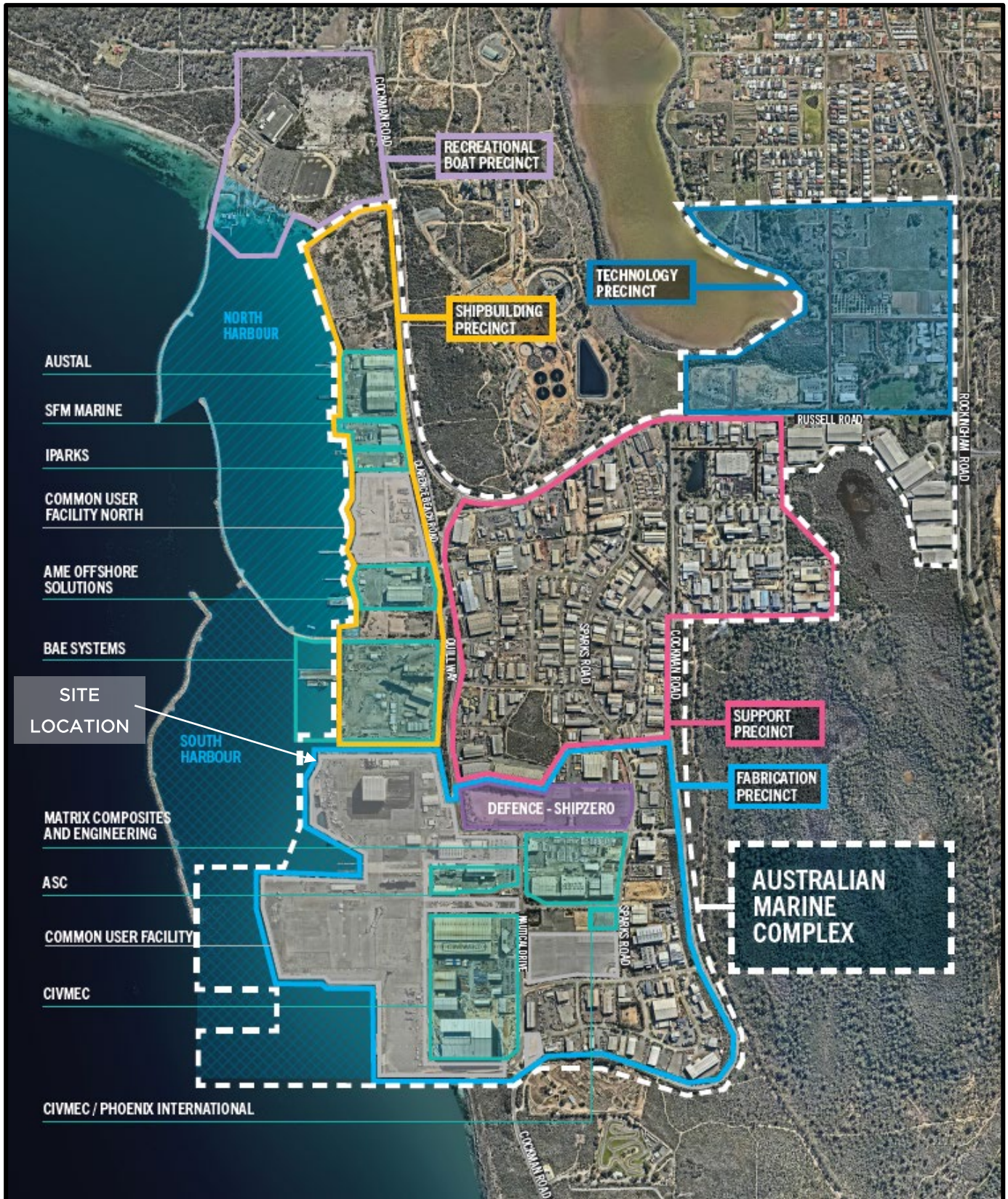
Refer to **Figure 3 – Australian Marine Complex Precinct Plan**.

The Western Australian Government owned Common User Facility (CUF), located within the AMC, provides facilities for users engaged in strategic maritime related activities, including hardstand laydown areas, a fabrication hall, workshops, offices, a floating dock for ship-lifting, wharves and vessel berths.

FIGURE 2 LOCATION PLAN



Source: Google Maps, 14 December 2020

**FIGURE 3 AUSTRALIAN MARINE COMPLEX PRECINCT PLAN**

Source: Department of Jobs, Tourism, Science and Innovation, DevelopmentWA, Industrial Lands Authority and Australian Marine Complex (WA)



Supporting large scale oil, gas and mining resource projects has been a key focus for the AMC for the past 15 years, whilst shipbuilding and sustainment (particularly for the Defence sector) is considered a key sector for continued growth.

This is reflected in the high level State objectives outlined in the AMC Strategic Infrastructure and Land Use Plan (SILUP) (June 2020) prepared by Advisian for the Department of Jobs Tourism Science and Innovation as outlined below.

- *“Establish the AMC as the principal location for all maintenance, upgrades and sustainment of Australian’s submarines and frigates<sup>3</sup>.*
- *Enable the national and international expansion of Western Australia’s defence, marine and resource industry capabilities.*
- *Facilitate and enhance economic development and diversification opportunities created by the clustering of defence, marine and resource industries.*
- *Provide common user infrastructure and land to meet the needs of defence, marine and resource industries.*
- *Enable the co-location of businesses across the marine, defence and resource industries supply chains.*
- *Enable research and development activities that promote cross sector collaboration and innovation.”*

To ensure Western Australia is ready to support future naval work, optimise defence investment and provide ongoing support for resource and other major projects, it is critical that AMC infrastructure, services and utilities supports current and future requirements for Defence.

<sup>3</sup> As and when required by Defence and the Commonwealth Government



**FIGURE 4 AUSTRALIAN MARINE COMPLEX, HENDERSON**



Source: Department of Jobs Tourism Science and Innovation, <https://jtsi.wa.gov.au/economic-development/defence-west/australian-marine-complex>

To facilitate the objectives of the SILUP, the following the following key infrastructure improvements and investments are required within the Southern Harbour (Fabrication Precinct):

- Consolidation of Defence activities and creation of a single Defence Priority Zone in the central portions of the Southern Harbour.
- Multiple new berths to accommodate future Defence vessels.
- A new covered work area and two outdoor hardstand positions to accommodate vessel sustainment and disposal activities.
- Upgraded lift and transfer capability.
- New transfer paths to connect the Northern Harbour and within the CUF.
- New breakwaters to shelter berths in the southern portion of the harbour.
- A new large vessel dry berth to support out of water activities on vessels too large for the lift and transfer system.

The proposed works, the subject of this development application, are located within the AMC Southern Harbour (Fabrication Precinct) where the primary focus is to support the construction and sustainment of Defence vessels and provide ongoing support for commercial ship fabrication and maintenance projects.



The key objectives of the project are:

- Support current RAN fleet sustainment and upgrade activities for the Anzac class.
- Support the Offshore Patrol Vessel (OPV) in-water commissioning activities.
- Address current berth capacity issues due to the increased level of Defence activity at the CUF.
- Support possible Full Cycle Docking maintenance activities for the existing Collins class and future Attack class submarines (ACSM).
- Support future RAN fleet sustainment and upgrade activities, including Hobart class destroyers and future Hunter class frigates.<sup>4</sup>

<sup>4</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C



### 3. SITE CONTEXT

#### 3.1 REGIONAL CONTEXT

The site is located in Henderson within the City of Cockburn and lies approximately 23 kilometres south west of the Perth Central Business District, 13 kilometres south of the Fremantle and approximately 4 kilometres west of the Latitude 32 Industrial precinct. Refer to **Figure 2 – Location Plan**.

#### 3.2 LOCAL CONTEXT

The site is situated in the AMC and forms part of the CUF within the Fabrication Precinct owned by DevelopmentWA and managed by AMC Management (WA) Pty Ltd and a portion of the abutting Jervoise Bay waterway, owned by the State of Western Australia and managed by Fremantle Ports Authority. Refer to **Figure 3 – Australian Marine Complex Precinct Plan**.

The AMC was established in 2003 to enhance and support industries involved in manufacturing, fabrication, assembly, maintenance and technology servicing the defence, marine, oil, gas and resource industries, and is now home to the largest marine industry in Australia and is an integral part of WA's ship building, ship repair and maintenance industry.

A world leader in the construction of high-speed light weight vessels, the area also excels in the fabrication of luxury super yachts, tugs, rescue, patrol, fishing, paramilitary and offshore supply vessels for local and export markets.

The area is supported by the Western Australian Government owned CUF, a 400,000m<sup>2</sup> integrated heavy engineering, fabrication and assembly facility that provides for fabrication, assembly, commissioning, maintenance and repair activities.

Including a floating dock, six (6) wharves, heavy lift cranes and self-propelled modular transporters, the CUF provides a unique opportunity for users of the facility to off load and load directly into the protected deep water harbour of Jervois Bay and out to sea.

In addition to providing direct access to the Indian Ocean, the area is also supported by access to the regional road network of Russell, Cockburn and Rockingham Roads and Kwinana Freeway providing the AMC with excellent access to the State's High Wide Load Corridor, Restricted Access Vehicle network and the broader metropolitan and regional freight road networks.



## 4. SITE DESCRIPTION

Lot 4552 is approximately 31,390ha in area and covers a large area of the Indian Ocean, extending from the western coastline of East Rockingham, Kwinana, Naval Base and Henderson, westwards to the eastern waters of Garden Island and north to the western coastline of Fremantle Ports Inner Harbour, ending north of Rottnest Island and off the coast of Scarborough. Refer to **Figure 5** below.

**FIGURE 5 LOT 4552 LOCATION AND CONFIGURATION**



Source: Landgate MapViewer, 14 December 2020

Lot 804 (No. 124) Quill Way Henderson is 79.5116ha in area and is bound:

- To the north by Lots 1 and 37 Clarence Beach Road and the waters of Jervoise Bay/Cockburn Sound.
- To the west by Lot 4552 and the waters of Jervoise Bay/Cockburn Sound.
- To the east by Cockburn Road, Nautical Drive, Quill Way and Lots 1 and 37 Clarence Beach Road.
- To the south by the waters of Jervoise Bay/Cockburn Sound and two Crown reserves (Lots 4431 and 15493) owned by the State of Western Australia and managed by the City of Cockburn.

Lot 804 enjoys direct access to:

- Nautical Drive and Quill Way, gazetted and public roads classified as Access Roads under the control of the City of Cockburn.
- Cockburn Road (via locked gates), a gazetted and public “Other Regional Road”, classified as a Distributor A road, managed by Main Roads WA.

Refer to **Figure 6 - Aerial Site Plan**.

**FIGURE 6 AERIAL SITE PLAN**



Source: Nearmaps, 10 October 2020



## 4.1 LEGAL DESCRIPTION

The proposed works are located on Lot 804 (No. 124) Quill Way and Lot 4552 in Henderson. The lots are formally described in the table below.

