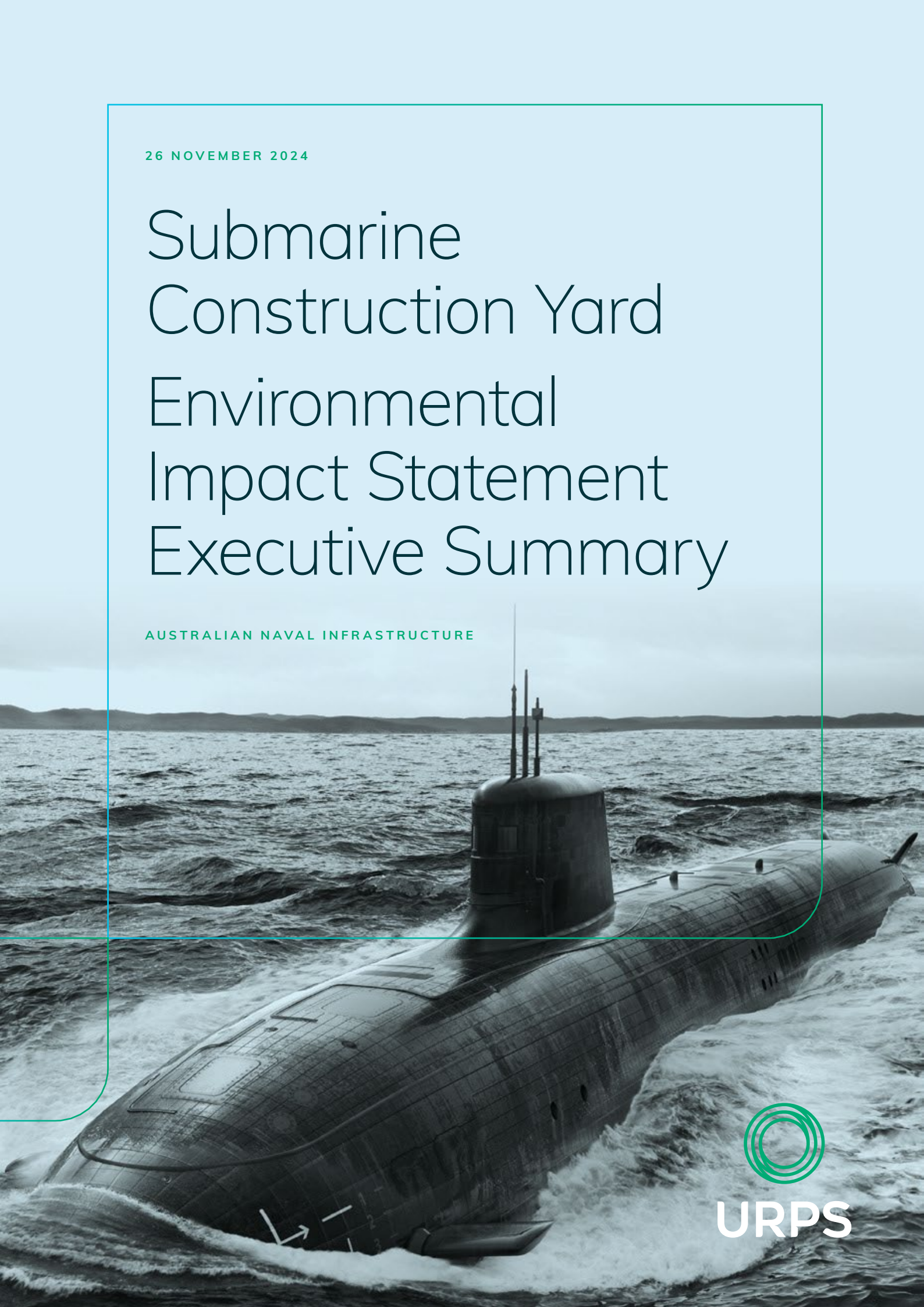
26 NOVEMBER 2024

Submarine Construction Yard Environmental Impact Statement Executive Summary

AUSTRALIAN NAVAL INFRASTRUCTURE



URPS

Environmental Impact Statement Executive Summary

We acknowledge and pay our respects to the Traditional Owners, the Kaurna people of the Adelaide Plains. It is upon their ancestral lands that the development is proposed.

We pay respect to Elders past and present. We respect their spiritual beliefs and connection to land, waters and culture which are of continuing importance to the living Kaurna people today. We further acknowledge the contribution and important role that First Nations people continue to play in our shared community.

Contents

1.
Introduction

Background

An Environmental Impact Statement (EIS) has been prepared on behalf of Australian Naval Infrastructure Pty Ltd (ANI) for the nuclear-powered Submarine Construction Yard (SCY) (the 'development') at the Osborne Naval Shipyard (ONS), Adelaide.

The SCY is required to support Australia's future defence needs in particular the acquisition of conventionally-armed nuclear-powered submarines which will be built in Adelaide under the Australia, United Kingdom, and United States (AUKUS) trilateral security partnership.

The submarines, to be known as SSN-AUKUS, will incorporate the best submarine technology from all three nations to deliver a world-class submarine.

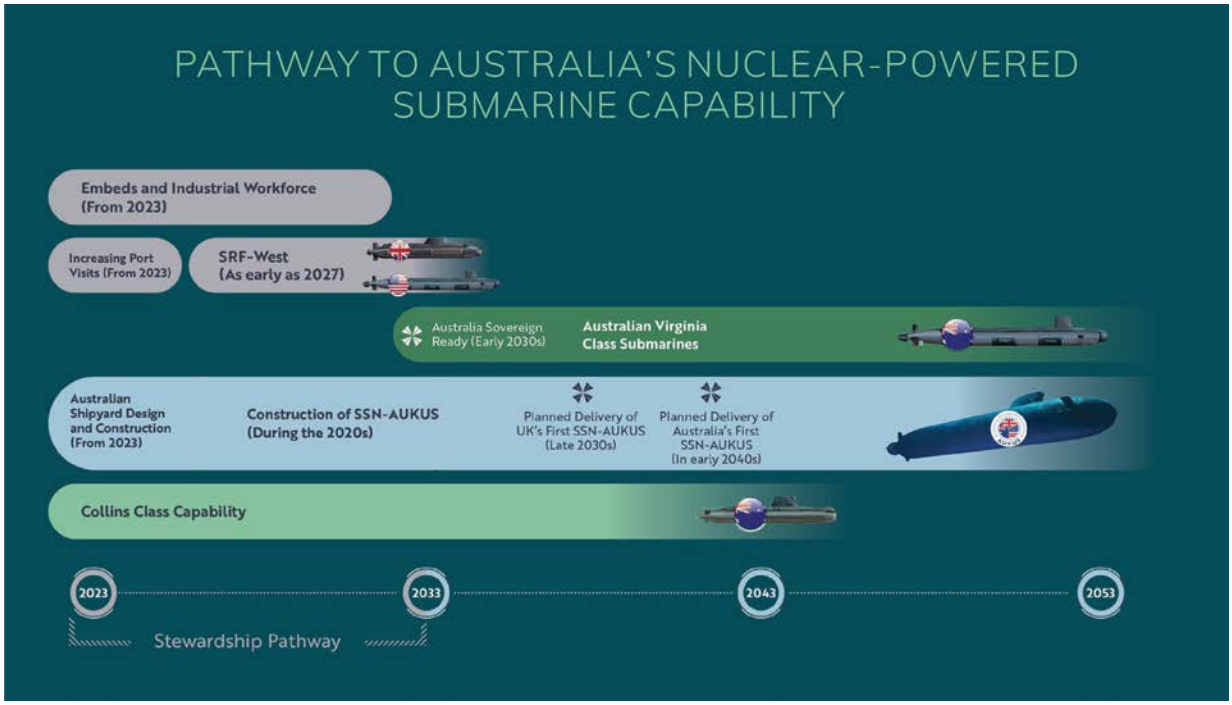
Office for AUKUS' Lefevre Master Plan

The Office for AUKUS (established by the South Australian Government to support the AUKUS program), is preparing the Lefevre Peninsula Master Plan in collaboration with ANI, the Commonwealth Australian Submarine Agency, City of Port Adelaide Enfield, and State Government agencies.

The Plan will provide a structured approach the future growth of Lefevre Peninsula. It will provide clear guidance as to the future investment in necessary infrastructure, including housing and transport, to support the new submarine enterprise as well as meeting the needs of other industry in the area and local residents.

It will also support future local activity and inform broader strategic planning including the development of the Greater Adelaide Regional Plan to make sure that it responds to the needs associated with construction and operation of the development and broader AUKUS program. A core objective is to make sure that future growth is sustainable with the aim for liveable, economically supported communities.

The Plan is anticipated to commence in late 2024, with delivery and implementation of the Masterplan from 2025.



