Outer Harbour Port Development, Kwinana

Application Number: **02228** Commencement Date: **23/01/2024** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Outer Harbour Port Development, Kwinana

1.1.2 Project industry type *

Transport - Water

1.1.3 Project industry sub-type

Port

1.1.4 Estimated start date *

01/01/2027

1.1.4 Estimated end date *

01/01/2092

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The Director General of the Department of Transport on behalf of the State of Western Australia (the Proponent) proposes to construct and operate a new multimodal port in the Kwinana Industrial Area (KIA), approximately 30 kilometers south of Perth, Western Australia.

The Proposed Action is the response to the efficiency, transport access and urban amenity issues facing the existing Inner Harbour at Fremantle and surrounding residential community. The Proposed Action will provide the State with a future-proofed and internationally competitive port to service container trade, with efficient road and rail transport links separated from housing and other sensitive receptors; strategically co-located in a heavy industrial area with available industrial land.

The Proposed Action includes:

- A port facility.
- Adjacent areas of landside development.
- An offshore breakwater.
- Dredging for a second main channel from the Indian Ocean to Cockburn Sound, which will be additional and parallel to the existing Success Channel.
- Dredging for access channels, turning basins and berthing areas adjacent to the port facility.
- Use of dredge material for beneficial re-use (primarily reclamation) and, where required, placement in approved marine placement areas (yet to be defined).
- Removal of the disused Kwinana Bulk Berth 1 (KBB1) Jetty.
- Removal of the KBB2 Jetty, with replacement infrastructure to be constructed as a component of the port facility.
- Connections to existing road and rail infrastructure up to the vicinity of Rockingham Road.
- Relocation, removal or upgrade of existing infrastructure, structures and buildings.
- Temporary construction infrastructure.
- Maintenance of all infrastructure and assets, including maintenance dredging.

The Proposed Action project area is approximately 1683 hectares (ha) in total, comprising two discrete areas; the port (841 ha) and the second main channel (842 ha). The location and extent of the project area is shown in **Attachment (Att.) A - Figures, Figure 1**. To familiarise the reader with the local area, a 360 degree aerial image from the approximate port location can be viewed online using Link #1 “Westport 360 Images_16.01.2024”.

The terrestrial elements of the Proposed Action are located within an area of existing heavy industrial land uses within the KIA, serviced by existing road and rail infrastructure. The marine elements of the Proposed Action are primarily located within Cockburn Sound adjacent to the KIA, whilst the second main channel extends from the northern boundary of Cockburn Sound to the Indian Ocean, extending across Owen Anchorage and Gage Roads.

The Proposed Action is currently at a preliminary design stage (15% of total design effort) and will be subject to a future detailed design process. Given the potential variability and changes that may arise as the design is further developed over time, **indicative** footprints have been specified at this stage. The indicative footprints are shown in **Att. A - Figures, Figure 2** and **Figure 3.**

Preliminary artist impressions are provided in **Att. B - Artist Impressions**, whilst a video flythrough can be viewed online using Link #2 “Westport Preferred Design Flythrough".

The Proposed Action includes the below physical elements within the project area:

- **Port facility (indicative footprint 276 ha)** to be used by ships to berth and then unload and load goods, primarily containers, with intermodal facilities provided for freight road and rail connectivity. The port facility will be situated on reclaimed land, to be constructed through beneficial reuse and placement of dredge material from capital dredging. Four container ship berths are provided along the main quay line, serviced by ship to shore cranes, with adjacent container stacking areas. Two bulk-goods ship berths are also provided on the southern quay line to replace the existing KBB2 Jetty, which will service the existing Fremantle Ports Kwinana Bulk Terminal via a conveyor corridor.
- **Offshore breakwater (indicative footprint 22 ha)** situated approximately 1km offshore from the port facility to protect ships accessing the port facility from wind and waves to maximise port operability. Based on the preliminary design, the breakwater will be up to 2.6 km long and up to 115 m wide. The

Proponent is investigating opportunities to minimise environmental impacts and provide beneficial environmental and social uses of the breakwater.

- **Landside development (indicative footprint 89 ha).** Where the rear of the port facility meets the existing shoreline, a landside development area extends across an east-west corridor to provide connectivity to existing road and rail network infrastructure, up to the vicinity of the intersection of Anketell Road and Rockingham Road. The landside development area will support road and rail connections, empty container parks, truck marshalling areas, ancillary buildings and other infrastructure.
- **Access channels, turning basins and berthing areas, including navigational aids (indicative footprint 235 ha).** Ships accessing the port will navigate from the central portion of Cockburn Sound to the port facility via two separate access channels; one access channel to the container berths (which also provide through-access to the existing Calista Channel) and another access channel to the bulk-goods berths. A turning basin and berthing areas are provided for each access channel. The access channels, turning basins and berthing areas will be constructed and maintained to variable depths, up to a maximum of -17.4 m chart datum.
- **Second main channel, including navigational aids (indicative footprint 626 ha)** which will be dredged to provide access from the Indian Ocean to Cockburn Sound. The second main will be wider and deeper than the existing sole channel (Success Channel) that currently provides large vessel access to Cockburn Sound from the north, to facilitate larger capacity ships. The second main channel will also reduce operational risk and increase operational capacity by providing a second point of access into and out of Cockburn Sound. The preliminary design identifies the second main channel to be approximately 21 km in length, with a variable width between 250-470 m (including batters), as shown in **Att. A - Figures, Figure 4**. The minimum channel design depth is -17.9 m chart datum, with some sections being deeper up to a maximum design depth of -19.5 m chart datum.

The Proposed Action includes the following construction elements:

- **Capital dredging** (total volume estimated to be up to 35 million cubic metres). This estimate is based on the current 15% preliminary design stage, and therefore is subject to variability which will be refined through the future detailed design stage. Dredge material will be beneficially re-used (primarily reclamation) and, where required, placed in approved marine placement areas (yet to be defined). The Proponent is also investigating additional opportunities for other targeted beneficial re-usage, for example beach nourishment and seagrass habitat restoration, subject to dredge material suitability and availability.
- **Reclamation works** for the port facility and offshore breakwater, using dredge material.
- **Terrestrial bulk earthworks**, within the port facility and landside development area.
- **Pile driving works**, to construct the port facility quay lines.
- **Relocation, removal or upgrade of existing infrastructure, structures and buildings**. This will include removal of KBB1 (disused) and KBB2, as well as existing structures within the landside development area.
- **Temporary construction infrastructure**, including staging and laydown areas.

Preliminary schedule estimates indicate construction may take up to 15 years in total, inclusive of commissioning.

With respect to operational elements:

- The ultimate operational lifespan of the port will be subject to future State Government decision making. The port assets have a design lifespan of at least 50 years.
- The Proposed Action includes maintenance dredging of the second main channel, access channels, turning basins and berthing areas. Maintenance dredging requirements (over the long-term operational lifespan of the port) are not yet fully defined and maintenance dredging will be undertaken as required to support future port operations and maintain capital dredge widths and depths.

The Proposed Action is a stand-alone action and is not a component of a larger action, as it does not rely on, nor is it co-dependent on, any additional actions to be undertaken before or after for it to be viable. The Proposed Action (i.e. construction and operation of the port) can be implemented to connect into the existing road and rail network. Any future road and rail infrastructure network upgrades outside of the project area that may be progressed would be done so by separate proponents to service the overall Perth South West road and rail network needs; associated with improving access, improving safety outcomes and accommodating the predicted increased traffic demand associated with population and economic growth.

Assessment pathway

The WA Environmental Protection Authority is also assessing the Proposed Action, through a Public Environment Review pathway, pursuant to the WA *Environmental Protection Act 1986* (assessment number 2416).

The Proposed Action is likely to be a Controlled Action. The Proponent requests that the determined EPBC Act assessment pathway is through an accredited WA assessment process.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

WA *Environmental Protection Act 1986*

The Proponent has also referred the Proposed Action to the WA Environmental Protection Authority, pursuant to the WA *Environmental Protection Act 1986*. On 27 March 2024, the EPA determined that the Proposed Action requires assessment through a Public Environmental Review, which is the highest level of assessment and was specifically requested by the Proponent.

In addition, subject to a EPBC Act 'Controlled Action' determination, the Proponent has also requested the EPA to consider MNES through an accredited WA assessment process. This request is also made to DCCEEW, consistent with pre-referral meeting discussions.

WA - other legislation

In addition to the primary approvals under the EP Act and EPBC Act, the Proposed Action may also require various secondary approvals and consents under other WA legislation, including:

- *Aboriginal Heritage Act 1972*
- *Environmental Protection Act 1986* (Part V)
- *Planning and Development Act 2005*
- *Main Roads Act 1930*
- *Contaminated Sites Act 2003*
- *Government Railways Act 1904*
- *Rail Freight System Act 2000*
- *Public Works Act 1902*
- *Rights in Water and Irrigation Act 1914*
- *Biodiversity Conservation Act 2016*
- *Dangerous Goods Safety Act 2004*
- *Port Authorities Act 1999*
- *Fish Resource Management Act 1994*

- *Aquatic Resources Management Act 2016.*

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

The Proposed Action has potential to impact Matters of National Environmental Significance listed under the EPBC Act. As such, the EPBC Act is relevant to the Proposed Action and this EPBC Act referral has been prepared for the Proposed Action. The following EPBC Act related policies or guidelines may be applicable to the Proposed Action:

- Significant Impact Guidelines 1.1 - Matters of National Environmental Significance (2013)
- EPBC Act Offsets Policy (2012)
- Marine bioregional plan for the South-west Marine Region (2012)
- Survey guidelines for Australia's threatened birds (2010)
- Survey guidelines for Australia's threatened fish (2011)
- Survey guidelines for Australia's threatened mammals (2011)
- Survey guidelines for Australia's threatened reptiles (2011)
- Draft survey guidelines for Australia's threatened orchids (2014)
- National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong (2024)
- Banksia Woodlands of the Swan Coastal Plain: a nationally protected ecological community (2016)
- EPBC Referral Guidance - Banksia Woodlands of the Swan Coastal Plain ecological community (2019)
- Tuart Woodlands and Forests of the Swan Coastal Plain: a nationally significant ecological community (2019)
- EPBC Referral Guidance - Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community (2019)
- Referral guideline for 3 WA threatened black cockatoo species (2022)
- Recovery plans for applicable MNES, where these have been prepared.

Commonwealth *Environment Protection (Sea Dumping) Act 1981*

The *Environment Protection (Sea Dumping) Act 1981* (Sea Dumping Act) regulates the loading and dumping of waste at sea and the creation of artificial reefs within Australian waters, which stretch from the low-water mark of the Australian shoreline out to 200 nautical miles (excluding waters defined as those within the limits of a State, which may include bays, gulfs, estuaries, rivers, creeks, inlets, ports, or harbours).

The Proposed Action will generate dredge material which is proposed for beneficial re-use (primarily reclamation of the port facility). However, placement of some dredge material may be required in marine placement areas, which is yet to be fully defined. There is also potential that creation of artificial reef/s may be proposed as part of the Proposed Action (for example, as a measure to mitigate or offset residual impacts). As such, a Sea Dumping Permit may be required for the Proposed Action.

The marine elements of the Proposed Action project area are primarily located within Internal Waters, which are defined as 'within the limits of a State', with a small portion (the northern-most ~0.5 km of the second main channel) extending outside of this area into 'Australian Territorial Sea', as shown in **Att. A - Figures, Figure 5**. All waters intersecting the project area are State-controlled, with the nearest Commonwealth controlled waters being approximately 3 nautical miles further offshore. The location of any dredge material seafloor placement or creation of artificial reefs, if determined to be required, is not yet known and will be confirmed through detailed design. This may be consequential to determining Sea Dumping Permit requirements for the Proposed Action.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Extensive stakeholder engagement has been undertaken across all stages of the Westport Program to date, which are defined as follows:

- **Stage 1 (completed 2017-2018: Problem identification and initiation)**, which involved assessment of the need for the project and evaluation of potentially suitable locations. This culminated in the identification of eight strategic approaches to manage container trade in WA, across three port locations (Fremantle, Kwinana and Bunbury) and various time horizons.
- **Stage 2 (completed 2018-2020: Strategic planning and optioning)**, which involved evaluation of a long-list of options. This culminated in the identification of a preferred site for a new container terminal at Kwinana serviced by Anketell Road.
- **Stage 3 (current 2020-2024: Business case and preliminary design)**, which has involved establishment of the Westport Project Office to coordinate preliminary (15%) design and provide advice to State Government about when and how the project should be developed. This will be documented in a Business Case submission, to enable decision making around project delivery. This stage also involves commencement of the statutory EIA process (EP Act and EPBC Act referrals).

Stakeholder engagement will continue to be undertaken through the final stage of the Westport Program, being **Stage 4 (detailed design, delivery and transition)** which will involve completion of detailed design, completion of the statutory EIA process, procurement, construction and operational commencement.

Stakeholder engagement for the Proposed Action has been guided by the following objectives and principles.

Objectives:

1. Establish and maintain trust between stakeholders and Westport.
2. Ensure impacted stakeholders are involved and believe the Westport engagement process is considered, transparent and fair.
3. Ensure stakeholder inputs contribute to positive outcomes for their high priority issues.

Principles:

- Respectful treatment of all stakeholders
- Open and clear communication
- Early and proactive engagement
- Inclusivity, to ensure the needs of all stakeholders are heard and acknowledged.
- Collaboration, to harness stakeholder input and expertise.

Westport has a large and diverse range of stakeholders, such as academics and thought leaders, industry groups and associations, local governments, marine service providers, other national and international ports, rail and intermodal terminal operators, recreational and environmental groups, shipping lines, stevedores, and Traditional Owners. Residents in the City of Kwinana and adjoining local government areas are considered key stakeholders, while the broader Western Australian public are also stakeholders, given the scale of the proposed supply chain.