**TABLE 1 CERTIFICATE OF TITLE DETAILS**

LOT NO.	LEGAL DESCRIPTION	REGISTERED LANDOWNER	LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS (REFER TO NOTES BELOW FOR BOLD TEXT)	LOT AREA
Lot 804	Certificate of Title Volume 2615 Folio 365 Deposited Plan 38196	Western Australian Land Authority (trading as DevelopmentWA)	<ul style="list-style-type: none"> <li>▪ <b>Easement burden created under Section 27A of T. P. &amp; D. Act - See Deposited Plan 38196 - Created on Plan 18554. (1)</b></li> <li>▪ <b>E235512 Easement to Water Authority of Western Australia. See Deposited Plan 38196 and Instrument E235512. Registered 16/11/1989. (2)</b></li> <li>▪ <b>Easement burden created under Section 27A of T. P. &amp; D. Act - See Deposited Plan 38196. (2)</b></li> <li>▪ <b>*J627661 Notification. Town Planning and Development Act 1928. Registered 17/2/2006. (3)</b></li> <li>▪ <b>*K014874 Caveat by Fremantle Port Authority as to portion only. Lodged 7/12/2006. (4)</b></li> <li>▪ K219581 Lease to ASC Pty Ltd of Mersey Road, Osborne, South Australia. Expires: See Lease. As to portion only. Registered 7/6/2007.               <ul style="list-style-type: none"> <li>- K449149 Transfer of Lease K219581, Lessee now Henderson WA Pty Ltd of Level 27, 77 St Georges Terrace, Perth. Registered 17/12/2007.</li> <li>- L023006 Sub-Lease of Lease K219581 to ASC Pty Ltd of Mersey Road, Osborne, South Australia Expires: See Sub Lease. Registered 29/7/2009.</li> </ul> </li> <li>▪ <b>*K372195 Caveat by Henderson WA Pty Ltd as to portion only. Lodged 10/10/2007.</b></li> <li>▪ K826155 Lease to Telstra Corporation Ltd of Level 41, 242 Exhibition Street, Melbourne, Victoria Expires: See Lease. As to portion only. Registered 15/1/2009.</li> <li>▪ <b>*L520714 Memorial. Contaminated Sites Act 2003 Registered 30/12/2010. (5)</b> <ul style="list-style-type: none"> <li>○ <b>*N029175 Partial withdrawal. See Deposited Plan 405715 Registered 16/6/2015. (5)</b></li> </ul> </li> <li>▪ L598475 Lease to Civmec Holdings Pty Ltd of 16 Nautical Drive, Henderson Expires: See Lease. As to portion only. Registered 8/4/2011.</li> <li>▪ M496575 Lease to BAE Systems Australia Ltd of Evans Building, Taranaki Road Edinburgh Parks, Edinburgh, South Australia Expires: See Lease. As to portion only Registered 16/12/2013.</li> <li>▪ <b>*N029176 Memorial. Contaminated Sites Act 2003. As to portion only - See Deposited Plan 405715. Registered 3/8/2015. (5)</b></li> </ul>	79.5116ha
Lot 4552	Crown Land Title Volume LR3116 Folio 733 Deposited Plan 220690	State of Western Australia Vested under statute Primary interest holder: The Fremantle Port Authority	<ul style="list-style-type: none"> <li>▪ H548494. Vested. Pursuant to Section 25 of the <i>Port Authority Act 1999</i>. Registered 12/9/2000.</li> <li>▪ H900729. Lease to Hismelt Corporation Pty Ltd of Leath Road, Kwinana. Expires: See Lease. As to portion only. Registered 17/10/2001.</li> <li>▪ H900730 Sub Lease of Lease H900729 to Fremantle Port Authority of 1 Cliff Street, Fremantle. Expires: See Sub Lease. Registered 17/10/2001.</li> <li>▪ J431519 Portion comprised in Lots 5012 and 5013 in DP44685 to Vol3113 Fol's 449 and 450. Registered 13/9/2005.</li> <li>▪ K186677 Caveat by Co-operative Bulk Handling Ltd as to portion only. Lodged 8/6/2007.</li> <li>▪ K298844 Memorial. <i>Heritage of Western Australia Act 1990</i>. As to portion only - see Deposited Plan 56921. Lodged 8/8/2007.</li> <li>▪ L842203 Easement to Newgen Power Kwinana Pty Ltd for outfall pipeline purposes. See Deposited Plan 53855. Registered 25/1/2012.</li> </ul>	



LOT NO.	LEGAL DESCRIPTION	REGISTERED LANDOWNER	LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS (REFER TO NOTES BELOW FOR BOLD TEXT)	LOT AREA
			<ul style="list-style-type: none"> <li>L852163 Portion comprised in inset Lot 513 on DP69297. Amalgamated into Lot 1 on Plan 23900 to Vol 2195 Fol 724. Registered 8/2/2012.</li> </ul>	

#### 4.1.1 LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS

Easements, notifications and memorials highlighted in bold text and numbered in the above table are described in further detail below. Other interests registered on the title relate to existing tenants and are not relevant to the proposed development or works.

1. An easement to the benefit of Western Power is registered over Lot 804 for the purpose of providing power. The easement is located approximately 70m north of the Nautical Drive culdesac head (opposite the northern boundary of Lot 42) and is remote from the area of the proposed works. Refer to annotation “8” on Sheet 4 of the Deposited Plan.
2. Two 5m wide easements to the benefit of the Metropolitan Water Supply Sewerage and Drainage Board (Water Corporation) are registered over Lot 804 for the purpose of providing access to a Water Corporation sewer pipe. The easement is located immediately east of the existing Vessel Transfer Path and west of the ship fabrication facilities.

Refer to annotation “6” (E235512) and “Y” on Sheets 7 and 8 of the Deposited Plan.

3. On 17 February 2006, Notification J627661 was registered on the Title of Lot 804 advising that:

*“This land has previously been utilised as an artillery range and may contain unexploded ordnance. Whilst the land has been searched to a depth of one metre no guarantee can be given that all UXO has been located. Any ordnance found should be treated as dangerous and its location reported to the Policy or Defence establishment.”*

4. On 7 December 2006, Caveat K014874 was registered on the Title of Lot 804 and provides Fremantle Ports with a right of first refusal in the event that the Registered Proprietor wishes to allow a third party to use the Land for Port Purposes.
5. On 17 December 2010, Memorial L520714 was registered on the Title of Lot 804 under the *Contaminated Sites Act 2003* to advise that the site has been classified as “Possibly contaminated – investigation required”.

On 9 June 2015, Document N029175 gave notice that section 8(1)(a)(i) of the *Contaminated Sites Act 2003* no longer applies to the land and that authority was granted to withdraw memorial number L520714.

On 9 June 2015, Memorial N029176 was registered on the Title of Lot 804 under the *Contaminated Sites Act 2003* to advise that the site has been classified as “Remediated for Restricted Use”.



Refer to **Section 6.2.3** for further details.

Copies of current Certificates of Title, Survey Plans, relevant easement, notification, caveat and memorial documents are provided at **Appendix 1**.

## **4.2 SITE HISTORY – LAND USE AND DEVELOPMENT**

The site was historically cleared to support industrial activities over the site's 40-year history and currently features buildings and infrastructure related to the operations of the AMC CUF, co-located tenants and temporary users.

Lot 804 contains a range of uses and development associated with its role providing land and infrastructure for ship building and maintenance operations, Defence fleet maintenance and large resource projects, including:

- AMC Management administration office and staff facilities
- Numerous vessel fabrication and maintenance facilities and workshops (BAE, Silver Yachts, ASC and CIVMEC) primarily fronting Nautical Drive
- AMC's CUF covered fabrication facility (shed)
- AMC's CUF Floating Dock (abutting Lot 804)
- Self-propelled modular transporters (SPMT) storage and maintenance shed
- Vessel transfer path
- Extensive hardstand areas
- Wharves and berths (partially within and abutting Lot 804)
- Staff car parking areas
- Services and utilities (power, water, sewer, drainage, communications and lighting)
- Fencing

The land-side boundaries of the site and individual tenant sites are fenced, generally with steel posts, cyclone security fence and rows of barbed wire.

Refer to **Figure 6 – Aerial Site Plan**.

### **4.2.1 INDIGENOUS AND EUROPEAN HERITAGE**

A search of the State Heritage Register and the City of Cockburn Municipal Heritage Inventory did not identify any buildings or structures of heritage significance.

Lot 804 is partially identified as (and abuts) Other Heritage Place 3776 – the Indian Ocean on the Aboriginal Heritage Inquiry System (AHIS). The site extends along the west Australian coastline, extending north to Cottesloe and south towards Rockingham and encapsulates the majority of Lot 4552. The site is classified as “Stored Data / Not a Site”, which is a place that has been assessed as not meeting Section 5 of the *Aboriginal Heritage Act 1972*.



#### 4.2.2 EXISTING AMC 1 WHARF AND LOT 804 INTERFACE

The proposed works, the subject of this development application, are located within the AMC Southern Harbour (Fabrication Precinct) where the primary focus is to support the construction and sustainment of Defence vessels and provide ongoing support for commercial ship fabrication and maintenance projects.

The AMC 1 wharf is a 3,000 tonne capacity load-out wharf, with a berth face of 115m in length. This wharf is also used for vessel maintenance. The wharf is a concrete deck structure supported on steel piles. To the rear of the wharf is a sheet piled structure that extends on either side of the loadout wharf. There is one mooring dolphin to the north of AMC 1. This is connected to the loadout wharf with a walkway strut and to the landside with a walkway.

**FIGURE 7 NORTHERN EXTENT OF EXISTING AMC 1 WHARF**

(facing north across the location of a portion of the proposed works in the foreground and mid-ground)





**FIGURE 8 NORTHERN EXTENT OF EXISTING AMC 1 WHARF**

(facing north east across the location of a portion of the proposed works in the foreground and mid-ground)



### 4.3 TOPOGRAPHY

Lot 804 falls in a westerly direction towards the waters of Jervoise Bay and Cockburn Sound, though is relatively flat to enable the transfer of vessels from the floating dock to ship building facilities within the site.

Refer to **Appendix 2 – Site and Seabed Surveys**.

### 4.4 SOIL AND GROUNDWATER CONDITIONS

#### 4.4.1 GEOTECHNICAL CONDITIONS

The Department of Water and Environmental Regulation (DWER) mapping confirms the site is not located in an area with a risk of acid sulfate soils.

Lots 804 and 4552 contain land (or seabed) classified under the *Contaminated Sites Act 2003*. Refer to Section 6.2.3 for further details.

#### 4.4.2 GROUNDWATER CONDITIONS

The Perth Ground Water Atlas (1997) shows the historical maximum groundwater level to be at a depth of between approximately 0.0m AHD and 4.5m AHD below ground level across Lot 804.

### 4.5 FLORA AND FAUNA

The site has been cleared as part of its historic industrial use and no remnant flora or vegetation are present. No fauna is expected to be encountered on the site.