Skills and training

The Commonwealth and State Government are working together on over 20 initiatives under the joint Commonwealth-South Australia Defence Industry Workforce and Skills Action Plan, including:

- the Skills and Training Academy at Osborne;
- the Schools Pathways Program, supporting almost 5,000 secondary students;
- over 1,000 additional Commonwealth Supported Places at the University of Adelaide and Flinders University over the coming years.

What is EIA and EIS

The development is an Impact Assessed development under section 108 (1)(c) of the Planning, Development and Infrastructure Act 2016 (PDI Act). The Impact Assessed process is the highest level of assessment in the South Australian planning system. It provides a comprehensive assessment of the development and its anticipated effects on the environment and its local setting.

An Environmental Impact Assessment (EIA) has been undertaken for the development. The EIA aims to prevent, reduce or offset the adverse effects of a development and enhance beneficial effects. It ensures that planning decisions are made considering these effects and includes engagement with key stakeholders and the community. It determines whether the development can meet regulatory requirements and details what specific measures will be needed to ensure the development is acceptable.

The EIS documents the EIA undertaken for the development. The EIS identifies the mitigation measures required and any monitoring that may be appropriate to help inform decision-making. The EIS has been prepared in response to the Assessment Requirements approved by the independent State Planning.

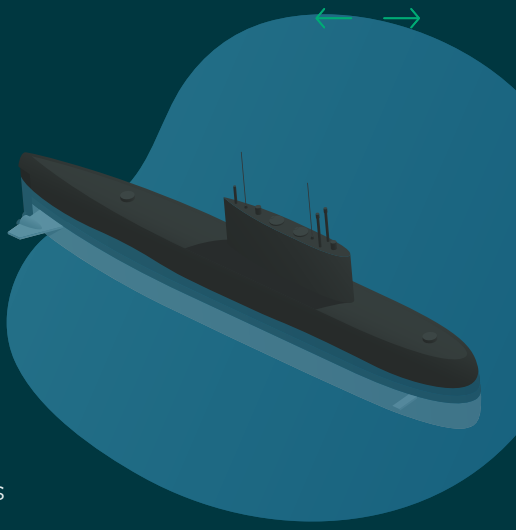
What are the benefits of the development?

The development will deliver a significant expansion to the capability and capacity of shipbuilding infrastructure on the Lefevre Peninsula. It will bring significant social, environmental and economic benefits to South Australia, including:

- At least $2 billion invested in infrastructure in South Australia.
- Significant local employment opportunities with up to 4,000 Australian workers employed to design and build the infrastructure for the SCY in Osborne and a further 4,000-5,500 direct jobs created to build nuclear-powered submarines in South Australia.
- Community and business benefits such as increased property values, upgraded roads, public transport, public spaces, schools, health facilities and retail services.
- Environmental measures that contribute to biodiversity, habitat and species protection.

These benefits are further detailed on the next page, which highlight the positive contribution at the local, state and regional level.

ECONOMIC AND EMPLOYMENT BENEFITS



Nuclear-powered Submarine Construction

Design and build infrastructure at Osborne Naval Shipyard over four years

Up to **4000** Workers

$2bn Programs

At least $2 billion invested in infrastructure in South Australia.

At its peak, up to 4,000 Australian workers employed to design and build the infrastructure for the SCY in Osborne.

Significant employment opportunities

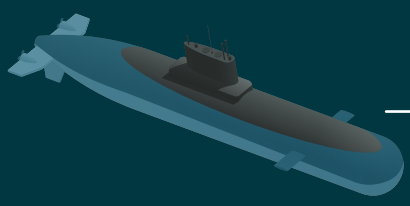
Program will create about 20,000 Australian Jobs over the next 30 years (not including tier two and three supply chain).

4000 → 5000

A further 4,000-5,500 direct jobs created to build nuclear-powered submarines in South Australia when the program reaches its peak.

Jobs include

- Engineers
- Technicians
- Scientists
- Tradespeople
- Administrators



What will the development deliver?

Once built, the development will enable five world-class submarines, known as the SSN-AUKUS, to be delivered to support security, peace and economic prosperity in the Indo-Pacific.

The construction of the submarines at the development site will begin by the late 2020s with the planned delivery of the first Australian built nuclear-powered submarine anticipated by the early 2040s.

Where is the development site?

The preferred development site for the SCY is located 19 km north of Adelaide on the north-eastern side of the Lefevre Peninsula in Osborne, South Australia. The development site for the purpose of the EIS is outlined in yellow within Figure 1 below.

Figure 1 - Development site divided into key areas

Why was this site selected?

The preferred site for the SCY was selected because it:

› is adjacent to the existing shipbuilding infrastructure at the ONS, which is owned and managed by ANI; and,

› is land previously prepared for industrial development that has access to deep water and was available for acquisition by the Australian Government.

What does the site include?

The development site contains three areas as shown in Figure 1 above, consisting of:

› Submarine fabrication (Area 1): This area will contain buildings and workshops to manufacture submarine components.

› Submarine outfitting (Area 2): Buildings in this area will be used to fit out the submarine sections.

› Submarine consolidation, launching and testing (Area 3): This area will be used for the final assembly, testing and commissioning of the submarines which requires a launch facility and wharf.

All three areas of the development site will have infrastructure including services, roads, worker amenities, security huts, lighting, CCTV, offices, on-site accommodation (Navy personnel) and car parking.

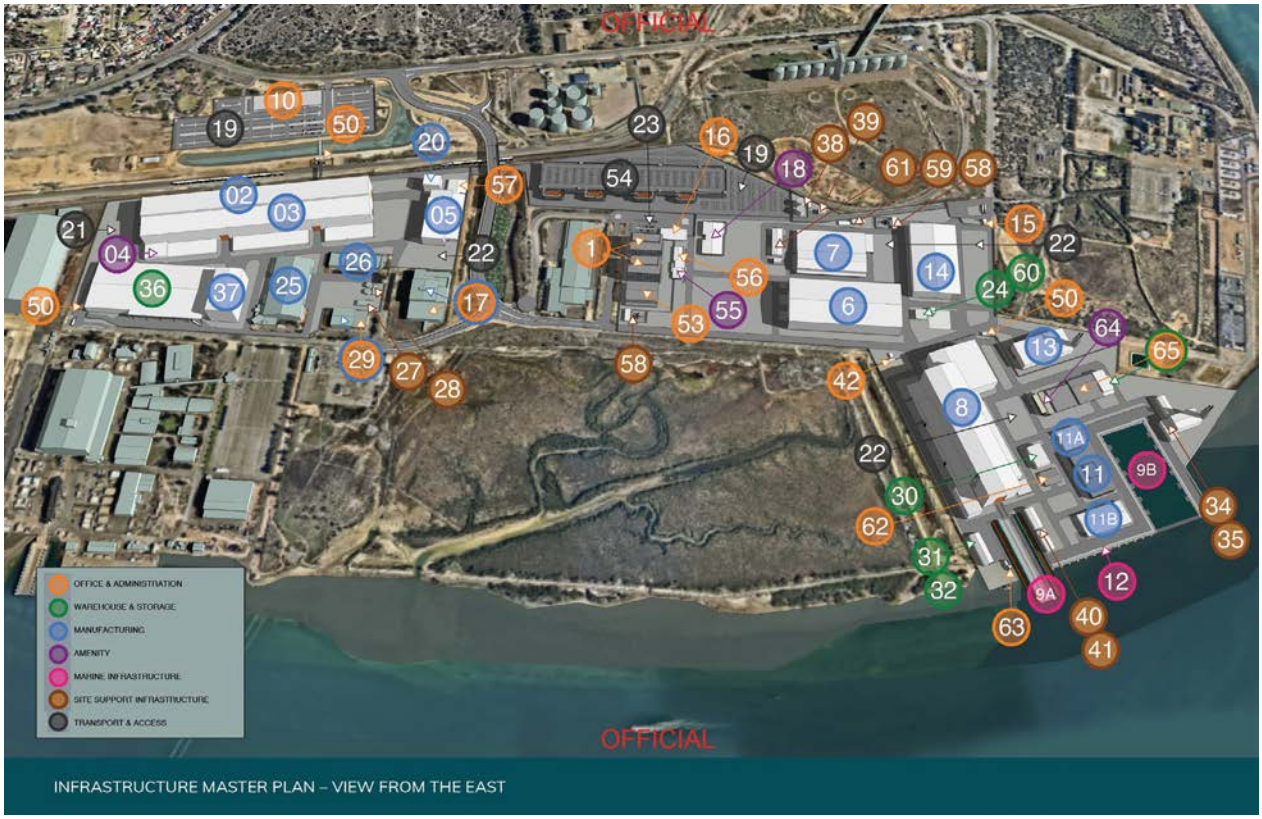
What will the buildings look like?