During Stages 1 and 2 (2017-2020) of the Westport Program, the following stakeholder engagement was undertaken in relation to the Proposed Action:

- **Westport Reference Group** (comprising over 90 organisations including community groups, industry, peak bodies, unions and member organisations, State, Federal and Local Government agencies, universities and research institutions) was established to ensure industry, peak bodies and private operators had input throughout the planning process.
- **Environmental Work Stream Working Group** (comprising 20 government and non-government members self-nominated from organisations represented at the Westport Taskforce Reference Group) was established to provide high level environmental advice in relation to identification of environmental and social values, potential future pressures of a port development, and preliminary

assessment of possible impacts of these pressures on environmental values, associated with each area of interest.

- **WAMSI Westport Marine Science Program (WWMSP)** was established, which is a world-leading science and research initiative led by the Western Australian Marine Science Institute in collaboration with Westport and its program partners, which aims to address environmental and social knowledge gaps surrounding Cockburn Sound. Westport has contributed $13.5M in funding to the WWMSP, which was developed with the objective of defining baseline environmental conditions, improving Westport's ability to avoid, mitigate and offset environmental impacts and increase Government's ability to manage other pressures acting on Cockburn Sound into the future. More than 30 research projects are being undertaken as part of the WWMSP across nine environmental and social themes, which will be used to inform the environmental impact assessment process for the Proposed Action. The WWMSP is currently scheduled to be completed by the end of 2024.
- **Community engagement** including Fremantle, Kwinana and Bunbury communities, communities along freight routes (roads and rail), wider Western Australian community, and interest groups. This engagement has confirmed that environment is one of the most important community values.
- **Aboriginal engagement** with the South West Aboriginal Land and Sea Council (SWALSC) and other key Aboriginal stakeholder groups in the Fremantle and Kwinana areas. This led to the development of *Kapi Biddi: The Westport Aboriginal Engagement Strategy*.

The key environmental topics based on community and stakeholder feedback for Stage 1 and Stage 2 of Westport were:

- Westport should allow for sustainable development of the port industry.
- The Infrastructure Sustainability Council (ISC) rating system should be considered.
- A strategic environmental assessment would allow for feedback on the environmental health of the port location in response to dredging requirements.
- The idea that Cockburn Sound is recovering needs further scientific investigation about likely environmental impacts associated with construction, operation, and maintenance.
- Further Westport publications should expand on the diverse and significant environmental values of the study area.
- Aboriginal heritage and the important history of the First Nations Gnaala Karla Booja people need to be recognised.
- Extend Westport Reference Group to include representation of Indigenous interests.
- Westport should recognise the existing industrial uses of seawater within Cockburn Sound, which include use as cooling water for industrial premises, desalination intake water and outfall of industrial process water (including desalination brine).

During Stage 3 (2020-2024) of the Westport Program, the following stakeholder reference and working groups were established and routinely engaged with in relation to the Proposed Action:

- **Noongar Advisory Group** (NAG), comprising 10 community leaders elected by 100 representatives from the Whadjuk and Gnaala Karla Booja Peoples. The NAG provides strategic advice to the Proponent within quarterly meetings held over 18 months during 2023 and into 2024.
- **Dredging Working Group**, which generates and explores options for the capital dredging campaign (including spoil use and disposal) for input into the port planning process.
- **Marine Mitigation Working Group**, which evaluates and recommends priority resilience-building measures to mitigate the direct and indirect impacts from the Proposed Action, and improve the long-term marine ecosystem health and biodiversity within Cockburn Sound and it's surrounds.
- **Terrestrial Mitigation Working Group**, which has the same scope as the Marine Mitigation Working Group except with respect to terrestrial values.
- **Environmental, Social and Governance Reference Group.**
- **Supply Chain Industry Reference Group.**
- **Government Trading Enterprise Working Group.**
- **Local Government Reference Group.**

In addition to the above reference and working groups, significant community consultation has also been undertaken during Stage 3 of the Westport Program in relation to the Proposed Action, including but not limited to including residents from Perth and Peel metropolitan area, City of Kwinana, City of Cockburn, City of Rockingham, Shire of Serpentine-Jarrahdale, horse owners who visit Naval Base horse beach, and recreational fishers who access Cockburn Sound. Community consultation has included targeted meetings, briefings and broader website updates, monthly project newsletters, letterbox drops, community pop-up events, community surveys, social media advertising, biannual community perception surveys and webinars.

Examples of key environmental considerations that have been influenced by stakeholder engagement to date include:

- **Protecting recreational fishing in Cockburn Sound**, which influenced the development of the WWMSP with funding of specific studies in relation to seagrass and pink snapper. Furthermore, additional technical investigations and modelling was completed in relation to potential impacts to snapper spawning, which informed option selection processes and design development.
- **Avoiding Mount Brown** (located north-east of Cockburn Sound). Preliminary development options that intersected this area were ruled out, resulting in strategic avoidance of impacts to conservation-significant environmental and heritage values of Mount Brown.
- **Cumulative impacts on seagrass**, which was an identified knowledge gap incorporated into the WWMSP as a new area of research.
- **Protection of seagrass**, which resulted in these environmental values being heavily weighted within multi-criteria analysis (MCA) of port footprint options.

The Proponent will continue to engage stakeholders into the future. Given the Proposed Action will subject to a Public Environmental Review process under the EP Act (which is also anticipated to include consideration of MNES through an accredited assessment, subject to the EPBC Act referral outcome), this provides targeted opportunities for stakeholders to input to the EIA process, including:

- Referral, where submissions can be made in relation to the level of assessment for the Proposed Action (complete).
- Scoping, where submissions can be made on the Environmental Scoping Document to determine the information to be provided in the future Public Environmental Review.
- Assessment, where submissions can be made on the Environmental Review Document.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide

some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	57144772510
Organisation name	Emerge Environmental Services Pty Ltd
Organisation address	26 Railway Road, Subiaco, 6008 WA

Referring party details

Name	Jason Hick
Job title	Director, Principal Environmental Consultant
Phone	08 9380 4988
Email	Jason.hick@emergeassociates.com.au
Address	Suite 4, 26 Railway Road, Subiaco WA 6008

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	27285643255
Organisation name	Department of Transport (Westport Project Office)
Organisation address	125 Murray Street, Perth, 6000 WA

Person proposing to take the action details

Name	Patrick Seares
Job title	Managing Director, Westport
Phone	08 6551 6850
Email	patrick.seares@westport.wa.gov.au
Address	125 Murray Street, Perth, 6000 WA

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The Proposed Action is being developed and referred by the Department of Transport (through the Westport Project Office) and will be under the lawful jurisdiction of the Director General of the Department of Transport on behalf of the State of Western Australia (the Proponent). Once constructed, the port will be

a public asset to be managed by an existing or to be determined port authority.

The Department of Transport has an extensive record of responsible environmental management and engages qualified professionals to ensure appropriate land, planning and environmental requirements are considered and appropriately responded to in accordance with environmental legislation and consistent advice and directions by government agencies and other authorities. There are no current or past legal proceedings (interpreted as court action) against the Department of Transport in the past 10 years under Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

The Department of Transport has previously referred the following actions under the EPBC Act:

- 2021/9098 Broome Boating Facility
- 2013/6860 Vegetation clearing for sand extraction, Lot 268 Leeuwin Road, Augusta
- 2010/5528 Murray Serpentine River Channel Maintenance Dredging.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

The Department of Transport has an Environmental Policy and supporting Environmental Management Guidelines, which are provided in Attachment X. The objectives of the policy aim to ensure that the Department of Transport:

- Manages and minimises adverse environmental impacts over which it has control or influence.
- Builds an environmentally aware culture through education and promoting awareness amongst its employees, contractors and partner agencies.
- Complies with all relevant environmental legislation, regulations, policies and reporting requirements.

The Department of Transport also has an Environmental, Social and Governance (ESG) framework which shapes and guides the strategic direction and achievement of the key objective to '*deliver sustainable, integrated, accessible and safe transport solutions to meet current and future needs*'. The overarching framework includes:

- **Environmental targets:** reducing energy and carbon emissions and decarbonization, transitioning to net zero emissions future, contributing to positive outcomes for the natural environment, and ensuring resilience to climate change.
- **Social targets:** enhancing performance in Aboriginal economic participation, economic participation for people with disability, enhancing community liveability, promoting improved worker health, safety and mental wellbeing, and workforce equity, diversity and inclusion.
- **Governance targets:** engagement with stakeholders, partnering with research institutes to foster innovation, creating new employment opportunities, integrity, accountability and ethical decision making, and promoting a sustainable development mindset.

In addition to this overarching Department of Transport ESG framework, the project-specific *Westport Environmental, Social and Governance Strategy* (available on the project's website via the below link) has also been prepared. The commitments and objectives documented in the Westport ESG Strategy are as follows:

- **Environmental** commitments to deliver positive long-term benefits for the natural and physical environment, with objectives to:
    - Protect sensitive natural and physical environments.
    - Deliver new science well beyond the needs of our own project to underpin Cockburn Sound's longterm holistic management.
    - Embed *Working With Nature* into planning to regenerate the natural and physical environment striving for a better environment after construction than before.

- Design and catalyse a *net zero* port and local container supply chain by 2050.
- Advance circular economy outcomes by reducing, reusing, and recovering materials during construction.

- **Social** commitments to create opportunities for social advancement, with objectives to:
  - Identify opportunities to increase industry capability and the creation of high quality jobs.
  - Partner with Noongar people to recognise cultural values in design and create opportunities for the Noongar community and businesses.
  - Implement safety in design to ensure both workers and the community surrounding transport links are safe.
  - Engage with stakeholders, industry and the community to inform design, best practice and expectations.
- **Governance** commitments are to make decisions which benefit Western Australians with strong, transparent governance and reporting, with objectives to:
  - Meet the needs of future generations by ensuring the efficiency, scalability, and resilience of the port and supply chain beyond 2070.
  - Demonstrate transparent and responsible governance.
  - Comply with legislative, regulatory and State Government policy obligations during the planning and delivery of the port and supply chain infrastructure.
  - Ensure sustainability, Noongar opportunities and social values are embedded into all relevant procurement during planning.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	27285643255
Organisation name	Department of Transport (Westport Project Office)
Organisation address	125 Murray Street, Perth, 6000 WA

Proposed designated proponent details

Name	Patrick Seares
Job title	Managing Director, Westport
Phone	08 6551 6850

Email	patrick.seares@westport.wa.gov.au
Address	125 Murray Street, Perth, 6000 WA

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	57144772510
Organisation name	Emerge Environmental Services Pty Ltd
Organisation address	26 Railway Road, Subiaco, 6008 WA
Representative's name	Jason Hick
Representative's job title	Director, Principal Environmental Consultant
Phone	08 9380 4988
Email	Jason.hick@emergeassociates.com.au
Address	Suite 4, 26 Railway Road, Subiaco WA 6008

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	27285643255
Organisation name	Department of Transport (Westport Project Office)
Organisation address	125 Murray Street, Perth, 6000 WA
Representative's name	Patrick Seares
Representative's job title	Managing Director, Westport
Phone	08 6551 6850
Email	patrick.seares@westport.wa.gov.au

Address	125 Murray Street, Perth, 6000 WA

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

Yes

1.4.10 Enter purchase order number *

635218

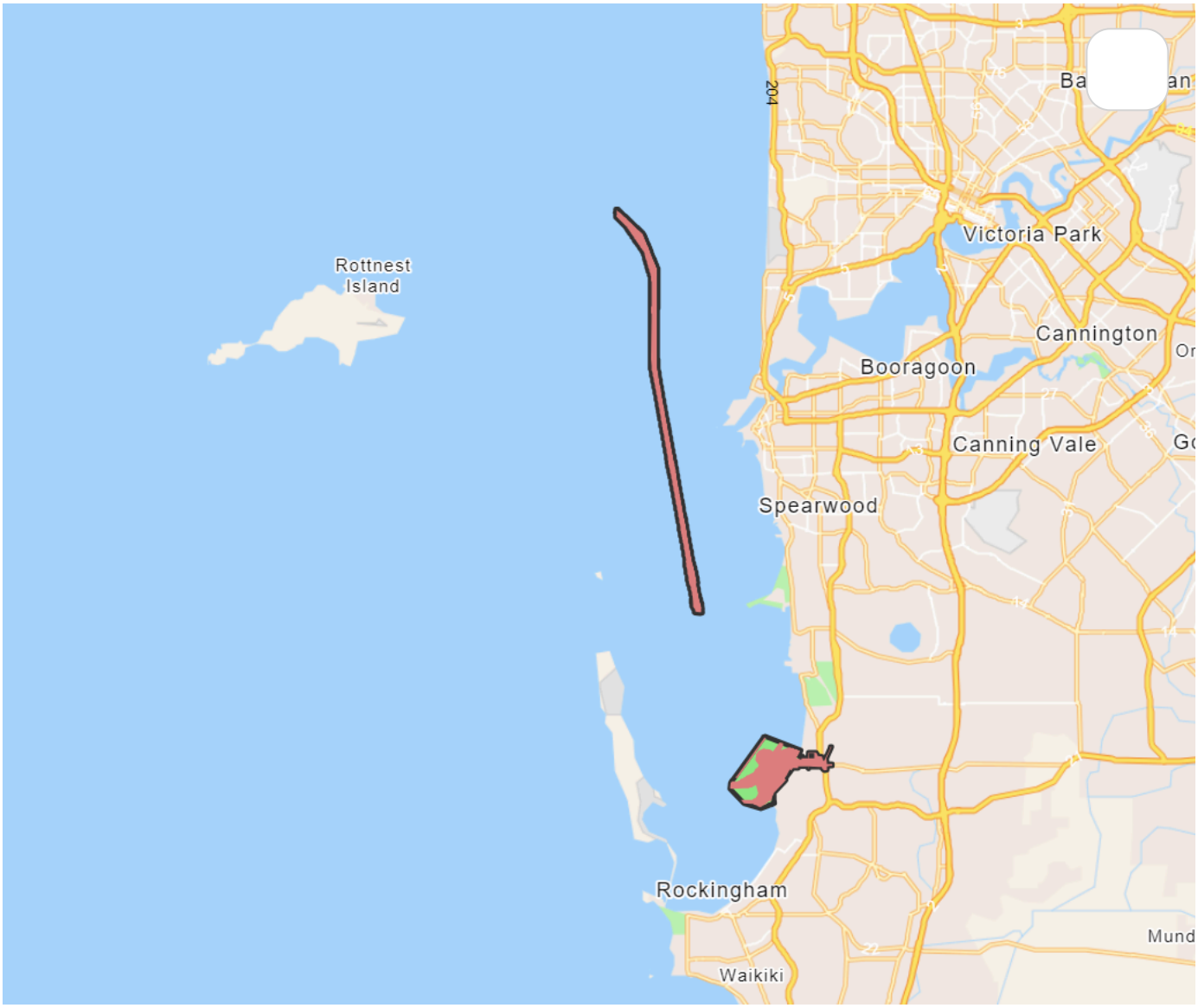
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Land in proximity to intersection of Beard Street and Leath Road, Naval Base.