## 5. INFRASTRUCTURE AND SERVICES

### 5.1 ROAD NETWORK

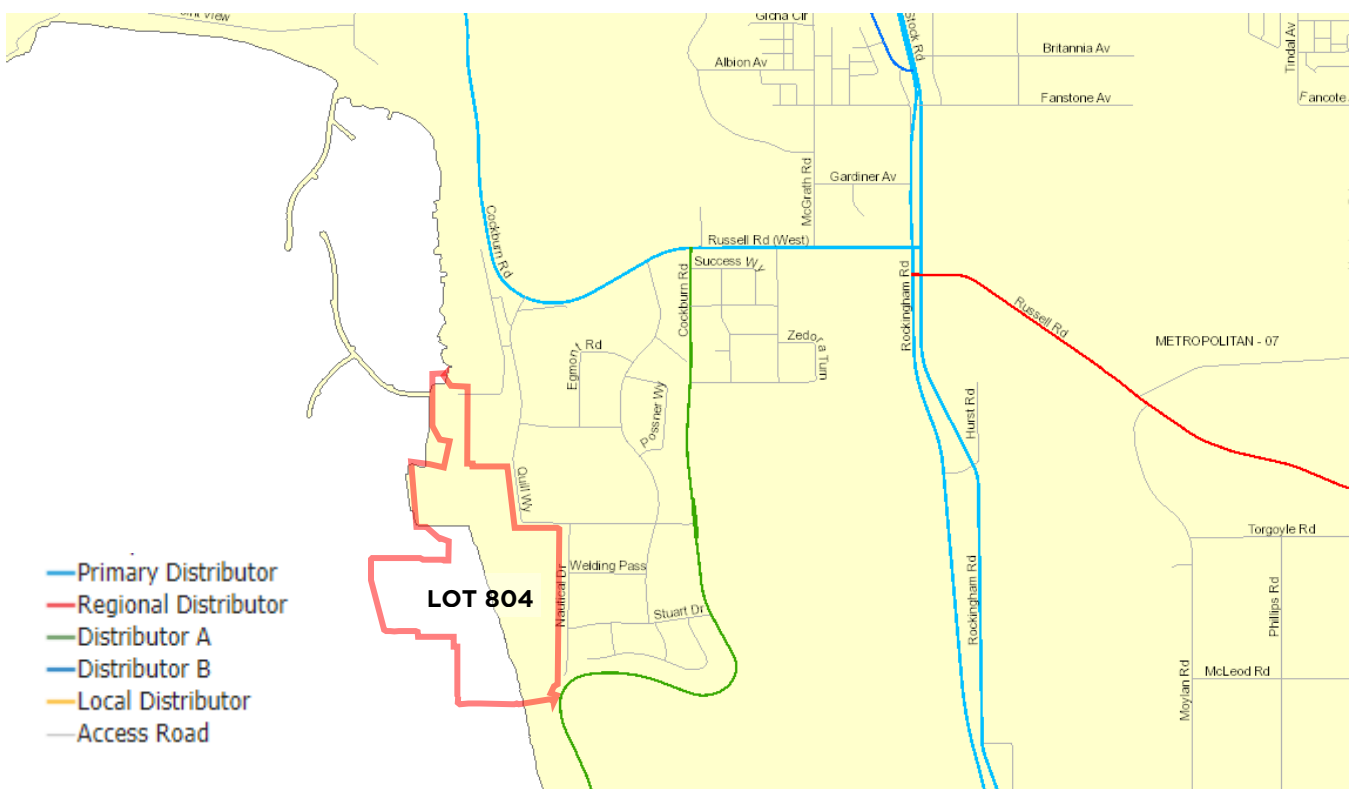
Lot 804 enjoys direct access to:

- Nautical Drive, a gazetted public road under the control and management of the City of Cockburn, is classified as an “Access Roads” with a posted speed limit of 50km/hr and forms part of the Restricted Access Vehicle 4 (RAV 4) network, which allows for vehicle movements up to 27.5m in length and 87.5 tonnes in weight.
- Quill Way, a gazetted public road under the control and management of the City of Cockburn, is classified as an “Access Roads” with a posted speed limit of 60km/hr and forms part of the RAV 4 network, which allows for vehicle movements up to 27.5m in length and 87.5 tonnes in weight.
- Cockburn Road, a gazetted public roads under the control and management of the Main Roads WA, reserved “Other Regional Roads” under the Metropolitan Region Scheme, is a secondary freight road, classified as a “Distributor A” with a posted speed limit of 70km/hr and forms part of the RAV 4 network, which allows for vehicle movements up to 27.5m in length and 87.5 tonnes in weight.

Refer to **Figure 9** below.

In addition, all three roads provide for oversize and over-width loads and Cockburn Road, at the southern intersection with Lot 804, forms part of the State’s High Wide Load Corridor connecting the AMC to the North West region of WA.

**FIGURE 9 ROAD NETWORK HIERARCHY**



Source: Main Roads Road Information Mapping System, 3 November 2020,  
<https://mrwebapps.mainroads.wa.gov.au/PublicMaps/RoadInformationMapping>



The proposed works will not add any additional traffic volumes to the local and regional road network post-construction and delivery of the upgraded Vessel Transfer Path. Existing roads can accommodate the volume and type of construction traffic.

## **5.2 POWER**

Lot 804 is connected to Western Power's electricity network. No changes are proposed to Western Power's electricity infrastructure or assets.

## **5.3 WATER CORPORATION SERVICES**

### **5.3.1 WATER**

Lot 804 is connected to Water Corporation's water services located within Quill Way, Nautical Drive and Cockburn Road. No changes are proposed to Water Corporation's water infrastructure or assets.

### **5.3.2 SEWER**

As outlined in **Section 4.1**, Lot 804 contains easements to protect a Water Corporation sewer pipe that traverses Lot 804.

Due to the depth of the Water Corporation sewer pipe and the location of the proposed works, the infrastructure is not considered to be impacted.

## **5.4 DRAINAGE AND STORMWATER MANAGEMENT**

Lot 804 contains an extensive drainage network of pits, gullies and pipes across the expansive hardstand areas and individual operations to capture, treat (gross pollutant traps) and discharge stormwater.

No significant changes are proposed by the works, the subject of this application.



## 6. STRATEGIC AND STATUTORY PLANNING FRAMEWORK

### 6.1 STRATEGIC PLANNING FRAMEWORK

#### 6.1.1 PERTH AND PEEL @ 3.5 MILLION (MARCH 2018)

The Department of Planning, Lands and Heritage's Perth and Peel @ 3.5 Million (and associated sub-regional frameworks) set out the long-term growth strategy for land use and infrastructure for Perth and Peel.

Located within one of Perth and Peels most strategic industrial areas, the AMC is identified as forming part of the Western Trade Coast created for strategic industry and comprises an agglomeration of activities including the Kwinana Industrial Area, Rockingham Industrial Zone, the AMC and Latitude 32 Industrial area. AMC is also recognised as a:

*"critical contributor to the export economy of the sub region and has unique strategic values."*

The proposed works are wholly consistent with Perth and Peel @3.5.

### 6.2 STATUTORY PLANNING AND ENVIRONMENTAL FRAMEWORK

#### 6.2.1 PLANNING AND DEVELOPMENT ACT 2005 - PART 17

The Planning and Development Act 2005 (as amended by the Planning and Development Amendment Act 2020), introduced Part 17 - Special Provisions for Covid-19 Pandemic Relating to Development Applications that grants the Western Australian Planning Commission (WAPC) temporary decision-making powers to determine proposals over \$20 million in metropolitan Perth, and over \$5 million in regional areas.

The pathway is a temporary measure for job-creating projects that can support the State's economic recovery from the COVID-19 pandemic.

This application seeks assessment by the State Development Assessment Unit and determination by the WAPC under Part 17. Details on how this project contribute to the State's economic recovery from the COVID-19 pandemic and the wide reaching benefits for the state are outlined in Section 8.

#### 6.2.2 ENVIRONMENTAL PROTECTION ACT 1986 - SECTION 45C APPLICATION

In December 1998, the Environmental Protection Authority (EPA) granted Ministerial Approval (Ministerial Statement No.490) to construct the AMC Southern Harbour under Part 5 section 45(5) of the *Environmental Protection Act 1986*. The approval outlined conditions to manage the environmental impacts associated with the works.

Following the 1998 approval, three (3) S45C applications were assessed and approved for additional works in the AMC Southern Harbour as follows:

- August 2000 - Approval granted to stage construction, including substantial reductions in the overall footprint of the project.



- September 2006 – Approval granted to extend the Eastern Wharf, construct a floating dock, transfer system and interface with the existing wharf and deepening of the harbour.
- March 2009 – Approval granted to construct an additional wharf to the south of the Southern Wharf and associated dredging.

On 23 December 2020, DevelopmentWA and JTSI lodged a section 45C (S45C) application to make changes to the works approved by the section 45(5) statement and subsequent S45C applications for the assessment and approval of the proposed AMC Wharf 1 extension, new Finger Wharf and associated works. Approval of the S45C application is expected in February 2021.

Refer to **Appendix 3 – Status of Section 45C Application – Letter Confirmation**

### 6.2.3 CONTAMINATED SITES ACT 2003

#### LOT 804

DWER's *Contaminated Sites Act 2003* Basic Summary of Records for 124 (Lot 804) Quill Way Henderson outlines that a portion of Lot 804, located between the BAE facility and the waters of Jervoise Bay, are classified as “Remediated for restricted use” under the *Contaminated Sites Act 2003* as a result of the historical use of the land for marine and ship-building purposes over a period of approximately 40 years. Refer to **Figure 10** below.

Land use on the lots is restricted to commercial and industrial uses. Refer to **Appendix 4 – DWER Basic Summary Records**.

The proposed works on Lot 804 are remote from the portion of Lot 804 that is classified as “Remediated for restricted use”.