Detailed design for the SCY is currently underway. As such, the final number of buildings/structures is unknown. The current design as shown in Figure 3 and 4 identifies a number of buildings/structures on the development site, providing a range of manufacturing and associated activities including fabrication, welding, painting, abrasive blasting, warehousing, storage, assembly and testing, general workshop operations and component fit out. These buildings will range in size with some of the larger buildings being over 400 metres long and 50 metres tall. The larger buildings will be similar in appearance to Figure 2 below.

Figure 2 - Existing Osborne Naval Shipyard

Figure 3 - Current design view from the west

Figure 4 - Current design view from the east

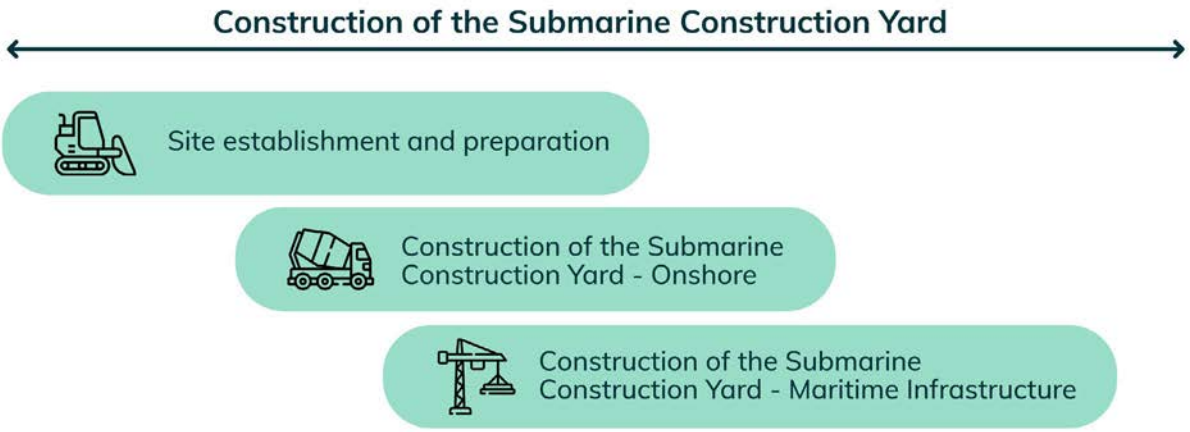


How long will construction take?

Construction of the development will take more than a decade with enabling works anticipated to start in 2025. Construction will take place over three phases, some of which may be undertaken in parallel, as illustrated in Figure 5 below:

- Site establishment and preparation works - This involves site establishment works, bulk earthworks and services to make the development site ready for construction and includes excavation, piling, services and drainage.
- Onshore construction - This involves construction of onshore infrastructure (such as services, roads, carparks, lighting, security, submarine launch facility, wet basin and wharf) and buildings (such as warehouses, offices, canteen, health centre and other amenities).
- Marine construction - This involves construction of maritime infrastructure within the Port River and includes dredging and hardening the Port River water's edge along Area 3.

Figure 5 - Indicative construction phases



How will the nuclear-powered propulsion systems be managed?

Buildings and infrastructure within the development that will house the nuclear-powered propulsion systems will be designed to meet safety standards required by the International Atomic Energy Agency (IAEA), the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and ultimately the Australian Naval Nuclear Power Safety Regulator (ANNPSR). In addition, due to the comprehensive nuclear licensing process, the development will be subject to ongoing monitoring and periodic review by the nuclear regulator to make sure that the development adheres to the safety requirements required for the site.

The nuclear-powered propulsion systems will be sourced and then delivered from overseas to the development site as a fully constructed and sealed unit that is dry and inactive. They will only be received when the construction schedule of the submarines requires them. At the development site the nuclear-powered propulsion systems will be stored inside a specifically designed and constructed, safe and secure area until each submarine is ready to have the nuclear-powered propulsion system installed in its hull.

There is only a limited period, from the time the propulsion system arrives at the development site, to when it is installed, started and tested prior to being delivered to the Royal Australian Navy for use, where any potential risk of radiation exposure could occur. Smalls amounts of low-level (or less) radioactive waste, similar to that produced by hospitals and research facilities currently in South Australia, will be generated during the later stages of the submarine build and testing process. This low-level waste will be collected, sorted and categorised prior to being taken off-site for long-term disposal.

All activities during the operational phase will be consistent with international best practice and with Australia's domestic and international legal obligations.

Given that the construction of propulsion systems will occur overseas, the limited time that propulsion systems are on the development site, and the limited time the propulsion systems are activated at the development site during commissioning and testing of the submarine, there is no risk to people or the environment of radiation exposure during the construction of the development.

What legislation and regulatory approvals are required?

The construction and operation of the development is subject to a range of legislation and approvals from the Commonwealth and State governments.

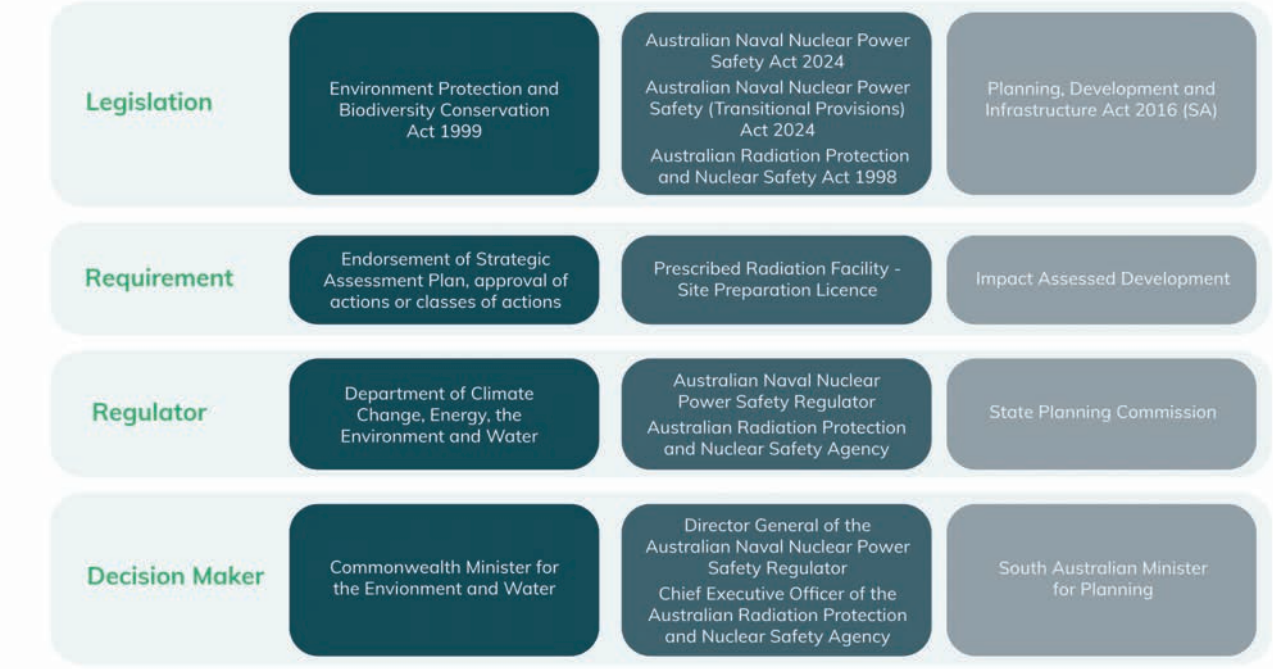
The following three approvals are required and outlined in Figure 6 below:

- State (South Australian) development approval under the PDI Act – this is being progressed through an Impact Assessed Development Application. This includes licence requirements of the Environmental Protection Authority (EPA),
- Commonwealth (Australian Government) approvals under the Environment, Protection and Biodiversity Conservation Act 1999 (EPBC Act) - this is being progressed through a Strategic Assessment.
- Nuclear Licensing, currently under the Australian Radiation Protection and Nuclear Safety Act 1998 (ARPANS Act) – this requires significant and detailed assessments against a range of internationally recognised standards including the Nuclear Non-Proliferations (Safeguards) Act 1997. This licencing requirement is anticipated to transition to provisions of the Australian Naval Nuclear Power Safety Bill 2024 in 2025.

Chapter 3 of the EIS provides additional details about the legislation relevant to this EIS.

Overall, the development site is considered consistent with the State Planning Policies and Greater Adelaide Regional Plan. There are some minor inconsistencies with the Planning and Design Code, which are proposed to be amended as a consequential change following a decision on this proposal. For example, it is proposed to include the entire development site within the Strategic Employment Zone, National Naval Shipbuilding Subzone.

Figure 6 - Legislative approval requirements



How are potential likely significant effects and impacts identified?

The development has the potential to create a range of impacts and effects.