2.2.2 Where is the primary jurisdiction of the proposed action? *

Western Australia

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

Terrestrial areas

The terrestrial portions of the project area extend across 57 separate land parcels, of which approximately 70% are currently under State Government ownership or control (as freehold land or reserves) and approximately 30% are currently owned in freehold by private entities or individuals. The most sizable State tenured land parcels include those owned by the State of Western Australia, Western Australian Land Authority, Fremantle Port Authority, Commissioner of Main Roads, and Water Corporation. The most significant privately tenured land is owned by B P Refinery (Kwinana), Adelaide Brighton Cement, and BGC (Australia).

The Proponent is consulting and working with remaining private landowners to arrange access or acquisition to land. It is intended that all required land will be under ownership or legally accessible by the State Government prior to commencement of the Proposed Action by the Proponent.

Marine areas

The marine portions of the project area extend into the waters of Cockburn Sound, Owen Anchorage and Gage Roads, generally in area between the coastline, Garden Island and Rottnest Island. The marine portions of the project area are solely contained within Lot 4552 on Deposited Plan 220690, which is owned by the State of Western Australia and vested with the Fremantle Port Authority. This cadastral parcel broadly aligns with the extent of the Port of Fremantle Outer Harbour.

As discussed in response to **section 1.2.6** and shown in **Att. A - Figures, Figure 5**, the marine elements of the Proposed Action are contained within State-controlled 'Coastal Waters'. The project area does not intersect any Commonwealth-controlled waters or marine areas, with the nearest such waters being approximately 3 nautical miles further offshore.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Proposed Action is located within the southern portion of the Perth metropolitan area, situated in the south-west of Western Australia.

Terrestrial areas

The terrestrial components of the Proposed Action are situated within the Kwinana Industrial Area of the Western Trade Coast, that is located on the western coastline of the Swan Coastal Plain and adjacent to Cockburn Sound, which is also known by its Aboriginal name of Derbal Nara. This area is located approximately 30 km south of Perth.

Consistent with the wider KIA, the majority of the terrestrial portion of the Project Area is zoned 'Industrial' under the Metropolitan Region Scheme (MRS), with some areas reserved for 'Railways', 'Primary Regional Roads' or 'Other Regional Roads'. A small eastern section of the Project Area is situated within the adjacent Hope Valley - Wattleup Redevelopment Scheme, which supports industrial land uses. The MRS zoning of the Project Area and surrounds is shown in **Att. A - Figures, Figure 6**.

The terrestrial portion of the Project Area is surrounded by the following land uses and zoning:

- **To the north:** various heavy industrial land uses within the KIA (including but not limited to energy generation plants, the Perth Seawater Desalination Plant, cement production and an alumina refinery), located on land zoned 'Industrial' or reserved for 'Public Purposes'. Freight rail corridors and a 'Primary Regional Road' reserve (Rockingham Road) also occur.
- **To the east:** various industrial land uses within the Hope Valley - Wattleup Redevelopment Scheme area, land reserved for 'Other Regional Roads' (Anketell Road), land reserved for 'Parks and Recreation' (associated with the Perth Motorplex) and other 'Rural' zoned land.
- **To the south:** various heavy industrial land uses within the KIA (including but not limited to Fremantle Ports Kwinana Bulk Terminal, an oil terminal, lithium refineries and a waste-to-energy facility), located on land zoned 'Industrial'. Freight rail corridors and a 'Primary Regional Road' reserve (Rockingham Road) also occur.

The KIA was first established in the early 1950s and has since been the primary strategic heavy industrial area servicing the Perth metropolitan region. The KIA has been strategically separated from sensitive land uses (such as urban areas) to avoid potential land use conflicts.

Terrestrial ecological values within the project area have been subject to high levels of historical disturbance and clearing as a result of the development and expansion of industrial land uses across the KIA since the early 1950s. Limited remnant vegetation and associated fauna habitat remains in the local area. Given the extensive historical disturbance, the native fauna assemblages utilising the site would be reduced compared to what would be expected in similar environments that had not been subject to such disturbances.

The Project Area is accessible via existing road infrastructure; including primary arterial roads (Anketell Road and Rockingham Road) and local access roads (Lee Road, Beard Street, Leath Road, Barter Road and Riseley Road). These existing roads will be used to access the Project Area during construction and operation of the Proposed Action.

If future road infrastructure upgrades in the local area are progressed by others to address network capacity needs (for example, future upgrades to Anketell Road freight corridor progressed by Main Roads), then the layout of the Proposed Action will integrate with any such upgrades to the road network.

Marine areas

The majority of the marine components of the Proposed Action, including the port facility, access channels, turning basins, berthing areas and offshore breakwater are situated in the eastern portion of Cockburn Sound, on the Kwinana Shelf. The proposed second main channel extends from the northern edge of Cockburn Sound across Owen Anchorage and Gage Roads, connecting with the Indian Ocean to the north. The location of the proposal development envelope in relation to nautical charts is shown in **Att. A - Figures, Figure 7**.

The marine portion of the Project Area (as well as all surrounding marine areas) are reserved as ‘Waterways’ under the MRS, as shown in **Att. A - Figures, Figure 6**.

Cockburn Sound is a semi-enclosed marine embayment (covering approximately 110 km2). To the south and east Cockburn Sound is bound by the coastline, to the north by Woodman Point and relatively shallow Parmelia Bank, and to the west by Garden Island, which is a barrier island approximately 10 km long, that provides protection from incoming oceanic swell.

Cockburn Sound has been intensively utilised and considerably altered from its natural state since European settlement in the 1800s. This primarily occurred from the 1950s onwards, with the development of heavy industrial land uses along the coastline that resulted in industrial emissions and discharges entering Cockburn Sound. These are discussed below.

Seagrass is a key component of Cockburn Sound’s marine environment, with up to 4,200 ha of coverage recorded in early accounts prior to introduction of heavy industrial land uses. Primary wastewater from the Water Corporation’s Woodman point treatment plant was discharged directly into Cockburn Sound from the early 1960s. By 1967, seagrass coverage in Cockburn Sound had declined to approximately 2929 ha. Between the 1960s and early 1980s, approximately 80% of the seagrass cover was lost. In 1984, the Sepia Depression Ocean Outlet Landline (SDOOL) pipeline became operational at Cape Peron, which was constructed to discharge treated wastewater to the deeper waters west of Garden Island, rather than into Cockburn Sound, curbing the flow of contaminants and nutrients into the Sound (Kendrick et al., 2002). Seagrass meadows stabilised over the following decade with only a minor increase from 721 ha to 948 ha (Hovey and Fraser, 2018) since 1999.

Whilst the primary entrance to Cockburn Sound is from the north via an opening between the north-east of Garden Island and Woodman Point, the southern end of the Sound is also connected to the Indian Ocean via a natural opening between the southern end of Garden Island and the western tip of Point Peron. In 1973, this natural opening was bridged by the construction of a 4.2 km causeway to link Garden Island to the mainland, as part of the construction of the HMAS Stirling naval base. The causeway is predominantly a solid rock revetment, with two openings spanned by bridges (northern opening is 600 m wide, southern

opening is 300 m wide) that allow limited exchange between Cockburn Sound and the Indian Ocean. Modification of natural flow regimes within Cockburn Sound as a result of the causeway exacerbated the trapping of nutrient-rich water, contributing to water quality issues.

Cockburn Sound and surrounding waters to the north have also been subject to various historical and ongoing dredging campaigns. This has included dredging to establish and maintain various navigational channels, as well as ongoing shell-sand dredging undertaken by Cockburn Cement Limited across the Pamelia and Success Banks since 1972. These dredging activities are undertaken pursuant to the *Cement Works (Cockburn Cement Limited) Agreement Act 1971* State Agreement.

The Perth Seawater Desalination Plant (PSDP) is located adjacent to the proposed action area. The PSDP intakes seawater from Cockburn Sound for the desalination process and then discharges the brine (highly saline water) back into Cockburn Sound, on the Kwinana Shelf at a depth of approximately 10 m (BMT 2018). Based on public compliance reports the PSDP is meeting State environmental approval conditions and no complaints have been received during the most recent reporting period (2021-2022).

3.1.2 Describe any existing or proposed uses for the project area.

Terrestrial areas

A variety of existing heavy industrial land uses currently occur within the KIA in proximity to the Proposed Action, including a petroleum terminal (BP), alumina refinery (Alcoa), power stations (NewGen Power Station, Synergy Kwinana Power Station, Synergy Cockburn Power Station), chemical plants, cement works (Cockburn Cement), port facilities (Fremantle Ports Kwinana Bulk Terminal, BP Oil Refinery Jetty, Alcoa Jetty) and various other supporting industries.

Marine areas

Cockburn Sound is currently actively used for significant commercial port operations, which were first established in the 1950s. Specifically, The Port of Fremantle Outer Harbour extends across the majority of Cockburn Sound, as well further north across Owen Anchorage and Gage Roads. Vessels utilising existing Outer Harbour port facilities transit into Cockburn Sound via Success Channel, with designated anchorage areas located along the western portion of Cockburn Sound (in addition to Gage Roads to the north). In addition to the Outer Harbour, the Port of Fremantle also includes an Inner Harbour, which is located at Fremantle and currently handles all of the State's maritime container trade. The Port of Fremantle is managed by Fremantle Ports, which is a State Government trading enterprise. A map of the existing port boundaries is provided in **Att. A - Figures, Figure 8**.

The following existing active Outer Harbour commercial port facilities are located within Cockburn Sound (from north to south):

- Australian Marine Complex (AMC), which is a shipbuilding and sustainment industrial precinct split across two harbours.
- Alcoa Alumina Refinery, which accommodates ships importing bulk caustic soda and exporting refined alumina.
- Fremantle Ports Kwinana Bulk Terminal (KBT), which imports and exports dry bulks goods as well as bulk LPG exports.
- BP Kwinana Terminal, which accommodate bulk tankers loading and unloading bulk petroleum products.
- Fremantle Ports Kwinana Bulk Jetty, which accommodates vessels unloading dry and liquid bulk cargoes.
- CBH Kwinana Grain Terminal, which accommodates vessels loading bulk grain exports.

In addition to the above and outside of the Outer Harbour port boundary, the Department of Defence operate military port facilities at HMAS Stirling on Garden Island in the western portion of Cockburn Sound. This includes primary wharfs and berths that are located at Careening Bay at the southern end of Garden

Island, with a separate Armament Jetty at the north-east of Garden Island.

The Proposed Action will result in additional port infrastructure and facilities being constructed in Cockburn Sound, as well as the construction of a second main channel into Cockburn Sound. This will include the replacement of existing jetty infrastructure for Fremantle Ports KBT.

Cockburn Sound also supports a range of commercial activities in the marine environment including tourism and fisheries. Resident populations of dolphins and little penguins use the Sound for foraging, attracting tourism to the region and activities such as diving and dolphin encounters (WAMSI, 2018). Cockburn Sound also supports commercially and recreationally fished species such as blue swimmer crabs and pink snapper. Mussel aquaculture is also a significant industry operating in Cockburn Sound but has been in decline in recent years (CSMC, 2023).

Cockburn Sound is the State's most intensively used embayment in view of its many concurrent recreational, industrial, and commercial uses. Recreational uses of Cockburn Sound are numerous and varied and include land-based and water-based activities. Recreational boating and fishing is a key existing recreational and social use of Cockburn Sound, with significant recreational small vessel boat traffic currently experienced throughout the year within Cockburn Sound.

The portion of the project area associated with the second main channel is offshore and not accessible for land-based activities. Most recreational activities in this area are likely to be associated with boating, fishing and other boat-based activities.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The proposed action project area does not intersect or adjoin any existing conservation areas. Mt Brown, a conservation reserve within Beeliar Regional Park and a State Bush Forever site (346), is situated approximately 3km north of the project area.

The terrestrial portion of the project area does not contain any outstanding natural features, with the majority of the land highly disturbed from its pre-European state as a result of intensive and ongoing heavy industrial land uses. Some coastal foredune landforms remain adjacent to Cockburn Sound, which is common along the Perth coastline. These areas have been impacted by industrial land uses and are modified from their natural condition.

The marine portion of the project area intersects Cockburn Sound, which is an important environmental, economic and social value to the local and regional area. A key natural feature of Cockburn Sound are its seagrass meadows. Cockburn Sound features both perennial seagrasses which grow all year round (including *Amphibolis griffithii* and *Posidonia Australis*), and ephemeral seagrasses that grow seasonally (including *Halophila ovalis*). As discussed above, historical industrial land uses across the coastline of Cockburn Sound have resulted in significant decreases in seagrass coverage within Cockburn Sound from approximately 4,200 ha to approximately 950 ha in 2018. Similar to Cockburn Sound, the benthic primary producer habitats of Owen Anchorage to the north are also dominated by seagrasses but have been subject to lower levels of historical loss.

As part of WWMSP *Project 2.1 Benthic habitat mapping*, WAMSI are developing a contemporary map of the current extent of seagrass (and other benthic habitat types) within with the project area, including Cockburn Sound, Owen Anchorage and Gage Roads. Preliminary mapping outputs from this project are shown in **Att. A - Figures, Figure 9**. The finalised mapping outputs are scheduled to be published in 2024.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

Terrestrial areas

The majority of the terrestrial project area is generally flat with a gentle slope and minor dunal undulation in some discrete areas. Elevation ranges from between 0 metres Australian Height Datum (mAHD) along the coastline in the west, up to up 22 mAHD in the far eastern areas in proximity to the intersection of Rockingham Road and Anketell Road.