#### LOT 4552

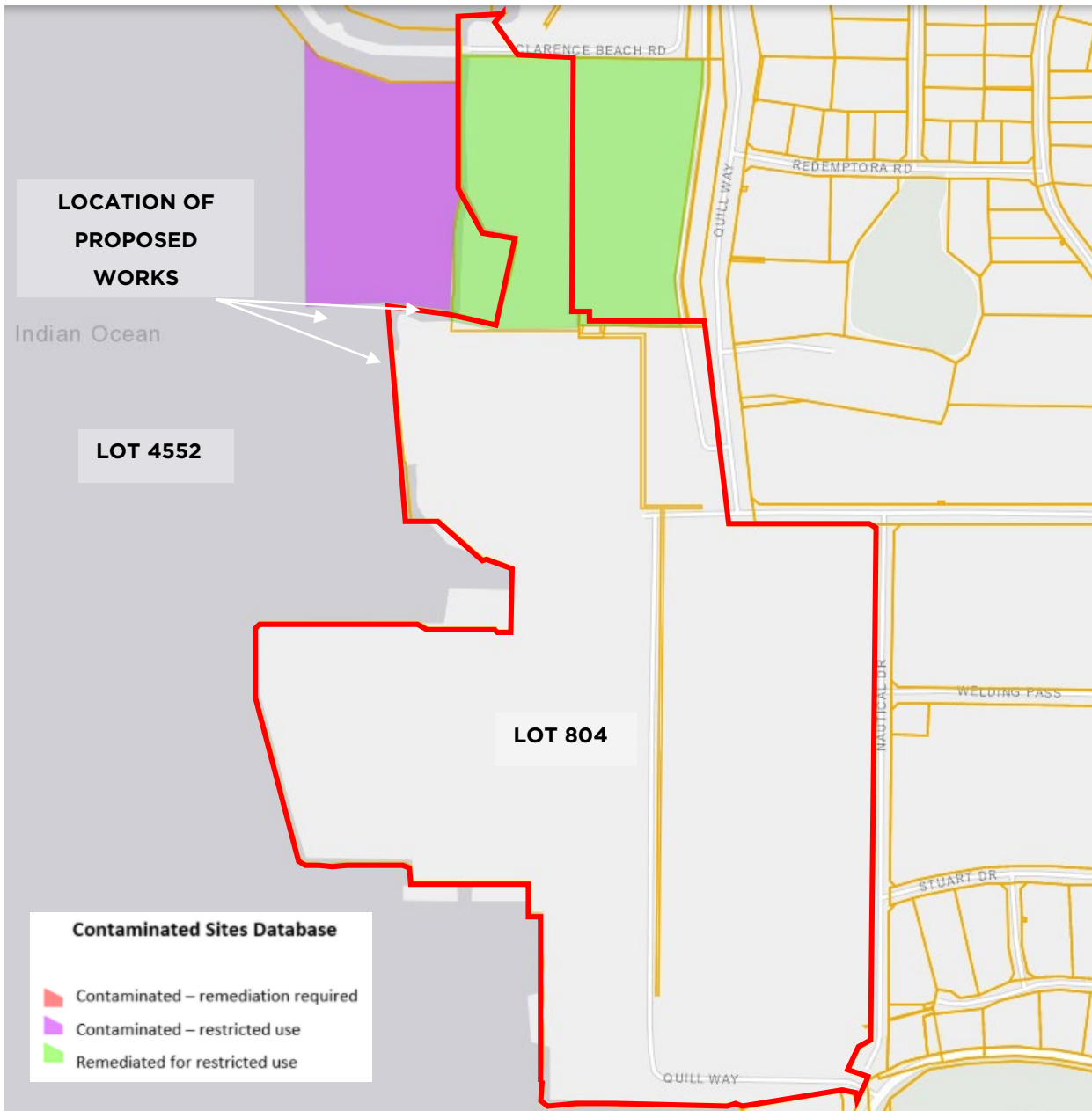
DWER's *Contaminated Sites Act 2003* Basic Summary of Records for Lot 4552 on Deposited Plan 220690 outlines that a portion of Lot 4552 (seabed), immediately west of the BAE facility, is classified as “Contaminated – restricted use” under the *Contaminated Sites Act 2003* as a result of the historical use of the land for marine and ship-building purposes over a period of approximately 30 years. Refer to **Figure 10** below.

The site is suitable for its current use as an industrial harbour, subject to implementation of the “Management Plan, Henderson Shipyard, 42 Quill Way, Henderson WA 6166 (Worley Parsons, June 2014) or any subsequent version of the plan. Refer to **Appendix 4 – DWER Basic Summary Records**.

As outlined in the letter enclosed at **Appendix 3** and in **Section 6.2.2** above, Advisian have prepared and lodged a S45C application that includes details on the outcome of investigations undertaken to date, including sediment sampling, impact assessment and a review of the approved construction and dredging management plans to ensure that environmental impacts, if any, can be managed to acceptable levels.



**FIGURE 10 DWER CONTAMINATED SITES DATABASE MAPPING**



Source: Department of Water and environmental Regulation Contaminated Sites Database,  
<https://dow.maps.arcgis.com/apps/webappviewer/index.html?id=c2ecb74291ae4da2ac32c441819c6d47>, 3 November 2020.

#### 6.2.4 METROPOLITAN REGION SCHEME

Lot 804 is wholly zoned “Industrial” and Lot 4552 is partially zoned “Industrial” (abutting Lot 804) and largely reserved “Waterways”.


The proposed works straddle land reserved “Waterways” and zoned “Industrial”.

Lot 804 abuts land and waters zoned “Industrial” and reserved:

- “Other Regional Road” – Cockburn Road
- “Parks and Recreation” and “Bushforever Site No. 346” – two Crown reserves (Lots 4431 and 15493)

Refer to **Figure 11 – Metropolitan Region Scheme – Clause 42 Certificate**.

**FIGURE 11 METROPOLITAN REGION SCHEME - CLAUSE 42 CERTIFICATE**



**Metropolitan Region Scheme**  
Form 5

## Scheme Certificate

In accordance with clause 42 of the  
*Metropolitan Region Scheme* the following information relates to:

Certificate:  
61032705

Receipt:  
None

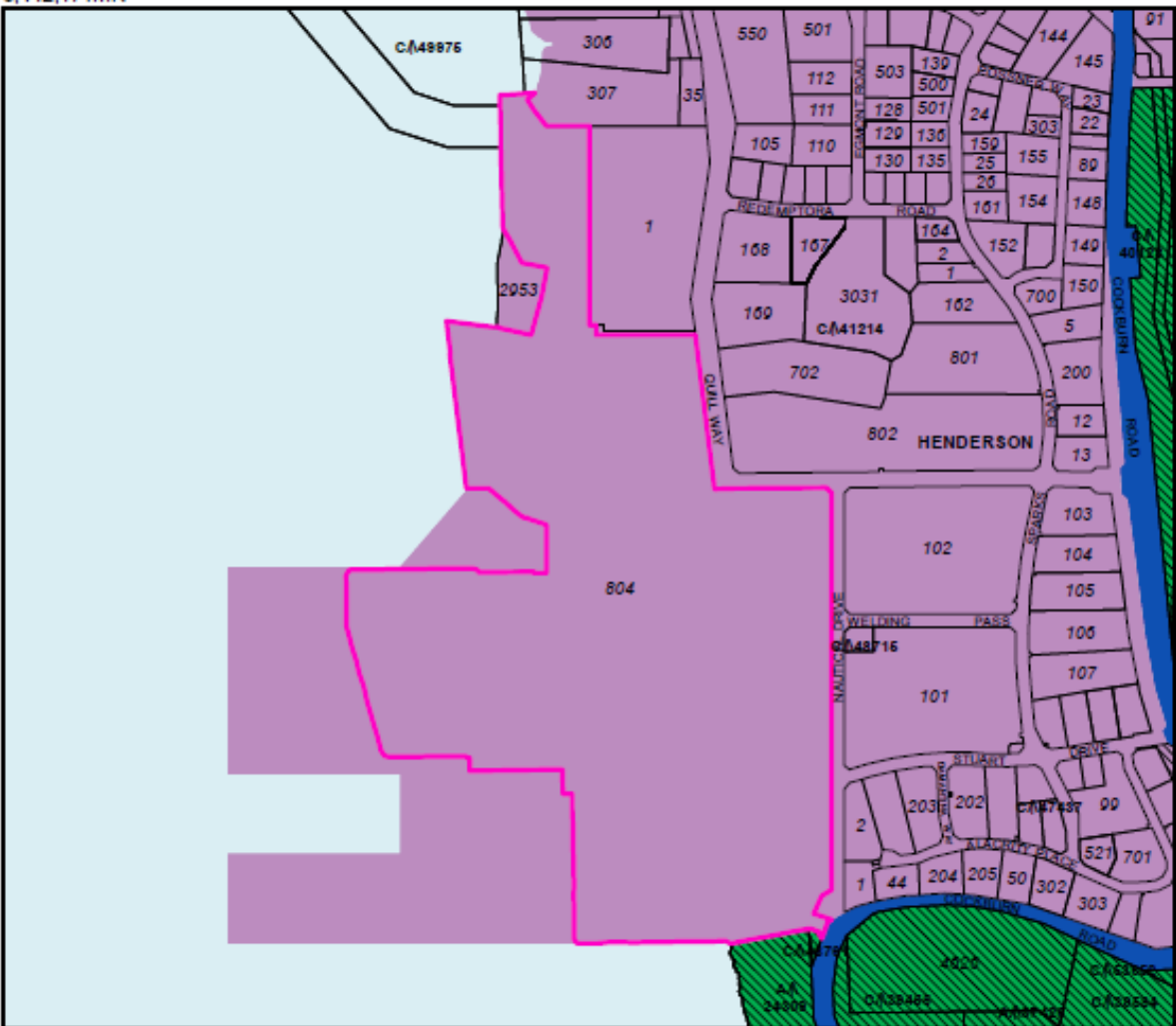
Date:  
23/10/2020

Location: Freshwater Pde, Claremont  
 Certificate of Title: Vol: 2615 Folio: 365  
 Deposited Plan: 38196

**Legend for reserved land and zones**

Bush forever areas	Other regional roads	Waterways
Industrial	Parks and recreation	

6,442,171mN

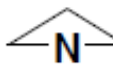


6,440,214mN

This certificate relates only to the provisions of the:  
**Metropolitan Region Scheme**  
and does not claim to indicate the land use allocation under  
any local government provision.


Produced by Data Analytics,  
Department of Planning, Lands and Heritage, Perth WA.

Base information supplied by:  
Western Australian Land Information Authority SLIP 1096-2018-1



0 130 260 390 520  
metres

Coordinates based on MGA Zone 50 (GDA 94)  
All dimensions are in metres  
Subject to survey



**Ms Sam Fagan**  
Secretary  
Western Australian Planning Commission

Source: Western Australian Planning Commission

+ 24



### 6.2.5 STATE PLANNING POLICY 3.7: PLANNING IN BUSHFIRE PRONE AREAS (SPP 3.7)

Two areas of Lot 804, in the north-eastern and south-eastern corners, are designated by the Fire and Emergency Services Commissioner as a 'Bushfire Prone Area'. Refer to **Figure 12** below.

**FIGURE 12 MAP OF BUSHFIRE PRONE AREAS 2019 (EXTRACT)**



Source: SLIP Map of Bushfire Prone Areas, <https://maps.slip.wa.gov.au/landgate/bushfireprone>, 3 November 2020