The EIS impact assessment methodology used the following four assessment criteria to identify the likely significant effects and impacts of the development:

1. Assessment of the baseline condition and identification of those who could be affected (eg humans, built resources, natural resources).
2. Identification of potential environmental impacts for construction and operational phases, and cumulative scenarios as appropriate.
3. Evaluation of the "significance" of effect (significance' reflects the relationship between the magnitude (or scale) of an impact and the sensitivity (or value) of those affected).
4. Consideration of additional mitigation measures to reduce effects, if appropriate, and confirm remaining effects.

The significant effects identified for the development are outlined in Section 2.

2. Identified significant effects and impacts

Listed below are the range of effects and impacts identified for the development. After assessment, most of these are considered minor in nature (i.e., not significant) and can be addressed by standard approaches to reduce the impact to an acceptable standard (mitigation measures).

The assessment also identified positive effects (i.e., beneficial), in particular the economic benefits of the development which are described in Local, Regional and State Economies.

Local, Regional and State Economies

Likely economic impacts for the State, regional and local economies considered within the assessment included, employment, expenditures linked to these workers, and total economic output. The assessment identified direct, supply-induced and consumption-induced impacts across the construction and operational phases. In addition, the risks and impacts linked to the regional labour force, the provision of regional accommodation, industry supply chains, employment land supply, and more.

The economic effects for the development were assessed as the following:

- Significant beneficial construction phase employment effects, with an additional 619 jobs (including just under 200 directly linked to construction) generated for every $1 billion in construction phase expenditure.
- Significant beneficial construction effects in relation to wages and salaries linked to the construction phase with $45.8 million for every $1 billion in construction phase expenditure, including $15 million directly linked to construction activity.
- Significant beneficial construction effects due to the direct impact on economic output of $100 million for every $1 billion in construction phase expenditure, rising to a total economic output of $255 million considering supply-induced and consumption-induced impacts.
- Significant benefits across the operational phase, with an estimated 6,010 direct jobs, and 17,109 total jobs, created on an annual basis for every $10 billion in activity.
- A significant beneficial annual impact linked to the payment of wages and salaries across the operational phase, with $498 million in direct impacts, and a total impact of $1.3 billion for every $10 billion in economic activity.
- A significant beneficial total annual impact of $9.42 billion to the state's economy, including $5 billion in direct impacts over the operational phase, for every $10 billion in economic activity.

Other impacts identified were:

- Positive employment generating impacts across the operating phase, with between 4,000 and 5,500 employment opportunities directly associated with the project.
- Increasing demand for visitor accommodation is likely to create opportunities for new investment in new hotel accommodation supply, particularly in the Port Adelaide centre and Adelaide's north-western suburbs.
- Important supply chain benefits, with activities during the construction and operating phases sustaining existing suppliers, and providing opportunities for the creation of new businesses.

- Increased employment in the north-western suburbs is likely to lead to increased demand for housing across the region. Higher demand would translate to increased regional housing costs and gentrification in some areas.
- The supply of industrial land in Greater Adelaide's two most productive industrial regions - Adelaide West and Inner North regions – is constrained. The development will accelerate take-up of land across these regions, limiting opportunities for future economic expansion. Reduced availability of land may also lead to more intensive use of industrial land in these regions.
- If the development does not proceed, the impacts discussed above will not be generated. Perhaps most critically, failure to progress the project would alter perceptions around the risk of South Australia as a location for investment. It would likely precipitate a decline in investor and consumer confidence, potentially resulting in the flight of investment and skilled workers from the state.

A range of Commonwealth and South Australian Government commitments have been announced to support an expansion of the State's economic capacity. This includes the upskilling of the local workforce, efforts to attract skilled migrants to South Australia, and investment in supply chains. Failure to effectively build the capacity of the state's workforce presents a further risk to the delivery of the project.

Conclusion: The finding from the assessment is that there are significant benefits to the South Australian economy at all levels through construction and operation of the development. However, the South Australian Government and Australian Government will need to give consideration and manage competition for skilled labour and land requirements.

Air Quality

Air quality baseline conditions at and around the development site are currently similar to other parts of metropolitan Adelaide, with the primary sources of air emissions being industrial/ commercial and vehicle generated. Likely air quality impacts considered within the assessment included construction impacts from construction and remedial activities, and operation impacts from on-site emissions and operational traffic.

Construction air quality impacts may arise from site preparation and construction activities, vehicle movements, haul out onto sealed roads, and windblown stockpiles if not mitigated. The main emissions occurring from these impacts are anticipated to be dust, airborne particulate matter (mixture of solid particles and liquid droplets found in the air), and exhaust emissions.

During operation of the development, air quality impacts, if not mitigated, have potential to be generated by paint and blasting activities, manufacturing, fuel combustion sources and vehicle emissions. The potential air pollutants to be generated by these on-site activities include volatile organic compounds (VOCs), particulate matter, combustion gases, metals, polycyclic aromatic hydrocarbons (PAHs) and odour.

To meet EPA and Council requirements, Construction and Operational Air Quality Management Plans (AQMPs) will be developed, and will form part of the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP). These plans will outline specific mitigation strategies and procedures for controlling air quality during the construction and operation of the development.

Conclusion: No significant air quality effects have been identified. Air quality can be well controlled within acceptable limits for the environment and community through the adoption of infrastructure design (including controls and filtration standards) and standard construction and operation mitigation and management measures, as implemented on the existing ONS facility.

Transport and Traffic

Current (baseline) traffic conditions on the surrounding road network show that the existing road network is operating between 22% and 72% of its design capacity. The assessment identified the likely operational transport and traffic impacts of the development in combination with planned growth on the Lefevre Peninsula. Construction impacts and operational impacts to freight and passenger rail, maritime and air transport operations, shipping and recreational and other maritime/ water vessel access were scoped out of the EIS as they were found to be not significant.

Operationally, the initial traffic assessment shows that there is potential for the SCY workforce traffic in addition to the traffic from the future growth on the Lefevre Peninsula to exceed the design capacity of the existing road network.

The construction of nuclear-powered submarines will begin in the late 2020s when parts of the yard will become operational. It is expected that there will be steady growth in the workforce from mid to late 2020s with peak demand likely to be reached in the mid 2030s. This means that operational traffic demand is expected to grow steadily over the next 10-15 years, providing sufficient time for the optimal solution to be identified. This solution is likely to include a combination of operational measures as well as some infrastructure improvements.

For operations at the development site itself, mitigation options could include:

- workforce scheduling to spread traffic loads
- identifying alternate worksite locations for staff not critical to manufacturing at the site and changes to existing ONS workforce schedules (accounting for the new SCY) operation times.

Beyond operations at the development site itself:

- road infrastructure upgrades
- new or enhanced public transport services
- off-site parking with dedicated transfer services for staff.

The South Australian Government has commissioned the Lefevre Peninsula Master Plan. It is anticipated that, through the master planning process, opportunities will be identified to accommodate current and future traffic demand for the additional SCY workforce and other future growth on the peninsula.

A Construction Traffic Management Plan (CTMP) which includes measures to minimise impacts from construction traffic, will be prepared and implemented. As part of this, consideration would be given to traffic routing, timing and access locations to the development site to minimise impacts. Management of heavy goods vehicles within the development site and access to the road network will also require management with planning and measures identified in the CTMP.

Conclusion: No significant adverse effects have been identified for the transport and traffic network during construction. Traffic generated as a result of the development workforce during the operational phase, in combination with other planned growth on the Lefevre Peninsula, has the potential to exceed the road network design capacity from Port Adelaide, northwards up the Lefevre Peninsula.

However, there are a range of operational measures and infrastructure improvement options identified to manage capacity and cater for future demand to offset the future planned growth of the Lefevre Peninsula. The State and Commonwealth Government's are committed to work collaboratively to ensure the optimal solution is identified ahead of demand.

Noise and Vibration

Current (baseline) noise conditions around the development site are currently dominated by existing industrial and traffic noise, with no specific audible noise attributed to the existing ONS. Anticipated noise and vibration impacts considered within the assessment included, construction activities, and operation noise impacts from on-site plant (machinery and equipment) and operational traffic.

Construction traffic noise and vibration and operation vibration impacts were scoped out of the EIS as they were found to be not significant. Impacts from vibration to heritage structures is considered within Heritage Places and Areas, whilst impacts to animals from noise and vibration is considered within Marine Flora and Fauna and Terrestrial Flora and Fauna.

During construction, the most notable impacts due to increases in noise would be during construction of site infrastructure and substructures, which includes piling activities. Construction noise will vary across the development site in terms of location, duration and magnitude. Construction noise will be temporary, with nearby residential properties and businesses likely to experience short-term significant noise effects from construction activities within Area 1 during the daytime. This will reduce to non-significant effects as construction progresses and site infrastructure and substructures are completed within Area 1 and construction moves north into Area 2 and 3.