Marine areas

The bathymetry of Cockburn Sound is characterised by a relatively deep central basin with a depth varying between 15-20 m, with shallower surrounding areas including:

- Kwinana Shelf in the eastern portion north of James Point, which experiences a variable depth up to 10 m. This is where the majority of proposed port infrastructure associated with the Proposed Action is located.
- Southern Flats in proximity to the Garden Island causeway, which experiences a depth of around 2-3 m.
- Nearshore beaches along the mainland and Garden Island.

To the north, the shallow Parmelia Bank and Success Bank bound the deeper Owen Anchorage. Success Channel is a narrow 150 m dredged shipping channel, approximately 15 m deep, that extends shore-parallel through Parmelia Bank, Owen Anchorage and Success Bank. The proposed second main channel is parallel and to the east of the existing Success Channel.

Gage Roads is naturally deeper than Parmelia Bank and Success Bank, with depths varying between approximately 10-25 metres on average in areas intersecting the proposed action.

The bathymetry of the local marine environment is shown as a blue gradient in **Att. A - Figures, Figure 1**.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Flora

A desktop study of flora and vegetation values within the terrestrial component of the project area was completed in August 2023 (Biota, 2023). This study involved a literature review, database searches and a likelihood of occurrence assessment for conservation significant flora and vegetation. Based on the results of the desktop flora and vegetation study (Biota, 2023), one flora species listed as threatened under the EPBC Act was assessed to potentially occur within the terrestrial project area; *Caladenia huegelii* (King Spider-orchid), which is listed as endangered under the EPBC Act.

Building on the outcomes of the August 2023 desktop study, a ‘detailed’ and ‘targeted’ flora and vegetation assessment was undertaken, including field surveys completed in July, September and October 2023 during which extensive targeted flora searches were conducted in accordance with the *Draft Survey Guidelines for Australia’s Threatened Orchids.* The flora and vegetation assessment report is currently being finalised and once completed will be made available upon request by the Department.

No threatened flora species listed under the EPBC Act, including *Caladenia huegelii*, were identified during the July, September or October 2023 field surveys. It is considered unlikely that EPBC Act listed flora species would be present within the survey area, given that significant spatial and temporal survey effort has been allocated to their detection.

Fauna - Terrestrial (including migratory birds)

A desktop study of terrestrial fauna species (vertebrate and invertebrate, including short-range endemic (SRE) species) was completed within the project area in August 2023 (Biota, 2023). This study involved a literature review, database searches and a likelihood of occurrence assessment for conservation significant fauna. Biota subsequently completed a site-specific fauna survey in 2023 and early 2024. In addition to the general fauna survey components, targeted surveys for black cockatoos, migratory shorebirds (November 2023, January 2024 and February 2024) and SRE species were also completed. All site-specific survey investigations have been completed and the associated report is currently being finalised. Once completed, a copy of the report will be made available upon request by the Department.

The results of the survey (focusing on EPBC Act listed threatened and migratory fauna) are summarised as follows:

- Eight mammal species were detected; seven introduced and one native (quenda). No EPBC Act listed threatened or migratory mammal species were recorded or were concluded have potential to occur (i.e. ‘likely to occur’ or ‘may occur’) within the project area.
- Five reptile species were recorded; three skinks and two elapids. No EPBC Act listed threatened or migratory reptile species were recorded or were concluded to have potential to occur (i.e. ‘likely to occur’ or ‘may occur’) within the project area.
- 63 bird species were recorded to occur (three of which are introduced species), including nine EPBC Act listed threatened and/or migratory species:
    - **Fairy tern** (*Sternula nereis nereis*) (Threatened)
    - **Red Knot** (*Calidris canutus*) (Threatened, Migratory)
    - **Caspian Tern** (*Hydroprogne caspia*) (Migratory)
    - **Australian Tern** (*Gelochelidon macrotarsa*) (Migratory)
    - **Bridled Tern** (*Onychoprion anaethetus*) (Migratory)
    - **Sanderling** (*Calidris alba*) (Migratory)
    - **Osprey** (*Pandion haliaetus*) (Migratory)
    - **Common Sandpiper** (*Actitis hypoleucos*) (Migratory)
    - **Greater Crested Tern** (*Thalasseus bergii*) (Migratory)
- Six additional EPBC Act listed threatened and/or migratory species, although not recorded during the survey, were concluded ‘likely to occur’:
    - **Carnaby’s cockatoo** (*Zanda latirostris*) (Threatened)
    - **Forest red-tailed black cockatoo** (*Calyptorhynchus banksii naso*) (Threatened)
    - **Grey Plover** (*Pluvialis squatarola*) (Threatened, Migratory)
    - **Ruddy Turnstone** (*Arenaria interpres*) (Threatened, Migratory)
    - **Red-necked Stint** (*Calidris ruficollis*) (Migratory)
    - **Grey-tailed Tattler** (*Tringa brevipes*) (Migratory)
- It was also concluded that the following 13 EPBC Act listed threatened and/or migratory species, although not recorded during the survey, ‘may occur’:
    - **Northern Siberian Bar-tailed Godwit** (*Limosa lapponica menzbieri*) (Threatened, Migratory)
    - **Curlew Sandpiper** (*Calidris ferruginea*) (Threatened, Migratory)
    - **Common Greenshank** (*Tringa nebularia*) (Threatened, Migratory)
    - **Greater Sand Plover** (*Charadrius leschenaultia*) (Threatened, Migratory)
    - **Pacific Swift** (*Apus pacificus*) (Migratory)
    - **Eurasian Whimbrel** (*Numenius phaeopus*) (Migratory)
    - **Roseate Tern** (*Sterna dougallii*) (Migratory)
    - **Parasitic Jaeger** (*Stercorarius parasiticus*) (Migratory)

- **Common Gull-billed Tern** (*Gelochelidon nilotica affinis*) (Migratory)
- **Little Tern** (*Sternula albifrons*) (Migratory)
- **Common Tern** (*Sterna hirundo*) (Migratory)
- **South Polar Skua** (*Stercorarius maccormicki*) (Migratory)
- **Pomarine Jaeger** (*Stercorarius pomarinus*) (Migratory)

With respect to the two species of black cockatoos:

- No individuals or secondary evidence of any black cockatoo species were recorded.
- 99 trees were assessed as potential habitat trees for black cockatoos within the survey area, of which up to a maximum of approximately 40 trees are estimated to occur within the project area. None of 99 the trees have hollows present. No evidence of breeding activity was recorded.
- The project area is unlikely to support night roosting habitat for Carnaby's cockatoo. Some small pockets of the survey area may represent suitable night roosting habitat for Forest red-tailed black cockatoo, which have more general roosting habitat preferences. No known roosting sites (e.g. Birdlife Australia Great Cocky Count) occur within the project, nor was any evidence of roosting activity observed. Overall, it was concluded that it is unlikely roosting from any black cockatoo species occurs in the project area.
- Foraging value within the survey area is negligible, with more prospective areas of foraging habitat in immediately surrounding areas. Individuals from both species may be seen in the project area and surrounds travelling between more extensive foraging areas in the locality.

With respect to the remaining species (which are all shorebirds with EPBC Act threatened and/or migratory listing status):

- Caspian Terns were recorded in the survey area during all field visits, including observations of loafing and foraging behaviours. Common Sandpiper and Greater Crested Terns were recorded during all three targeted shorebird surveys, although in low numbers. The remaining significant species observed were recorded in the survey area less consistently, including many records being an observation of a single individual only once.
- Of the species recorded as occurring, the project area represents secondary habitat only, with suitable shallow waters for foraging and sandy beaches for roosting. Breeding for these species occurs in habitat types not available in the project area (such as on offshore islands) or are non-breeding visitors to the area. Some of the species are known to breed in the Kwinana and Rockingham areas, including Osprey, Bridled Tern and Caspian Tern (Bamford 2011), however low numbers of these species were recorded within the project area.
- Coastal areas to the north and south of the project area are likely more attractive to migratory birds due to lower levels of anthropogenic activity.

Fauna - Marine

A desktop study by O2 Marine (2023) was completed to determine the likelihood of occurrence of marine fauna within the project area. The following EPBC Act listed threatened or migratory marine fauna species are considered to have a 'high' likelihood of occurrence (noting that migratory birds are not duplicated here, given Biota's site-specific survey results are outlined above):

- **Australian sea lion** (*Neophoca cinerea*) (Threatened)
  There are important haul-out areas within the south-west of WA at Garden Island and the species is known to use waters of Cockburn Sound (Sutton and Shaw 2019). The species is almost entirely confined to the South-West Marine Region (DSEWPaC 2012). WWMSP Theme 8 *Apex predators and iconic species* is investigating the abundance, movement, habitat use and diet of Australian sea lions in the Perth metropolitan area, with findings expected to be published in 2024.
- **White shark** (*Carcharodon carcharias*) (Threatened and Migratory)
  Multiple tagged white shark have been detected within Cockburn Sound and it is very likely that the

species would be present in the project area. High abundances of sharks in the region coincide with the seasonal formation of spawning aggregations of snapper.

The following EPBC Act listed threatened or migratory marine fauna species are considered to have a 'medium' likelihood of occurrence (noting that migratory birds are not duplicated here, given Biota's site-specific survey results are outlined above):

- **Grey nurse shark** (*Carcharias taurus* west coast population) (Threatened)
  Aggregation sites near Rottnest Island are part of important feeding, breeding and/or nursery areas within the southwest, including feeding inshore from Garden Island in November during snapper spawning (Hoschke et al. 2023).
- **Scalloped hammerhead** (*Sphyrna lewini*) (Threatened)
  Species are distributed globally in tropical and warm temperate water, and mate from September – December within the west coast bioregion including Perth (Harvey et al. 2016).
- **Southern right whale** (*Eubalaena australis*) (Threatened, Migratory)
  During their northern migration (May – August) and southern migration (September – November), southern right whales utilize the waters off the Perth metropolitan area (Cannell 2004).
- **Humpback whale (***Megaptera novaeangliae*) (Migratory)
  The migration pathway for the western Australian population includes Perth coastal waters. The species is commonly sighted within 20 nautical miles of the coastline from Bunbury to Jurien Bay during migration periods.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Soil

The project area is located on the western edge of the Swan Coastal Plain, which is the geomorphic unit that characterises much of the Perth metropolitan area. The Swan Coastal Plain is approximately 500 km long and 20 to 30 km wide and is roughly bound by the Indian Ocean to the west and the Darling Escarpment to the east. Broadly, the Swan Coastal Plain consists of two sedimentary belts of different origin; the western side consisting of three dune systems (Quindalup, Spearwood and Bassendean) composed of wind-deposited soils and the eastern side consisting of alluvial material washed down from the adjacent Darling Escarpment (Seddon, 2004).

The project area is situated on the Quindalup Dune system, which is characterised by uniform pale calcareous sands that are well- to rapidly-drained and consist of wind-blown lime and quartz beach sand. The eastern-most portion of the project area extends into the Spearwood dune system which is characterised by yellow-brown siliceous sands over limestone, with hilly to gently undulating terrain (Seddon, 2004).

The natural foredune landforms typical of the Perth coastline have been heavily modified along the eastern edge of Cockburn Sound within the KIA as a result of industrial development, with limited natural landform remaining within the project area.

Vegetation – regional complexes

Vegetation complex mapping for the Swan Coastal Plain (DBCA, 2018) identifies the Quindalup Complex and Cottesloe Complex – Central and South as occurring across the terrestrial project area, as shown in **Att. A - Figures, Figure 10**.

The **Quindalup Complex** is a coastal dune complex consisting mainly of two alliances, the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of *Melaleuca lanceolata* (Rottnest teatree) – *Callitris preissii* (Rottnest Island pine), the closed scrub of *Acacia rostellifera* (summer-scented wattle) and the low closed *Agonis flexuosa* (peppermint) forest of Geographe

Bay. Structurally the vegetation complex is coastal dunes, low closed forest and closed scrub. The Swan Coastal Plain pre-European extent of this vegetation complex was 54,574 ha and the 2018 extent was 33,012 ha (60.5% of pre-European extent remaining). The 2018 extent protected for conservation is 4,918 ha (9.0% of pre-European extent). The native vegetation extent within the project area is 14.6 ha, of which 5.7 ha is identified as regrowth vegetation.

The **Cottesloe Complex – Central and South** is a mosaic of woodland of *Eucalyptus gomphocephala* (tuart) and open forest of *Eucalyptus gomphocephala* (tuart) – *Eucalyptus marginata* (jarrah) – *Corymbia calophylla* (marri), and closed heath on the limestone outcrops. The structural formation is woodland, open forest and closed heath. The Swan Coastal Plain pre-European extent of this vegetation complex was 45,300 ha. The 2018 extent was 14,658 ha (32.2% of pre-European extent remaining). The 2018 extent protected for conservation is 4,308 ha (9.5% of pre-European extent). The native vegetation extent within the project area is 13.3 ha of which 5.5 ha is identified as regrowth vegetation.

The extent of native remnant vegetation in proximity to the project area is shown in **Att. A - Figures, Figure 10**. The majority of the KIA has been cleared of native vegetation, with only discrete patches remaining in undeveloped parts of the KIA.

Approximately 70% of the study area assessed by Biota (2023) as part of the ‘detailed’ and ‘targeted’ flora and vegetation assessment was found to be cleared or in ‘completely degraded’ vegetation condition. Approximately 11% of the study area assessed by Biota (2023) was found to be in ‘good’ or better vegetation condition, which generally indicates the presence of an intact native vegetation community.

Biota (2023) encountered 85 introduced non-native species across the survey area, which commonly occur across the project area. Dense patches of herbaceous weed species occurred through the entirety of the survey area along roadsides and cleared areas. Declared Pest **Gomphocarpus fruticosus* (Narrow-leaved Cotton Bush) and the Declared Pest and Weed of National Significance **Asparagus asparagoides* (Bridal Creeper) were recorded throughout the survey area.

Given the extensive historical disturbance across the KIA and within the terrestrial project area, the introduction of plant diseases such as dieback (*Phytophthora cinnamomi*) is common in south-west Western Australia where areas are subject to high degrees of disturbance and human activity, indicating such disease may exist within the terrestrial project area.