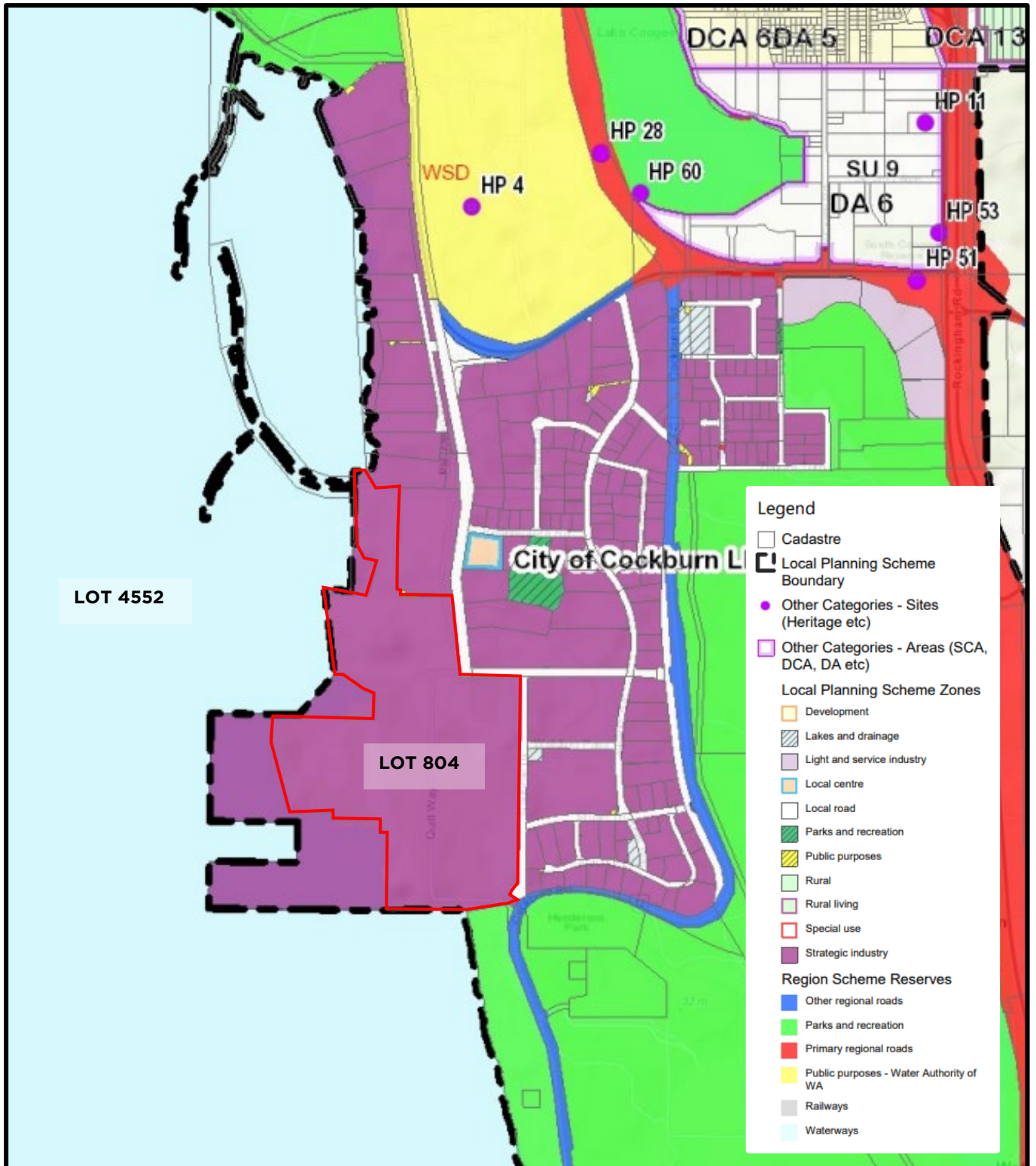
In accordance with State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7) a Bushfire Attack Level (BAL) Assessment is not required on the basis that the proposed works do not relate to a vulnerable or high risk land use or habitable building and do not result in an intensification of development or land use.

### 6.2.6 LOCAL PLANNING SCHEME

Lot 804 is wholly zoned "Strategic Industry" under the City of Cockburn's Town Planning Scheme No. 3 (TPS3). Refer **Figure 13 – City of Cockburn Town Planning Scheme No. 3 Map**.



**FIGURE 13 CITY OF COCKBURN TOWN PLANNING SCHEME NO. 3 MAP**



Source: DPLH PlanWA, 17 December 2020



The land was rezoned to “Strategic Industry” in late 2020 following the gazettal of Amendment No. 144 to TPS 3 (Amendment 144), which sought to normalise and simplify the local statutory planning framework within the Henderson Industrial area and the AMC.

Amendment 144 was initiated by Council on the 13 June 2019 to rezone the broader AMC area from “Special Use 2” and “Special Use 22” to “Strategic Industry” and delete the “Development Area” classifications from the affected sites.

The objective of the “Strategic Industry” zone is:

*“To provide for Strategic Industrial areas of State or Regional significance; and to provide for a range of industrial activities associated with defence, resource and marine activities.”*

The permissible and discretionary land uses within the “Strategic Industry” zone are outlined in the table below. Definitions are included for those uses relevant to the proposed works.

**TABLE 2 LAND USE PERMISSIBILITY IN THE STRATEGIC INDUSTRY ZONE**

LAND USE AND PERMISSIBILITY		LAND USE AND PERMISSIBILITY	
Civic Use	D	Industry: Light <i>“means an industry - (a) in which the processes carried on, the machinery used, and the goods and commodities carried to and from the premises do not cause any injury to or adversely affect the amenity of the locality. (b) the establishment or conduct of which does not, or will not, impose an undue load on any existing or proposed service for the supply or provision of essential services.”</i>	D
Educational Establishment	D	Industry: Service	D
Office	D	Fuel Depot	D
Lunch Bar	D	Storage Yard <i>“means premises used for the storage of goods, equipment, plant or materials.”</i>	D
Motor Vehicle Wash	D	Warehouse	D
Service Station	D	Transport Depot	P
Trade Display	D	Marine Engineering <i>“means the carrying out of any process for and incidental to the fitting out, maintenance and repair of ships, including the construction of boats, but excluding all blasting other than wet slurry blasting operations as defined by Clean Air Act Regulations.”</i>	P
Industry: General <i>“means an industry other than a cottage, extractive, general (licensed), light, mining, noxious, rural or service industry, or motor vehicle repair or motor vehicle wrecking.”</i>	D	Motor Vehicle Repair	D
Industry: General (Licensed) <i>“means an industry which is a category of prescribed premises set out in Schedule 1 of the Environmental Protection Regulations, notwithstanding the production or design capacity for each category of prescribed premises specified in the Schedule, but where a prescribed premises is also included in Schedule 2 of the Health Act, the Health Act prevails, for the purpose of the Scheme.”</i>	D		



## LAND USE

The proposed structures and areas of land reclamation will be used to support the continued and growing operations of the established ship building, fabrication and maintenance businesses co-located within the Fabrication Precinct of the AMC including “Marine Engineering” and “Storage Yard” activities.

## CAR PARKING

The majority of staff that will undertake activities on the land and infrastructure proposed by this application are attached to established businesses within the AMC and enjoy access to existing buildings, staff amenities and car parking, for example CIVMEC and Australian Submarine Corporation, and will not generate demand for additional car parking bays to be provided.

The operational arrangements managed by AMC Management (WA) for the use of the Common User Facility (including established and future wharves), including temporary leaseholds, provides for on-site parking on the hardstand within the lease area boundaries, ensuring that the land within the CUF can adapt to meet the requirements of a variety of uses and activities on an as-needs basis, thereby protecting its value and ability to accommodate projects of all sizes.

## DA15 STRUCTURE PLAN

On 12 February 2009, the City of Cockburn adopted a structure plan for the “Development Area 15” (DA15) precinct in accordance with the requirements of the DA15 provisions. Refer to **Figure 14** below.

Whilst the DA15 provisions no longer apply to Lot 804, they provide context to the over-arching intent and objectives of the AMC, the Common User Facility its relationship to the abutting Fabrication Precinct, described below:

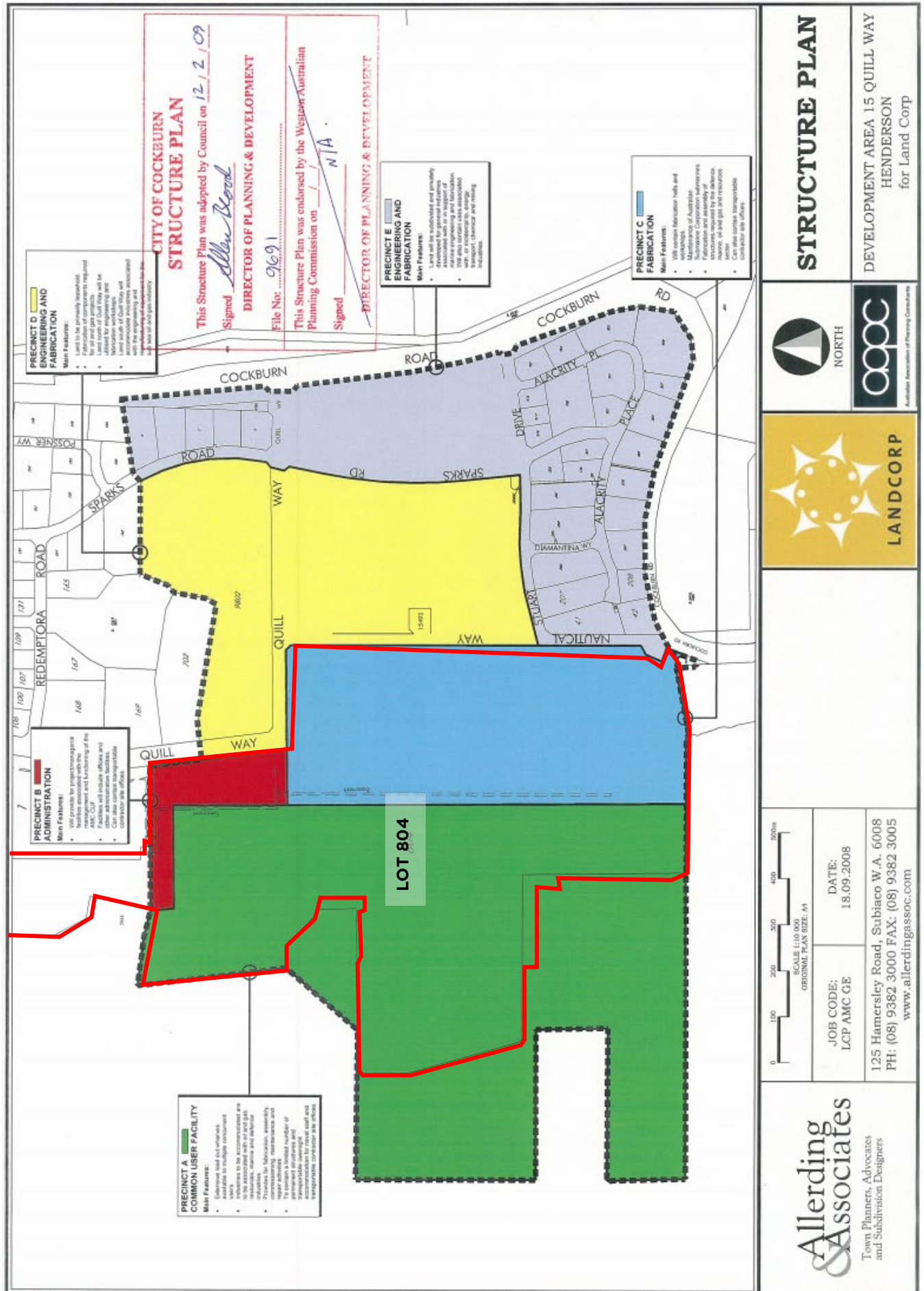
- Precinct A – Common User Facility, where the main features are:
  - Extensive load out wharves available to multiple users
  - The accommodation of industries associated with oil/gas, resources, marine and defence.
  - To provide for the fabrication, assembly, commissioning, maintenance and repair activities.
  - To contain a limited number of permanent structures and transportable overnight accommodation for naval staff and transportable contractor site offices.
- Precinct C – Fabrication, where the main features are:
  - To accommodate fabrication halls and workshops.
  - Maintenance of the Australian Submarine Corporation submarines.
  - Fabrication and assembly of structures require by defence, marine, oil/gas and resource sector.
  - To accommodate transportable contractor site offices.

The proposed works and use of the resulting infrastructure are entirely consistent with the intent of the DA15 Structure Plan.