There was no impact of construction vibration identified for nearby residential properties. Vibration effects may be experienced within the existing ONS facility and commercial and industrial premises within 100m of the development site, however vibration effects can be readily managed through standard industry construction measures, and the adjacent structures and their operations are significant and robust. As a result, the effects are not considered significant.

The operational noise assessment confirmed that the noise levels from the operation of all facilities at the development site, in combination with the existing ONS facility, comply with the relevant Noise Environment Protection (Commercial & Industrial Noise) Policy criteria. As such, no impacts were identified. Due to planned growth on the Lefevre Peninsula in the future, including the development, traffic noise along the road network is expected to increase over time. Separate to the development, a Lefevre Peninsula Masterplan is to be prepared that will provide a structured approach to planning on the Lefevre Peninsula which will provide clear guidance as to the future investment in necessary infrastructure, including transport. Through the involvement of DIT and other stakeholders through the Lefevre Peninsula Masterplan process it is anticipated that potential impacts from traffic can be minimised.

In accordance with EPA and Council requirements, the majority of the construction activities will be undertaken during the hours of 7 am to 7 pm, Monday to Saturday. Night Works Management Plans (NWMP) will be prepared should construction works outside these hours be required. A Construction Noise and Vibration Management Plan (CNVMP) that includes specific mitigation strategies and procedures to minimise noise and vibration impacts to the lowest level will be prepared and implemented during construction.

Conclusion: During construction, nearby residential properties could experience short-term noise effects during construction however this is manageable and anticipated for development of this size and scale. Operational noise levels are expected to be the same as the existing ONS facility, and with good infrastructure design, and application of the required design standards, are predicted to comply with relevant noise criteria.

Traffic noise is expected to increase along the road network in the future as planned growth in the Lefevre Peninsula increases. Planning will need to be progressed, including partnerships with a number of government agencies, to manage capacity and cater for future demand to offset the future planned growth of the Lefevre Peninsula. No significant vibration effects are anticipated.

Visual Amenity

The development site currently comprises flat, vacant, cleared land that has been prepared for industrial use. The majority of the development site is currently fenced, and not accessible to the public. Infrastructure surrounding the development site are built structures associated with SA's largest commercial and tourism port, power stations, commercial rail, grain silos, fuel storage and the existing ONS facility. Given the existing conditions, most of the development site is not considered to have any important characteristics such as rarity, tranquillity or scenic amenity, nor does the development site itself significantly contribute to sense of place.

The assessment considered the likely impacts to landscape and visual amenity during the construction and operational phase of the development.

No significant effects have been identified during construction, as the development site is not considered to be particularly sensitive given the vacant land and existing industrial landscape. Once fully constructed, some degree of visual impact is anticipated due to the design and scale of the infrastructure required for the development. Whilst this includes large buildings of significant height, these will be consistent with the size and scale of the existing infrastructure including the ONS facility and is representative of zoning under the Planning and Design Code. As such, significant effects are not anticipated.

During detailed design, specific strategies and procedures for managing potential impacts to visual amenity including the management of light spill will be achieved via a range of design elements such as building orientation, shielding and lighting standards. Landscaping (to be confirmed during detailed design), anticipated to be limited due to site operational and security requirements, offers the opportunity to provide screening to the development and help to soften the visual impact and provide amenity in certain locations.

Conclusion: There will be some long, medium and short views of the development where change will occur and infrastructure will be visually prominent. However, no significant effects have been identified given the existing industrial character of the development site and existing infrastructure in the surrounding area.

Biosecurity

Biosecurity is important to protect our environment from the spread of pests and disease. The Landscape South Australia Act 2019 manages land-based pest species, and the Fisheries Management Act 2007 manages marine-based pest species (there are nine aquatic pest species listed within 5km of the development site waters).

If not appropriately mitigated, on-land construction has the potential for a short-term negative impact through the introduction, or spread, of land-based pest plants and animals within the development site or surrounding areas. However, there are long-term positive impacts by eradicating Declared Plants and other weeds within the development site through clearance, site management and increased human activity.

Aquatic biosecurity is critically important for our natural ecosystems. The Port River is a historically disturbed environment and currently contains a number of introduced non-native plants and animals species. Eradication of the existing species is not possible as part of development however through mitigation measures, the development will prevent their spread and avoid introducing new invasive species.

In the local aquatic environment, it is extremely unlikely that submarine construction would result in any increased risk of spreading or introducing new marine invasive species to the Port River or South Australia, given the submarines will be constructed locally and launched directly into the Port River.

A Biosecurity Management Plan (BMP) will be developed and implemented during both the construction and operation phases of the development. The BMP will outline specific strategies and procedures for managing and mitigating biosecurity risks. During construction, site soils and material sourced for fill would be managed in accordance with requirements in the Construction Environment Management Plan. A Dredge Management Plan (DMP) will also be prepared to manage and minimise dredging impacts and include consideration of biosecurity. All relevant permits and licenses related to biosecurity will be obtained, including relevant permits under the Fisheries Management Act 2007 to appropriately manage marine pest species where encountered.

Conclusion: No significant effects have been identified in relation to biosecurity for both the construction and operational phases. Biosecurity effects can be well controlled through the adoption of existing standard mitigation measures. These measures are the same as those demonstrated successfully during construction and in operation for the existing ONS facility.

Marine Flora and Fauna including Indo-Pacific Bottlenose Dolphins

Approximately 12 hectares of the Port River is included within the development site. While the River has some areas of remnant seagrass, microalgae and rock ledges, it has been significantly degraded due to historic dredging and industrial and stormwater discharges. There are up to 10 threatened or protected marine fauna species protected under the EPBC Act and/or National Parks and Wildlife Act 1972 (NPW Act) within the locality.

An assessment for the development considered the likely impacts on marine protected areas, native and/or listed marine threatened flora (plants), fauna (animals) and ecological communities, and fisheries during the construction and operation of the development.

The proposal will require the removal of seagrass within the development site, to enable the construction of coastal infrastructure and localised dredging (channel dredging is outside the scope of this EIS as this will not be required for a number of years). This seagrass is of low quality, with higher quality and more abundant seagrasses present in the wider locality. The removal of this seagrass is therefore not a significant impact.

The *Tursiops aduncus* (Indo-Pacific Bottlenose Dolphin) and *Kaupus costatus* (Deep-bodied Pipefish) were considered the only protected marine animal species certain to occur and could potentially be impacted by the development. Four other species of fish and two species of pinniped (Australian Sea Lion and Long-nosed Fur Seal) may be impacted by the development. However, potential impacts on these species are not considered to be significant as these species have abundant habitat in the region, the habitat in the immediate proximity of the development makes up an extremely small and highly modified portion of their overall habitat, and they are all highly mobile species able to swim away from disturbances to other areas.

Additional consideration was given to the Adelaide Dolphin Sanctuary (ADS) and protection of the Indo-Pacific bottlenose dolphins in the EIS. The ADS is protected under the Adelaide Dolphin Sanctuary Act 2005 and its management is guided by the Adelaide Dolphin Sanctuary Draft Management Plan 2024.

The area of the ADS impacted by the development is extremely small in the context of the entire ADS. The ADS is approximately 11,800ha in total, with the development representing just 0.1% of the total area of the ADS. The area of the ADS impacted by the development is a highly modified habitat that is also used by South Australia's main shipping port and is exposed daily to human impacts, marine traffic, noise, light spill and stormwater pollution. As such, impacts will not be significant to the ADS.

Potential impacts to the local population of Indo-Pacific bottlenose dolphins (Turisops aduncus) and other dolphins from construction activities will be a combination of direct (habitat removal) and indirect (turbidity, sedimentation, noise, vibration, water quality) effects. Potential impacts from operation of the development site will be more limited, including a combination of direct (lighting) and indirect (noise, water quality) from site maintenance and management operations. As is the case with the other marine animal species, dolphins are transient and mobile creatures able to temporarily move themselves away from disturbances such as dredging, noise etc. which further minimises impacts and no significant impacts to their habitat is expected. As such, impacts will not be significant to the Indo-Pacific bottlenose dolphins.

No direct construction/operation impacts will affect Mutton Cove or the Torrens Island Conservation Park as it is not within the development site. If unmitigated, indirect disturbance from construction/operation noise, light, air quality (dust) impacts and ground and surface water could occur, but these are not considered to be significant. The marine-based portion of Area 3 is within the Barker Inlet and St Kilda Wetland - a Wetland of National Importance. It is located within the Port River, extending through Mutton Cove and Torrens Island. As with the ADS, the area impacted by the development represents an extremely small percentage of the total area of the wetland. The area of the wetland impacted by the development is a highly modified habitat that is also used by South Australia's main shipping port and is exposed daily to human impacts, marine traffic, noise, light spill and stormwater pollution. As such, impacts from the development will not be significant to the Barker Inlet and St Kilda Wetland.

An assessment of impacts on commercial fisheries and recreational fishing has been undertaken and found that there are no significant affects.

Nonetheless, potential impacts will be managed through a range of mitigation measures documented in a Marine and Coastal Environmental Management Plan (MCEMP), a Construction Stormwater Management Plan (CSMP), a BMP and a DMP. An operational Stormwater Management Plan (SMP) will also be prepared that documents stormwater management and treatment requirements for the development during detailed design.

Conclusion: No significant effects have been identified in relation to marine plants and animals. Potential impacts can be mitigated and controlled through the adoption of standard construction and operation mitigation measures. These measures are the same as those demonstrated successfully during construction and in operation for the existing ONS facility.

Terrestrial Flora and Fauna

The development site is dominated by industrial land use and the balance of the land has already been prepared for industrial land use. As a result, it has limited plants / vegetation present throughout. The ecological value of the development site has been reduced and heavily modified by past land clearance and the incursion of weeds in certain locations. None of the vegetation on the development site meets the criteria for a Threatened Ecological Community (TEC) under the EPBC Act and no threatened flora under the EPBC Act have been observed.

A total of 16 threatened or protected animal species, all of them birds, were observed within the development site and surrounds. Six of these bird species are listed as threatened under the EPBC Act and/or the NPW Act. The remaining ten species are either listed as Migratory or Marine under the EPBC Act. These species were mostly observed at coastal swale drains on Snapper Point and the intertidal flat/coastline on the edge of Area 3. These are the only areas on the development site considered to have any potential for habitat of significance to listed animals.

Potential impacts on open space, native and/or listed threatened animals, plants and ecological communities were considered for the construction and operational phase of the development including the impacts of vegetation clearance, noise, light, air quality, contamination events, stormwater runoff, vehicle movements, excavation, restricted access, litter, and increased human activity. Non-listed land plant and animal species and communities have been scoped out of assessment on the basis that populations are of limited ecological importance due to their size, composition or lack of threat / rarity.

The entire development site will need to be cleared of any remaining existing vegetation. These impacts will be direct, permanent, long-term and irreversible. However, the ecological value of these areas has been compromised by the incursion of weeds and past human activities.

Removal of habitat is likely to be the most significant impact to animals as the entire area of intertidal habitat and all vegetation within the development site will be removed during the construction phase. Birds are highly mobile species largely able to avoid impacts and resilient to change. Habitat within the development site is of limited importance to birds in the wider context of locality where there are abundant higher quality habitats. Despite their national protection, the high mobility of these birds and ample availability of higher quality habitat in the locality will not result in significant impacts and can be controlled through mitigation measures.

There are no direct construction/operational impacts affecting open spaces in the locality. Although indirect disturbance from noise, light, dust deposition, and ground and surface water could occur if not mitigated.

All impacts will be managed through a range of mitigation measures documented in a Terrestrial Flora and Fauna Management Plan (TFFMP), a SMP, and a BMP during construction. Once operational the relevant mitigations documented in the TFFMP will be carried forward and implemented.

Conclusion: No significant effects have been identified in relation to terrestrial flora and fauna. Impacts can be controlled through the adoption of standard construction and operation mitigation measures. These measures are the same demonstrated successfully for those implemented during construction and in operation for the existing ONS facility.

Climate Change Adaptation

The potential for significant effects resulting from climate change on the development were assessed based on an operational lifespan of 30+ years. The assessment focused on the future when changes from the existing climate will have occurred and may pose risks to the operational function of the development and its users. The future baseline was informed by historic and the projected change in climate variables for Adelaide. The following climate hazards were considered: sea level rise, extreme temperature, rainfall, drought and bushfires. As a result, the assessment does not explicitly consider climate risks during the construction period as these works will happen in a period which is not subject to additional climate change.

Once operational, several climate change trends such as increasing sea levels, declining rainfall, warmer temperatures and higher bushfire risk could potentially impact the development and future onsite workers. However, the assessment found that the development could effectively manage or design out climate hazards sufficiently such that no significant effects have been identified.

Conclusion: The climate adaptation and resilience measures identified and adopted by the development seek to minimise climate risks due to future climate change. The assessment has found that the development is resilient to likely climatic changes with no significant effects currently identified.

Greenhouse Gas Emissions

The majority of the development site currently has no material activities that result in Greenhouse Gas (GHG) emissions. An assessment undertaken as part of the EIS compares the change in the GHG emissions resulting from the development over its lifetime. This initial and preliminary GHG assessment has been undertaken for the concept design stage of development and had access to very limited quantity and operational information. As a result, it represents a 'worst case' estimate for the development based on similar existing infrastructure and a number of assumptions. Further consideration of GHG emissions will be undertaken during detailed design.

The initial GHG assessment considered direct emissions (e.g. fuels, welding refrigerant gas), indirect emissions (e.g. grid electricity), and embodied emission (e.g. construction materials, waste management, site maintenance, supply chain, project travel, workforce transport).

Based on the initial estimates and assumptions, during construction the development would account for approximately 0.35% of South Australia's annual GHG emissions and during operation the development would account for approximately 0.43% of South Australia's annual GHG emissions. The assessment concludes that the effects of the development on climate change are not significant. The development emissions are a very small component of State carbon budgets. The development is also consistent with existing policy requirements, and will adopt mitigation measures to minimise GHG emissions during construction and operation.

When more certain quantity and operational information is available following detailed design, it is anticipated that more accurate GHG emissions calculations be undertaken and opportunities to reduce GHG emissions can be identified and implemented during construction and operation.

Conclusion: No significant greenhouse gas emissions effects have been identified. The development's greenhouse gas emissions are considered to be a small component of State carbon budgets over the development's lifecycle. The development has the opportunity to adopt good practice measures to avoid and minimise greenhouse gas emissions during the construction and operation phases and will support South Australia's transition to net zero by or before 2050.

Waste Management

The development site has long been identified for industrial development, however does not currently contain any activities that generate waste

As for any construction project, multiple waste streams will be produced through construction and operation. The impact of anticipated waste categories (refer to Table 1) has been assessed.

Table 1 - Categories of waste

Waste category	Description
Standard waste & recycling	Does not contain hazardous and/or radioactive waste and is similar to any commercial / industrial development.
Hazardous waste	Has the potential to be dangerous to environment and human health, and is common in industrial manufacturing precincts.
Contaminated solid waste	Has hazardous waste contamination but still suitable for landfill disposal.
Waste soils	From excavation that is not contaminated and can be safe for reuse as a construction fill.
Radioactive waste	This includes up to and including low-level radioactive waste generated during commissioning of the nuclear-powered propulsion system at the final stage of the submarine build process. This level of waste is similar to radioactive waste created and stored at medical sites that use nuclear medicine.

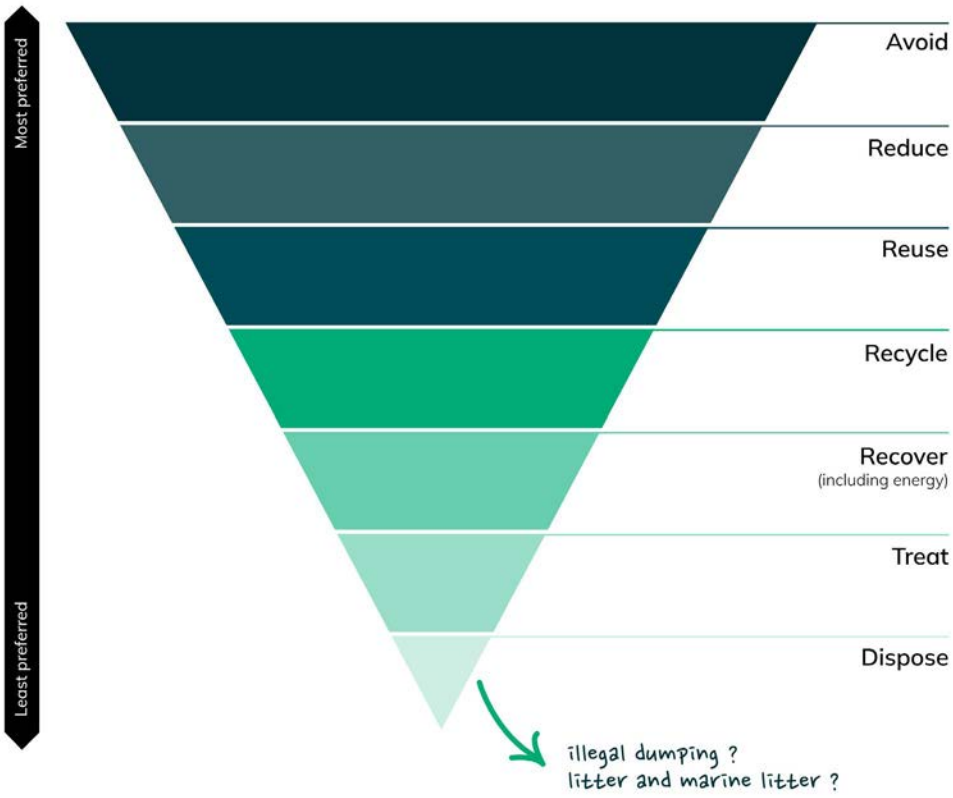
Waste will be managed appropriately to avoid impacts including waste of resources and harm to the environment and community. Disposal of waste will follow the waste hierarchy of avoiding, reducing, reusing, recycling and recovering waste as a priority over treating and disposing of waste, as shown in Figure 7 on the next page.

Up to 170,000 tonnes of waste material could be generated during the construction phase of the development with a further 2,000 tonnes of waste material per year potentially generated in the operational phase. However, it is anticipated that more than 90% of construction waste and 70% of operational waste will be diverted away from landfill disposal, bringing the total landfill diversion percentage for the development to between 60% and 89%.

The generation of up to low-level radioactive waste is limited to the operational phase of the development, and only when the final stage of each submarine's construction requires commissioning of the nuclear-powered propulsion system to occur. The management of the waste generated will be undertaken by requirements of the International Atomic Energy Agency (IAES), the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and ultimately the Australian Naval Nuclear Power Safety Regulator (ANNPSR).

The development will comply with all relevant requirements to ensure management of waste promotes sustainability and avoids negative impacts. The storage, transport, disposal and licensing requirements for each waste type are detailed in Chapter 16 of the EIS and will be further considered during detailed design.

Figure 7 - Waste Heirachy



Conclusion: No significant waste management effects have been identified. The development will adopt good practice measures to avoid and minimise waste and will follow the waste hierarchy (avoiding, reducing, reusing, recycling and recovering waste as a priority over treating and disposing waste). These measures are the same those demonstrated successfully during construction and in operation for the existing ONS facility.

Flooding

The Lefevre Peninsula has many low-lying areas that sit below recorded high tide levels. The development site is relatively flat, with only a very subtle grade that falls from west to east, towards the Port River. Most existing surface levels sit around 2 to 3 m above height datum (AHD) (height above average sea level). Areas 1 and 3 are both low-lying and have potential to be inundated by high tides or storm surges should there be no protection measures in place. Flood modelling results show that floodwaters across the development site are generally contained to the existing road reserves and detention basins in a 1-in-100-year storm event. Floodwaters generally do not breach the road reserves or basins and enter private allotments.

The assessment considered the likely impacts from surface water and tidal flooding during the construction and operation of the development.

For flood risk, the primary concern during the construction phase is managing surface water runoff, including any tidal influences, to minimise impact from surface water flooding on the development and surrounding land. A CEMP would set out measures for the management of surface water runoff during the construction of the development to mitigate any risks to surrounding vacant industrial land, industrial sites, adjacent roads and the environment.

Because the development will increase ground levels across much of the existing development site and harden the edge of Area 3 with a sea wall, the lower-lying areas associated with higher tidal interactions and surface water flooding risk in particular will be significantly reduced. Surface and building levels across the development site will be set above the 1-in-100-year flood levels, with an appropriate allowance for increased rainfall, sea level rise, extreme storm surges, land subsidence or uplift, and coastal erosion. In addition, the operational SMP will ensure water flow is directed away from buildings. Therefore, the development and work force, would be unlikely to experience surface water flooding during a 1-in-100-year event.

Off-site areas, such as the existing ONS facility to the south of the development site and the adjacent roadways, will not suffer any significant effects following completion of the development. The SMP, through detailed design for the development, will mitigate off-site discharge and ensure that site-wide drainage is effectively managed and prevent any negative off-site flooding impacts.

Overall, by implementing the measures identified within the CEMP during construction, and managing and maintaining the measures identified in the SMP during operation, the potential effect of flooding at the development site and surrounding areas can be managed and is not considered to be significant.

Conclusion: No significant effects have been identified in relation to flooding for both the construction and operational phases.

Site and Groundwater Contamination

Potential existing contamination of soils in the region is recognised due to a history of potentially contaminating activities that include dredge spoil disposal or storage, fill or soil importation, water detention basins, and industrial burials. Groundwater in the locality is known to be impacted by a number of contaminants, including metals. Extensive site contamination investigations for the development site have been undertaken over time, and these have been supplemented most recently with investigations specifically for the EIS. The latest investigations for the EIS did not identify significant contamination with the exception of copper in one sample from Area 1 and lead in one sample from Area 2. Acid sulfate soils (ASS) and potential acid sulfate soils (PASS) were not encountered.

The assessment considered the potential impacts of land-based site and groundwater contamination during the construction and operational phase of the development. It included identified potential impacts on human controlled waters (groundwater and surface water) and ecological waters (plant and animals in conservation areas). The assessment concluded that effects were not significant in relation to potential disturbance of contaminated soil, coastal acid sulphate soils or naturally occurring ground gas. It was also not significant in relation to potential contamination of soils/ groundwater from spills, management of soil, or incidents as a result of erosion and sedimentation, soil compaction, or dewatering.

Management plans, specific to the mitigating and handling of site and groundwater contamination during construction, will form part of the CEMP. This will include as a Soil, Erosion and Drainage Management Plan (SEDMP), a Spoil Management Plan, an Acid Sulfate Soil Management Plan (ASSMP), a Dewatering Management Plan and a SMP.

During operation a Dewatering Management Plan will form part of the OEMP, with the SMP including operational requirements for the water quality management and improvement measures for stormwater identified for the development during detailed design.

Further investigations are anticipated during detailed design to support existing data. These investigations will be undertaken and results confirmed prior to construction commencing.

Conclusion: Extensive site and groundwater investigations have been undertaken over time across the development site. Sampling, testing and reporting has to date confirmed that potential soil and groundwater contamination impacts during the construction and operational phases can be effectively and appropriately managed such that no significant effects are expected. Management measures required are the same as those demonstrated successfully during construction and in operation for the existing ONS facility.

Coastal and Marine

The EIS assessed the potential impacts of the development on the coastal and marine interface associated with construction of the development, and turbidity of the marine environment due to the disposal of dredged material at the anticipated dredge material placement area (DMPA).

A disposal location for dredged materials has not yet been confirmed. Due to the likely quantity of material, and the absence of a suitable land-based site, the EIS assessment has anticipated that all dredged material for the construction of the development is likely be require disposal at the Gulf St Vincent DMPA previously used for Port River and Outer Harbor dredge spoil. That DMPA site was nominated because very limited known sensitive environmental receptors were identified there. Further assessment is required once design detail has progressed and the area and volume of dredging and other marine infrastructure can be confirmed. Approval will be undertaken and provided to the EPA as part of the dredging and disposal licence applied for under the Environment Protection Act 1993.

The construction of the development is anticipated to require between 636,000m3 and 891,000m3 of material to be dredged. This quantity of material is significantly less than previous Outer Harbour channel deepening and widening projects undertaken in 2005 and 2017. Whilst acknowledging the placement of dredge material within the Gulf St Vincent has potential to impact to marine plants and animals, using an existing site that was chosen because it had very limited known sensitive environmental receptors is anticipated to minimise potential impact.

The construction of coastal and marine infrastructure within Area 3 and the hardening of the coastal edge will cause changes to the flow of water and sediment deposition in the Port River. However, given the scale of the change (which represents a relatively small portion of the broader marine environment within the Port River), any effects on sediment movement or water flow patterns are anticipated to be minimal. As such, the development is not expected to result in changes which could significantly affect the shape, structure and coastal processes within the Port River.

A Marine and Coastal Environmental Management Plan (MCEMP) will be developed and incorporated into the CEMP to manage and mitigate impacts to coastal and marine flora and fauna. This will be supported by the BMP and DMP. The DMP will set out the proposed dredging methodology based on final design and the season in which the works will be undertaken. It will include monitoring requirements with triggers for changes in methodology in order to reduce plume and sedimentation impacts.

Conclusion: No significant effects have been identified in relation to the placement of dredged material within the Gulf St Vincent, nor from changes to coastal processes during operation of the development.

Surface Water and Groundwater

The EIS assessed the potential impacts on water quality (surface and ground) during the construction and operation of the development. Common pollutants found in stormwater runoff that can impact water quality from construction sites and industrial areas include suspended solids, nutrients, litter, heavy metals, oils and grease. These pollutants can cause harm to the environment if unmitigated:

During construction, the CEMP will include methods and measures designed to prevent adverse impacts in relation to water quality, surface water drainage and pollution control of oils, sediment, cements and other polluting sources which may be hazardous to the environment. The CEMP will also include a Dewatering Management Plan including requirements to treat construction wastewater prior to discharge and a SMP to manage stormwater.

During operation, the development will incorporate a range of water quality management measures to reduce pollutant discharging off-site and entering the Port River. These will be documented in the SMP during detailed design, and include requirements for operation. These measures will ensure that the drainage directs all stormwater runoff away from Mutton Cove, stormwater generation is minimised and treatment solutions are identified and implemented, stormwater reuse is maximised and spill prevention measures are accounted for in the design. In addition, regular monitoring of stormwater is anticipated to demonstrate treatment measures are achieving the required results.

Conclusion: No significant effects have been identified in relation to surface water and groundwater quality during the construction and operation of the development.

Aboriginal Cultural Heritage

Although the development site is now highly modified reclaimed land, the Lefevre Peninsula is part of the traditional lands of the Kaurna people and closely tied to the Tjilbruke dreaming, a creation story that provides a set of rules to live with each other and the land.

The EIS assessed the potential impacts on Aboriginal cultural heritage. Whilst there are no known Aboriginal cultural heritage sites within the development site, the potential impact to unknown heritage sites during construction was assessed. The operational phase was excluded from the scope of assessment as all direct physical effects on below ground assets would occur during construction phase of the development.

The assessment also confirmed whilst the development site is within the native title claim area of the Kaurna People, the Federal Court has determined that native title does not exist in the current development site, and as such this was not assessed further.

The assessment has considered geotechnical investigations, archaeological surveys, Aboriginal consultation and Kaurna/Ramindjeri earthworks monitoring since the early 2000's documented in 21 relevant reports for the northern and eastern sections of the Lefevre Peninsula including the development site. There is a general consensus among those studies, and the current assessment of the area, that there is a low risk for unknown heritage sites. This is primarily because the development site was largely under water until the period following European arrival, and it is unlikely that there was anything other than potential opportunistic use of this area by Aboriginal people during low tide at the development site.

Regardless of the evidence to date, should an unknown Aboriginal heritage sites be found, site discovery procedures, documented in the CEMP and supported by cultural awareness as part of worker induction, will minimise potential impacts and ensure responsible management at the site. ANI has already imbedded this into their operational processes.

Conclusion: There are no known Aboriginal heritage sites within the development site. The development site has been assessed as having a low risk of works impacting unknown Aboriginal heritage sites.

Any potential risk of encountering unknown Aboriginal heritage sites can be managed with standard construction mitigation measures.

Community Wellbeing/Social Impact Assessment

A Social Impact Assessment (the 'SIA') was undertaken for the construction and operational phases of the development, which considered all real or perceived, positive and negative impacts. Impacts identified were wide ranging and include impacts to services, infrastructure, residential areas, employment, community cohesion, public safety (including perceptions), recreation, public space amenity and other values.

Assessing SIA impacts within the EIA process is challenging because perceptions are inherently subjective, varying widely across individuals based on personal values, experiences, and expectations. While the breadth of potential impacts may have been captured, the perception of their impact is personal and subjective, and may be influenced by social, media, or individual beliefs, making it difficult to accurately predict or assess.

The community were considered via the following three categories:

- The 'immediately impacted community' who live or work in proximity to the development site. This includes people living or working in North Haven, Largs Bay and Semaphore.
- The 'wider community' who will not experience direct impacts but may feel some real or perceived broader impacts. This is defined as those within Greater Adelaide.
- 'Other interested and affected people' who are community members beyond Greater Adelaide with an interest in the development.

The potential effects from impacts identified were not significant in relation to:

- Increased scale of land use at the development site.
- Light spill and light impact.
- Danger to people and property.
- Availability of information about the nuclear-powered propulsion system and the low level radioactive waste that is generated during commissioning.
- Transparency of information.
- Changes to local property market (due to the wider beneficial impacts provided by the development).
- Increased demand on infrastructure/utilities.
- Opposition to defence activity (due to a very small number of receptors who are strongly opposed to defence activity).
- Changes to access (due to a very small number of receptors affected).
- Transparency of information provided and complexity of approvals.
- Genuine, regular and transparent engagement and barriers to participation (as the Impact Assessed process is highly transparent, providing extensive opportunities for community engagement, inviting public submissions, and holding consultations).

Potential effects were considered beneficial in relation to changing community composition.

A CEMP and OEMP for the development will include mitigation measures that contribute to managing and mitigating construction and operation impacts that may affect the community such as noise, air quality, heritage, hazards etc. In addition, ANI and its partners will deliver regular, ongoing, quality engagement with community and stakeholders to ensure the community is well informed about the development, able to have their questions and have their concerns heard and acted upon where relevant.

Conclusion: It is acknowledged that the community may feel perceived impacts as a result of the development, however the assessment has not identified any significant effects. The development will generate social and community benefits and impacts, with most of these being beyond the area under the control of the development and ANI.

ANI, in partnership with the shipbuilder, will work with Local, State and Commonwealth Government's to support the community through this change, to ensure locals and broader South Australians enjoy the benefits of the development, and negative impacts are minimised.

For this reason, the Commonwealth, State and Local Government are working together to minimise social impact and maximise social opportunities.

Management measures required are the same as those demonstrated successfully during construction and in operation for the existing ONS facility.

Heritage Places and Areas

The development site was originally marshy low-lying land (intertidal swamp, mudflats, dunes and sub-tidal seabed) until it was reclaimed with extensive fill and developed throughout the late 20th century. As a result, no heritage places or areas are at the development site.

There are two state heritage places and three local heritage places in the vicinity of the development site. The closest of these is the Former Glen Arif House on Victoria Road which is 660m from south-west of the site. There are five shipwrecks (the Corsair, Sigrid, Wildflower, Enchantress and Napperby) mapped within the Port River and two shipwrecks (Excelsior and Jupiter) located adjacent the development site in Mutton Cove. There are no heritage overlays affecting the development site.

The EIS considered the impacts to the Excelsior shipwreck, unexpected historic shipwreck finds and unknown historical archaeology during the construction phase. There are no state heritage places, state heritage areas, local heritage places, historic areas or known sites of historical archaeology located within the development site. As such direct impacts to these heritage assets within the development site were scoped out of the EIS. All shipwrecks but the Excelsior were excluded from the assessment as investigations indicated that six of the shipwrecks (Corsair, Sigrid, Wildflower, Enchantress, Napperby and Jupiter) within surrounding area were unlikely to be affected by the development. Indirect impacts during the operational phase of the development on local and state heritage places was also scoped out of further assessment, due to the distance from the development and intervening built and natural form.

The Excelsior is a historic shipwreck (over 75 years old) and is protected under the Historic Shipwrecks Act 1981. Potential impacts, if unmitigated, to the Excelsior are limited to vibratory impacts from construction activities for the development. There is no reasonable cause to suspect that excavation of the development site will result in an archaeological artefact of significance being discovered. There are no archaeological records on the development site.

A Construction Vibration Management Plan (CVMP) will be developed and incorporated into the CEMP for the development. Within the CEMP several specific mitigation measures for the Excelsior will be undertaken, including condition assessment and vibration monitoring for certain construction activities in close proximity to the shipwreck. Although very unlikely to be encountered given the site history, the CEMP will set in place protocols for staff inductions to ensure staff are aware of the possibility of encountering archaeological artefacts, and will outline the stop work procedure to be implemented in the event of discovery.

Conclusion: No significant effects have been identified in relation to Heritage places and areas. There is no reasonable cause to suspect that excavation of the development site will result in an archaeological artefact of significance being discovered.

3. Summary

All identified significant effects for the construction and operational phases of the development are listed in Chapter 25 of the EIS, including those with no significant effects. Only residual significant effects, which are those effects that remain following the implementation of mitigation measures, are highlighted below:

Construction Phase

There are significant short-term benefits to the South Australian economy at local and regional levels through construction of the development. To maximise these, the EIS identifies the need for the South Australian Government and Australian Government to consider the development's skilled labour and land requirements.

During construction, the EIS identifies that nearby properties could experience short-term noise effects during the daytime however this is manageable and expected for a development of this size and scale.

Operational Phase

There are significant long-term benefits to the South Australian economy at all levels (local, regional and state) through operation of the development. To maximise these, the EIS identifies the need for the South Australian Government and Australian Government to consider the development's skilled labour and land requirements.

During operation of the development, traffic generated by the workforce in combination with other planned growth on the Lefevre Peninsula, has the potential to exceed the capacity of certain existing roads in the area. This increase in traffic will also result in traffic noise along the road network increasing over time.

The EIS recommends traffic and transport options be progressed in partnership with government agencies and organisations to increase capacity to cater for this additional demand. As a result of the involvement of DIT and other stakeholders through the Lefevre Peninsula Masterplan process it is anticipated that potential impacts from operational traffic and operational traffic noise can be minimised.

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