Vegetation – EPBC Act listed threatened ecological communities

A ‘detailed’ and ‘targeted’ flora and vegetation assessment has been completed by Biota, including field surveys completed in July, September and October 2023. This included detailed assessment of EPBC Act listed threatened ecological communities, including against key diagnostic characteristics and condition thresholds, as per the approved conservation advice. All site-specific survey investigations have been completed and the associated report is currently being finalised. Once completed, a copy of the report will be made available upon request by the Department.

Based on the results of the survey, two EPBC Act listed threatened ecological communities occur within the project area:

- **Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain**
  Approximately 0.7 ha of this community occurs within the project area, comprising a single patch in ‘good’ or ‘very good’ condition, located in the eastern portion of the project area adjacent to Rockingham Road. Additional, larger occurrences of the community were identified within the surrounding local area. Other parts of the project area contain tuart trees and associated canopy cover, however when assessed these patches of vegetation did not meet the key diagnostic criteria and therefore do not meet the definition of the listed threatened ecological community.
- **Banksia Woodlands of the Swan Coastal Plain**
  Approximately 0.6 ha of this community occurs, comprising a single patch in ‘good’ condition, located

in the eastern portion of the project area adjacent to Rockingham Road. Additional, larger occurrences of the community were identified within the surrounding local area.

No other EPBC Act listed threatened ecological communities were identified during the detailed flora and vegetation assessment as occurring within the project area.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

The Commonwealth maintains various lists and registers of natural, historic and indigenous heritage places throughout Australia, including the World Heritage List, National Heritage List and Commonwealth Heritage List (DCCEEW, 2023a).

The World Heritage List is associated with Australia's obligations under the World Heritage Convention and includes 20 listings. The National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation. The Commonwealth Heritage List is a list of Indigenous, historic and natural heritage places owned or controlled by the Commonwealth Government which are of significant heritage value. There are no World, National or Commonwealth heritage places within 2 km of the project area.

Australia protects its shipwrecks, sunken aircraft and other types of underwater heritage and their associated artefacts through the *Underwater Cultural Heritage Act 2018*. A search of the Australasian Underwater Cultural Heritage Database (DCCEEW, 2023b) identified no historic shipwrecks listed under the Commonwealth *Underwater Cultural Heritage Act 2018* occurring within 1 km of the Proposal.

Based on the shipwreck data held by the Western Australian Museum, no shipwrecks occur within the project area, however two shipwreck sites are located within close proximity, being the Camilla lost in 1903 (approximately 100 m north of the Alcoa jetty) and a D9 Dredge ex Parmelia, sunk in 1962 (approximately 2.5 km south-west of the Alcoa jetty). These shipwrecks are not listed as heritage values under the EPBC Act.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

Noongar people are the Traditional Owners of the south-west of Western Australia, which incorporates the project area. The proposed action occurs across two Native Title determined areas, being the Gnaala Karla Booja (WC1998/058) in the south (including Cockburn Sound and Kwinana) and the Whadjuk (WC2011/009) in the north (including Owen Anchorage and Gage Roads), as shown in **Att. A - Figures, Figure 11**.

Aboriginal heritage in Western Australia is managed under the *Aboriginal Heritage Act 1972*, which provides a framework for the recognition, protection, preservation and management of Aboriginal heritage. The Act requires approval for activities that may impact or harm Aboriginal heritage. Recent amendments to the Act, which came into effect on 15 November 2023, create opportunities for Aboriginal people to make decisions about their cultural heritage and to decide what cultural heritage is important. The Act provides for a new statutory committee, the 'Aboriginal Cultural Heritage Committee' (The Committee) made up predominantly by Aboriginal representatives, who will make recommendations on Section 18 Notices to the Minister and to the Registrar in relation to Section 16 applications.

A search of the DPLH Aboriginal Cultural Heritage Inquiry System (ACHIS) was undertaken to identify previously recorded Aboriginal sites. The search indicated no Registered Aboriginal heritage sites recorded within 1 km of the project area. The closest registered Aboriginal heritage site to the proposed action is Thomas Oval, approximately 2 km southeast as shown in **Att. A - Figures, Figure 11**.

The search of the ACHIS identified one 'Other' Heritage Place within the project area namely, 'Indian Ocean' mythological Aboriginal heritage site (S02169/3776), which includes Cockburn Sound and the waters north to Fremantle and west to Rottnest Island. The site relates to the creation of Cockburn Sound and the surrounding islands, which comes from a Noongar dreaming story about the Gumbar Yondock Ancestral Crocodile and the Waugal. The status of this site is 'Stored Data/Not a Site', and as such it is not a protected area under the *Aboriginal Heritage Act 1972*.

The Proponent has undertaken focused engagement with Aboriginal stakeholders, including representatives of the applicable Aboriginal Corporations to identify cultural sites of importance and develop a cultural and spiritual values map. The sites identified were used to inform the multi-criteria analysis completed to develop the preliminary port design, by highlighting the important cultural and spiritual sites of relevance. It is noted that the information provided to develop the cultural and spiritual mapping was provided to the Proponent in confidence and is not yet publicly available. Further assessment of Aboriginal cultural heritage will be undertaken during the next assessment stage of the proposed action within both the marine and terrestrial portions of the project area, in accordance with relevant guidance.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

Groundwater

Based on the results of the Preliminary Site Investigation (WSP, 2023), groundwater underlying the terrestrial project area is expected to be contained within the following aquifers:

- Superficial aquifer located in the unconsolidated dune sands, recharged by local rainfall. This sandy aquifer generally exhibits high hydraulic conductivities and extends to a depth of approximately 26m.
- A lower, semiconfined aquifer contained in the karstic limestone where a non-continuous clay layer acts as an aquitard. The karstic nature of the aquifer containing limestone results in variable hydraulic conductivities and preferential flow pathways. Due to the non-continuous nature of the aquitard this aquifer is connected to portions of the superficial aquifer.
- Deeper aquifers including the Leederville and Yarragadee aquifers which are separated from the shallow aquifers and each other by thick, impermeable layers.

Groundwater within the project area is expected to be encountered between 3 to 4 m below ground level and flow in a west to north westerly direction (DWER, 2023). Regional groundwater contours are shown in **Att. A - Figures, Figure 12**.

The PSI concluded that due to the proximity of Cockburn Sound, underlying groundwater is expected to be tidally influenced, with the magnitude of the influence greater in areas closer to the coast. Additionally, a saline water wedge has been documented to be present in excess of 1km inland from the coast.

Various existing groundwater bores occur across the project area, the majority of which access the superficial aquifer. Existing bores are used for a variety of purposes, including commercial, industrial, water supply, monitoring and other unspecified uses. Various groundwater abstraction licenses also exist within the project area of varying quantities.

The PSI concluded that groundwater quality across the project area is of variable quality, with historical groundwater investigations reporting impacts from hydrocarbons, metals, nutrients and excess alkalinity, which was expected to flow towards Cockburn Sound.

Existing vegetation within the site may uptake or be dependent upon groundwater from the underlying superficial aquifer which underlies the site. BoM maintain a groundwater dependent ecosystem (GDE) Atlas, which shows there is potential for terrestrial GDEs to occur within the project area. The GDE Atlas presents a national level assessment, as opposed to being based on more targeted regional or site-specific studies. The PSI concluded that it is considered unlikely that there are any GDEs of significance within the project area.

Surface water

The site is generally flat, with a slight slope from east to west, towards Cockburn Sound. No surface water features, such as rivers, creeks, drains or flow paths, are mapped within or passing through the project area.

Based on the topography of the project area, Cockburn Sound is considered to be the primary sensitive environmental receptor downstream of the project area.

The underlying sandy soils are characterised by high permeability, meaning that rainfall is typically expected to freely infiltrate at source in undeveloped areas. Surface water flows in developed areas are likely driven by anthropogenic features such as hardstand runoff and constructed drainage areas.

Given most existing land uses within the KIA (and therefore within the project area) were constructed some time ago, there is generally an absence of contemporary stormwater infrastructure that incorporates Water Sensitive Urban Design (WSUD) principles that would contribute to managing the quality of any surface water runoff, with the exception of more recently constructed developments and land uses.

Wetlands

Geomorphic wetland mapping for the Swan Coastal Plain (DBCA, 2023) does not identify any wetland features as occurring within the project area.

The closest mapped wetland is a 2.12 ha Resource Enhancement Wetland (REW) to the north-east of the Rockingham Road and Anketell Road intersection, as shown in **Att. A - Figures, Figure 12**.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable Matter of National Environmental Significance (MNES) as there are no World Heritage sites listed within the project area or in close proximity.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as there are no National Heritage sites listed within or in close proximity to the project area.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	No	Forrestdale and Thomsons Lakes

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as the Proposed Action does not directly intersect any RAMSAR wetlands, nor is it in close proximity, hydrologically upstream or up-gradient to any RAMSAR wetlands. Forrestdale and Thomsons Lakes are approximately 14 and 6 km hydrologically upstream of the project area, respectively.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Andersonia gracilis	Slender Andersonia
No	No	Anous tenuirostris melanops	Australian Lesser Noddy
No	No	Ardenna grisea	Sooty Shearwater
No	No	Balaenoptera musculus	Blue Whale
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Caladenia huegelii	King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid
No	No	Calidris acuminata	Sharp-tailed Sandpiper

Direct impact	Indirect impact	Species	Common name
Yes	No	Calidris canutus	Red Knot, Knot
Yes	No	Calidris ferruginea	Curlew Sandpiper
Yes	No	Calyptorhynchus banksii naso	Forest Red-tailed Black-Cockatoo, Karrak
Yes	No	Carcharias taurus (west coast population)	Grey Nurse Shark (west coast population)
Yes	No	Carcharodon carcharias	White Shark, Great White Shark
No	No	Caretta caretta	Loggerhead Turtle
Yes	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Chelonia mydas	Green Turtle
No	No	Dasyurus geoffroii	Chuditch, Western Quoll
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Diomedea amsterdamensis	Amsterdam Albatross
No	No	Diomedea dabbenena	Tristan Albatross
No	No	Diomedea epomophora	Southern Royal Albatross
No	No	Diomedea exulans	Wandering Albatross
No	No	Diomedea sanfordi	Northern Royal Albatross
No	No	Diuris micrantha	Dwarf Bee-orchid
No	No	Diuris purdiei	Purdie's Donkey-orchid
No	No	Drakaea elastica	Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid
Yes	No	Eubalaena australis	Southern Right Whale
No	No	Halobaena caerulea	Blue Petrel
No	No	Leipoa ocellata	Malleefowl
Yes	No	Limosa lapponica menzbieri	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit
No	No	Macroderma gigas	Ghost Bat
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel

Direct impact	Indirect impact	Species	Common name
No	No	Macronectes halli	Northern Giant Petrel
No	No	Natator depressus	Flatback Turtle
Yes	No	Neophoca cinerea	Australian Sea-lion, Australian Sea Lion
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pachyptila turtur subantarctica	Fairy Prion (southern)
No	No	Phaethon rubricauda westralis	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird
No	No	Phoebetria fusca	Sooty Albatross
No	No	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	No	Pseudocheirus occidentalis	Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit
No	No	Pterodroma mollis	Soft-plumaged Petrel
No	No	Rhincodon typus	Whale Shark
No	No	Rostratula australis	Australian Painted Snipe
Yes	No	Sphyrna lewini	Scalloped Hammerhead
Yes	No	Sternula nereis nereis	Australian Fairy Tern
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	No	Thalassarche melanophris	Black-browed Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Thunnus maccoyii	Southern Bluefin Tuna
Yes	No	Tringa nebularia	Common Greenshank, Greenshank
Yes	No	Zanda latirostris	Carnaby's Black Cockatoo, Short-billed Black-cockatoo

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Banksia Woodlands of the Swan Coastal Plain ecological community
No	No	Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion
Yes	Yes	Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Based on the results of desktop and site-specific fauna, flora and vegetation assessments completed to date, MNES that are applicable to the project area and proposed action have been identified based on the following information sources:

- Detailed and targeted site-specific surveys for terrestrial fauna (including shorebirds), flora and vegetation have been completed by Biota during 2023 and 2024, with associated reporting currently under preparation to be finalised in 2024. EPBC Act listed threatened terrestrial fauna species (including shorebrids), flora species and ecological communities which were recorded or considered ‘likely to occur’ or ‘may occur’ have been identified as applicable MNES for the proposed action.
- For marine fauna, desktop level assessments have been completed and species concluded to have a ‘high’ or ‘medium’ likelihood of occurrence within the project area have been identified as applicable MNES for the proposed action.

The above approach for determining 'applicable' MNES is considered conservative. Not all of the MNES considered to be applicable may actually occur within the project area, or be at risk of significant impact by the proposed action.

MNES found to be applicable to the project area and the proposed action are listed below (grouped in the following categories: flora and ecological communities, fauna – terrestrial, fauna – shorebirds, fauna – marine). The potential impacts of the proposed action on these MNES are also outlined below.

Flora and ecological communities

The following threatened flora species and ecological communities are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain** (Critically Endangered)
- **Banksia Woodlands of the Swan Coastal Plain** (Endangered)

Potential impacts to these MNES as a result of the proposed action include:

- Direct loss, degradation and fragmentation of ecological communities through clearing and bulk earthworks of the landside development area.

- Indirect loss or impact to ecological communities as a result of the introduction or spread of invasive species (pests and weeds) due to construction or operational machinery and vehicles.
- Indirect loss or impact to ecological communities as a result of the introduction or spread of disease (for example, dieback) due to construction or operational machinery and vehicles.

Based on the unpublished results of the detailed flora and vegetation assessment, the proposed action may result in the direct loss of up to approximately 0.7 ha of the Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain ecological community and up to approximately 0.6 ha of the Banksia Woodlands of the Swan Coastal Plain (Endangered) ecological communities. The quantum of these impacts will be confirmed through the assessment stage, which will inform the assessment of these impacts and their potential significance.