FIGURE 14

DEVELOPMENT AREA 15 STRUCTURE PLAN

Source: [http://maps.cockburn.wa.gov.au/public80/hyperlinks/StructurePlans/HENDERSON\\_STRUCTURE\\_PLAN\\_\(2\)\\_\(2\).pdf](http://maps.cockburn.wa.gov.au/public80/hyperlinks/StructurePlans/HENDERSON_STRUCTURE_PLAN_(2)_(2).pdf)



## 7. PROPOSED WORKS

The key outcome of the proposed works is to increase wharf and berthing capacity at the AMC's CUF to:

- Support current RAN fleet sustainment and upgrade activities for the Anzac class.
- Support the Offshore Patrol Vessel (OPV) in-water commissioning activities.
- Address current berth capacity issues due to the increased level of Defence activity at the CUF.
- Support possible Full Cycle Docking (FCD) maintenance activities for the existing Collins class and future Attack class submarines (ACSM).
- Support future RAN fleet sustainment and upgrade activities, including Hobart class destroyers and future Hunter class frigates.<sup>5</sup>

The plans lodged in support of this application have been prepared in consultation with DevelopmentWA, AMC Management (WA) Pty Ltd, the Department of Jobs Tourism Science and Innovation and Defence West the proposed infrastructure meets the specifications for the Royal Australian Navy's (RAN) fleet of existing and future vessels.

A high level project description is outlined as follows and illustrated in **Figure 15** below:

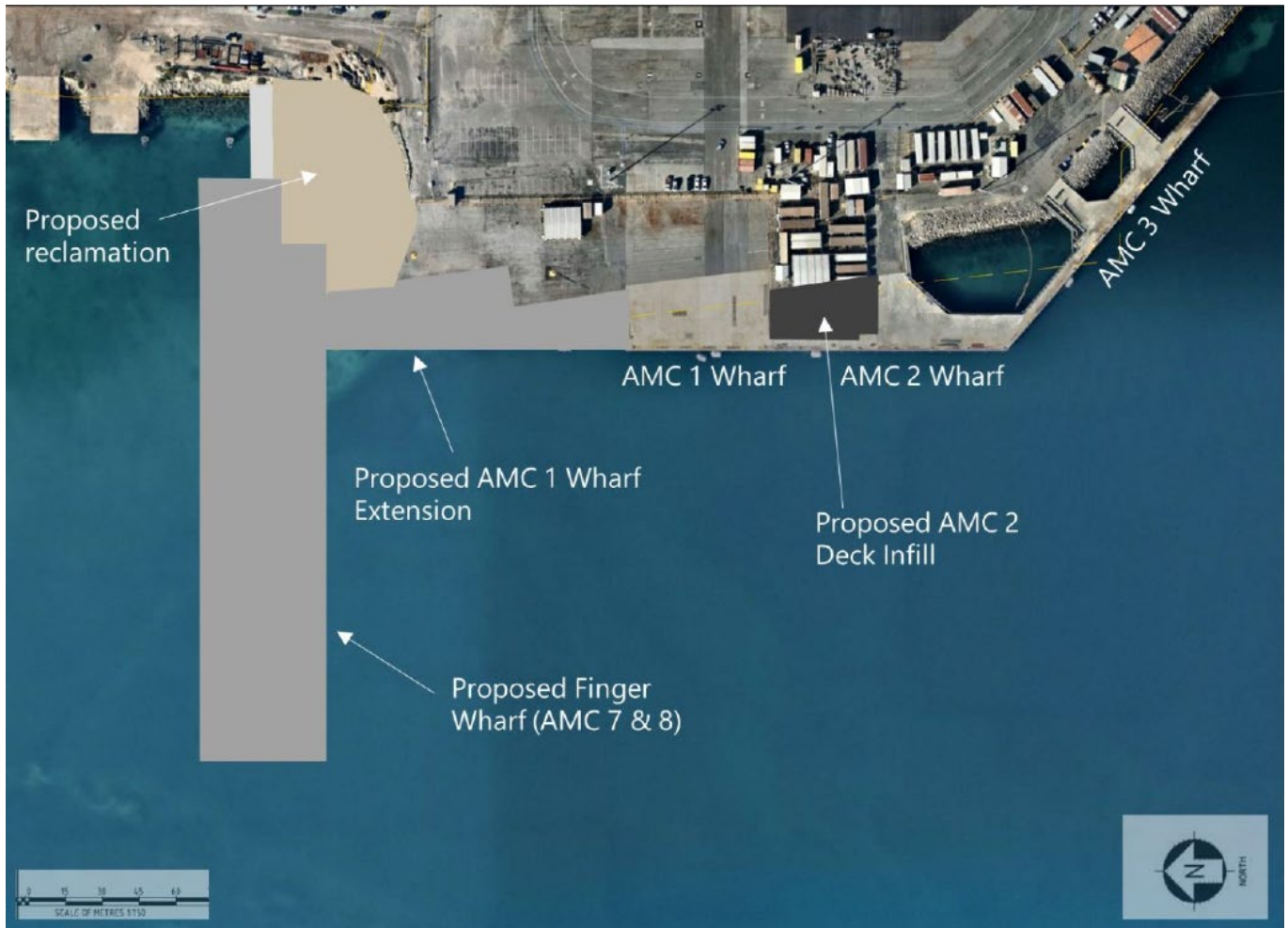
- Design and construction of an extension to AMC 1 wharf in a northerly direction.
- Design and construction of a new finger wharf heading in an east west direction providing two additional berths (AMC 7 & 8).
- Design and construction of land reclamation to the rear of the wharves, to cater for future offices for use by Defence and sustainment contractors, with provision of services to suit.
- Design of structural infill for the gap to the rear of AMC 2 wharf and additional removeable bollards along the berthing face of AMC 1 wharf.
- Design and construction of associated services upgrades – including power, water and secure communications to the existing AMC 1, 2 and 3 wharves and the new AMC 1 extension and design of associated services upgrades to the new AMC 7 & 8 wharves.<sup>6</sup>

<sup>5</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>6</sup> As above.



**FIGURE 15 PROJECT DESCRIPTION**



Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

The works are proposed to be constructed in two stages. A high level summary is illustrated on the General Arrangement Stage 1 and 2 plans contained in **Plan Set 1** and in **Figures 16 and 17** below.

**Stage 1 works:**

- AMC 1 wharf extension
- AMC 2 wharf deck infill
- Stage 1 land reclamation
- Stage 1 services compound
- Stage 1 dredging

**Stage 2 works:**

- New finger wharf (AMC 7 wharf and AMC 8 wharf)
- Stage 2 land reclamation
- Stage 2 services compound
- Stage 2 dredging

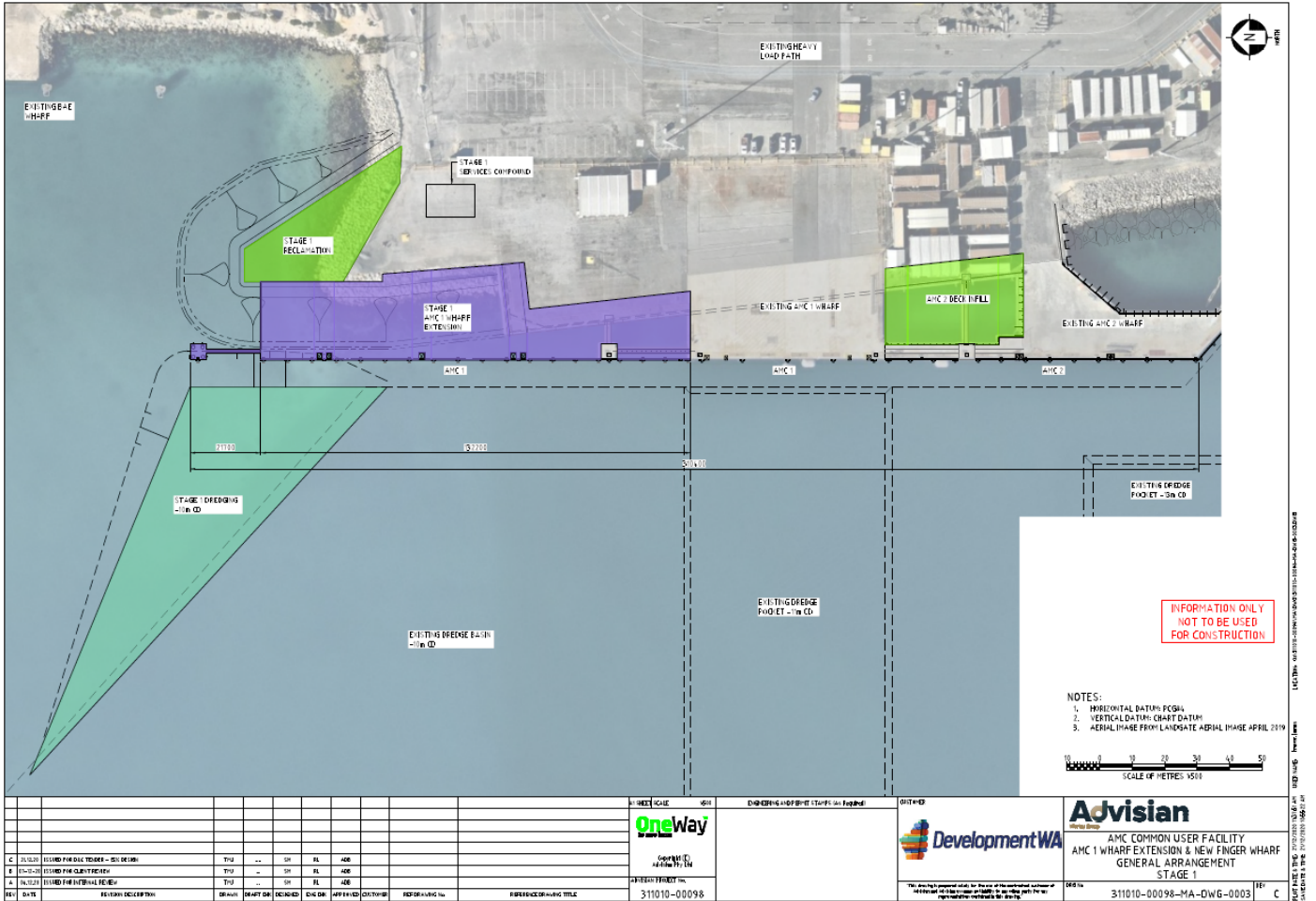
Works proposed within waters and/or on the seabed are the subject of a separate Section 45C application to the Environmental Protection Authority.