Fauna – terrestrial

The following threatened terrestrial fauna species are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **Carnaby's Cockatoo** (*Zanda latirostris*) (Endangered)
- **Forest Red-tailed Black-cockatoo** (*Calyptorhynchus banksii* subsp. *naso*) (Vulnerable)

Potential impacts to these MNES as a result of the proposed action include:

- Direct loss, degradation and fragmentation of terrestrial fauna habitat through clearing and bulk earthworks.
- Mortality of fauna due to interaction with construction equipment.
- Mortality of fauna due to interaction with operational equipment, such as vehicles, cranes and ships.
- Altered fauna behaviour due to increased or altered noise emissions, light emissions and human presence.
- Increased predation by feral animals due to increased feral animal abundance and/or movement around the project area.

Based on the unpublished results of the targeted black cockatoo habitat assessment, the proposed action may result in the direct loss of up to a maximum of approximately 40 potential black cockatoo habitat trees, none of which contain hollows. Roosting and foraging habitat values within the project area were found to be negligible, with the exact quantum of any such habitat to be confirmed once the associated reporting is finalised in 2024. The quantum of these impacts will be confirmed through the assessment stage, which will inform the assessment of these impacts and their potential significance.

Other impacts associated with noise, light, human presence and feral animal abundance is possible, acknowledging that it is likely that such threats already apply to terrestrial fauna values within the project area given historical and existing industrial land use. There are various impact minimisation measures available to mitigate these potential impacts.

Fauna – shorebirds

The following threatened shorebird fauna species are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **Common Greenshank** (*Tringa nebularia*) (Endangered, Migratory)
- **Curlew Sandpiper** (*Calidris ferruginea*) (Critically Endangered, Migratory)
- **Fairy tern** (*Sternula nereis nereis*) (Vulnerbale)
- **Greater Sand Plover** (*Charadrius leschenaultia*) (Vulnerable, Migratory)
- **Grey Plover** (*Pluvialis squatarola*) (Vulnerable, Migratory)
- **Northern Siberian Bar-tailed Godwit** (*Limosa lapponica menzbieri*) (Endangered, Migratory)
- **Red Knot** (*Calidris canutus*) (Vulnerable, Migratory)
- **Ruddy Turnstone** (*Arenaria interpres*) (Vulnerable, Migratory)

Potential impacts to these MNES as a result of the proposed action include:

- Direct loss, degradation and fragmentation of shoreline habitat through clearing and bulk earthworks. The project area includes up to approximately 3.5 km of shoreline which may be impacted.
- Injury or mortality of fauna due to interaction with construction activities and equipment during reclamation works, given placement of dredge material within the reclamation footprint may create temporary habitat that attracts shorebirds.
- Mortality of fauna due to interaction with construction equipment.
- Mortality of fauna due to interaction with operational equipment, such as vehicles, cranes and ships.
- Altered fauna behaviour due to increased or altered noise emissions, light emissions and human presence.
- Increased predation by feral animals due to increased feral animal abundance and/or movement around the project area

Fauna - marine

The following threatened marine fauna species (excluding shorebirds that are addressed above) are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **Australian sea lion** (*Neophoca cinerea*) (Endangered)
- **White shark** (*Carcharodon carcharias*) (Vulnerable, Migratory)
- **Grey nurse shark** (*Carcharias taurus* west coast population) (Vulnerable)
- **Scalloped hammerhead** (*Sphyrna lewini*) (Conservation Dependent)
- **Southern right whale** (*Eubalaena australis*) (Endangered, Migratory)

Potential impacts to these MNES as a result of the proposed action include:

- Injury from vessel strike during dredging and disposal activities, and to a lesser degree from operational vessels.
- Entrainment of marine fauna by dredge.
- Underwater noise and vibration impacts from dredging and piling, and to a lesser degree from operational vessels.
- Artificial light emissions originating from construction and operational vessels altering behaviours.
- Loss of marine fauna habitat due to direct removal or disturbance of benthic habitat from construction activities, including dredging.
- Increases in turbidity from dredging and reclamation impacting on foraging and other behaviour.
- Increases in turbidity from vessel movements impacting on foraging and other behaviour.
- Threats to biosecurity due to the introduction of marine pest species from operational vessels.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

In consideration of the scale, nature and extent of the proposed action and its associated potential environmental impact pathways, there is potential for significant impacts from the proposed action to applicable threatened species and ecological communities.

Based on currently available information there is potential for significant impact criteria, as outlined in the Significant Impact Guidelines 1.1, to be triggered for applicable MNES as a result of implementing the proposed action.

Of the applicable MNES identified, the following species and ecological communities may be considered to have the greatest risk (relative to the other applicable MNES) of potential for significant impacts:

- **Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain**, given the potential impacts of the proposed action associated with clearing a known occurrence of the community (approximately 0.7 ha) may trigger the following significant impact criterion: “reduction in the extent of the ecological community”.
- **Banksia Woodlands of the Swan Coastal Plain**, given the potential impacts of the proposed action associated with clearing a known occurrence of the community (approximately 0.6 ha) may trigger the following significant impact criterion: “reduction in the extent of the ecological community”.
- **Australian sea lion**. The project area is nearby to important habitat areas for the species (such as haul out areas at Garden Island) with the species also known to use the Perth metropolitan waters including within Cockburn Sound, Owen Anchorage and Gage Roads. In this context, the potential impacts of the proposed action may trigger the following significant impact criterion: “modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline”, specifically in relation to modification of foraging habitat within a biologically important area.

The remainder of the applicable MNES identified are considered to have a comparatively lower risk of potential for significant impacts given the absence of critical habitat and/or low frequency of occurrence within the project area, which suggest the significant impact criteria are less likely to be triggered.

It is proposed that the Proposed Action is conservatively determined to be a Controlled Action, with the potential impacts to applicable MNES to be further considered during the proposed future assessment process. This will also enable alignment with the WA environmental impact assessment pathway determined by the WA EPA, whereby the proposed action is to undergo a comprehensive Public Environmental Review assessment process.

Importantly, the proposed future assessment process will be informed by additional information that will assist in assessing the significance of impacts of the proposed action on applicable MNES. Specifically, additional information that will be available will include:

- Further detailed information about the proposed action (including both construction and operational elements) as the preliminary design continues to be developed. This will enable potential environmental impacts to be more comprehensively defined with higher certainty (for example, potential environmental impacts associated with dredging will be dependent on the selected dredge methodologies and strategies, which are not yet confirmed).
- The outcomes of scoping and technical investigations both in progress and yet to be completed, including final reporting from the WAMSI Westport Marine Science Program. This will provide further information to confirm the extent and context of presence or validate the presumed absence of specific MNES, and further understand the likely impact significance of the proposed action.

Whilst there is an accepted potential for significant impacts to applicable MNES, it is important to consider that there are extensive impact avoidance, mitigation and offset opportunities available to manage these potential impacts, such that the proposed action can be implemented in an environmental acceptable manner consistent with the requirements of the EPBC Act. These are discussed in the relevant sections below.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

The Proposed Action has the potential to have significant impacts on threatened species and ecological communities. It is therefore proposed that the Proposed Action is conservatively determined to be a Controlled Action, to enable the potential impacts to MNES to be considered through the proposed assessment process. The future assessment process will be informed by additional information including further detailed information about the proposed action as the preliminary design continues to be developed, as well as outcomes of scoping and technical investigations both in progress and yet to be completed, including final reporting from the WAMSI Westport Marine Science Program. Further specification of impact avoidance, mitigation and offsets will also be considered through the proposed assessment process.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Marine considerations

Avoiding known critical spatial and temporal windows of marine environmental sensitivity has been a key mitigation strategy during the planning phase for the proposed action, and will also be applied during the future construction phase.

In developing the preferred preliminary design, the Proposed Action scored best for environmental criteria relating to benthic habitat, including seagrasses, with the configuration (parallel to shore) and location of proposed infrastructure (slightly further south on the Kwinana Shelf) avoiding any direct seagrass loss in Cockburn Sound when compared to the other design options (see **Att. A - Figures, Figure 13**). This includes the proposed offshore breakwater which, compared with some other port options considered through the MCA process, avoids seagrass habitat that supports prey and foraging habitat for applicable MNES (threatened marine mammals, sharks and shorebirds).

Earlier plans for the Proposed Action also included a through channel which extended north along the Kwinana Shelf, rather than the proposed single entry/exit channel with a turning basin. Removal of this through channel from the final design has significantly reduced dredging volumes and avoided direct loss of seagrass in this area.

The Proposed Action also represents the lowest in-situ dredge volume of the three shortlisted options. This lower dredge volume for the port facility will result in less dredging pressure overall on marine fauna and benthic habitats during the construction phase which can be managed more effectively.

The second main channel also runs through large areas of Parmelia and Success Banks that have been previously dredged by shellsand dredging operations, therefore avoiding undisturbed seagrass habitat. Given a second main channel would also reduce operational risk by providing a second point of access into and out of Cockburn Sound (whilst also increasing operational capacity), this was selected as the preferred option. The second main channel depth has also been optimised (and reduced) over the preliminary design process, which has reduced dredge volumes and the extent of impacts to MNES habitat through dredging as far as possible at this stage in project development.

Where avoidance is not practicable or feasible, the framework for minimisation of impacts will be predicated on outcome based thresholds that minimise effects on MNES and habitats supporting MNES. The following additional mitigation measures will be evaluated to minimise impacts of the proposed action:

- Continuing and possibly increasing the State-wide Array Surveillance (SWASP) monitoring to ensure introduced pests are detected as soon as possible and measures can be taken to control and

eradicate.

- Offshore breakwater and structure design options are being considered to minimise the impact on hydrodynamics.
- Options are being considered for the offshore breakwater to be designed to include fish habitat and sea lion resting areas.
- To minimise the impacts of dredging, sediment concentrations should be kept below critical thresholds. Seasonal restrictions on dredging will also be considered. A dredging management plan will ultimately be prepared to cover dredging operations for the Proposed Action. Any management plans that may be prepared to support the Proposed Action will be made available upon request by the Department.
- Reducing noise can be most effectively achieved through selection of quieter construction methods. Vibration piling for example could be used as a preference to hammer piling and mechanical dredging could be selected over hydraulic dredging where possible.
- Where temporal or spatial overlap between noise at a potentially harmful level with sensitive species is unavoidable, mitigation should involve trained and/or dedicated marine fauna observers (MFOs) and the use of management (observation and exclusion) zones.
- Rehabilitation of benthic communities where possible may also aid in supporting the marine fauna in the area.

Terrestrial considerations

Throughout the port location selection process, various port layouts with different terrestrial footprints were considered.

A small marine footprint port was considered, whereby the bulk of the container logistics and storage infrastructure was separately located inland, east of Rockingham Road, and connected to the marine terminal by automated transport routes. This option would have resulted in extensive impacts to native vegetation, associated conservation significant TEC vegetation (including much larger areas of Tuart woodlands and forests of the Swan Coastal Plain TEC and Banksia Woodlands of the Swan Coastal Plain TEC), fauna habitat (including Carnaby's cockatoo and Forest Red-tailed black cockatoo breeding, roosting and foraging habitat), habitat connectivity and ecological linkages, due to its large inland terrestrial footprint. Potential impacts to conservation significant flora were also considered. Avoiding this high quantum of terrestrial fauna, flora and vegetation impacts was a key reason this port option scored poorly in the MCA process when compared to other options. This option was not further progressed, providing a strategic impact avoidance outcome.

Where possible the project area has been spatially limited to avoid areas supporting native vegetation and associated terrestrial fauna habitat, to avoid potential impacts of loss and fragmentation through clearing. However, given the large scale of the proposed action and the needs for large, cleared areas to support landside port infrastructure, such impact avoidance opportunities are limited. Avoidance opportunities will continue to be considered as the design of the proposed action develops.

Where avoidance is not practicable or feasible, the framework for minimisation of impacts will be predicated on outcome based thresholds that minimise effects on MNES and habitats supporting MNES. The following additional mitigation measures will be evaluated to minimise impacts of the proposed action:

- Implementation of best-practice construction environmental management protocols (typically through a construction environmental management plan), for example pre-clearing fauna relocation, fauna spotting during construction activities, application of construction site speed limits and relocation of suitable habitats (for example, black cockatoo hollows). Any management plans that may be prepared to support the Proposed Action will be made available upon request by the Department.
- Specification of lightning that minimises impacts to fauna species through reduced spread and intensity.
- Operational protocols around native fauna interactions

- Operational protocols around feral animal control.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The residual environmental impacts of the Proposed Action on MNES will be confirmed at the future assessment stage. If any residual environmental impacts are identified to be significant, then offsets may be proposed to address these. Any such offsets will be based on the following principles:

- Environmental offsets for the Proposed Action will only be considered after impact avoidance and mitigations options have been exhausted. Significant steps have been taken through strategic site selection, siting and design development to achieve environmental impact avoidance to date.
- Environmental offsets will be based on sound environmental information and knowledge. Westport has invested significantly in the WWMSP to undertake relevant research that will inform any future offset proposals.

Given the extent of the Proposed Action, its potential environmental impacts and the current understanding of existing environmental values within the project area, there is potential for significant residual impacts to MNES and therefore offsets may be required. If the need for offsets is confirmed, then offset strategies and proposals will be defined and considered for relevant MNES as part of future assessment stage.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
Yes	No	Actitis hypoleucos	Common Sandpiper
No	No	Anous stolidus	Common Noddy
No	No	Apus pacificus	Fork-tailed Swift
No	No	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater
No	No	Ardenna grisea	Sooty Shearwater
No	No	Balaenoptera edeni	Bryde's Whale
No	No	Balaenoptera musculus	Blue Whale
No	No	Calidris acuminata	Sharp-tailed Sandpiper
Yes	No	Calidris canutus	Red Knot, Knot
Yes	No	Calidris ferruginea	Curlew Sandpiper

Direct impact	Indirect impact	Species	Common name
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Caperea marginata	Pygmy Right Whale
No	No	Carcharhinus longimanus	Oceanic Whitetip Shark
Yes	No	Carcharodon carcharias	White Shark, Great White Shark
No	No	Caretta caretta	Loggerhead Turtle
Yes	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Chelonia mydas	Green Turtle
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Diomedea amsterdamensis	Amsterdam Albatross
No	No	Diomedea dabbenena	Tristan Albatross
No	No	Diomedea epomophora	Southern Royal Albatross
No	No	Diomedea exulans	Wandering Albatross
No	No	Diomedea sanfordi	Northern Royal Albatross
Yes	No	Eubalaena australis	Southern Right Whale
Yes	No	Hydroprogne caspia	Caspian Tern
No	No	Lamna nasus	Porbeagle, Mackerel Shark
No	No	Limosa lapponica	Bar-tailed Godwit
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	No	Macronectes halli	Northern Giant Petrel
Yes	No	Megaptera novaeangliae	Humpback Whale
No	No	Mobula alfredi	Reef Manta Ray, Coastal Manta Ray
No	No	Mobula birostris	Giant Manta Ray
No	No	Motacilla cinerea	Grey Wagtail

Direct impact	Indirect impact	Species	Common name
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
Yes	No	Onychoprion anaethetus	Bridled Tern
No	No	Orcinus orca	Killer Whale, Orca
No	No	Phoebetria fusca	Sooty Albatross
No	No	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	No	Rhincodon typus	Whale Shark
Yes	No	Sterna dougallii	Roseate Tern
Yes	No	Sternula albifrons	Little Tern
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	No	Thalassarche melanophris	Black-browed Albatross
No	No	Thalassarche steadi	White-capped Albatross
Yes	No	Tringa nebularia	Common Greenshank, Greenshank

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Based on the results of desktop and site-specific fauna assessments completed to date, EPBC Act listed Migratory species that are applicable to the project area and proposed action have been identified based on the following information sources:

- Detailed and targeted site-specific surveys for terrestrial migratory fauna (including shorebirds) have been completed by Biota during 2023 and 2024, with associated reporting currently under preparation to be finalised in 2024. EPBC Act listed migratory fauna species (including shorebrids)

which were recorded or considered ‘likely to occur’ or ‘may occur’ have been identified as applicable MNES for the proposed action.
- For marine migratory fauna, desktop level assessments have been completed to date and species concluded to have a ‘high’ or ‘medium’ likelihood of occurrence within the project area have been identified as applicable MNES for the proposed action.

The above approach for determining 'applicable' MNES is considered conservative. Not all of the applicable MNES may actually occur within the project area, or be at risk of significant impact by the proposed action.

Migratory fauna found to be applicable to the project area and the proposed action are listed below (grouped into two categories: migratory shorebirds and migratory marine fauna). The potential impacts of the proposed action on these MNES are also outlined below.

Migratory shorebirds

The coastal beach area and intertidal zone has the potential to be used by migratory or marine bird species during southward or northward migration periods. However, the project area is not a known important area for shorebirds (Cannell, 2004).

The following migratory shorebird fauna species are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **Australian Tern** (*Gelochelidon macrotarsa*) (Migratory)
- **Bridled Tern** (*Onychoprion anaethetus*) (Migratory)
- **Caspian Tern** (*Hydroprogne caspia*) (Migratory)
- **Common Gull-billed Tern** (*Gelochelidon nilotica affinis*) (Migratory)
- **Common Tern** (*Sterna hirundo*) (Migratory)
- **Common Sandpiper** (*Actitis hypoleucos*) (Migratory)
- **Common Greenshank** (*Tringa nebularia*) (Endangered, Migratory)
- **Curlew Sandpiper** (*Calidris ferruginea*) (Critically Endangered, Migratory)
- **Eurasian Whimbrel** (*Numenius phaeopus*) (Migratory)
- **Greater Crested Tern** (*Thalasseus bergii*) (Migratory)
- **Greater Sand Plover** (*Charadrius leschenaultia*) (Vulnerable, Migratory)
- **Grey Plover** (*Pluvialis squatarola*) (Vulnerable, Migratory)
- **Grey-tailed Tattler** (*Tringa brevipes*) (Migratory)
- **Little Tern** (*Sternula albifrons*) (Migratory)
- **Northern Siberian Bar-tailed Godwit** (*Limosa lapponica menzbieri*) (Endangered, Migratory)
- **Osprey** (*Pandion haliaetus*) (Migratory)
- **Pacific Swift** (*Apus pacificus*) (Migratory)
- **Parasitic Jaeger** (*Stercorarius parasiticus*) (Migratory)
- **Pomarine Jaeger** (*Stercorarius pomarinus*) (Migratory)
- **Red Knot** (*Calidris canutus*) (Vulnerable, Migratory)
- **Red-necked Stint** (*Calidris ruficollis*) (Migratory)
- **Roseate Tern** (*Sterna dougallii*) (Migratory)
- **Ruddy Turnstone** (*Arenaria interpres*) (Vulnerable, Migratory
- **Sanderling** (*Calidris alba*) (Migratory)
- **South Polar Skua** (*Stercorarius maccormicki*) (Migratory)

Potential impacts to these MNES as a result of the proposed action include:

- Direct loss, degradation and fragmentation of shoreline habitat through clearing and bulk earthworks. The project area includes up to approximately 3.5 km of shoreline which may be impacted.
- Injury or mortality of fauna due to interaction with construction activities and equipment duringreclamation works, given placement of dredge material within the reclamation footprint may createtemporary habitat that attracts shorebirds.
- Mortality of fauna due to interaction with construction equipment.

- Mortality of fauna due to interaction with operational equipment, such as vehicles, cranes and ships.
- Altered fauna behaviour due to increased or altered noise emissions, light emissions and human presence.
- Increased predation by feral animals due to increased feral animal abundance and/or movement around the project area

Migratory marine fauna

The following migratory marine fauna species (excluding shorebirds that are addressed above) are either known to occur within the project area, or were concluded to have potential to occur, and therefore are applicable MNES:

- **White shark** (*Carcharodon carcharias*) (Vulnerable, Migratory)
- **Southern right whale** (*Eubalaena australis*) (Endangered, Migratory)
- **Humpback whale***Megaptera novaeangliae* (Migratory)

Potential impacts to these MNES as a result of the proposed action include:

- Injury from vessel strike during dredging and disposal activities, and to a lesser degree fromoperational vessels.
- Entrainment of marine fauna by dredge.
- Underwater noise and vibration impacts from dredging and piling, and to a lesser degree fromoperational vessels.
- Artificial light emissions originating from construction and operational vessels altering behaviours.
- Loss of marine fauna habitat due to direct removal or disturbance of benthic habitat from constructionactivities, including dredging.
- Increases in turbidity from dredging and reclamation impacting on foraging and other behaviour.
- Increases in turbidity from vessel movements impacting on foraging and other behaviour.
- Threats to biosecurity due to the introduction of marine pest species from operational vessels

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.5.5 Describe why you consider this to be a Significant Impact. *

In consideration of the scale, nature and extent of the proposed action and its associated potential environmental impact pathways, there is potential for significant impacts from the proposed action to applicable migratory species.

Based on currently available information there is potential for significant impact criteria, as outlined in the Significant Impact Guidelines 1.1, to be triggered for applicable MNES as a result of implementing the proposed action. Specifically, for the applicable migratory shorebirds and migratory marine fauna identified, there is a possibility that one or more of the following significant impact criteria could be triggered as a result of implementing the proposed action:

- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species
- Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or
- Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

It is proposed that the Proposed Action is conservatively determined to be a Controlled Action, with the potential impacts to applicable MNES to be further considered during the proposed future assessment process. This will also enable alignment with the WA environmental impact assessment pathway determined by the WA EPA, whereby the proposed action is to undergo a comprehensive Public Environmental Review assessment process.

Importantly, the proposed future assessment process will be informed by additional information that will assist in assessing the significance of impacts of the proposed action on applicable MNES. Specifically, additional information that will be available will include:

- Further detailed information about the proposed action (including both construction and operational elements) as the preliminary design continues to be developed. This will enable potential environmental impacts to be more comprehensively defined with higher certainty (for example, potential environmental impacts associated with dredging will be dependent on the selected dredge methodologies and strategies, which are not yet confirmed).
- The outcomes of scoping and technical investigations both in progress and yet to be completed, including final reporting from the WWMSP. This will provide further information to confirm the extent and context of presence or validate the presumed absence of specific MNES, and further understand the likely impact significance of the proposed action.

Whilst there is an accepted potential for significant impacts to applicable MNES, it is important to consider that there are extensive impact avoidance, mitigation and offset opportunities available to manage these potential impacts, such that the proposed action can be implemented in an environmental acceptable manner consistent with the requirements of the EPBC Act. These are discussed in the relevant sections below.

4.1.5.7 Do you think your proposed action is a controlled action? *

Yes

4.1.5.8 Please elaborate why you think your proposed action is a controlled action. *

The Proposed Action has the potential to have significant impacts on migratory species. It is therefore proposed that the Proposed Action is conservatively determined to be a Controlled Action, to enable the potential impacts to MNES to be considered through the proposed assessment process. The future assessment process will be informed by additional information including further detailed information about the proposed action as the preliminary design continues to be developed, as well as outcomes of scoping and technical investigations both in progress and yet to be completed, including final reporting from the WAMSI Westport Marine Science Program. Further specification of impact avoidance, mitigation and offsets will also be considered through the proposed assessment process.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Marine considerations

Avoiding known critical spatial and temporal windows of marine environmental sensitivity has been a key mitigation strategy during the planning phase for the proposed action, and will also be applied during the future construction phase.

In developing the preferred design, the Proposed Action scored best for environmental criteria relating to benthic habitat, including seagrasses, with the configuration (parallel to shore) and location of proposed infrastructure (slightly further south on the Kwinana Shelf) avoiding any direct seagrass loss when compared to the other design options (see **Att. A - Figures, Figure 13**). This includes the proposed offshore breakwater which, compared with some other port options considered through the MCA process, avoids seagrass habitat that supports prey and foraging habitat for applicable MNES, including migratory marine fauna and migratory shorebirds.

Earlier plans for the Proposed Action also included a through channel which extended north along the Kwinana Shelf, rather than the proposed single entry/exit channel with a turning basin. Removal of this through channel from the final design has significantly reduced dredging volumes and avoided direct loss of seagrass in this area.

The Proposed Action also represents the lowest in-situ dredge volume of the three shortlisted options. This lower dredge volume for the port facility will result in less dredging pressure overall on marine fauna and benthic habitats during the construction phase which can be managed more effectively.

The second main channel also runs through large areas of Parmelia and Success Banks that have been previously dredged by shellsand dredging operations, therefore avoiding undisturbed seagrass habitat. Given a second main channel would also reduce operational risk by providing a second point of access into and out of Cockburn Sound (whilst also increasing operational capacity), this was selected as the preferred option. The second main channel depth has also been optimised (and reduced) over the preliminary design process, which has reduced dredge volumes and the extent of direct impacts to MNES habitat through dredging as far as possible at this stage in project development.

Where avoidance is not practicable or feasible, the framework for minimisation of impacts will be predicated on outcome based thresholds that minimise effects on MNES and habitats supporting MNES. The following additional mitigation measures will be evaluated to minimise impacts of the proposed action:

- Continuing and possibly increasing the State-wide Array Surveillance (SWASP) monitoring to ensure introduced pests are detected as soon as possible and measures can be taken to control and eradicate.
- Offshore breakwater and structure design options are being considered to minimise the impact on hydrodynamics.
- Options are being considered for the offshore breakwater to be designed to include fish habitat and sea lion resting areas.
- To minimise the impacts of dredging, sediment concentrations should be kept below critical thresholds. Seasonal restrictions on dredging will also be considered. A dredging management plan will ultimately be prepared to cover dredging operations for the Proposed Action. Any management plans that may be prepared to support the Proposed Action will be made available upon request by the Department.
- Reducing noise can be most effectively achieved through selection of quieter construction methods. Vibration piling for example could be used as a preference to hammer piling and mechanical dredging could be selected over hydraulic dredging where possible.
- Where temporal or spatial overlap between noise at a potentially harmful level with sensitive species is unavoidable, mitigation should involve trained and/or dedicated marine fauna observers (MFOs) and the use of management (observation and exclusion) zones.
- Rehabilitation of benthic communities where possible may also aid in supporting the marine fauna in the area.

Terrestrial considerations

Given the nature of the proposed action being a land-backed port facility, the constructed marine and terrestrial interface will result in the loss of the existing shoreline and associated migratory shorebird habitat. As such, there are minimal impact avoidance measures that are practical or feasible.

The framework for minimisation of impacts will be predicated on outcome based thresholds that minimise effects on MNES and habitats supporting MNES. The following additional mitigation measures will be evaluated to minimise impacts of the proposed action:

- Implementation of best-practice construction environmental management protocols (typically through a construction environmental management plan), for example pre-clearing fauna relocation, fauna spotting during construction activities, application of construction site speed limits and relocation of suitable habitats (for example, black cockatoo hollows). Any management plans that may be prepared to support the Proposed Action will be made available upon request by the Department.
- Specification of lightning that minimises impacts to fauna species through reduced spread and intensity.
- Operational protocols around native fauna interactions
- Operational protocols around feral animal control.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The residual environmental impacts of the Proposed Action on MNES will be confirmed at the future assessment stage. If any residual environmental impacts are identified to be significant, then offsets may be proposed to address these. Any such offsets will be based on the following principles:

- Environmental offsets for the Proposed Action will only be considered after impact avoidance and mitigations options have been exhausted. Significant steps have been taken through strategic site selection, siting and design development to achieve environmental impact avoidance to date.
- Environmental offsets will be based on sound environmental information and knowledge. Westport has invested significantly in the WWMSP to undertake relevant research that will inform any future offset proposals.

Given the extent of the Proposed Action, its potential environmental impacts and the current understanding of existing environmental values within the project area, there is potential for significant residual impacts to MNES and therefore offsets may be required. If the need for offsets is confirmed, then offset strategies and proposals will be defined and considered for relevant MNES as part of future assessment stage.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as there are no nuclear actions associated with the Proposed Action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed Action occurs up to the boundary of the internal waters of Western Australian and as such there is at least 3 nautical miles of State-controlled (coastal) waters between the closest point of the Proposed Action (portion of the project area associated with the northern end of the second main channel) and the nearest Commonwealth Marine Area (i.e. Commonwealth controlled waters).