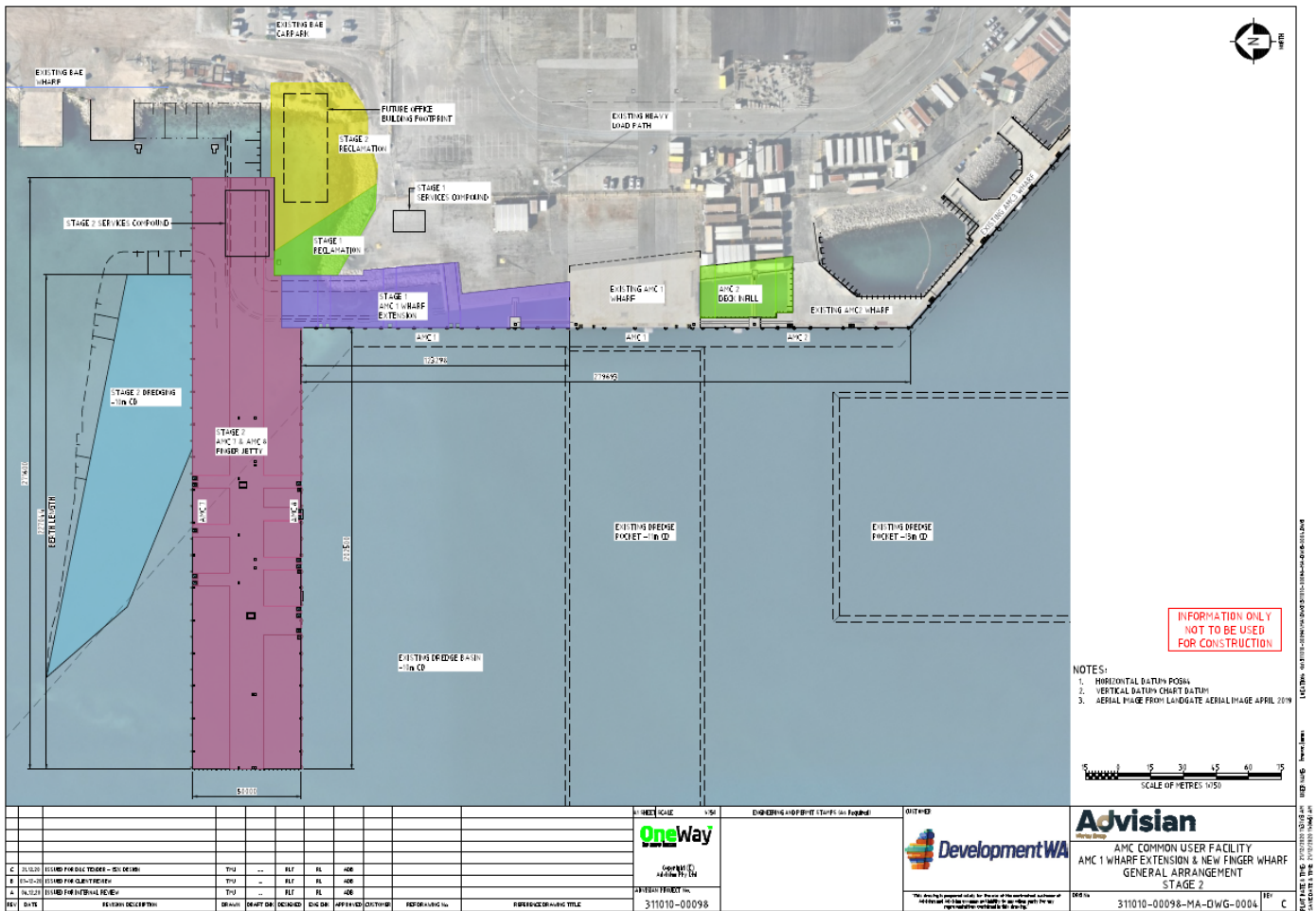


The proposed works will result in the creation of the following net lettable area:

- 5,900.00 m<sup>2</sup> – AMC 1 Wharf Extension
- 11,500.00m<sup>2</sup> – Finger Wharf (AMC 7 and 8)

**FIGURE 16 GENERAL ARRANGEMENT – STAGE 1**



**FIGURE 17 GENERAL ARRANGEMENT - STAGE 2**

## 7.1 USER REQUIREMENTS

### 7.1.1 AMC 1 WHARF EXTENSION

The AMC 1 Wharf Extension shall be designed to:

- Provide continuous berthing face and flexibility to cater for a range of Navy and commercial vessels.
- Cater for sustainment activities of a range of RAN vessels, including OPVs, Anzac class frigates, Hobart class destroyers and future Hunter class vessels.
- Over the combined length of the AMC 1 wharf extension and AMC 2 cater for at least two RAN vessels, with an overall length of around 310m.
- Provide adequate space at the rear of the wharf for sustainment activities, including enabling crane access along the length of the wharf.
- Maintain a dredge depth of -10 mCD along the length of the wharf, but design for a future dredge depth of -11.5 mCD.
- Tie into the existing AMC 1 wharf at the same elevation and incorporate the existing northernmost dolphin.
- Minimal disruption to existing users of the CUF facility during the construction period.



- Provision of services including 50Hz and 60Hz power supply, wharf lighting, communications and security, potable and non-potable water, sewer, and fire water for connection to vessels.<sup>7</sup>

### 7.1.2 FINGER WHARF - AMC 7 AND 8 WHARVES

The new AMC 7 & 8 Finger Wharf shall be designed to:

- Provide continuous berthing face of 200m in length and maximum width of 50m with flexibility to cater for a range of Navy and commercial vessels.
- Cater for sustainment activities of a range of RAN vessels, including OPVs, Anzac class frigates, Hobart class destroyers, future Hunter class vessels, Collins class and future Attack class submarines.
- Provide adequate space at the rear of the wharf for sustainment activities, including enabling crane access along the length of the wharf and the turning of a 19m long semi-trailer at the far end. The design should cater for the possibility of two vessel sustainment contractors working on AMC 7 & 8 at any one time.
- Maintain a dredge depth of -10 mCD, but design for a future dredge depth of -11.5 mCD.
- Tie into the extended AMC 1 wharf at the same elevation.
- Minimal disruption to existing users of the CUF facility during the construction period.
- Provision of services including 50Hz and 60Hz power supply, wharf lighting, communications and security, potable and non-potable water, sewer and fire water for connection to vessels.
- Provision of capability for services extension to future wharves AMC 9 and 10 (addition of wharf extension westwards) including HV power, communications and security, potable and non-potable water, sewer and fire water for connection to vessels.<sup>8</sup>

### 7.1.3 LAND RECLAMATION AND FUTURE OFFICES

The new reclamation shall be designed to:

- Cater for the accommodation of permanent, secure offices for Defence and their vessel sustainment contractors, for around 200 people.
- The offices shall provide for:
  - A 90:10 split between open and cellular office space, with two small meeting rooms and one larger conference meeting room.
  - End of trip facilities including showers and toilets.
  - Breakout areas for lunch connected with a kitchen area.
  - Refrigerated storage for ship cold food supplies.
  - Hazchem/dangerous goods store.
  - Quarantine waste facilities.
  - Galley crew break rooms.
  - Shore side laundry facility for ship and possibly industry use if required.
- Car parking.

<sup>7</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>8</sup> Source: As above.



- Provision of services including 50Hz power supply, yard lighting, communications and security, potable and non-potable water, sewer and fire water.<sup>9</sup>

The future office buildings do not form part of the proposed development for this application, but some key assumptions have been made to assist with the sizing and provision of services to a defined location, in the new reclamation area.

#### 7.1.4 SERVICES UPGRADES FOR AMC 1, 2 AND 3

The upgrades to the existing services for AMC 1, 2 and 3 wharves shall include:

- Power supplies – adjustments to 60Hz connections to the vessels.
- Power supplies – 50Hz upgrade to support adjustments to 60Hz supplies.
- Fresh fire water at existing cope boxes to supplement saltwater cooling.<sup>10</sup>

#### 7.1.5 AMC 2 WHARF DECK INFILL

The AMC 2 wharf deck infill shall be designed to:

- Provide a structural deck for infill of the gap to enable crane and vehicle access.
- Tie into the existing AMC 1 and 2 wharves at the same elevation.
- Cater for the existing and proposed services feeding to the cope box in the form of conduits through the deck structure.<sup>11</sup>

#### 7.1.6 AMC 1 WHARF ADDITIONAL REMOVABLE BOLLARDS

The AMC 1 wharf additional removable bollards shall be designed to:

- Provide the attachments and any cast-in items to enable the installation of removable bollards on the existing heavy load out wharf.
- Cater for a maximum of four additional bollards.
- Cast-in items are to be flush with the wharf ground surface so as to not restrict future load outs.

### 7.2 SCOPE OF WORK

A full set of engineering drawings are provided under separate confidential cover.

#### 7.2.1 AMC 1 WHARF EXTENSION

Works associated with the AMC 1 wharf extension are as follows:

- Removal of existing revetment rock armour and underlayers. Assess whether the material can be reused and store for reuse or dispose of appropriately.
- Removal of catwalks, mooring line support pipe and other marine furniture which will not be reused in the Works.

<sup>9</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>10</sup> Source: As above.

<sup>11</sup> Source: As above



- Localised dredging to achieve the required design seabed levels, to tie in with the current berth pockets in the CUF central harbour. It is noted the toe of the dredge pocket does not line up with the fender line. Disposal of the material onshore.
- Provision of any temporary snap back protection to existing mooring bollards during construction.
- Provision of a new tubular piled reinforced concrete deck structure including tie-in with the existing AMC 1 wharf, mooring dolphin and rear sheet pile wall. A land backed wharf solution should not be considered due to issues related to wave reflection and hydrodynamics in the central harbour area.
- Account for the existing sheet pile wall in the design and construction of the deck structure. The proposed deck structure will be independently supported and not impose loads which would compromise the integrity of the existing sheet pile structure and its supports.
- New mooring dolphin and catwalk with pedestrian access from the wharf extension. This mooring dolphin will be either incorporated into the finger wharf structure in the future, or demolished.
- Provision of mooring bollards.
- Provision of marine fendering systems to cover the range of design vessels and capability to attach removable pneumatic fenders. The berthing face of the wharf shall cater for the pneumatic fenders over the extent as shown on the 15% design drawings.
- Provision of removable handrail along the berthing face of the wharf and fixed guardrail (where required).
- Provision of emergency access ladders and life buoys.
- Provision of a gangway for vessel access.
- Provision of cast in attachments to the wharf structure for fixing of floating booms for oil spill management.
- Extension to the existing impressed current cathodic protection system for the marine structures.
- Cathodic protection earth bonding on the wharf for ship cathodic protection systems.
- Earthworks associated with forming reclamation, possible re-use of dredged material and tie-in with all existing levels.
- Provision of a rock armoured revetment, with associated underlayers and geotextile.
- Provision of pile sleeves in the revetment for future AMC 7 & 8 Finger Wharf.
- Extension of asphalt pavement directly behind the wharf extension.
- Installation of stormwater drainage, including a gross pollutant trap.
- Provision of services, contained in conduits cast into the structure, as follows:
  - Power supplies – 50Hz for general use (e.g. power tools, maintenance equipment, servicing facilities and the like) on the wharf and yard areas.
  - Power supplies - 50Hz for use on the vessels.
  - Power supplies - 60Hz for use on the vessels.
  - Wharf lighting.



- Communications infrastructure for connection to vessels and other facilities on the wharf and yard areas.
- Security of the wharf and yard areas.
- Potable and non-potable water for use on the wharf, in yard areas, as well as on vessels
- Sewer and drainage from buildings located on wharves or in the yard.
- Fire water for landside protection.
- Saltwater cooling / fire protection for connection to vessels.
- The existing storm bollards, to the rear of the wharf, shall remain in place. <sup>12</sup>

## 7.2.2 FINGER WHARF - AMC 7 AND 8 WHARVES

Works associated with the AMC 7 and 8 Finger Wharf are as follows:

- Demolition of the existing mooring dolphin
- Localised dredging to achieve the required design seabed levels, and disposal of the material onshore
- Provision of a new tubular piled reinforced concrete deck structure including tie-in with the existing AMC 1 wharf extension. A land backed wharf solution should not be considered due to issues related to wave reflection and hydrodynamics in the central harbour area
- Provision of mooring bollards
- Provision of marine fendering systems to cover the range of design vessels and cater for removable pneumatic fenders and panelling to support removable vertical hydro-pneumatic fenders. The berthing face of the wharf shall cater for the pneumatic fenders over the extent as shown on the 15% design drawings
- Provision of removable handrail along the berthing face of the wharf and fixed guardrail (where required).
- Provision of emergency access ladders and life buoys.
- Provision of cast in attachments to the wharf structure for fixing of floating booms for oil spill management.
- Provision of new impressed current cathodic protection system for the marine structures.
- Cathodic protection earth bonding on the wharf for ship cathodic protection systems.
- Provision of services, contained in conduits cast into the structure, as follows:
  - Power supplies - 50Hz for general use (e.g. power tools, maintenance equipment, servicing facilities and the like) on the wharf.
  - Power supplies - 50Hz for use on the vessels.
  - Power supplies - 60Hz for use on the vessels.
  - Wharf lighting.
  - Communications infrastructure for connection to vessels and other facilities on the wharf
  - Security on the wharf.
  - Potable and non-potable water for use on the wharf, as well as on the vessels.
  - Sewer drainage from buildings located on the wharves.

<sup>12</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C



- Fire water for landside protection.
- Fire water protection for connection to vessels.<sup>13</sup>

### 7.2.3 LAND RECLAMATION AND FUTURE OFFICES

Works associated with the reclamation and provisions for future offices are as follows:

- Removal of existing revetment rock armour and underlayers where required, store for re-use or dispose of appropriately.
- Earthworks associated with forming reclamation, possible re-use of dredged material and tie-in with all existing levels.
- Provision of a new revetment.
- Provision of stormwater drainage.
- Provision of the following services:
  - Power supplies – 50Hz for general use in yard areas, in temporary buildings and new permanent buildings.
  - Yard lighting.
  - Communications infrastructure for yard areas, in temporary buildings and new permanent buildings.
  - Security of the yard areas.
  - Potable and non-potable water for yard areas, in temporary buildings and new permanent buildings.
  - Sewer from the buildings located in the yard.
  - Fire water for yard protection and extension to permanent buildings.<sup>14</sup>

### 7.2.4 SERVICES UPGRADES FOR AMC 1, 2 AND 3

Works associated with AMC 1, 2 and 3 wharves services upgrade comprise:

- Power supplies – adjustments to 60Hz connections to the vessels
- Power supplies – 50Hz upgrade to support adjustments to 60Hz supplies
- Fresh fire water at existing cope boxes to supplement saltwater cooling.<sup>15</sup>

### 7.2.5 AMC 2 WHARF DECK INFILL

Works associated with the AMC 2 wharf deck infill is as follows:

- Removal of catwalk, guard rail, cable tray, structural supports and other marine furniture which will not be reused in the Works.
- Provision of a new tubular piled reinforced concrete deck structure including tie-in with the existing sheet pile wall.
- Account for the existing sheet pile wall, in the design and construction of the deck structure. The proposed deck structure will be independently supported and not impose loads which would

<sup>13</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>14</sup> Source: As above

<sup>15</sup> Source: As above.



compromise the integrity of the existing sheet pile structure and its supports by ensuring no additional loads are applied.

- Installation of ducts through the structure and installation of the services feeding to the existing cope box. These services include sewer, firewater and low voltage electrical.<sup>16</sup>

### 7.2.6 AMC 1 WHARF ADDITIONAL REMOVABLE BOLLARDS

Works associated with the AMC 1 wharf additional removable bollards is as follows:

- Installation of the required attachments and any cast-in items to enable the installation of removable bollards.
- Provision of mooring bollards and any fixings to suit the cast-in items.<sup>17</sup>

## 7.1 DEVELOPMENT PERSPECTIVES

The two images below illustrate the indicative outcome of the proposed works and how the work relates to the existing wharves and hardstand areas.

**FIGURE 18 INDICATIVE DEVELOPMENT PERSPECTIVES**



Source: DevelopmentWA

<sup>16</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C

<sup>17</sup> Source: As above.



Source: DevelopmentWA

7.2 CONSTRUCTION SCHEDULE

An indicative project timeframe, including commencement of construction is outlined below.

ITEM	INDICATIVE / CONFIRMED TIMING
Invitation to Tender	Released December 2020
Submission of Design and Construct Tender	February 2021
Announcement of preferred respondent	March 2021
Construction works mobilisation	July 2021
Commencement of works on site	August 2021



## 8. COVID-19 ECONOMIC RECOVERY

### 8.1 ECONOMIC STIMULUS

The extension of AMC Berth 1 is required to support the maintenance program for the RAN Anzac class frigates, which generates approximately 650 jobs.

Together, the extended AMC Berth 1 combined with Berth 2 will provide a 280 metre long wharf, enabling multiple naval vessels to be docked alongside for maintenance including the future Hunter class frigates, which will be sustained in Western Australia generating further significant jobs.

This berth extension will also enable the Hobart class destroyers to be docked alongside. Defence has indicated that these destroyers will undergo a combat system upgrade valued at over \$4 billion from the mid-2020s, which would provide significant opportunities for the local defence industry and create hundreds of jobs.

The AMC Berth 1 extension is also required to support the in water commissioning of the \$4 billion Arafura class OPV program, which will see ten (10) vessels constructed at the Cvmec shipbuilding facility at the AMC, with the first to be launched in September 2022 (estimated to deliver 700 jobs).

The design of the new finger wharf will support Full Cycle Docking maintenance activities for Collins class and future Attack class submarines, estimated by ACIL Allen Consulting to generate up to 3,000 jobs.

The proposed works are designed, funded and shovel-ready and will deliver a broad range of benefits to the state including, but not limited to:

- Job creation
- Expanding WA's defence industry capability
- Strengthening the local skills base in marine repair, maintenance and construction
- Increase skills and training opportunities
- Complement and encourage private investment

#### 8.1.1 COMMITTED FUNDING

Refer to **Appendix 5** for a copy of the Premier's media statement of the announcement of a \$330m investment in major infrastructure and planning projects as a part of the WA Recovery Plan, including \$87.6m allocated to upgrades within the AMC (including \$84m for capital works).

**Appendix 5** also includes a copy of the relevant page from the WA Government Budget Paper highlighted committed funding in the 2020-21 and 2021-22 budgets for upgrade works at the AMC.

#### 8.1.2 SHOVEL-READY PROJECTS

DevelopmentWA opened an invitation for construction contractors to tender on Stage 1 of the proposed works with submissions closing in early March 2021, following an extension to the submission period. Refer to **Figure 19** below.


**FIGURE 19      EXPRESSION OF INTEREST: WHARF EXTENSION**



GOVERNMENT OF  
WESTERN AUSTRALIA



**AUSTRALIAN  
MARINE  
COMPLEX**

WESTERN AUSTRALIA

# EXPRESSIONS OF INTEREST



## WHARF EXTENSION DESIGN AND CONSTRUCTION

DevelopmentWA is seeking submissions by marine contractors for Expressions of Interest to design and construct the extension of an existing wharf and the design of an adjoining finger wharf in the Australian Marine Complex, Henderson, WA.

Interested parties must download the EOI document via TenderLink [tenderlink.com/developmentwa](https://tenderlink.com/developmentwa)

**Submissions close 2:00PM (AWST)  
Tuesday 24 November 2020.**

DEWW 0580B

*Industrial Lands Authority*

Shaping our State's future



DevelopmentWA

Source: DevelopmentWA



## 8.2 JOB CREATION

The Department of Jobs, Tourism, Science and Innovation advise that the proposed works and resulting increased capacity at the AMC CUF will create/support the following jobs:

- 260 jobs -during construction
- 2,250 jobs - existing/ongoing jobs comprising:
  - 650 Anzac class sustainment
  - 500 Collins class mid cycle docking
  - 400 Arafura class OPV build program
  - 700 Cape class and Guardian class build programs (Austral)



## 9. CONCLUSION

The AMC is a world class centre for maritime-related manufacturing, fabrication, assembly, maintenance and technology that services the defence, marine, oil/gas and resource industries and is one of two locations identified for shipbuilding under the Commonwealth's first Naval Shipbuilding Plan.

To ensure Western Australia is ready to support this future naval work and optimise defence investment it is critical that AMC infrastructure matches current and future requirements of Defence.

Key to the success of the AMC and the co-located operators is the Western Australian Government owned Common User Facility (CUF), which commenced operations in 2003 and provides facilities for multiple users engaged in strategic maritime related activities. Common user facilities include hardstand laydown areas, a fabrication hall, workshops, offices, a floating dock for ship-lifting, wharves and vessel berths.

The existing wharves and the Floating Dock, that form part of the AMC Common User Facility, enable ships and other vessels to be docked and/or lifted out of the water and moved to shipbuilding facilities (within the AMC), for maintenance.

The proposed wharf extension, finger wharf and associated works form part of a larger program of works that will enable the AMC to meet committed and future Defence requirements and provide ongoing support for commercial ship fabrication and maintenance.

The key objectives of the project are:

- Support current RAN fleet sustainment and upgrade activities for the Anzac class.
- Support the Offshore Patrol Vessel (OPV) in-water commissioning activities.
- Address current berth capacity issues due to the increased level of Defence activity at the CUF.
- Support possible Full Cycle Docking maintenance activities for the existing Collins class and future Attack class submarines (ACSM).
- Support future RAN fleet sustainment and upgrade activities, including Hobart class destroyers and future Hunter class frigates.<sup>18</sup>

The plans lodged in support of this application have been prepared in consultation with DevelopmentWA, AMC Management (WA) Pty Ltd, the Department of Jobs Tourism Science and Innovation and Defence West the proposed infrastructure meets the specifications for the Royal Australian Navy's (RAN) fleet of existing and future vessels.

The proposed works will be delivered by a building contractor, on behalf of DevelopmentWA, through a Design and Construct model. Once engaged, the building contractor undertakes detailed design, satisfies conditions of development approval and undertakes construction through to the completion and delivery.

<sup>18</sup> Source: Advisian AMC 1 Wharf Extension and New Finger Wharf: Phase 1 Report – Scope of Work and Basis of Design, 21 December 2020, Revision C



The plans that form a part of this development application are intended to reflect the minimum standard of design and construction for the proposed works and have been prepared to support both the development application and to accompany the design and construct (D&C) tender invitations issued by DevelopmentWA for the project.

Construction is programmed to commence in August 2021, subject to securing approval and satisfying conditions, in support of the State Government's commitment to expedite economic recovery through job creation following the impacts of COVID-19.

Considering the preceding material and enclosed design drawings, the support of, and approval from, the Western Australian Planning Commission is sought for the proposed works at the earliest opportunity.