No construction or operational activities directly associated with the Proposed Action will be undertaken within Commonwealth Marine Areas, therefore, no advervse direct impacts on marine species and cetaceans within Commonwealth Marine Areas are predicted.

Dredging activities associated with the Proposed Action within the project area is likely to result in the generation of dredge plume. Dredge plume modelling is yet to be undertaken to assess the extent, severity and duration of the dredge plume (and zones of impact). Although there is a small possibility that some of the dredge plume may reach Commonwealth waters at some point for some period of time, the distance buffer from the source of dredging, even before any mitigation measures are considered, should ensure there are no adverse impacts within Commonwealth Marine Areas to marine ecosystem functioning or integrity, populations of marine species or cetaceans, biodiversity, ecological integrity, social amenity or human health.

Construction and piling activities for the Proposed Action within the project area is also likely to result in the generation of underwater noise. Underwater noise modelling is yet to be undertaken to assess the zones required for management of underwater noise. Although there is a possibility that some noise from construction activity (e.g. piling) may reach Commonwealth waters, it is very unlikely that it will be at a level to cause disturbance to listed marine species and/or cetaceans within Commonwealth Marine Areas.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as the Proposed Action is not within or in proximity to the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as the Proposed Action does not include any coal seam gas or large coal mine related development.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES given the Proposed Action is not being taken on Commonwealth land, nor is it expected to impact upon Commonwealth land.

The project area does not include any Commonwealth land.

The nearest Commonwealth land to the Proposed Action is Garden Island, which is situated on the western edge of Cockburn Sound. The Proposed Action will not have any impacts on Garden Island. Any potential impacts of the Proposed Action in proximity to Garden Island would be to the surrounding waters (i.e. to the marine environment of State-controlled Coastal Waters) as opposed to terrestrial areas of Commonwealth land.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This is not an applicable MNES as there are no Commonwealth Heritage Places Overseas within the project area.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

There are no feasible alternatives to the proposed action, on the basis that significant option analysis and selection processes have been undertaken to date to identify the preferred location and design, which has ruled out other considered options. This option analysis and selection process (including at a strategic level and detailed site-specific level) is outlined below.

Historical context

The Inner Harbour facilities at Fremantle have managed maritime container trade entering and exiting the State for over 50 years. Port facilities and operations in Cockburn Sound were first established in the 1950s and have since developed and expanded over time. However, no historical or existing port facilities within Cockburn Sound have provided container trade services. Various studies, investigations, plans and proposals have been formulated over time to address the long-term challenges faced by container trade operations at the Inner Harbour. These initiatives include:

- New Port Options Study (1989)
- Future Port Options (1996)
- Outer Harbour Strategic Plan (1997)
- James Point Stage 1 (1998)
- Freight Network Review (2002)
- James Point Stage 2 (2005)
- Fremantle Ports Outer Harbour Project Strategic Assessment (2005)
- Kwinana Quay Project Offshore Island Port Facility (2007)

High-level strategic options analysis

The Independent Westport Taskforce, established in September 2017, assessed all possible solutions to manage the growing freight demands of Perth to future-proof Perth’s freight network. With a particular focus on the existing port locations at Fremantle, Kwinana and Bunbury, this involved an assessment of the ports,

associated road and rail links, and intermodal terminals to determine the best long-term integrated freight transport plan to meet the State's needs.

Environment has been a key consideration of the Westport Program since its commencement, with the establishment of the Westport Environmental Work Stream (EWS) in April 2018. The overarching purpose of the Westport EWS was to identify the marine and terrestrial environmental issues associated with each potential solution to inform a multi-criteria analysis in the selection of a preferred freight strategy.

Following completion of the Stage 1 assessment, eight high-level scenarios outlining how future container trade could be allocated across three port locations at Fremantle, Kwinana and Bunbury over various time horizons were investigated. Based on these options a long list of 25 diverse infrastructure scenarios were developed for assessment. Of the 25 options, four involved port operations at Fremantle, four at Bunbury and 17 a new port at Kwinana. The 25 options were compared using an MCA approach that incorporated weighted assessment criteria related to economic (34.6%), environmental (21.8%), land use (19.9%), social (14.6%) and governance and operation (9.1%) considerations. Seven options were shortlisted and all featured a new port in Kwinana, whilst no Bunbury or stand-alone Fremantle options made the shortlist.

Based on the outcomes of a second MCA, the two highest scoring options were recommended to be progressed to the next stage (Westport 2020). Both options involved the construction of a new land-backed port facility at Cockburn Sound serviced by Anketell Road.

Two strategic-level environmental impact avoidance outcomes were achieved through this recommendation:

- Avoidance of clearing at Mt Brown (Bush Forever site 346), which would have occurred to facilitate an extended and upgraded Rowley Road transport and infrastructure corridor servicing the port facility under other options. The overall environmental impacts of upgrading Rowley Road and Anketell Road were compared as part of the MCA, with Anketell Road assessed to result in less overall environmental impacts.
- Avoidance of increased direct loss of benthic habitat that would have been required to construct an offshore island port facility (as compared to a land-backed port) under other options. No such options were recommended to progress to the next stage of planning.

Detailed site-specific options analysis

Westport Stage 3 involved the selection of a preferred port option and development of a preliminary design (15% of total design effort to be completed), to inform the project's business case and EIA process.

The evaluation of project options was coordinated by a Supply Chain and Integrated Design (SCID) consultant through a three-phase MCA approach. Environmental criteria and weightings were developed then qualitative and quantitative assessment of impacts were used to score each option.

- **SCID Phase 1 (long list):** Based on Westport Stage 2 location, 30 port configuration options and three landside logistics options were developed. From this pool of 30, a "long list" of 7 port design options and one landside option were identified. Three main environmental criteria were evaluated, with options scoring highest where impacts to benthic habitats, dredging on Kwinana Shelf, and changes to hydrodynamics were minimised.
- **SCID Phase 2 (shortlist):** Long list refined to a "short list" of 3 port options. Environmental scoring factors included impacts to water quality, benthic habitat, significant wetlands, recreational values, high value indigenous and non-indigenous heritage sites, significant terrestrial flora, ecological communities, terrestrial fauna, terrestrial fauna habitat, connectivity and ecological linkages, coastal processes, assets and new infrastructure, soil and groundwater contamination disturbance, and construction stage carbon emission.
- **SCID Phase 3 (preferred option):** Short list of 3 options further assessed to identify the preferred option. Of the three assessed options (shown in **Att. A - Figures, Figure 13**), Option G ranked highest for the environmental scoring factors, largely due to minimal impact on coastal processes,

snapper spawning and lowest loss of seagrass and limestone reefs on Kwinana Shelf compared to options A and C. SCID advised that "*Whilst Option G is not the lowest cost port solution, it performs better than Options A or C with respect to environmental impacts and performs similar to if not better than these Options for all other criteria*". Given the weighting of environment in scoring, Option G thereby outperformed the other shortlisted options and was recommended to WPO as the preferred option.

Second main channel options analysis

In addition to selecting a preferred port location, another decision point was how ships will enter and exit Cockburn Sound. Currently, vessels visiting the Outer Harbour enter and exit Cockburn Sound through a single existing shipping channel, Success Channel, which is maintained to a dredged depth of 14.7 m by Fremantle Ports.

As part of Westport Stage 2, Success Channel was identified as a constraint to any potential future container port development, given it is not sufficiently deep or wide to enable passage of larger, deeper-draught vessels that are anticipated to service the State based on future trade forecasts. To address this issue, two options were considered:

1. Deepen and widen the existing main channel to 18.76 m depth and 220 m width.

2. Construct a second main channel parallel to the existing Success Channel, dredged and maintained to 18.8 m depth and 220 m width. The proposed location of the second channel was selected to align with historical Cockburn Cement dredge footprints to minimise the quantum of dredging required and to reduce loss of seagrass habitat. This option would involve no modification to the existing Success Channel.

Each channel option was investigated with respect to their potential environmental impacts, both in terms of potential seagrass habitat loss on Success and Parmelia Banks and influences on hydrodynamics within Cockburn Sound. With respect to seagrass, spatial analysis determined little difference in direct seagrass loss between the two options, but a greater loss of shallow sandy habitat (representing potential future seagrass habitat) from widening the existing channel. Furthermore, based on the results of hydrodynamic modelling undertaken for each option, the following conclusions were made at that time:

- A wider, deeper channel improves the flushing most of the year across most of the deep basin
- Dredging a second channel in addition to the existing channel improves flushing rates
- Seasonal medium-scale and broadscale water circulation regimes in Cockburn Sound were not affected

Given a second main channel would also reduce operational risk by providing a second point of access into and out of Cockburn Sound (whilst also increasing operational capacity), and in consideration of the assessment findings related to seagrass loss and hydrodynamic changes, this option was selected as part of the Westport Stage 2 process and subsequently formed a base-assumption for assessment of individual port options thereafter.

As part of the Westport Stage 3 process, the two channel options were reassessed in relation to benthic habitat (seagrass) impacts to validate the channel decision from Westport Stage 2. This was done given the availability of refinements in the channel design from vessel simulations undertaken during SCID Phase 3 and the availability of updated benthic habitat mapping from the WWMSP in October 2023. The validation process was undertaken for the optimised design of the proposed new second channel versus the widened and deepened existing Success Channel, under the same design requirements.

The validation results reconfirmed that potential impacts on seagrasses (both direct and indirect) would be lower under a new second channel scenario versus widening and deepening of the existing Success Channel. This is largely due to the location of the new second channel aligning with historically dredged areas, as opposed to the existing Success Channel which abuts shallow seagrass beds that would be impacted by widening. As such, the second main channel option was reconfirmed as the selected option.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment A - Figures.pdf Referral supporting figures	26/06/2024	No	High
#2.	Document	Attachment B - Preliminary Artist Impressions.pdf Preliminary artist impressions	15/04/2024	No	High
#3.	Link	Westport 360 Images_16.01.2024 https://momento360.com/e/uc/f94f1eebd8944e79ab90..			High
#4.	Link	Westport Preferred Design Flythrough https://www.youtube.com/watch?v=vBbhio67nPc			High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment C - DoT Environmental Policy.pdf Department of Transport Environmental Policy and Environmental Management Guidelines	21/06/2024	No	High
#2.	Link	Westport Environmental, Social and Governance Strategy https://westport.wa.gov.au/media/ih1nvx4x/westpo..			High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Benthic Habitat Mapping of Cockburn Sound. https://docslib.org/doc/5157963/benthic-habitat-..			High
#2.	Link	Changes in seagrass coverage in Cockburn Sound, Western Australia between 1967 and 1999 https://doi.org/10.1016/S0304-3770(02)00005-0			High
#3.	Link	Perth Desalination Plant Discharge Modelling: Model Validation. https://www.epa.wa.gov.au/sites/default/files/Re..			High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Assessment of the impact of the Garden Island Causeway on the marine environment in Cockburn Sound. https://wamsi.org.au/wp-content/uploads/bsk-pdf-..			High
#2.	Link	State of Cockburn Sound Marine Area Report 2022 https://www.wa.gov.au/system/files/2023-07/state..			High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Distributions of the major marine fauna found in the Perth metropolitan area (Yanchep to Mandurah). https://library.dbca.wa.gov.au/static/FullTextFi..			High
#2.	Link	Effects of dredging-related pressures on critical ecological processes for finfish: a review and pos https://wamsi.org.au/wp-content/uploads/bsk-pdf-..			High
#3.	Link	Literature review and preliminary risk assessment of the marine environment for the West Port and En https://WAMSI-Westport-literature-review-and-ris..			High
#4.	Link	Mangles Bay Marine Project, Rockingham. Significance for Migratory Birds https://www.epa.wa.gov.au/sites/default/files/PE..			High
#5.	Link	Marine fauna desktop study: Report prepared for Westport. https://o2marine.com.au/environmental/			High
#6.	Link	Population distribution, aggregation sites and seasonal occurrence of Australia’s western population https://www.int-res.com/articles/esr2023/50/n050..			High
#7.	Link	Species group report card – pinnipeds. Supporting the marine bioregional plan for the South-west Mar https://www.dcceew.gov.au/system/files/pages/a73..			High
#8.	Link				

		Westport Last Mile Area (WLMA) Fauna, Flora and Vegetation Desktop Study https://www.biota.net.au/services-flora			High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Sense of Place: A Response to an Environment, the Swan Coastal Plain, Western Australia. https://catalogue.nla.gov.au/catalog/3167187			High
#2.	Link	Vegetation Complexes - Swan Coastal Plain (DBCA-046) https://catalogue.data.wa.gov.au/dataset/vegetat..			High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Australasian Underwater Cultural Heritage Database https://www.dcceew.gov.au/parks-heritage/heritag..			High
#2.	Link	Australian Heritage Database https://www.dcceew.gov.au/parks-heritage/heritag..			High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Contaminated Sites Database https://www.wa.gov.au/organisation/department-of..			High
#2.	Link	Geomorphic Wetlands, Swan Coastal Plain (DBCA-019) https://catalogue.data.wa.gov.au/dataset/geomorp..			High
#3.	Link	Westport Last Mile Area Preliminary Site Investigation August 2023 https://www.epa.wa.gov.au/sites/default/files/Re..			High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Link				

Future Port Recommendations, Stage 2 Report, May 2020 https://westport.wa.gov.au/media/humberqz/westpo..	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	57144772510
Organisation name	Emerge Environmental Services Pty Ltd
Organisation address	26 Railway Road, Subiaco, 6008 WA
Representative's name	Jason Hick
Representative's job title	Director, Principal Environmental Consultant
Phone	08 9380 4988
Email	Jason.hick@emergeassociates.com.au
Address	Suite 4, 26 Railway Road, Subiaco WA 6008

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Jason Hick of Emerge Environmental Services Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	27285643255
Organisation name	Department of Transport (Westport Project Office)
Organisation address	125 Murray Street, Perth, 6000 WA
Representative's name	Patrick Seares
Representative's job title	Managing Director, Westport
Phone	08 6551 6850
Email	patrick.seares@westport.wa.gov.au
Address	125 Murray Street, Perth, 6000 WA

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Patrick Seares of Department of Transport (Westport Project Office)**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Patrick Seares of Department of Transport (Westport Project Office)**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *