

APPENDIX E

Planning

E-1 Planning Assessment Report

NORTHERN
WATER PROJECT



Northern Water Project

Department for Infrastructure and Transport

Planning Assessment Report

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We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

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Abbreviations

Abbreviation	Definition
Units	
GL, GL/year	Gigalitre, gigalitres per year
ha	Hectare
km	Kilometre
kV	Kilovolt
ML, ML/day	Megalitre, megalitres per day
Legislation	
EP Act	<i>Environment Protection Act 1993 (SA)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
LSA Act	<i>Landscape South Australia Act 2019 (SA)</i>
NPW Act	<i>National Parks and Wildlife Act 1972 (SA)</i>
NV Act	<i>Native Vegetation Act 1991 (SA)</i>
PDI Act	<i>Planning, Development and Infrastructure Act 2016 (SA)</i>
PDI Regulations	<i>Planning, Development and Infrastructure (General) Regulations 2017 (SA)</i>
the Code	Planning and Design Code (Version 2025.21, 4 December 2025)
Abbreviations	
DA	Development Application
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DHUD	Department for Housing and Urban Development (SA)
DIT	Department for Infrastructure and Transport (SA)
DoD	Department of Defence
DoE	Department of Environment (Cth) (a former department - now DCCEEW)
DPTI	Department for Planning, Transport and Infrastructure (SA) (A former department – now DHUD and DIT)
EIS	Environmental Impact Statement
EL	Exploration Licence (under the <i>Mining Act 1971</i>)
EP	Eyre Peninsula
EPP	Environment Protection Policies (under the EP Act)
EWRP	Eyre and Western Region Plan
FNRP	Far North Regional Plan
GAB	Great Artesian Basin
LGA	Local Government Area
MNES	Matter of national environmental significance
NVC	Native Vegetation Council
the Project	Northern Water Project
OEMP	Operational Environmental Management Plan
PUA	Pastoral Unincorporated Area
RARB	Recognised Aboriginal Representative Body

Abbreviation	Definition
RCP	Representative Concentration Pathway
SAPPA	South Australian Property and Planning Atlas
SEB	Significant Environmental Benefit
SPC	State Planning Commission
SPP	State Planning Policies
SSP	Shared Socioeconomic Pathways
TBM	Tunnel boring machine
UIA	Unincorporated Area
USG	Upper Spencer Gulf
WSUD	Water sensitive urban design

Executive Summary

The Northern Water Project (the Project) aims to provide a secure climate resilient water source for industry in South Australia's Upper Spencer Gulf (USG) and Far North through the delivery of 51 GL/year of water from a seawater reverse osmosis desalination plant located in the Upper Spencer Gulf, and associated water transfer system (including pipeline, transfer pump stations and water storages) and electricity infrastructure (refer Figure 1 and Figure 2 for maps of the Project location).

The Project comprises the following key elements:

- a 51 GL/year seawater reverse osmosis desalination plant located at Mullaquana Station approximately 25 km south-west of Whyalla
- marine intake and outfall tunnels extending underneath the seabed and into Spencer Gulf
- diffuser structures for discharge of return water into Spencer Gulf
- a transfer system consisting of:
 - a ~360 km main transfer pipeline, largely constructed underground, terminating at the delivery point at the Olympic Dam copper-gold mine
 - a ~46 km lateral branch to a delivery point at the Carrapateena copper-gold mine (which may be constructed above or below ground)
 - associated transfer pump stations and product water storage
- high voltage electricity supply including new transmission and distribution lines and new network substations to provide power to the desalination plant and transfer pump stations
- associated temporary construction-related infrastructure (e.g. construction camps, site offices and amenities, yards, storages and laydown areas)
- access tracks including establishing new tracks and upgrading existing tracks
- enabling roadworks and road upgrades.

Planning Assessment – Approach and Methodology

For the purposes of an assessment against the Planning and Design Code, a corridor width of 200 m around Project assets (100 m from the centreline of the asset) is defined. This allows for minor changes in siting or alignment and during ongoing design or construction, but does not call for a full planning assessment of the entire 5 km Project Area. The final alignments and easements are expected to be confirmed during final construction planning and sequencing.

In most cases, changes to the siting or alignment of most Project assets are unlikely to vary the assessment outcome, except where Project assets interact with Zones, Subzones or Overlays not previously considered, or where additional Project assets require specific assessment (noting the generic design basis used to inform this assessment, as noted in Section 3.2). In this instance, further assessment of those relevant Project assets against the relevant Zones, Subzones or Overlays would be required.

The assessment provided herein contemplates a design that generally responds to the design basis contemplated by Revision 5 of the Reference Design (GHD 2025a), noting that the actually implemented design, siting, layout and form of Project assets could comprise elements that the assessment does not, at present, contemplate. The planning assessment report has contemplated this generic design basis in the context of the Zones, Subzones and Overlays applicable to the presently understood Project assessment area as defined in Section 3.1. In this way, the planning assessment seeks to present an 'in principle' assessment

of Project asset classes, defined in Section 3.3. Except where a singular instance of a Zone, Subzone or Overlay interaction occurs that is necessarily geographically defined, each instance of a Zone, Subzone or Overlay interaction is not individually assessed.

Assessment Summary

Strategic planning instruments

The Project is consistent with the majority of relevant State Planning Policy (SPP) objectives and policies. The Project is intended to facilitate a climate resilient and dependable supply of water to regions of the State which are increasingly water-constrained. This goes directly to the objective of SPP 14 Water Security and Quality, and both directly and indirectly supports the objectives of SPP 1 Integrated Planning, SPP 5 Climate Change, SPP 8 Primary Industry and SPP 10 Mineral and Energy Resources.

The Project finds general consistency with the majority of SPP criteria, notwithstanding minor inconsistencies with specific objectives focused on environmental protection and sustainable development. However, the Project's contribution to social and economic development outcomes, and provision of an alternative water supply in the Far North, should be taken to balance relatively minor inconsistencies.

. The desalination plant and associated infrastructure is necessarily coastal, however the main plant has been sited and positioned well back from the natural coastline to protect infrastructure from natural hazards, and to minimise the Project's potential impact on natural coastal processes. The positioning of intake and outfall pipeline infrastructure below ground via tunnel boring through the coastal interface, and the positioning of the main transfer pipeline underground for the majority of its terrestrial alignment, serve to minimise the potential disturbance to the natural landform and seabed, and facilitate the ongoing use of land and water largely unimpeded by the Project's presence.

Planning and Design Code

The Project demonstrates a mixed level of consistency with the relevant Zones and Subzones, reflecting its scale and linear nature across multiple land use contexts. Where inconsistencies are identified, these are primarily associated with the inherent characteristics of the infrastructure, rather than avoidable siting or design decisions. Inconsistency of desalination plant ancillary infrastructure (notably the intake pump building at Mullaquana Station, within the Conservation Zone and Visitor Experience Subzone) arises out of the necessity for co-location with other Project infrastructure and the coastal fringe. The benefits offered by the Project and the Project's adopted mitigation hierarchy assist in ameliorating (but do not absolve) the Project of these inconsistencies. The water transfer system (transfer pipeline, segments adjacent Roxby Downs) finds inconsistency with the Conservation Zone also, however the balance of Project infrastructure is generally not inconsistent, or readily able to achieve consistency, with the balance of Zone and Subzone performance outcomes. The Project overall is assessed as being generally **not inconsistent** with relevant Zones and Subzones, taking into account proposed mitigations and management approaches to addressing potential impacts.

The Project is generally consistent with the desired outcomes and relevant performance outcomes of the relevant Overlays, with the only inconsistency arising with the interaction of pipeline infrastructure with the Water Resources Overlay. The Project is readily compliant, however, with the relevant Hazards Overlays, including for flooding and bushfire, and the balance of Project infrastructure other than pipeline infrastructure is compliant with the Water Resources Overlay. While the Project proposes substantial native vegetation clearance, the Project's detailed approach to the avoidance of ecologically sensitive areas and assessment of potential impacts, taken in combination with proposed offset and mitigation strategies, results in the Project being not inconsistent with the performance outcomes of the Native Vegetation Overlay. Similarly, the Project's interactions with the Key Outback and Rural Routes Overlay and the Gas and Liquid Petroleum Pipelines Overlay are assessed as **not inconsistent** on the basis of management and mitigation strategies being able to adequately address potential impacts to the desired outcomes and

relevant performance outcomes of those Overlays, subject to further information developed through the final construction planning and sequencing phase.

The balance of Project infrastructure, including pipeline infrastructure, is assessed as not inconsistent with, or readily consistent with, the relevant Overlays. Overall the Project is assessed as **consistent** with the relevant Overlays, taking into account proposed mitigations and management approaches to addressing potential impacts.

The Project is generally consistent, or readily able to achieve consistency with the relevant performance outcomes of the applicable General Development Policies (GDPs), subject to further information developed through the final construction planning and sequencing phase. Where inconsistencies with specific GDP performance outcomes are unable to be avoided, it is considered that alternative approaches present challenges to health and safety, or to other environmental aspects which would, if implemented, potentially outweigh the significance of the inconsistency. The Project is therefore assessed as **consistent** with the relevant GDPs, taking into account proposed mitigations, and the likelihood of further information being developed during final construction planning and sequencing.

Conclusions

- The Project overall is **consistent** with strategic planning instruments including the State Planning Policies and applicable Region Plans.
- The Project overall is **not inconsistent** with the Planning and Design Code.

The Project supports a number of key aspirations of the State Planning Policies, and the Eyre and Western and Far North Region Plans. A new climate resilient supply of water represents significant economic benefit to existing and future industries.

It is considered that the Project satisfies, or has the capacity to satisfy, a majority of applicable Code policy. Where there is conflict between Code policy and the outcomes sought by the Project, there is limited consequence to the proper planning of the locality, or impact upon adjoining land or the receiving environment.

On the basis of the above, the Project is supported from a planning and land use perspective, subject to appropriate mitigations and control measures implemented where inconsistency with the Code may present the possibility of environmental impacts.

1. Introduction and Background

1.1 Project Overview

The Northern Water Project (the Project) aims to provide a secure climate resilient water source for industry in South Australia's Upper Spencer Gulf and Far North. Delivery of the Project will involve the construction and operation of a 51 gigalitre per year (GL/year) seawater reverse osmosis desalination plant located at Mullaquana Station, and associated water transfer system (including pipelines, transfer pump stations and water storages) and electricity infrastructure (refer Figure 1 and Figure 2 for maps of the Project location).

The Project comprises the following key elements:

- a 51 GL/year seawater reverse osmosis desalination plant located at Mullaquana Station approximately 25 km south-west of Whyalla
- marine intake and outfall tunnels extending underneath the seabed and into Spencer Gulf
- diffuser structures for discharge of return water into Spencer Gulf
- a transfer system consisting of:
 - a ~360 km main transfer pipeline, largely constructed underground, terminating at the delivery point at the Olympic Dam copper-gold mine
 - a ~46 km lateral branch to a delivery point at the Carrapateena copper-gold mine (which may be constructed above or below ground)¹
 - associated transfer pump stations and product water storages, with co-located construction and service facilities including temporary construction laydown areas, telecommunications infrastructure (underground cabling within pipeline trench, and communications towers within pump station and water storage location site footprints)
- high voltage electricity supply including new transmission and distribution lines and new network substations to provide power to the desalination plant and transfer pump stations
- associated temporary construction-related infrastructure (e.g. construction camps, site offices and amenities, yards, storages and laydown areas not excluded from the assessment by Section 1.4.4)
- access tracks including establishing new tracks and upgrading existing tracks
- enabling roadworks and road upgrades.

A Reference Design (GHD 2025) for the desalination plant and transfer system from Mullaquana Station to Olympic Dam has been completed for the Project. The Project design is preliminary and is expected to change through the final construction planning and sequencing process, or in response to cultural heritage matters or other refinements to minimise impacts as design and technical studies continue.

1.2 Project Location

1.2.1 Desalination plant

The desalination plant site is on the western shore of the Upper Spencer Gulf on Mullaquana Station, located 25 km south-west of Whyalla. The desalination plant site is approximately 14 km from the Lincoln Hwy and 1.5 km from Upper Spencer Gulf coastal waters and will comprise approximately 200 ha of land for the purposes of construction. Construction and operation access is proposed via either a new 6 km road to be

¹ This assessment has assumed construction above ground.

constructed adjacent to the proposed pipeline alignment which will connect Eight Mile Creek Road to the Lincoln Highway, or via Eight Mile Creek Road south of Whyalla.

Land at Mullaquana Station and the adjoining station properties is currently used for low-intensity sheep grazing. Stocking rates are typically low, reflective of pastoralism, rather than intensive or high-productivity agricultural operations. The land has not been cleared or developed, and grazing is generally on native vegetation. The site is relatively flat and low-lying, sloping gently from the coast in the east to the escarpment in the west. Saline plains, low coastal dunes and mangrove areas lie to the east of the site moving to sandy loam saltbush / bluebush plains to the west. Surface water features across and around the desalination plant site are scarce and ephemeral. The desalination plant site is not located within an area where the water resource is prescribed under the *Landscape South Australia Act 2019* and it is not within a water protection area. There are no areas protected under the *National Parks and Wildlife Act 1972* or areas under native vegetation heritage agreement at the desalination plant site.

The desalination plant site and works are located in the Remote Areas and Conservation Zones under the Planning and Design Code. Temporary disturbance areas may occur in either or both of these Zones (see Section 1.2.5).

The desalination plant is within the determined Barngarla Native Title Claim which extends across the majority of the eastern and central Eyre Peninsula from the Spencer Gulf to the Eyre Highway. Native Title has been extinguished over Mullaquana Station and neighbouring properties, but remains from the mean high water mark to approximately 700 m seaward along this section of the coast.

The area is very sparsely populated, with the closest potential sensitive receptor being the Mullaquana Station homestead approximately 5 km west of the site. Small coastal settlements are located 8 km north (Cowleds Landing) and 10.5 km south (Murninnie Beach), with the majority of the dwellings periodically occupied during holiday periods.

1.2.2 Marine infrastructure

Marine infrastructure includes tunnels, intake and outfall structures extending into Spencer Gulf waters from the desalination plant onshore intake pump station.

Prawn Commercial Fisheries Block 12 is located immediately offshore from Mullaquana Station, with juvenile prawn nursery sites identified at Cowleds (5 km north) and the Spit (15 km south). A recognised Snapper nursery area is also located offshore from the desalination plant location and a recognised King George Whiting nursery site lies to the north near Cowleds Landing.

The Cuttlefish Coast Sanctuary Zone (the breeding grounds of the Giant Australian Cuttlefish) is an EPBC Act listed National Heritage Place and is located adjacent to Port Bonython approximately 34 km north-east of the location of the marine intake and outfall diffusers.

There are no areas protected under the *Marine Parks Act 2007* at the location of the desalination plant intake and outfall structures and no marine aquaculture zones within 40 km of the desalination plant site.

The intake and outfall structures are located within the Coastal Waters and Offshore Islands Zone.

1.2.3 Transfer system infrastructure

The transfer system runs generally north from the desalination plant to Olympic Dam passing Whyalla, Port Augusta, Woomera and Roxby Downs, with a lateral branch pipeline proposed to the operational Carrapateena mine. The indicative pipeline alignment (presented in the current engineering reference design) is shown in Figure 1 and Figure 2, and is described below:

- Desalination plant (Mullaquana Station) to Whyalla – alignment heads generally north following Eight Mile Creek Road and other existing tracks / fencelines on rural land skirting Whyalla to the west. The alignment then veers north-east and heads north following the Lincoln Highway.

- Whyalla to Port Augusta – alignment traverses a section of the Cultana Training Area following the Lincoln Highway heading north before meeting the Stuart Highway alignment via a short section of the Eyre Highway. The alignment may be located within the road reserve of the Lincoln Hwy or immediately adjacent to the west of the road reserve in the Cultana Training Area. This is subject to ongoing heritage survey.
- Port Augusta to Pimba – alignment generally follows the Stuart Highway, with portions following the former Stuart Highway alignment, and paralleling the existing Department of Defence Port Augusta to Woomera water pipeline.
- Pimba to Olympic Dam – generally follows the Olympic Dam Highway with the pipeline diverting to the east to avoid Woomera township.
- Carrapateena mine lateral branch – heads north-east from the main transfer pipeline, south of Lake Windabout.

Transfer system infrastructure including pipelines, transfer pump stations and storages is located (where possible) in disturbed areas, largely within land subject to livestock grazing over native vegetation.

Native Title has been determined to exist over much of the Project footprint, including Crown reserves, coastal land, the Cultana Training Area and pastoral leases. The Barngarla Native Title Claim extends across the majority of the eastern and central Eyre Peninsula and will be traversed by the transfer system. The Kokatha People (Part A) Native Title Claim was determined in 2014, with Native Title existing in parts of the determination area and will also be traversed by the transfer system.

The main transfer pipeline alignment will require crossing of the Moomba to Port Bonython Liquids Line, the Whyalla Steelworks to Middleback Ranges slurry pipeline and high-voltage overhead transmission infrastructure. The alignment will run parallel to existing water assets to avoid unnecessary service crossings, but crossing of some existing road and rail infrastructure (including Commonwealth assets) will be required.

The proposed pipeline alignment will traverse the Department of Defence Cultana Training Area (which is Commonwealth land) but avoids interaction with the township of Woomera and the Woomera Prohibited Area. The current design of the transfer system avoids other population centres.

The pipeline alignments do not traverse any conservation parks, national parks, Wilderness Protected Areas, conservation reserves or native vegetation heritage agreement areas. There are no surface water features of formal conservation significance that intersect with the transfer system alignments (e.g. Great Artesian Basin (GAB) springs, Ramsar listed wetlands). Salt lakes and other significant ephemeral surface water features are generally avoided by the alignment. Proposed water transfer system infrastructure is not located within an area where the water resource is prescribed under the *Landscape South Australia Act 2019* and it is not within a water protection area declared under the *Environment Protection Act 1993*.

The transfer system is within the Remote Areas, Commonwealth Facilities, Rural and Conservation Zones.

1.2.4 Electricity infrastructure

Four new transmission lines, two new network substations and two upgraded substations are proposed to provide power to the desalination plant and the transfer pump stations. Pump station locations will include an electrical control room, electrical transformers and equipment.

The proposed transmission network substations are mainly located in previously disturbed areas. Pump station electrical infrastructure will be located within pump station disturbance footprints.

The location and alignment of new powerlines and access tracks have considered location of existing electricity infrastructure (to facilitate network connection), topography, environmental features (e.g. presence of native vegetation or threatened species), land ownership, known or potential Aboriginal cultural heritage sites, design criteria and electricity infrastructure regulations.

The powerline alignments and substation locations do not traverse any conservation parks, national parks, Wilderness Protected Areas, conservation reserves or native vegetation heritage agreement areas. Electricity infrastructure is not located within an area where the water resource is prescribed under the *Landscape South Australia Act 2019* or within a water protection area declared under the *Environment Protection Act 1993*.

Project electricity infrastructure is within the Remote Areas Zone.

1.2.5 Ancillary infrastructure

1.2.5.1 Construction camps and laydown areas

The construction workforce is anticipated to be accommodated in a combination of existing commercial premises and transportable construction camps. Where existing commercial premises or previously approved, established workers' accommodation facilities are to be utilised, these are excluded from the EIS. Additionally, where workers' accommodation facilities are proposed within townships, or are expected to remain present after the construction phase of the Project is complete, these are assumed to be subject to separate approvals processes as described in Section 1.4.4.

Construction camps and laydown areas included in the planning assessment include;

- KAC Pimba construction camp and materials laydown area,
- Whyalla North materials laydown area,
- Construction water supply locations (temporary storage, pumps and pipework) within the Project Area, and
- Any other camps or laydowns that would reasonably be located within the Project Area.

The precise locations for additional construction camps and laydowns in proximity to Transfer System infrastructure (which is not excluded from the EIS) are not finalised. However, for the purposes of the planning assessment, the general locations identified above are considered to be representative of likely additional construction camp and laydown sites not subject to separate approvals processes. The KAC Pimba site occurs in the Remote Areas Zone, consistent with the majority of Transfer System infrastructure north of the Lincoln Gap. The Whyalla North laydown area occurs in the Strategic Employment Zone.

1.2.5.2 Construction earthworks and spoil management

Temporary box cut excavation for launch of the tunnel boring machine (TBM) at the desalination plant site necessarily occurs in the Conservation Zone. Areas for the stockpiling, dewatering and management of excavation spoil, TBM spoil and dredge spoil may occur in either the Conservation or Remote Areas Zone, subject to further planning of the construction sequencing and logistics.

1.2.5.3 Communications and control infrastructure

Independent remote communications infrastructure (buried fibre-optic cable) will be installed within pipeline trenches. Communications redundancy equipment (such as a second fibre-optic cable or wireless communication solution such as radio or cellular technology) will be selected based on site-specific feasibility and reliability considerations. The secondary communications path is to be confirmed during final construction planning and sequencing, but may include:

- Communications towers within site footprint of pump stations or water storages, and, where towers are required at additional locations,
- Uninterruptible power supply feeds (generators or solar photovoltaic panels, energy storage systems).

Communications and control infrastructure (communications towers and associated power supply) will be co-located with the main transfer pipeline, occurring predominantly in the Remote Areas Zone, with potential for infrastructure to also occur in the Rural Zone and Commonwealth Facilities Zone.

1.3 State Assessment Process – EIS

The *Planning, Development and Infrastructure Act 2016* (PDI Act) governs the planning system in South Australia and sets out the process and pathways for granting development approvals, including approvals for major infrastructure projects.

Projects being undertaken by Crown agencies are generally subject to the processes applying to a Crown Development under section 131 of the PDI Act. However sections 108 and 131(25) of the PDI Act make provision for the Minister for Planning (Minister) to direct that a proposed Crown development be assessed under the impact assessed development pathway. This alternative pathway requires preparation of an Environmental Impact Statement (EIS), the process for which is set out in sections 111-115 of the PDI Act.

A Crown Development Application for the Project was submitted on 16 December 2025. On 22 December 2025, pursuant to s.131(25) of the PDI Act, the Minister directed that an EIS be prepared, subject to the procedures and requirements of being an ‘impact assessed’ development, as if the development had been declared under s.108(1)(c) of the PDI Act. The processing of the application in the SA Planning Portal (DA 25038619) as a Crown (state agency) development under s.131(2)(a) of the PDI Act subsequently ceased.

1.3.1 Impact assessed development – *Planning, Development and Infrastructure Act 2016*

Practice Direction 17 requires that an EIS include an assessment of the consistency of the Project with:

- Relevant State Planning Policies (SPPs)
- Relevant Regional Plans
- The Planning and Design Code, and
- Any matters prescribed by the PDI Regulations.

1.4 Scope and Limitations of Planning Report

1.4.1 Scope

The planning assessment report is informed by publicly available spatial data and Project information as understood at the time of writing. It is understood that the Project’s final alignment is likely to continue to evolve through the final construction planning and sequencing phase.

The assessment provided herein considers a design that generally responds to the design basis contemplated by the Reference Design (GHD 2025a), noting that the actually implemented design, siting, layout and form of Project assets could comprise elements that the assessment does not, at present, contemplate. The planning assessment report has contemplated this generic design basis in the context of the Zones, Subzones and Overlays applicable to the presently understood Project assessment area as defined in Section 3.1, and shown in Figure 1 and Figure 2.

This planning assessment report provides an assessment of the Project against the relevant statutory instruments of the planning system, as required by Practice Direction 17 and the Project Assessment Requirements:

- The relevant SPPs, as per Version 2, published 14 August 2025,
- The relevant Region Plans:
 - o Eyre and Western Regional Plan (EWRP) (DHUD 2026a),
 - o Far North Regional Plan (FNRP) (DHUD 2026b),

- The Planning and Design Code (the Code), Version 2026.1 (15 January 2026).

A dedicated spatial portal has been developed for the Project, utilising publicly available datasets including the South Australian Property and Planning Atlas. The Project portal has been used to identify the applicable Code policies, land uses and other spatial information relevant to the Project.

1.4.2 Objectives

The specific objectives of the planning assessment report are to:

- Review legislation, planning policies, planning controls and region plans applicable to the Project Area.
- Identify specific criteria of the Planning and Design Code and specific policies of the relevant Region Plans and State Planning Policies against which the Project must be assessed.
- Assess the Project against the identified policies and criteria and describe the materiality of any variances from the relevant performance outcomes or objectives.
- Where applicable, identify areas of the EIS which address specific variances with identified policy or criteria, or support statements of alignment with identified policy or criteria.

1.4.3 Assumptions

This Planning Assessment Report uses a stipulated assessment area as defined in Section 3.1.

While material changes to this assessment are considered unlikely, where Project infrastructure alignments materially change or where additional infrastructure not previously contemplated is included in the Project's EIS, further assessment may be warranted.

Material laydown areas are considered temporary disturbance areas. Where they adjoin assessed Project asset classes, they are considered subordinate to the primary proposed land use and are excluded from the assessment (other than for environmental considerations such as drainage and stormwater design, vegetation clearance).

1.4.4 Exclusions

To progress the engineering design of the Project, a series of investigations are required to understand the topographic and geotechnical conditions where the land-based infrastructure is proposed, and the seabed and sub-surface conditions in the proposed marine infrastructure areas. A number of minor, preliminary site works are also proposed.

The following works are being undertaken as separate packages of work, and not considered part of the scope of this planning assessment:

- Ongoing environmental surveys, pre-condition surveys and monitoring
- Terrestrial geotechnical, soil and water investigations that may involve small, discrete test pits or soil bore drilling and well construction
- Marine bathymetric surveys, seismic testing of the ground conditions and marine geotechnical sampling (to provide an understanding of the condition of the sub-surface to inform tunnelling design and construction)
- Establishment of a site access, signage and/or temporary fencing to prevent formation of multiple, ad hoc tracks from site early works or other, unauthorised access
- Development and use of berthing facilities that are already approved for that activity
- Where necessary to support site development, establishment of borrow pits or use of existing borrow pits where those activities are already approved or are the subject of separate approvals or legislative regimes (and in particular, approval pursuant to the *Mining Act 1971*)

- Where necessary to support site development, asset relocation or service provision for third-party utilities where those activities are the subject of separate approvals and/or self-assessments
- Accommodation camps outside the Project footprint that would be the subject of separate approvals and/or self-assessments
- Laydowns that are located in existing premises or areas that are already approved for that activity, or would be the subject of separate approvals and/or self-assessments
- Fixed or mobile concrete batching plants that are the subject of separate approvals and/or self-assessments and/or already approved/licensed
- Select alteration or maintenance of public roads which the Project will utilise, but where the alteration or maintenance is delivered separately (as early works or otherwise) and is subject to separate approvals and/or self-assessments (if required at all). This may include, as an option to the currently proposed access, the alteration and/or upgrade of Mullaquana Road and Eight Mile Creek Road (comprising resealing and sealing) from the intersection with the Lincoln Hwy (at Whyalla) to Cowleds Landing, being the extent of the public road.

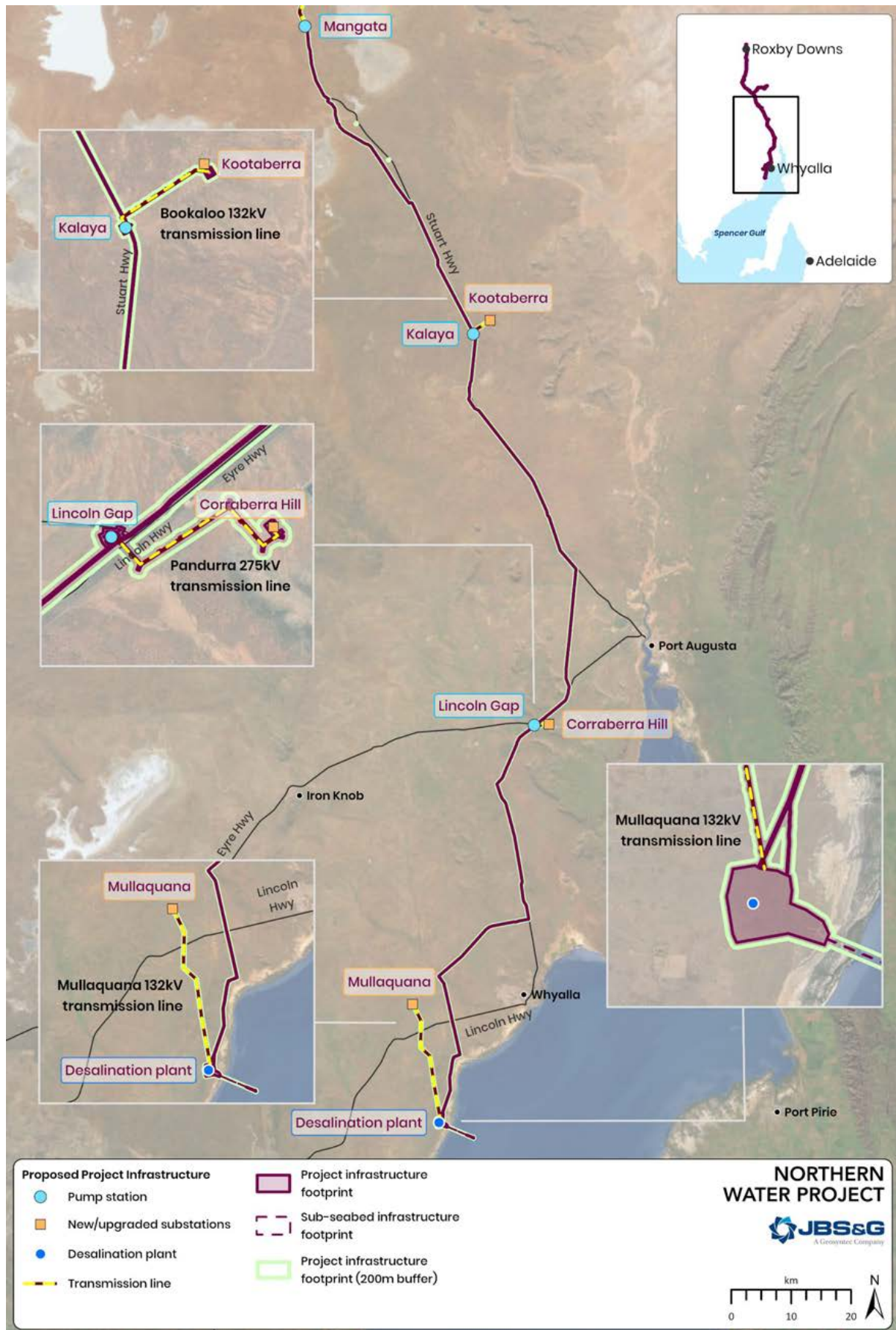


Figure 1: Project layout and assessment area - southern extent



Figure 2: Project layout and assessment area - northern extent

2. Project Description

2.1 Desalination Plant and Marine Infrastructure

2.1.1 Desalination plant

The desalination plant site will encompass the desalination plant, product water storage, high voltage switchyard, intake and outfall pump station areas, TBM launch facility, stormwater management systems and future proofed land to support the potential development of additional treatment plant.

The desalination plant includes:

- Seawater intake pump station,
- Desalination treatment process (pre-treatment and reverse osmosis (RO) systems),
- Product water storage and on-site product water pump station,
- Facilities for the post-treatment of product water and return water (chemical dosing),
- Ancillary equipment, facilities and power infrastructure at the plant, including
 - treatment chemical storage and dosing systems,
 - desalination maintenance and upkeep including CIP systems and waste management,
 - site access, internal roadways and parking areas,
 - site offices, administration building and amenities,
 - site fencing, lighting and security,
 - high-voltage facility substation,
 - stormwater detention basin and drainage infrastructure.

2.1.2 Marine intake and outfall structures

2.1.2.1 Tunnel boring

Tunnels would be constructed using tunnel boring machines (TBMs) launched via a temporary launch box or launch shaft that will facilitate tunnelling under the seabed to the required distance offshore. The Reference Design proposes operation of TBM(s) from a temporary longitudinal launch box, incorporating a decline and box cut section. TBM spoil (i.e., the material excavated from the tunnel) is transported above ground and stockpiled for drying as required (see Section 2.1.3). Non-recoverable components of the TBM(s) are proposed to be buried upon completion of tunnelling works.

2.1.2.2 Intake and outfall structures

Intake and outfall tunnels and pipes are proposed to extend offshore from the desalination plant location into Spencer Gulf waters and are likely to be located in a minimum approximate water depth of 13 m (intake) to 17 m (outfall) from Lowest Astronomical Tide. The exact length of tunnels and location of the intake and outfall structures will be refined with inputs from hydrodynamic modelling and final construction planning and sequencing, but as a minimum the intake and outfall structures are expected to be no less than 3 km and no more than 5 km from the onshore intake pump station.

The EIS assessment is broadly based on the engineering Reference Design for the Project. Regarding marine structures, the Reference Design includes:

Reference Design: Two tunnels (one each for the intake and outfall), for conveying seawater to the seawater desalination plant site and return water from the plant to the outfall diffusers. The intake structure(s)

includes a riser, precast concrete structure and screened intake head. The outfall diffuser structure includes a riser, manifold pipe and series of nozzles attached to the end of the outfall pipe.

For marine structures, the following option for marine structures also forms part of the EIS assessment:

Float and Sink Option: A single intake tunnel extending to the intake location and continuing offshore via approximately 1,000 m of additional outlet conduit on the seafloor to the outfall diffuser manifold. The outfall diffuser manifold would also be placed using a float and sink method. This involves floating HDPE pipeline into position and connecting to a tunnel riser once tunnelling reaches a suitable depth, then sinking the pipeline (through flooding) and securing it to the seabed using permanent anchoring methods (i.e. piled collar / weights). Dredging the footprint of the 'float and sink' section may be required to ensure level and secure anchoring to the seabed, hydraulic performance and asset protection (subject to final construction planning and sequencing).

Under both scenarios, the use of a jack-up barge (JUB) and dumb barge for the management of seabed dredge spoil would be required, to varying degrees. Tunnelling spoil and/or dredge spoil would be managed ashore, including dewatering and (where specified quality and suitability requirements are met) reused within the desalination plant site.

2.1.3 Construction earthworks and spoil management

During the construction phase, earthworks and temporary infrastructure for excavation, tunnelling and dredge spoil management within the desalination plant site will be required.

The activities creating spoil requiring treatment (including drying) include:

- Excavation of the TBM launch (box cut and decline),
- Tunnel boring, and
- Marine construction works requiring dredging.

Spoil from the groundworks described above and further in Chapter 6 of the EIS will be stockpiled within the desalination plant construction site for drying, within purpose-constructed settlement and drying areas. Each spoil stream will be kept separate, to allow for the quality of each stream to determine its potential for on-site reuse post-drying. It is anticipated that all spoil will be suitable for on-site reuse, which may include (but will not necessarily be limited to):

- Backfilling of the TBM launch box,
- Construction of earthen water storage structures including stormwater retention,
- Fill to construct the foundation on which desalination plant infrastructure will be placed.

As the geology of the coastal interface under which tunnelling will occur is expected to be predominantly clay, both slurry and earth pressure balance (EPB) TBMs will be viable options. The key difference is spoil transport (i.e., spoil is removed as solids, or piped out a slurry). The Reference Design allows for either option. For either option, TBM spoil will be dried similarly and is anticipated to be re-used onsite.

Dredging, being any excavation of the seabed (excluding tunnelling), will be required for the construction of risers, intake structure(s) and outfall structure(s) and for installation of float and sink pipe (if adopted). The key waste stream from the construction of these structures will therefore be dredge.

Dredge will be deposited on a 'dumb barge' moored adjacent to the JUB. Through the process of excavation and placement of the spoil on the dumb barge, turbidity impacts will likely be controlled using turbidity curtains extending from the surface to the sea bed.

Spoil from the riser and other marine infrastructure excavations will be deposited on the JUB in settling tanks and removed by a supply vessel. Spoil will be transported by supply vessel to the supporting infrastructure at

Whyalla port and trucked to the desalination plant where it will be dried and stockpiled for use as fill material. If unsuitable for re-use, spoil will be disposed of at a licensed waste facility.

There are a range of options for the re-use / disposal of water from the drying process and dried spoil, which will depend on the quality of each stream. This is discussed further in Chapter 24 Climate Change and Sustainability of the EIS.

2.2 Transfer System

The transfer system consists of the following key components:

- a main transfer pipeline from the desalination plant to Olympic Dam mine delivery point
- a lateral branch from the main transfer pipeline to the Carrapateena mine delivery point
- a transfer pump station at the desalination plant (contemplated as part of the desalination plant for the purposes of the planning assessment)
- additional transfer pump stations at three locations along the pipeline, plus water storage only at the transfer system high point:
 - o Lincoln Gap pump station and storage
 - o Kalaya pump station and storage
 - o Mangata pump station and storage, and
 - o Bimba high point storage (storage only)
- telecommunications infrastructure comprising a fibre-optic cable laid within the transfer system trench, and communications towers co-located with pump stations and water storages.

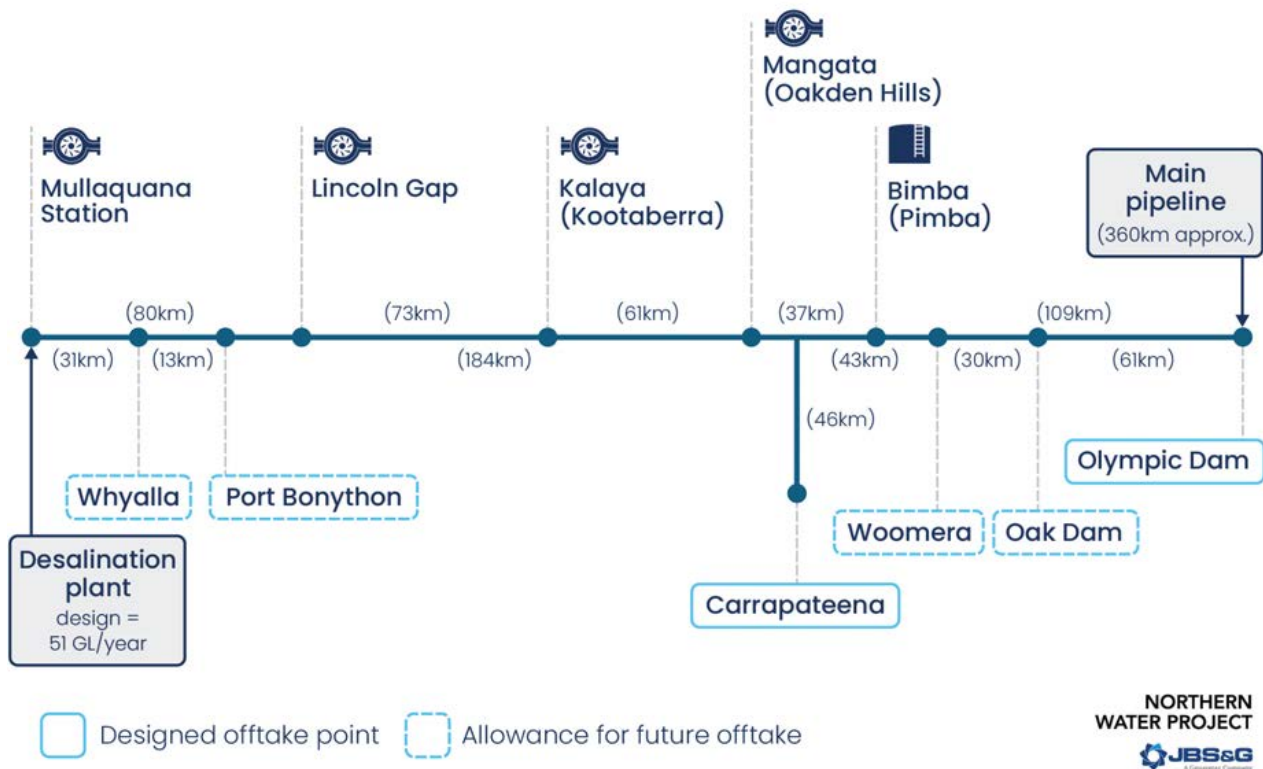


Figure 3: Transfer system schematic

2.2.1 Transfer system

The proposed alignment of the transfer system pipeline has been selected to parallel / or utilise existing and previously disturbed areas whilst minimising interaction with existing services, in order to reduce potential environmental and Aboriginal cultural heritage impacts. Alignments will be further refined through the competitive tender process and final construction planning and sequencing.

The transfer system pipelines would generally be buried underground and constructed using trench and cover fill for the majority of the alignment including road crossings. Trenchless excavation would be used for rail and for some waterway / waterbody crossings. Micro-tunnelling and auger-boring are proposed for crossings subject to the length of the crossing and the ground conditions. There may also be locations where the pipeline is required to be located above ground level for discrete sections where that is the preference of Traditional Owners or where hard rock is encountered. The extent of trenched, trenchless and above-ground installation will be detailed in the final design.

The lateral branch pipeline to a delivery point at Carrapateena may be located either above or below ground, with any above-ground sections laid directly on the ground without supports. The extent and location of below- and above-ground installation will be detailed in the final design. This planning report has contemplated both options, where applicable.

2.2.1.1 Land access and easements

The construction corridor width required over the length of the transfer system will vary based on topographical, geotechnical, pipe material and jointing method selected, required clearances from other services, and environmental and cultural heritage constraints.

The Project will seek to acquire access for construction and register a permanent easement post-construction. The maximum construction corridor width for standard installation pipeline would be 40 m, with narrowing in constrained locations and extra workspace to accommodate 'overflow' from adjacent, laydown and stack sites. Permanent easement will be a maximum of 20 m width

Establishment of new temporary access tracks for light and heavy vehicles from existing major and other roads would be required for the pipeline, along with maintenance and widening of existing access tracks, and upgrade or augmentation of road traffic infrastructure to accommodate movement of project materials. A continuous formed access road or track for future inspection or maintenance purposes once the pipeline is operational is not expected to be necessary for the entire alignment.

2.2.1.2 Interactions with existing infrastructure and established land uses

The main transfer pipeline alignment would require crossing of the Moomba to Port Bonython Liquids Line (Epic Energy), the Whyalla Steelworks to Middleback Ranges slurry pipeline (One Steel Manufacturing Pty Limited) and high-voltage overhead transmission infrastructure. The alignment would run parallel to existing water assets to avoid unnecessary service crossings, but crossing of some existing road and rail infrastructure (including Commonwealth assets) would be required.

The alignment would traverse the Department of Defence Cultana Training Area (which is Commonwealth land) and may be located within the road reserve of the Lincoln Highway or immediately adjacent to the west of the road reserve in the Cultana Training Area, subject to ongoing heritage survey. The transfer system alignment avoids interaction with the township of Woomera and the Woomera Prohibited Area and other population centres.

The transfer system alignment in the Reference Design does not traverse any conservation parks, national parks, Wilderness Protected Areas, conservation reserves or native vegetation heritage agreement areas. Proposed transfer system infrastructure is not located within an area where the water resource is prescribed under the Landscape South Australia Act 2019 (SA) and it is not within a water protection area declared under the Environment Protection Act 1993 (SA). Alignments would be further refined through final

construction planning and sequencing which may result in changes to the alignment or the design of the transfer system.

2.2.2 Transfer pump stations and water storages

A series of transfer pump stations and associated water storages will be required to move water along the length of the transfer system. Transfer pump stations are proposed at the desalination plant site (assessed as part of the desalination plant for the purposes of this planning assessment), at Lincoln Gap at the intersection of the Lincoln and Eyre Highways; on Kootaberra Station (Kalaya pump station); and Oakden Hills Station (Mangata pump station) on the Stuart Highway.

Water storage will be located at the desalination plant site and at transfer pump stations along the transfer pipeline. The Bimba storage is also proposed at the overall high point on the main transfer pipeline and will be located south of Pimba (refer Figure 1).

Individual transfer pump station and storage sites (excluding that located within the desalination plant site) are likely to be no more than 4 ha in size each.

2.3 Electricity Infrastructure

Power to the desalination plant will be provided by ElectraNet through a new substation and a new private dedicated ~20 km 132 kV feeder terminating at the substation located adjacent to the plant. Power supply to the transfer pump stations would be via three new powerlines – 275 kV to Lincoln Gap pump station (~3 km), 132 kV to Kalaya pump station (~4 km) and 33 kV to Mangata pump station (~15 km) from either the ElectraNet transmission system or from the SAPN 33 kV distribution system. Power supply at the Bimba storage would be provided by a solar panel array and battery system.

New network substations will be built at Mullaquana Station and Kalaya. Electricity infrastructure at pump stations will include electrical control room, electrical transformers and equipment located within pump station facility sites. This infrastructure will be smaller in size and may be enclosed and will be constructed by the Project. Some augmentation of existing ElectraNet and SA Power Network substations at Lincoln Gap and Mount Gunson is also proposed.

Existing access tracks and laydowns will be utilised wherever possible. New access tracks will avoid sensitive areas so as to minimise erosion, or disturbance to important vegetation or areas of Aboriginal heritage significance. Minor grading may be required for access tracks with limited requirement for importation of capping material.

It is likely that construction activities will proceed on several concurrent work fronts. Following establishment of access, concrete footings will be constructed first, followed by the erection and dressing of the tower structures and later stringing.

2.4 Ancillary infrastructure

2.4.1 Construction camps and laydown areas

Having regard for tight rental markets and accommodation scarcity in regional centres including Whyalla, the construction workforce is anticipated to be accommodated in a combination of existing commercial premises and transportable construction camps.

Construction camps may be co-located with equipment and materials laydown areas and storage yards, however the precise locations of facilities that are not co-located with Project assets (such as laydown areas or along the transfer system alignment) remain subject to ongoing assessment. Construction camps and laydown areas already approved (as previously utilised or commercial facilities) for the intended use are excluded from assessment. Construction camps and laydown areas included in the planning assessment include;

- KAC Pimba construction camp and materials laydown area,
- Whyalla North materials laydown area, and
- Any other camps or laydowns that would reasonably be located within the Project Area.

Additional laydown and storage areas at regular intervals along the pipeline alignment would be identified to allow set down and stockpiling of materials, placement of site amenities, temporary camps, construction equipment storage and turnaround movements. These areas will be defined as the pipeline alignment is finalised and will be located where possible in previously disturbed areas in consultation with relevant Traditional Owners, landholders and other stakeholders.

However, for the purposes of the planning assessment, the general locations identified above are considered to be representative of likely additional construction camp and laydown sites not subject to separate approvals processes.

Construction camps and laydowns are assumed to occupy up to several hectares apiece and include generally minor vegetation clearance (where not utilising previously cleared areas), establishment of stormwater drainage and, in some cases, the temporary installation of security fencing. Equipment and activities undertaken at construction camps and laydowns include:

- Temporary (demountable / transportable) buildings – site offices and amenities
- Temporary (demountable / transportable) buildings – workers' accommodation
- Storage of construction equipment, machinery, fuels, oils, chemicals and vehicles
- Temporary fencing and lighting, power generation and sewage / wastewater handling services
- Temporary tank farms for the storage of potable and non-potable water, for human consumption (i.e., drinking, bathing, amenities) and construction use (i.e., for concrete batching, hydrotesting of water-containing structures, dust suppression and conditioning of backfill material).

2.4.2 Construction water and power

Potable and non-potable water will be required for the construction workforce (drinking and bathing), concrete batching, tunnelling, hydrotesting of water containing structures, dust suppression and conditioning backfill material to ensure compaction. Water is proposed to be sourced primarily via existing infrastructure and in particular from the SA Water network and the Port Augusta to Woomera Pipeline (PAWP). Subject to ongoing negotiations with SA Water and the Department of Defence, other supplementary sources of water are being considered including groundwater wells and an offtake from BHP's Roxby Downs water supply.

For potential SA Water connection points, SA Water would be responsible for infrastructure and metering up to the meter. Infrastructure downstream (e.g. temporary water storage, pumps and pipework), its operation and maintenance, is part of the Project. These temporary water storage locations taking from SA Water's network are currently proposed at Whyalla North, Lincoln Gap and Port Augusta with all offtake locations being within the proposed disturbance footprint for the Project.

For potential PAWP connection points (all located north of Port Augusta), connection, metering and infrastructure downstream (e.g. temporary water storage, pumps and pipework), its operation and maintenance, is part of the Project. These temporary water storage locations taking from the PAWP are currently subject to finalisation but will be located within the proposed disturbance footprint for the Project.

Temporary construction power will be required at all construction sites, including for the desalination plant, tunnel boring, marine works, all camps, pipe and general laydown areas, stack sites, tank farms, ARTC rail sidings, transfer system work fronts, transfer pump stations and storages. It is envisaged that the majority of construction power would be provided by diesel generators with provision of some energy by temporary solar arrays.

2.4.3 Communications and control infrastructure

Communication towers will provide point-to-point radio link connectivity and controllability between pumpstations and storage tanks. It is expected that the infrastructure will be connected via a fibre-optic network in the transfer system trench. This will provide reliable data telemetry between pumping stations, storage tanks and the supervisory control and data acquisition (SCADA) system.

Communications redundancy equipment (such as a second fibre-optic cable or wireless communication solution such as radio or cellular technology) will be selected based on site-specific feasibility and reliability considerations. Communication towers and the associated equipment are likely to be connected to power via the adjacent pumping station or substation electrical system. The secondary communications path is to be confirmed during final construction planning and sequencing, but may include additional communications towers where distances between pumping stations or substations are too great. Where towers are determined to be required at additional locations, power supply will in the first instance be sought from the State electricity grid, with appropriate consideration for redundancy.

Redundancy systems at communication tower sites (or, where grid connection is not possible, primary power supply) will include uninterruptible power supply feeds such as solar photovoltaic panels and battery energy storage systems.

3. Procedural Matters

3.1 Project Assessment Area

For the purposes of an assessment against the Planning and Design Code, a corridor width of 200 m around linear Project assets (100 m from the centreline of the asset) is defined, as shown in Figure 1 and Figure 2. This allows for minor changes in siting or alignment and during ongoing design or construction, but does not call for a full planning assessment of the entire 5 km Project Area². The final alignments and easements are expected to be confirmed during final construction planning and sequencing. Pertaining to construction camps and laydowns defined in Section 1.2.5, assessment considers the specific land parcels.

In most cases, changes to the siting or alignment of most Project assets are unlikely to vary the assessment outcome, except where Project assets interact with Zones, Subzones or Overlays not previously considered, or where additional Project assets require specific assessment (noting the generic design basis used to inform this assessment, as noted in Section 3.2). In this instance, further assessment of those relevant Project assets against the relevant Zones, Subzones or Overlays would be required.

3.2 Assessment Methodology

The assessment provided herein contemplates a design that generally responds to the design basis contemplated by the Reference Design (GHD 2025a), noting that the actually implemented design, siting, layout and form of Project assets could comprise elements that the assessment does not, at present, contemplate. The planning assessment report has contemplated this generic design basis in the context of the Zones, Subzones and Overlays applicable to the presently understood Project assessment area as defined in Section 3.1. In this way, the planning assessment seeks to present an 'in principle' assessment of Project asset classes, defined in Section 3.3. Except where a singular instance of a Zone, Subzone or Overlay interaction occurs that is necessarily geographically defined, each instance of a Zone, Subzone or Overlay interaction is not individually assessed.

² For the purposes of the EIS, the standard Project area is based on a 2.5 km buffer surrounding all Project infrastructure including the desalination plant and either side of the centreline of linear infrastructure (i.e. a 5 km wide corridor). Linear infrastructure includes pipelines and transmission lines. Isolated areas are identified outside of this buffer for potential laydown locations.

For all relevant planning instruments against which the Project is able to be objectively assessed, an assessment outcome of *consistent*, *not inconsistent*, or *inconsistent* was applied. These are defined as:

- **Consistent:** The Project is assessed to align with all, or a majority, of applicable objectives of the planning instrument. Objectives with which the Project does not align are not significantly at variance, or have no material impact on the planning instrument.
- **Not Inconsistent:** The Project is assessed to neither support, nor be at variance with the objectives of the planning instrument, or to have no material impact on the planning instrument overall. Variances with specific objectives are feasibly able to be ameliorated through proposed controls and mitigations.
- **Inconsistent:** The Project is assessed to not align with all, or a majority, of applicable objectives of the planning instrument.

3.3 Project Asset Classes

For the purposes of assessment against the Code, the Project is contemplated by the development class of particular assets. Each asset class is assessed only against those Zones, Subzones and Overlays within which the asset class occurs (including the Project assessment area). Project asset classes are defined in Table 3-1.

Table 3-1: Project asset class and development type

Project asset class	Included Project assets	Nature of development
Mullaquana Station desalination plant (including marine infrastructure)	• Desalination plant • Associated electrical connection infrastructure, water storage, and transfer pump station within desalination plant footprint • Access tracks and internal roads associated with desalination plant • Intake and outfall tunnels, pipelines, seabed-mounted infrastructure (risers and diffusers), TBM launch infrastructure, and intake pump building • Temporary disturbance activities including material laydown, site amenities, construction-phase site controls	• Building work – General Industry • Electrical infrastructure (facility substation) • Excavation near the coast • Tunnelling or underboring work near the coast • Dredging • Tunnelling and marine works spoil and water management • Installation of pipeline infrastructure in the marine or coastal environment including dredging • Clearance of native vegetation including in the marine environment • Establishment of new, or upgrades of existing vehicle access points to/from a State maintained road • Dewatering and disposal or onsite reuse of excavation spoil, tunnelling spoil and dredge spoil • Construction of water storage, including potential for earth bank storage / dam • Earthworks, fencing, lighting and temporary disturbance areas
Water transfer system – main transfer pipeline and Carrapateena lateral branch pipeline	• Main transfer pipeline (assumed underground) • Carrapateena lateral branch pipeline (assumed ‘on ground’ construction) - • Maintenance points, offtake flanges, scour valves • Access roads (construction) and maintenance tracks (operation)	• Installation of pipeline infrastructure (below ground level) by trenching • Installation of pipeline infrastructure (below ground level) by under-boring or similar technique • Installation of pipeline infrastructure (on ground option – Carrapateena lateral branch) • Clearance of native vegetation • Establishment of new, or upgrades of existing vehicle access points to/from State maintained roads or local roads (including access tracks to

Project asset class	Included Project assets	Nature of development
		pipeline alignment, pump stations and water storages) Communications towers, where these are proposed to be sited independent of pump stations or substations
Water transfer system – transfer pump stations and water storages	- Lincoln Gap pump station and storage - Kalaya pump station and storage - Mangata pump station and storage - Bimba high point storage (storage only).	- Building work – General Industry - Above-ground water storages, electrical infrastructure (facility substations), communications towers and associated works - Clearance of native vegetation - Earthworks, fencing, lighting and temporary disturbance areas
Power supply	- Mullaquana 132 kV overhead transmission line (approx. 20 km - Mullaquana substation to desalination plant) - Pandurra 275 kV overhead transmission line (approx. 3 km - Corraberra Hill substation to Lincoln Gap pump station) - Bookaloo 132 kV overhead transmission line (approx. 4 km – Kalaya substation to Kalaya pump station) - Oakden Hills 33 kV transmission line (approx. 15 km – either from Mount Gunson substation or SAPN 33 kV distribution system to Mangata pump station). - Solar photovoltaic array and battery energy storage at Bimba high point water storage or at other Project locations - Mullaquana network substation - Corraberra Hill substation upgrade - Kalaya network substation - Mount Gunson substation upgrade	- Electricity infrastructure – overhead transmission lines (≥ 33 kV) - Electricity infrastructure – substations - Clearance of native vegetation - Establishment of new, or upgrades of existing vehicle access points to/from State maintained roads or local roads
Construction camps and material laydowns	- Construction camp and laydown facility at Pimba - Laydown facility north of Whyalla - Other construction camps and laydown facilities within the Project Area (if required) including offtake and storage of construction water - Temporary disturbance activities including material laydown (where co-located with infrastructure alignment) at other locations adjacent to Transfer System alignment	- Workers Accommodation - Temporary water storage tank farms - Clearance of native vegetation - Fencing, lighting (temporary) - Temporary storage of fuels and other chemicals - Water treatment (for human consumption) - Wastewater collection and management

3.4 Local Government Areas

The Project traverses the local government areas (LGA) of Whyalla, Port Augusta and Roxby Downs as well as large areas of Pastoral Unincorporated Area (PUA). The Project also extends through Department of Defence (DoD) land, including the Cultana Training Area near Whyalla and Port Augusta, and is located adjacent to Woomera Commonwealth Land east of Woomera (Figure 4).

Table 3-2: Local Government Areas

Project asset	Local Government Area
Desalination plant and marine infrastructure (Mullaquana Station)	Corporation of the City of Whyalla
Water transfer system – main transfer pipeline and Carrapateena lateral branch pipeline	Corporation of the City of Whyalla Pastoral Unincorporated Area Port Augusta City Council Municipal Council of Roxby Downs
Water transfer system – transfer pump stations and water storage locations	Corporation of the City of Whyalla Pastoral Unincorporated Area
Power supply – electricity substation and transmission lines	Corporation of the City of Whyalla Pastoral Unincorporated Area

3.5 Current Land Uses

High level generalised uses of land are depicted spatially through the Land Use Generalised 2024 layer in the SAPPA. It is common for the practical use of land to differ from the land uses defined by the Land Use Generalised layer. The majority of Project infrastructure occurs in land mapped as Livestock, with smaller regions of Public Institution (referring to DoD land), Utilities/Industry where existing infrastructure easements are present, and Vacant Urban Land in the Woomera vicinity. The practical uses of land and waters, land tenure, environmental context and anticipated future development patterns are discussed in Chapter 9 of the EIS (Chapter 9 - Use of Land and Marine Waters).

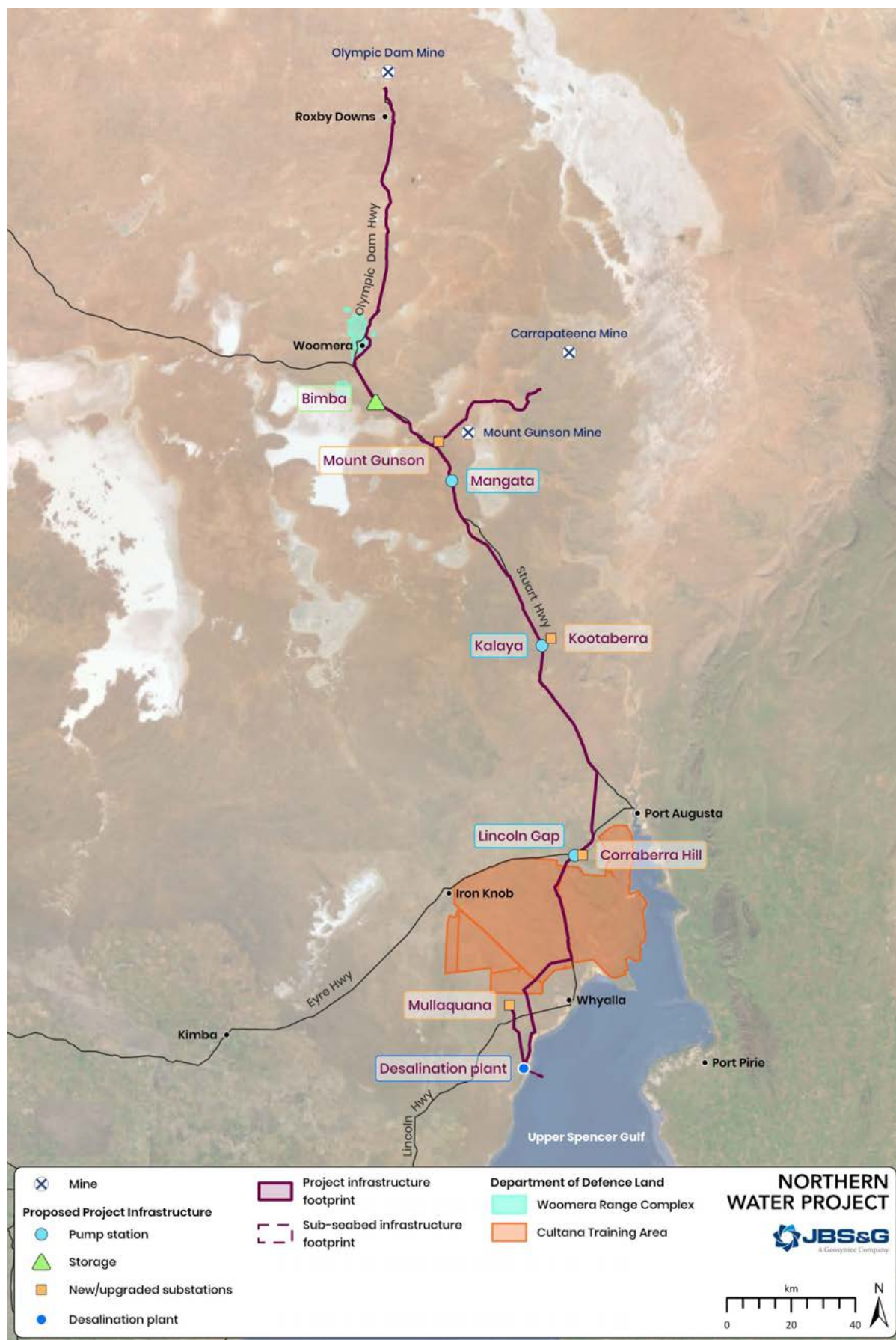


Figure 4: Project Interaction with Department of Defence Land

4. State Planning Policies

SPPs (DHUD 2025a) and special legislative schemes (DHUD 2025b) are the highest order policy document in the South Australian planning system and, amongst a suite of other documents, policies, standards and guidelines, must be considered as part of impact assessment.

The SPPs provide guidance regarding the Government's strategic directions for land use planning. In some instances, there may be competing priorities or conflict between SPPs. A planning assessment and decision must be balanced, having regard to contemporary knowledge and local circumstances. This is sought through the application of the Principles of Good Planning as set out in the SPPs (DHUD 2025a).

4.1 Assessment Summary – State Planning Policies

The Northern Water Project is consistent with the majority of relevant SPP objectives and policies. The Project is intended to facilitate the climate resilient and dependable supply of water to regions of the State which are increasingly water-constrained. This goes directly to the objective of SPP 14 Water Security and Quality, and both directly and indirectly supports the objectives of SPP 1 Integrated Planning, SPP 5 Climate Change, SPP 8 Primary Industry and SPP 10 Mineral and Energy Resources.

The Project finds general consistency with the majority of SPP criteria, notwithstanding minor inconsistencies with specific objectives focused on environmental protection and sustainable development. However, the Project's contribution to social and economic development outcomes, and provision of an alternative water supply in the Far North, should be taken to balance relatively minor inconsistencies.

The desalination plant and associated infrastructure is necessarily coastal, however has been sited and positioned well back from the natural coastline to protect infrastructure from natural hazards, and to minimise the Project's potential impact on natural coastal processes and the sensitive environment of the coastal interface. The positioning of intake and outfall pipeline infrastructure below ground via tunnel boring through the coastal interface, and the positioning of the main transfer pipeline underground for the majority of its terrestrial alignment, serve to minimise the potential disturbance to the natural landform and seabed, and facilitate the ongoing use of land and water largely unimpeded by the Project's presence.

Further assessment of key SPPs relevant to the Project is provided in Table 4-1.

Table 4-1: Key State Planning Policies

SPP and relevant policies	Preliminary Assessment against SPP objectives
SPP 1 – Integrated Planning Objective: To apply the principles of integrated planning to shape cities and regions in a way that enhances our liveability, economic prosperity and sustainable future. <i>Relevant policies: 1.2, 1.3, 1.6</i>	The Project is consistent with the objective of SPP 1 through the provision of infrastructure to support sustainable growth in the upper Eyre Peninsula and the State's far north. The Project provides a new climate resilient supply of water at a time when demands for water are projected to increase from existing and future development in the Far North.
SPP 4 – Biodiversity Objective: To maintain and improve our State's biodiversity and its life supporting functions. <i>Relevant policies: 4.1, 4.2, 4.5, 4.7, 4.8</i>	The Project is consistent with the objectives of SPP 4. Whilst a project of this scale cannot avoid impacts entirely, asset locations, pipeline alignments and construction approaches have been iteratively designed, and continue to be refined, to avoid, minimise, mitigate and offset clearance of native vegetation and impacts to biodiversity, consistent with policy 4.1 and 4.5. The siting and alignment of Project infrastructure avoids areas of high ecological value, preferring to site linear infrastructure in previously disturbed areas. Micro-siting of Project assets (such as transmission tower footings) will further assist in managing disturbance, consistent with policy 4.2.

SPP and relevant policies	Preliminary Assessment against SPP objectives
	Unavoidable impacts to native vegetation and conservation-significant terrestrial fauna habitat will be subject to offset obligations in accordance with the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth), <i>National Parks and Wildlife Act 1972</i> (SA), and <i>Native Vegetation Act 1991</i> (SA). The transfer system alignment in the Reference Design does not traverse any conservation parks, national parks, Wilderness Protected Areas, conservation reserves or native vegetation heritage agreement areas. Proposed transfer system infrastructure is not located within an area where the water resource is prescribed under the <i>Landscape South Australia Act 2019</i> (SA) and it is not within a water protection area declared under the <i>Environment Protection Act 1993</i> (SA). Project activities are not expected to result in an introduction, increase or spread of terrestrial weeds, pathogens or pest species as control, mitigation and management measures are well known and will be implemented. The location of the desalination plant was selected to avoid known areas of high ecological sensitivity in the coastal and marine environment. The desalination plant is necessarily coastal in its location but is sited a sufficient distance from the mean high water line (MHWL) to minimise the risk of impacts. Construction of the intake and outfall pipelines into the marine environment will occur by tunnel boring machine (TBM), minimising disturbance to the seabed, seagrass and the active intertidal zone, including mangrove habitat. Launch of the TBM is assumed to be via temporary box cut and decline. Detailed baseline studies and hydrodynamic modelling have been undertaken to assess potential impacts of the Project on the marine environment. Avoidance of adverse impacts on the ecological health of coastal and marine environments have been the focus of Project design from its earliest stages. Modelling has concluded that the design and performance of return water infrastructure will meet 95% species protection levels at appropriate distances from the outfall diffuser structures, confirmed by hydrodynamic modelling.
SPP 5 – Climate Change Objective: Provide for development that is climate ready so that our economy, communities and environment will be resilient to climate change impacts. <i>Relevant policies:</i> 5.5, 5.6, 5.7, 5.8, 5.9	The Project is consistent with the objectives of SPP 5. The Project will provide a secure, climate resilient water source for industry located in South Australia's Upper Spencer Gulf and Far North, enabling the growth of industries and key mining resources crucial for contributing to decarbonisation initiatives and sustainability. The Project is consistent with policies 5.6 and 5.9 as a Project facilitating sustainable development resilient from the impacts of climate change. The Project has been iteratively and responsively designed in accordance with the adopted mitigation hierarchy of <i>avoid, minimise, rehabilitate/restore, offset</i>, with consideration to the projected future climate (RCP 4.5 and/or RCP 8.5, or relevant SSP scenarios). The Project is resilient to climate change, and additional measures are expected to be considered through final construction planning and sequencing, consistent with policies 5.8 and 5.9 The Project is not inconsistent with policies 5.5 and 5.7. While the Project does not inherently promote carbon sequestration or greenhouse gas mitigation, the Project will rehabilitate and naturally regenerate, as far as reasonably practicable, areas of habitat or natural landscape disturbed during construction. This includes excavation, soil stockpiling and trench backfilling procedures which prevent soil inversion and erosive loss, and avoidance of areas of high ecological value to preserve their carbon sequestration value. The location of infrastructure takes into account the likelihood of natural hazards, including the projected risk profile into the future under modelled climate scenarios.
SPP 7 – Cultural Heritage Objective: To protect and conserve heritage places and	The Project is consistent with the objectives of SPP 7.

SPP and relevant policies	Preliminary Assessment against SPP objectives
areas for the benefit of our present and future generations. <i>Relevant policies:</i> 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7	No known cultural heritage will be impacted by the Project due to infrastructure site and alignment selection, engagement with Traditional Owners and the undertaking of cultural heritage surveys. Aboriginal sites, objects or remains that may be inadvertently discovered during construction, operations or maintenance will be addressed through heritage management processes agreed through Indigenous Land Use Agreement (ILUA) negotiations, including Aboriginal Cultural Heritage Agreement and Management Plans, Cultural Heritage Management Plans (CHMPs), ILUA Implementation Plans, the Project Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), and in compliance with the Aboriginal Heritage Act 1988 (AH Act). Operational and maintenance activities associated with the Project are not expected to result in impacts to Aboriginal cultural heritage as there will be no activities outside previously disturbed or surveyed areas, and as long as agreed operational cultural heritage management measures are implemented as required. CHMPs will be prepared in consultation with, and the endorsement of, the relevant Recognised Aboriginal Representative Bodies (RARB) / Traditional Owner representatives. They will address both Design and Build, as well as Operate and Maintain phases of the Project. An authorisation under Section 21 and/or Section 23 of the AH Act will be sought subsequent to the ILUA negotiation process, to create greater certainty for the Project in the event that unexpected cultural heritage discoveries occur during works. Infrastructure site and alignment selection has avoided known sites and places of non-Aboriginal cultural heritage significance. There are no listed National or State heritage places within 2 km of the Project construction footprint. Sites or objects that may be discovered during construction activities will be managed by implementing procedures in the Project Construction Environmental Management Plan (CEMP), CHMP and relevant legislation and guidelines, including where unlisted sites of heritage significance are located proximate to Project alignments. Any discoveries during operations would be managed following procedures in the Project CHMP in conjunction with the Operations Environmental Management Plan (OEMP). Any sites discovered through Project activities will be protected from damage by the requirements set out in the Project management plans.
SPP 8 – Primary Industry Objective: A diverse and dynamic primary industry sector making the best use of natural and human assets. <i>Relevant policies:</i> 8.1, 8.2, 8.4	The Project is consistent with the objectives of SPP 8. The coastal, marine and terrestrial landscapes of the Eyre Peninsula and the Far North host a variety of primary production industries. The USG supports key commercial fisheries and aquaculture, and provides critical breeding habitat for a range of marine fauna with both tourism and food resource value to the state. The siting and design of marine infrastructure associated with the desalination plant has taken into account the presence or potential for primary production assets, and actively sought to avoid or minimise potential impacts in accordance with the Project’s adopted mitigation hierarchy, consistent with policy 8.1 and 8.2. Terrestrial primary production in the proximity of the Project includes pastoralism, typically comprising livestock grazing with low stocking rates. The Project has been sited to minimise impacts to terrestrial primary production, by placing infrastructure adjacent property boundaries wherever possible (thereby reducing land that may be alienated/severed). It is anticipated that the pastoral activities, including grazing, can continue following construction of the Project, acknowledging that some Project areas will result in a change of land use.

SPP and relevant policies	Preliminary Assessment against SPP objectives
	Minimising the fragmentation or alienation of pastoral land is consistent with policy 8.4.
SPP 9 – Employment Lands Objective: To provide sufficient land supply for employment generating uses that supports economic growth and productivity. <i>Relevant policies:</i> 9.1, 9.2, 9.3, 9.5, 9.12	The Project is consistent with the objectives of SPP 9. The Project supports the growth of industries and key mining resources in the region, and will in turn assist in unlocking long term economic prosperity for South Australia. Several other resource exploration and renewable energy projects are understood to be under consideration in the locality of the proposed desalination plant. A new climate resilient source of water presents the opportunity for the expansion and clustering of key industries, consistent with policy 9.1, 9.2 and 9.12. The Project goes directly to the objective of policy 9.3, with a climate resilient alternative water source facilitating the continuance and future expansion of state-significant resource and energy industries.
SPP 10 – Mineral and Energy Resources To protect key resources that contribute to our state’s economy and provide valued employment opportunities (SPC 2019)³ <i>Relevant policies:</i> 10.1, 10.2, 10.3	The Project is consistent with the objectives of SPP 10. The Project provides significant supporting infrastructure to help realise the regions’ potential, with large scale renewable energy generation interests and abundant copper and iron ore resources. In particular, the Project will support the full potential of the State’s copper province, where major mines are connected to a central smelter and refinery hub. The alignment and location of Project infrastructure iteratively and responsively considers the potential for present and future coexistence of multiple land uses, including future resource and energy projects, consistent with policy 10.1 and 10.2. The Project goes directly to policy 10.3, being key pipeline infrastructure supporting mineral and energy resource activities.
SPP 13 – Coastal Environment Objective: To protect and enhance the coastal and marine environment and ensure that development is not at risk from coastal hazards. <i>Relevant policies:</i> 13.1, 13.2, 13.3, 13.4, 13.6, 13.9, 13.10	The Project is consistent with the objectives of SPP 13. Intake and outfall structures associated with the Project necessarily cross underneath the coastal zone adjacent to Mullaquana Station, and the intake pump building is located approximately 300 m inland from the mean high water mark. Protection of the coastal and marine environments is prioritised as a key objective of Project design. Other than the intake and outfall structures, no other part of the Project interacts with the coastal zone or intertidal environment. The desalination plant is substantially set back from the coast, consistent with the objective of policy 13.2, minimising the risk to the asset from current and future coastal hazards. Consistent with policy 13.1 and 13.9, the Project recognises the importance of the natural coastal landform, including mangroves, and minimises impact to the seabed and seagrass through the underground installation of the intake and outfall structures via tunnel-boring machine (TBM). Consistent with policy 13.3, the social and economic benefits conferred by the Project to current and future state-significant development in the Far North of SA have been considered in the context of environmental protection, in addition to the protection of important primary production and tourism values inherent to the USG. As far as possible, the desalination plant has been set back from the coastal environment to minimise risk from coastal hazards including under modelled future climate scenarios, consistent with policy 13.4. The Landscape Character and Visual Impact Assessment found that the relatively remote location of near-coast Project infrastructure (the desalination plant and

³ The quoted Objective of SPP 10 is taken from a superseded version of the SPPs (DPTI 2019, dated 23 May 2019) - current version (DHUD 2025a, dated 14 August 2025) omits the Objective of SPP 10

SPP and relevant policies	Preliminary Assessment against SPP objectives
	intake pump building) would not have a significant detrimental effect on the visual amenity of the locality. Assessment included consideration of visual prominence from identified sensitive receptor locations, in addition to visibility from the marine environment. Due to the location, siting and position of the desalination plant and intake pump building, views of those assets will largely be shielded by topography and vegetation from the small number of identified sensitive visual receptor locations. The project is not inconsistent with policy 13.6. The Project will discharge return water to the marine environment via the outfall pipeline. The potential for the disturbance of sediment in the coastal and marine environment during construction will be adequately controlled with industry standard construction procedures and mitigations. Undocumented areas of acid sulfate soil are readily manageable in accordance with standard procedure. The Project is not inconsistent with policy 13.10.
SPP 14 – Water Security and Quality Objective: To ensure South Australia’s water supply is able to support the needs of current and future generations. <i>Relevant policies:</i> 14.1, 14.3, 14.4, 14.5	The Project is consistent with the objectives of SPP 14. The Project supports all relevant water security and quality objectives of the SPP, by providing a secure, climate resilient water source that can support current and future generation needs and is fit for the proposed purpose. The Project seeks to balance the needs of current and potential future offtakers with the protection of natural environments both terrestrial and marine, and provide critical infrastructure while minimising impacts to land use. The Project’s primary objectives include supporting the continued development of South Australia’s key mining resources in the region while also reducing reliance on environmental water sources including the Great Artesian Basin (GAB), local groundwater and River Murray. The Project will incorporate design measures to manage risks to water quality including flooding, thus protecting people, property, and the environment.
SPP 15 – Natural Hazards Objective: To builds the resilience of communities, development and infrastructure from the adverse impacts of natural hazards. <i>Relevant policies:</i> 15.1, 15.2, 15.3, 15.5, 15.6	The Project is consistent with the objectives of SPP 15. The Project has been designed to mitigate risks from natural hazards, including extreme heat, bushfire, coastal flooding and the impacts of climate change, as discussed in relation to SPPs 4, 5, 8, 13 and 14. The design of the Project will continue to mature through final construction planning and sequencing, and will further respond to risks to the Project’s infrastructure from potential impacts from natural hazards, in accordance with the Project’s adopted mitigation hierarchy of <i>avoid, minimise, rehabilitate/restore, offset</i>. The Project design incorporates appropriate principles for management of stormwater runoff (including consideration of WSUD), with the capture and management of rainfall from desalination plant buildings and hard surfaces from appropriate rainfall events. The desalination plant is designed to prevent flows (of captured surface water) to the coast which exceed pre-development flows in volume, velocity or depth, and to maintain pre-development water quality.
SPP 16 – Emissions and Hazardous Activities Objective: To protect communities and the environment from risks associated with emissions, hazardous activities and site contamination, whilst industrial development remains viable. <i>Relevant policies:</i> 16.1, 16.2	The Project is consistent with the objectives of SPP 16. The majority of Project infrastructure is not expected to pose any material hazard arising from emissions or activities, after the construction phase is complete. Risks inherent to the construction of the Project will be managed in accordance with Project CEMPs and sub-plans, as recommended by relevant technical study supporting the EIS. The separation distance between major Project infrastructure assets (in particular the desalination plant) and sensitive receptors is generally significant, due largely to the relative remoteness of infrastructure placement and alignment. Where infrastructure is in proximity to populated places, it is typically of a form that does not pose a risk to adjacent land use, communities or the environment from emissions during operations.

SPP and relevant policies	Preliminary Assessment against SPP objectives
	The Project's construction and operational noise and vibration emissions (terrestrial) have been assessed as able to comply (with appropriate design and construction mitigations applied), with the <i>Environment Protection (Commercial and Industrial Noise) Policy 2023</i> and applicable vibration standards (Resonate 2025). The Project's underwater noise and vibration emissions (direct and cumulative) have been assessed against applicable standards, policy and guidelines, including DIT underwater piling and dredging guidelines, and best-practice international standards (Resonate 2026). The underwater noise and vibration impact assessment recommends control measures and mitigations, the implementation of which minimise potential impacts to environmental receptors from construction and operation of the Project in the marine environment. Limited other emissions (such as dust and odour) are expected during operation of the Project, and in this regard, adjacent sensitive receivers are expected to continue to experience an unchanged level of amenity. The presence of site contamination throughout the Project area, and therefore risk to workers and community, has been assessed as low. Potential impacts to the marine environment have been assessed through detailed baseline studies and an impact assessment including marine hydrodynamic modelling. The hydrodynamic modelling results for the desalination plant outfall water discharge plume conclude that dispersion and diffusion will be effective to ensure marine species protection as per Assessment Requirements (i.e. 95% species protection levels at appropriate distances from the diffuser).
SPP 19 – Special Legislative Scheme <i>Marine Parks Act 2007</i> Objective: To protect and conserve marine, coastal and estuarine biodiversity and habitats from the adverse impacts of development. <i>Relevant policies:</i> 19.1, 19.2	The Project is consistent with the objectives of SPP 19 No part of the Project interacts with any marine park established under the <i>Marine Parks Act 2007</i>, consistent with policy 19.2. The separation distance between return water discharge points and the nearest area protected under the <i>Marine Parks Act 2007</i> and marine parks zoning/overlays under the Code is substantial. Detailed baseline studies and hydrodynamic modelling have been undertaken to assess potential impacts of the Project on the marine environment. Avoidance of adverse impacts on the ecological health of coastal and marine environments have been the focus of Project design from its earliest stages, and include design of return water infrastructure to meet 95% species protection levels at appropriate distances from the outfall diffuser structures, confirmed by hydrodynamic modelling.

5. Regional Plans

Section 64 of the PDI Act provides for South Australia to be divided into planning regions for which regional plans must be prepared that are consistent with relevant State Planning Policies. These regional plans provide a long-term planning vision for a region to guide land use planning over a 15 to 30-year period.

The relevant regional plans for the Project are the Eyre and Western Regional Plan (EWRP) (DHUD 2026a) and Far North Regional Plan (FNRP) (DHUD 2026b), which were published by the State Planning Commission on 19 January 2026.

The EWRP and FNRP have much in common, with many shared objectives and a planning vision which prioritises the effective balance of economic growth and infrastructure provision with the preservation of natural landscapes and environmental values, and underpinned by effective township planning, residential land supply and building climate change resilience. The Project traverses large areas of both the Eyre and Western and Far North regions. The elements of the Project occurring in each of these two planning regions are shown in Table 5-1, together with applicable local government areas (LGAs).

Table 5-1: Applicable Region Plans

Infrastructure Element	Planning Region(s)	LGA(s)
Desalination plant and infrastructure (Mullaquana Station)	Eyre and Western	Corporation of the City of Whyalla
Water transfer system – transfer pump stations and water storage locations	Eyre and Western Far North	Corporation of the City of Whyalla Pastoral Unincorporated Area
Water transfer system – main transfer pipeline and Carrapateena lateral branch pipeline	Eyre and Western Far North	Corporation of the City of Whyalla Port Augusta City Council Pastoral Unincorporated Area Municipal Council of Roxby Downs
Power supply – electricity substation and transmission lines	Eyre and Western Far North	Corporation of the City of Whyalla Pastoral Unincorporated Area

5.1 Eyre and Western Regional Plan - Summary

The EWRP promotes economic development of the region, appropriately balanced with preserving, restoring and protecting environmental assets, natural and landscape beauty, ecosystem function and hydrological systems. Water availability is highlighted as a regional challenge for supporting sustainable economic, social and industrial development.

The EWRP calls for a balanced and strategic approach to development and promotes alternative water and energy supplies to sustainably maximise economic growth and job creation throughout the region.

The Project is consistent with the EWRP through the development of an alternative water supply, which will in turn support the continued development of the region's key mining resources, unlock sustainable growth in the key future industries, potentially including the Whyalla Steelworks, supporting employment and economic growth.

5.2 Far North Regional Plan - Summary

The Far North is highlighted as a region of significant economic importance to South Australia. The FNRP describes the region's economy as "supported by new technology in sustainable energy production, mineral resourcing and agri-business" (DHUD 2026b).

The FNRP recognises that continued economic prosperity is underpinned by tourism, a skilled workforce, and food and water security. The FNRP encourages economic growth through support of the mining industry balanced with protection of the region's unique and variegated landscape character, and provision of services to remote and regional communities. Diversification of water supply options to build resilience to drought and seasonal rainfall variability, and management of water resources to allow for the expansion of mining, defence and tourism activities supported by appropriate infrastructure, are key policy objectives.

The Project is consistent with the FNRP through the development of an alternative water supply, which will in turn support the continued development of the region's key mining resources, particularly including the State's copper province, unlock sustainable growth in the key future industries, supporting employment and economic growth.

5.3 Assessment against Regional Plan Outcomes

The Project is consistent with the strategic intent of the Eyre and Western and Far North Regional Plans, particularly in relation to facilitating long-term economic development, supporting key industries, and providing water supply alternatives. The provision of a climate resilient water supply directly supports identified regional priorities relating to infrastructure provision, economic growth, and resilience to climate variability.

The Project has been planned and sited to support these objectives while minimising potential impacts on environmental, cultural, and land use values, consistent with the policy framework established by the Regional Plans.

Key priorities in the EWRP and the FRNP relevant to the Project include:

- Capitalising on key economic drivers such as mining in Olympic Dam and the Gawler Craton, supporting and facilitating greater development of renewable energy resources,
- Safeguarding agricultural land and supporting climate-resilient projects like the Northern Water Project to diversify the economy and create jobs,
- Building climate resilient infrastructure to adapt to hotter, drier conditions,
- Investing in infrastructure to support economic growth and employment opportunities,
- Preserving biodiversity, protecting vulnerable species, and managing ecologically significant areas such as Lake Eyre Basin, and
- Preparing for the impacts of climate change, including rising temperatures, reduced rainfall, and increased frequency of natural hazards such as bushfires, floods, and coastal erosion.

A further assessment of the Project against the relevant Objectives of the Regional Plans is provided in Table 5-2

Table 5-2: Assessment against Regional Plan objectives

Assessment against relevant Regional Plan Objectives
Theme: People, Housing and Liveability
<u>Aboriginal cultural heritage and values</u> The current alignment of Project infrastructure has been iteratively and responsively designed to avoid impacts on areas of cultural heritage value to Aboriginal people. The alignment of linear infrastructure is expected to be further refined through the Project's design phase as surveys and ongoing consultation with Traditional Owner groups continues. Cultural heritage management plans (CHMPs) will be in place to ensure interface with sites of cultural heritage are managed or avoided, and procedures are implemented for managing discoveries. <u>State and Local heritage</u> No listed State heritage places protected by the <i>Heritage Places Act 1993</i> are present in proximity to Project infrastructure, nor expected to be impacted by Project construction or operation. Several potential sites of unlisted non-aboriginal heritage value have been identified in proximity to Project infrastructure and assessed for the potential to be impacted by noise and vibration created by Project construction and operation (Resonate 2026). No identified site is expected to be adversely impacted by the Project's construction or operation. Potential impacts to undocumented or locally significant sites (if discovered during construction) will be addressed in accordance with statutory processes (as they are applicable) and through consultation with landholders. <u>Landscape and township character</u> The Project's Landscape Character and Visual Impact Assessment (LCVIA) (Hemisphere 2025) addresses the long-term visual impact of Project infrastructure on its receiving landscapes, and broadly concludes that the impact of Project infrastructure is attenuated by the scale of the receiving environment. Elements of the Project including the intake pump structure at Mullaquana Station, overhead transmission lines and, in some instances, water transfer pump stations are considered to be visually prominent features, however have limited impacts on the overall visual amenity of the landscapes in which they are proposed. The remoteness of Project infrastructure and avoidance of landscape areas of high scenic amenity assists to ameliorate the Project's impacts to landscape character. Engagement with communities and landholders remains ongoing in accordance with ongoing stakeholder and community engagement activities, which commenced in 2022. The Project seeks to proactively engage with stakeholders to address issues with the aim of avoiding or minimising impacts, including for the identification of local sites and landscape features of community importance which could potentially be impacted by the Project. The Project is supported by the objective both directly and indirectly by:

Assessment against relevant Regional Plan Objectives

- Ongoing and proactive consultation with Traditional Owner groups, local communities and stakeholders enabling the holistic consideration of sites and areas of cultural heritage significance, and
- Avoidance of areas identified for future residential growth, to preclude the possibility of sensitive receptors being impacted by ongoing Project operations in the future.

Theme: Productive Economy

Tourism and events

Both the EWRP and FNRP emphasise the protection of natural and built assets which are of value to local communities and attractive to tourists, including open spaces and scenic trails, recreation and eco-tourism experiences, the natural coastline and rural landscapes, the marine environment, cultural heritage, accommodation and hospitality services.

As discussed above, the Project balances the necessity for a coastal and marine location with the objective to protect community and tourism value through consideration of siting of infrastructure, the avoidance of landscapes of high amenity or ecological value, and minimisation of impacts to the coastal and marine environments.

Some temporary impact on recreation areas and accommodation facilities in townships may arise during the Project's construction phase due to workforce accommodation, however during ongoing operations Project infrastructure is not anticipated to detract from the values and assets that make the Eyre and Western and Far North regions attractive to tourists.

Primary industry

The Project occurs across land and waters which are used for a variety of primary production activities, including pastoral activities, aquaculture and fisheries. Protection of the productive and ecological values of marine waters has been a key focus of impact assessment.

Detailed baseline studies and hydrodynamic modelling have been undertaken to assess potential impacts of the Project on the marine environment. Avoidance of adverse impacts on the ecological health of coastal and marine environments have been the focus of Project design from its earliest stages.

Avoidance of encroachment on, or fragmentation of, primary production land is a key objective of the EWRP and FNRP. As far as reasonably practicable, Project infrastructure (particularly transfer system and transmission infrastructure) which has the potential to result in land use fragmentation, has been sited and aligned to follow existing land parcel boundaries or infrastructure easements. Ongoing impacts to most uses of land are expected to be minimal.

Mineral and energy resources

The primary purpose of the Project is the supply of a new alternative water source to the region, supporting industry (including mining) to achieve consistency with the objective.

The Project supports sustainable industrial and mining development through the supply of a new climate resilient source of water. The Project is directly and indirectly supported by the EWRP and FNRP as key water security infrastructure.

The Project is supported by the objective both directly and indirectly by:

- Avoidance of areas of high tourism value,
- Placement of infrastructure to minimise the potential for land use fragmentation, future encroachment of sensitive land uses, and impacts to the primary production value of land and waters, and
- Supporting sustainable future growth through critical infrastructure support of identified key economic drivers in the regions.

Theme: Natural Resources, Environment and Landscapes

Biodiversity

The alignment of Project infrastructure has been selected and proactively refined to avoid areas of high biodiversity value or intact native vegetation, wherever practicable. Impacts are minimised through locating infrastructure within land used for grazing or other disturbed areas (in preference to road reserves, where remnant native vegetation may be present).

The clearance of vegetation and any required terrestrial dewatering will occur during the Project's construction phase. While some clearance of vegetation is permanent, potential impacts arising from dewatering are temporary in nature and any impacts to groundwater-dependent ecosystems (GDEs) are temporary in nature.

Assessment against relevant Regional Plan Objectives

Climate change

The Project supports sustainable development resilient from the impacts of climate change. The Project ultimately has the potential to increase the resilience of remote and rural communities, land uses and environments to the impacts of climate change through providing a climate resilient source of water to traditionally water-intensive industries.

Coastal environments

The Project seeks to avoid adverse impacts to the coastal zone by siting buildings and earthworks away from the intertidal and active coastal zone. The desalination plant is necessarily coastal in its location but coastal-adjacent infrastructure is sited a sufficient distance from the mean high water line (MHWL) to minimise the risk of impacts, including the intake pump building. Construction of the intake and outfall pipelines into the marine environment will occur by tunnel boring machine (TBM), avoiding the risk of significant disturbance to the seabed or the active intertidal zone, including mangrove habitat. Launch of the TBM is assumed to be via box cut and decline, necessitating earthworks. This is further examined and assessed for its alignment to relevant policies of the Planning and Design Code in later sections. Placement of the intake and outfall structures below-ground avoids significant disturbance to coastal and marine environments, aligning with the EWRP.

Natural hazards

The Project has been iteratively designed and continues to be refined through final construction planning and sequencing to identify and proactively attenuate risks from natural hazards in alignment with the adopted mitigation hierarchy of *avoid, minimise, rehabilitate/restore, offset*. The design of the Project is expected to continue to evolve through its design phase, enabling further responsiveness to emergent risks. This approach aligns to both the EWRP and FNRP.

Emissions and hazardous activities

The Project's construction and operational noise and vibration emissions (terrestrial) have been assessed as able to comply (with appropriate design and construction mitigations applied), with the *Environment Protection (Commercial and Industrial Noise) Policy 2023* and applicable vibration standards (Resonate 2026).

The Project's underwater noise and vibration emissions (direct and cumulative) have been assessed against applicable standards, policy and guidelines, including DIT underwater piling and dredging guidelines, and best-practice international standards (Resonate 2026). The underwater noise and vibration impact assessment recommends control measures and mitigations, the implementation of which minimise potential impacts to environmental receptors from construction and operation of the Project in the marine environment.

Limited other emissions (such as dust and odour) are expected during operation of the Project, and in this regard, adjacent sensitive receivers are expected to continue to experience an unchanged level of amenity.

The presence of site contamination throughout the Project area, and therefore risk to workers and community, has been assessed as low.

Potential impacts to the marine environment have been assessed through detailed baseline studies and an impact assessment including marine hydrodynamic modelling. The hydrodynamic modelling results for the desalination plant outfall water discharge plume conclude that dispersion and diffusion will be effective to ensure marine species protection as per Assessment Requirements (i.e. 95% species protection levels at appropriate distances from the diffuser).

The Project is supported by the objective both directly and indirectly by:

- Avoiding placement of infrastructure in areas of high biodiversity value including the coastal area, preserving the ecosystem value and carbon sequestration value of such environments,
- Positioning and designing infrastructure with regard to natural hazards including bushfire, flooding, extreme heat, and potential acid sulfate soils, and developing appropriate controls and mitigation measures to minimise impacts, and
- Undertaking detailed study to identify and quantify potential impacts from Project emissions, including dust, noise, and return water from the desalination plant, to enable Project design to respond to the level of potential impact.

Theme: Transport and infrastructure

Strategic transport networks

Assessment against relevant Regional Plan Objectives

The Project will utilise freight corridors and State-maintained roads during its construction phase for the delivery of materials, equipment and the construction workforce. Upgrades to vehicle access routes are necessary to link existing roads with the Project's construction footprint. All upgrades to the intersections of access roads with State-maintained roads will be carried out in accordance with all relevant policy and regulation, and emphasise the protection and continued safe operation of the road network.

Integrated water management, security and quality

The Project aligns with the objective of both the EWRP and FNRP to support water infrastructure that is resilient, and meets the needs of the population and economy. The provision of an alternative, climate resilient source of water in the State's north is an enabler of reduced reliance on naturally-occurring groundwater and surface water resources. This builds resilience to a changing climate, in which conditions in the Eyre and Western and Far North regions are predicted to become hotter and drier.

The Project does not rely on the use of groundwater or surface water resources, and avoids or minimises impacts to water resources in alignment with the Project's adopted mitigation hierarchy of *avoid, minimise, rehabilitate/restore, offset*, by:

- Provision of a climate resilient supply of water for industry that enables reduced reliance on the region's groundwater and surface water resources,
- Siting all permanent buildings and infrastructure a suitable distance from watercourses and placement of pipeline infrastructure predominantly below ground (including below watercourses via underboring) to avoid impacts to the natural surface water cycle, and
- Scheduling construction activities in or near watercourses during periods of low or no rainfall, or low runoff periods where practicable.

Infrastructure corridors and reserves

The Northern Water Project is specifically addressed in the FNRP as strategic infrastructure accommodating growth, new technologies and the continued economic prosperity and development of the region. The Project represents a new and unique infrastructure development which, to the extent possible, consolidates and makes use of existing infrastructure (such as existing water storage locations and electricity substations) to avoid the duplication of services.

The Project is supported by the objective both directly and indirectly by:

- Representing strategic infrastructure supporting the continued economic development of the regions,
- Contributing to water security in the Far North by enabling reduced reliance on groundwater and surface water resources, and
- Ensuring that Project construction, operation and maintenance aligns with objectives to maintain and improve an integrated and resilient transport network.

6. Assessment Against the Planning and Design Code

6.1 Assessment Summary

The Code, established under Section 65 of the PDI Act, applies to the entirety of the State and is the primary statutory instrument for assessing development applications against relevant planning policy.

Identification and spatial analysis of Zones, Subzones and Overlays applying to the Project has used a corridor width of 200 m around Project assets (100 m from the centreline of the asset) as defined in Section 3.1, with assessment methodology contemplating a generic design consistent with the Reference Design (GHD 2025a) as described in Section 3.2.

The Project demonstrates a mixed level of consistency with the relevant Zones and Subzones, reflecting its scale and linear nature across multiple land use contexts. Where inconsistencies are identified, these are primarily associated with the inherent characteristics of the infrastructure, rather than avoidable siting or design decisions. Inconsistency of desalination plant ancillary infrastructure (notably excavation near the coast and construction of the intake pump building at Mullaquana Station, within the Conservation Zone and Visitor Experience Subzone and, where it occurs, TBM and dredge spoil drying) arises out of the necessity for co-location with other Project infrastructure and the coastal fringe. The benefits offered by the Project and the Project's adopted mitigation hierarchy assist in ameliorating (but do not absolve) the Project of these inconsistencies. Control of impacts of spoil management activities will be managed through the Project's SEDMP and compliance with the Waste Treatment and Management Facilities General Development Policy, EPA 1093/21 *Environmental management of dewatering during construction activities*, EPA *Dredge Guideline* (EPA 2020), and the *Environment Protection (Water Quality) Policy 2015* (Water Quality EPP), and are expected to be subject to licensing by the EPA.

The balance of Project infrastructure is generally not inconsistent, or readily able to achieve consistency, with the balance of Zone and Subzone performance outcomes. The Project overall is assessed as being generally **not inconsistent** with relevant Zones and Subzones, taking into account proposed mitigations and management approaches to addressing potential impacts, and the Project's general level of consistency with the relevant General Development Policies relating to activities which are otherwise inconsistent with Zone or Subzone performance outcomes or desired outcomes.

The Project is generally **consistent** with the desired outcomes and relevant performance outcomes of the relevant Overlays, with the only inconsistency arising with the interaction of pipeline infrastructure with the Water Resources Overlay. For the main transfer pipeline this inconsistency relates predominantly to construction activities. The Carrapateena lateral branch pipeline (which when assumed to be installed via on-ground placement) has the potential to create an impediment to surface water flows. However, this is ameliorated through the specific avoidance of ongoing impacts to identified creeks and drainage lines via underground placement of the pipeline at such locations. The impacts of surface-level pipeline infrastructure on surface hydrology was assessed as *minor/negligible* by in Chapter 13 (Surface Water) of the EIS. This results in the Carrapateena lateral branch pipeline having, on balance, a comparable degree of consistency with the Water Resources Overlay as the main transfer pipeline, after construction.

The Project is readily compliant with the relevant Hazards Overlays, including for flooding and bushfire, and the balance of Project infrastructure is compliant with the Water Resources Overlay. While the Project proposes substantial native vegetation clearance, the Project's detailed approach to the avoidance of ecologically sensitive areas and assessment of potential impacts, taken in combination with proposed offset and mitigation strategies, results in the Project being not inconsistent with the performance outcomes of the Native Vegetation Overlay. Similarly, the Project's interactions with the Key Outback and Rural Routes Overlay and the Gas and Liquid Petroleum Pipelines Overlay are assessed as 'not inconsistent' on the basis of management and mitigation strategies being able to adequately address potential impacts to the desired outcomes and relevant performance outcomes of those Overlays, subject to further information developed through final construction planning and sequencing.

The balance of Project infrastructure, including pipeline infrastructure, is assessed as not inconsistent with, or readily consistent with, the relevant Overlays. Overall the Project is assessed as **consistent** with the majority of relevant Overlays, when taking into account proposed mitigations and management approaches to addressing potential impacts.

The Project is generally consistent, or readily able to achieve consistency with the relevant performance outcomes of the applicable General Development Policies (GDPs), subject to further information developed through final construction planning and sequencing. Where inconsistencies with specific GDP performance outcomes are unable to be avoided, it is considered that alternative approaches present challenges to health and safety, or to other environmental aspects which would, if implemented, potentially outweigh the significance of the inconsistency. The Project is therefore assessed as **consistent** with the relevant GDPs, taking into account proposed mitigations, and the likelihood of further information being developed during final construction planning and sequencing.

6.2 Applicable Zones, Subzones and Overlays

Table 6-1 summarises the applicability of identified Zones, Subzones and Overlays to Project asset types. Figures depicting the applicable Zones, Subzones and Overlays are provided in Appendix A as follows:

- Figure 5 and Figure 6 depict the applicability of Zones and Subzones to the Project assessment area.
- Figure 7 depicts the Project's southern extent and selected Overlay applicability (excluding Overlays which apply to all Project assets, or all terrestrial Project assets, as applicable).
- Figure 8 and Figure 9 present detail of Overlay interactions at the desalination plant site and the Lincoln Gap transfer pump station, Corraberra Substation and Pandurra 275 kV transmission line respectively.
- Figure 10 depicts the Project's northern extent and selected Overlay applicability (excluding Overlays which apply to all terrestrial Project assets).

Table 6-1: Zone, Subzone and Overlay applicability to Project assets

Zone, Subzone or Overlay	Relevant Project Elements				
	Desalination plant and marine infrastructure	Transfer system pump stations and storages	Transfer system pipeline & lateral pipeline	Power Supply – substations and transmission	Construction camps and laydowns
Zones and Subzones					
Coastal Waters and Offshore Islands Zone	✓				
Commonwealth Facilities Zone			✓		
Conservation Zone	✓		✓		
Remote Areas Zone	✓	✓	✓	✓	✓
Rural Zone			✓		
Strategic Employment Zone					✓
Visitor Experience Subzone	✓				
Overlays					
Airport Building Heights (Aircraft Landing Area) Overlay			✓		
Building Near Airfields Overlay			✓		
Coastal Areas Overlay	✓				
Gas and Liquid Petroleum Pipelines Overlay		✓	✓	✓	

Zone, Subzone or Overlay	Relevant Project Elements				
	Desalination plant and marine infrastructure	Transfer system pump stations and storages	Transfer system pipeline & lateral pipeline	Power Supply – substations and transmission	Construction camps and laydowns
Hazards (Bushfire - Outback)		✓	✓	✓	✓
Hazards (Bushfire - Regional)	✓	✓	✓	✓	✓
Hazards (Flooding - Evidence Required) Overlay	✓	✓	✓	✓	✓
Hazards (Flooding) Overlay	✓	✓	✓	✓	✓
Key Outback and Rural Routes		✓	✓	✓	✓
Native Vegetation Overlay	✓	✓	✓	✓	✓
Significant Interface Management Overlay			✓		
Water Resources Overlay	✓	✓	✓	✓	✓

6.3 Assessment of Zones and Subzones

Zones and Subzones relevant to the Project assessment area are shown in Figure 5, and Figure 6 (Appendix A). The Project finds mixed consistency with applicable Zones and Subzones. Applicable elements of the Project (applied spatially and with regard for the Project Assessment Area defined in Section 3.1) are assessed to be consistent with the Coastal Waters and Offshore Islands Zone and not inconsistent with the Remote Areas Zone, but inconsistent with the Conservation Zone and its associated Visitor Experience Subzone. The Project is assessed to be not inconsistent with the Commonwealth Facilities Zone and the Rural Zone, with applicable Project infrastructure having no material impact on the functionality of those Zones. In areas where inconsistencies with applicable Zones are observed, no broader adverse impact is likely on the functionality or desired outcomes of those Zones outside the Project's construction footprint. Overall it is considered that despite inconsistencies with specific performance outcomes of some Zones, the Project on balance does not adversely affect the intended use of those Zones, and incorporates adequate separation distances from sensitive land uses (or Zones intended principally to accommodate sensitive land uses) to minimise the potential of adverse impacts to the intended functionality of adjacent land uses.

At Mullaquana Station, development of desalination plant intake and outfall infrastructure, temporary disturbance activities including earthworks activities near the coast, finds inconsistency with the Visitor Experience Subzone and the Conservation Zone, as such elements are not principally for the conservation and enhancement of the natural coastal environment, nor fit the desired development pattern of the Conservation Zone. However, environmentally important coastal features have been avoided through the underground placement of most development proposed within the Zone and Subzone, and the placement of above-ground infrastructure landward of identified coastal native vegetation. The intake pump building is necessarily co-located with the coast, as are earthworks associated with the launch of TBM equipment for construction of the underground intake and outfall tunnel. However, on balance the proposed construction methodology preserves habitat and the environmental values of the coastal fringe, including mangrove areas and the active intertidal zone which may otherwise be substantially disturbed by earthworks by alternative construction methodologies. It is noted that the precise location of temporary dewatering and stockpiling areas are not finalised, and these may occur outside the Conservation Zone. Where these activities occur outside the Conservation Zone, the degree of their inconsistency with the Remote Areas Zone is less significant.

Intake and outfall infrastructure traversing the coastal fringe is necessarily placed within the Coastal Waters and Offshore Islands (CWOI) Zone. The under-seabed location of the majority of infrastructure within the CWOI Zone and the temporary nature of jack up barge activity associated with construction, together with

the proactive avoidance of sensitive seagrass areas, marine parks, sensitive marine ecosystems and aquaculture achieves consistency with a majority of relevant performance outcomes of the CWOI Zone.

In summary, the identified inconsistencies arise from the scale and functional requirements of the infrastructure, including necessary co-location of the infrastructure with the coastal interface. Notwithstanding this, the design and construction methodologies minimise disturbance to the extent reasonably practicable and maintain the broader intent of the Zones and Subzones.

Table 6-2: Relevant Zones and Subzones

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
Desalination plant (including marine)	
Coastal Waters and Offshore Islands Zone <i>Desired Outcomes</i> • Protection and enhancement of the marine and coastal environment and passage for safe watercraft navigation – DO 1 • Limited, small-scale, low-impact development – DO 2 <i>Performance Outcomes</i> • Land Use - PO 1.1 • Development on Offshore Islands - PO 2.6 [avoidance of seagrass] • Environmental Protection - PO 3.1, 3.2, 3.3, 3.4, [3.5 – impacts to marine parks]	Intake and outfall infrastructure is consistent with the CWOI Zone. Applies to the construction of intake and outfall tunnels/pipelines associated with the desalination plant, and the adopted construction methodology. For the purposes of this assessment, it has been assumed that an intake and outfall tunnel will be constructed via TBM, with pipe-end equipment (intake head and outfall diffusers) deployed via a ‘float and sink’ construction methodology. Elements of the Project which are to be constructed within coastal waters are a major focus of investigations being undertaken for the EIS, having particular regard to the Project’s potential operational impacts on the marine environment and commercial fisheries. Underground pipeline infrastructure installed via TBM or ‘float and sink’ methodology is not a development type which aligns with envisaged development within the Zone, however the impacts from construction are considered to be comparable to that of construction of a Jetty, or the establishment of certain types of Aquaculture, both of which are envisaged development. The intake and outfall pipeline structures are therefore assessed as being not inconsistent with PO 1.1, also noting that hydrodynamic modelling has shown that operational impacts arising from return water discharge will meet 95% species protection at appropriate distances from the outfall. PO 2.6 relates specifically to the avoidance of seagrass by recreational pontoons. A ‘float and sink’ pipeline construction methodology shares some characteristics with an offshore pontoon structure. Notably, dredging of the seabed may be required to facilitate the construction of aspects of the intake and outfall structures. The Project is inconsistent with PO 2.6 since some areas of <i>Zostera</i> seagrass may be cleared (depending on the Projects final construction planning and sequencing). However, the extent of this inconsistency is ameliorated by the avoidance of <i>Posidonia</i> seagrass by the construction method (tunnelling) and effective operation of the intake and outfall pipelines. Hydrodynamic modelling undertaken in support of the EIS investigated the impacts to seagrass and other marine life arising from return water discharge to marine waters. This work directly informed the placement of intake and outfall above-seabed structures (for the Reference Design) to avoid areas of ecological or environmental sensitivity. This includes detailed assessment of biosecurity or other impacts to fisheries, fish nurseries, aquaculture, tourism or other values of the offshore marine environment. Construction of the intake and outfall pipelines and tunnels via TBM (and thus subjacent to the active intertidal zone) avoids the need for significant earthworks in coastal waters, thereby minimising the resulting impacts to water quality including sedimentation and turbidity, and is therefore consistent with PO 3.1, PO 3.2, PO 3.3, and PO 3.4.

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
	The location of the intake and outfall pipelines avoids any reserve area protected under the <i>National Parks and Wildlife Act 1972</i> or the <i>Marine Parks Act 2007</i>, thereby achieving consistency with PO 3.5.
Conservation Zone & Visitor Experience Subzone <i>Desired Outcome</i> The conservation and enhancement of the natural environment and natural ecological processes for their ability to reduce the effects of climate change, for their historic, scientific, landscape, habitat, biodiversity, carbon storage and cultural values and provision of opportunities for the public to experience these through low-impact recreational and tourism development – DO 1 <i>Performance Outcomes</i> - Land Use - PO 1.1, 1.2 - Environmental Protection - PO 3.1, 3.2 - Built Form and Character - PO 4.1, 4.2, 4.4 - Access and Car Parking - PO 5.1, 5.2, 5.3, 5.6 - Landscaping - PO 7.1 Visitor Experience Subzone <i>Desired Outcome</i> Tourist accommodation within a conservation area complements visitor experiences, and is located, sited and designed to minimise detrimental impacts on the natural environment and natural ecological processes including their historic, scientific, landscape, habitat, biodiversity and cultural values – DO 1 <i>Performance Outcomes</i> - Land Use - PO 1.1, 1.2 - Environment Protection – PO 2.1	The relevant aspects of the desalination plant (intake pump building, TBM launch infrastructure and pipeline components) are inconsistent with the Conservation Zone and Visitor Experience Subzone. The Conservation Zone and Visitor Experience Subzone apply partially to development proposed as part of the desalination plant. The Zone and Subzone occur across the coastal fringe. Components of the desalination plant occurring in the Zone include the intake pump building, TBM launch infrastructure including earthworks, and landward portions of the underground intake and outfall tunnels/pipelines where they rise and are positioned above-ground adjacent the intake pump building. It is also possible, subject to final construction planning and sequencing, that some or all excavation spoil stockpiling, TBM spoil and dredge spoil dewatering may occur within the Zone and Subzone during the Project's construction phase. The intent of the Conservation Zone and Visitor Experience Subzone is to prioritise low-impact, small-scale land uses that provide for sustainable public access to, and enjoyment of, the natural environment of the area to which they apply. Overarchingly, the objective of the Zone and Subzone are to enhance and showcase a natural landscape, with which the scale and intensity of the intake pump building, TBM launch infrastructure and pipeline components are significantly at variance, finding inconsistency with PO 1.1 and PO 1.2 of the Conservation Zone, and PO 1.1 and PO 1.2 of the Visitor Experience Subzone. However, the land on which development is proposed is not presently publicly accessible, and as such the development proposed does not reduce the capacity of the Zone or Subzone to operate as intended. Further, the proposed construction methodology of coastal fringe infrastructure avoids impacts to mangroves, and will avoid/mitigate sedimentation and turbidity impacts to coastal waters through implementation of the Project's SEDMP, achieving compliance with PO 2.1 of the Visitor Experience Subzone. Above-ground development including earthworks and the intake pump building is located adjacent to areas of coastal vegetation, which may necessitate clearance, inconsistent with PO 3.1 and PO 3.2. However, noting the necessity of the Project's coastal location, the siting and design of buildings has regard for the imperative to avoid areas of important habitat and minimise the extent of clearance wherever possible. Clearance of coastal vegetation is feasibly able to be minimised through siting and design considerations. The intake pump building is inconsistent with PO 4.1, due to its scale and prominent position. Visual impacts are considered able to be mitigated through the use of low-reflective coatings and finishes, and colour choices that complement the surrounding landscape. However, given the scale of the intake pump building, it will remain a visible feature in the landscape that is incongruous with the natural shoreline. The Project is inconsistent with PO 4.2 on the basis of the extent of earthworks occurring within the Conservation Zone, however the extent of earthworks is substantially lessened through the installation of the intake and outfall structures via TBM, as compared to a trenching and backfill construction methodology, which would substantially impact on the active coastal zone and the environmental values therein.

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
	The Project is not inconsistent with PO 4.4, due to the remote location of the Project – noting, however, that elements of the Project associated with the desalination plant occurring in the Conservation Zone will be partially visible from coastal waters. Road construction occurring within the Conservation Zone is minimal, and will utilise existing private access tracks, suitably upgraded for the number and type of vehicles required to access the site of the intake pump building and TBM launch infrastructure. The Project is considered able to readily achieve consistency with PO 5.1, PO 5.2 and PO 5.3 through compliance with other transport, traffic and access requirements expressed through other Zones, Subzones, Overlays and the General Development Policies [Transport, Access and Parking]. Screening of infrastructure in the Conservation Zone using locally indigenous, contextual plantings are unlikely to substantively mitigate the visual bulk of the intake pump building, finding inconsistency with PO 7.1. However, as noted, the remote location and scale of the landscape of the receiving environment do alleviate some of the visual amenity impacts arising from the location of infrastructure. Construction of intake and outfall infrastructure is unlikely to have a detrimental impact on the function or use of the broader Zone and Subzone outside of the Project's construction footprint.
Remote Areas Zone <i>Desired Outcome</i> A diverse range of uses including pasture growing, grazing, farming, agricultural processing and transportation, mining and petroleum, energy generation and storage, pipeline infrastructure, aerospace and defence-related facilities, Aboriginal lands and related activities, tourist development, workers' accommodation and settlements – DO 1 <i>Performance Outcomes</i> - Land Use / Intensity - PO 1.1 - Built Form and Character - PO 2.1, 2.2	The desalination plant and associated infrastructure is not inconsistent with the Remote Areas Zone. The desalination plant is entirely located within the Remote Areas Zone, with the exception of infrastructure described above as occurring in the CWOI Zone and Conservation Zone. It is possible, subject to final construction planning and sequencing, that some or all excavation spoil stockpiling, TBM spoil and dredge spoil dewatering may occur within the Zone during the Project's construction phase. A desalination plant is inconsistent with PO 1.1, however facilities of a comparable scale and intensity are envisaged, and the desalination plant is able to achieve consistency with the Built Form and Character performance outcomes of the Zone (PO 2.1 and PO 2.2) through siting, design and finishes. While the desalination plant is likely to be a visual feature in the landscape visible from some distance, it is unlikely to be visible from the nearest State maintained road (being the Lincoln Highway) and is set back significantly from the coastline such that its visual bulk is minimised so far as reasonably practicable. The location of the plant and associated infrastructure is expected to be refined as detailed design progresses, to minimise impacts on natural features, native vegetation and fauna habitat. Pertaining to the stockpiling and dewatering of excavation, TBM and dredge spoil, the Zone envisages higher-impacting activities including mining, energy generation and pipeline infrastructure. Excavation and filling is a form of development which is consistent with DTS/DPF 1.1, and as such, the anticipated scale of dewatering and stockpiling is not considered to be in conflict with the desired outcome of the Zone.
Water Transfer System: Main transfer pipeline and Carrapateena lateral pipeline	
Commonwealth Facilities Zone <i>Desired Outcome</i>	Pipeline infrastructure is not inconsistent with the Commonwealth Facilities Zone.

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
- Accommodating nationally significant aviation and defence activities – DO 1 <i>Performance Outcomes</i> - Land Use – PO 1.1	Pipeline infrastructure interacts with the Zone north west of Whyalla in association with the Department of Defence's Cultana Training Area (main transfer pipeline only). Establishment of the pipeline (and prevention of activities/buildings within the pipeline easement) has the potential to affect future uses of land in proximity to the easement. Aviation-related activities are not expected to be precluded or hindered by presence of the transfer system. The significant amount of land outside the pipeline easement within the Zone will maintain the ability to accommodate activities anticipated within the Zone. Where communications towers are proposed to be sited within the Zone, these are not considered likely to present any constraint on aviation or other defence activities, however consideration should be given to the primary use of land in selection of sites. There will be ongoing engagement with the Department of Defence on the design and placement of infrastructure and management of potential impacts on Defence land.
Conservation Zone <i>Desired Outcome</i> The conservation and enhancement of the natural environment and natural ecological processes for their ability to reduce the effects of climate change, for their historic, scientific, landscape, habitat, biodiversity, carbon storage and cultural values and provision of opportunities for the public to experience these through low-impact recreational and tourism development – DO 1 <i>Performance Outcomes</i> - Land Use - PO 1.1, 1.2 - Environmental Protection - PO 3.1 - Built Form and Character - PO 4.1, 4.2, 4.4 - Access and Car Parking - (Construction) PO 5.1, 5.2 - Landscaping - PO 7.1	Pipeline infrastructure is not inconsistent with the Conservation Zone, and is not expected to adversely impact the desired outcome of the Zone outside the disturbance footprint. Water transfer system infrastructure occurring within the Conservation Zone is limited to a section of underground pipeline at the Project's northern extent adjacent to Olympic Dam. Further, the stipulated Project Assessment Area (a 200 m corridor around linear infrastructure) approaches (but does not interact with) the Conservation Zone and its associated Visitor Experience Subzone inland of the coastal fringe north of the desalination plant. Should pipeline siting and alignment move east from its current position between KP 2.6 and KP 12.3, this section of pipeline would be assessable against the Conservation Zone also. Pipeline infrastructure is not an envisaged form of development in the Conservation Zone, placing the Project at variance with PO 1.1 and PO 1.2. However, the underground position of the water transfer pipeline within the Zone (adjacent to Roxby Downs) is not inconsistent with existing infrastructure in the locality including roads, access tracks and electricity transmission infrastructure, achieving consistency with PO 4.1 and PO 4.4. Pipeline infrastructure installation within the Zone is expected to be achieved by trenching, which necessitates a disturbance corridor in the order of 40 m in width. This is inconsistent with PO 3.1, however detailed study has been undertaken to inform the siting and position of infrastructure to preserve and avoid areas of important habitat, nesting or breeding areas (where possible). No new access points are proposed within the Conservation Zone, consistent with PO 5.1. The relevant portions of Project infrastructure achieve consistency with PO 5.2 through combining construction footprint access into the disturbance corridor for construction. No planting or screening is proposed adjacent to pipeline infrastructure in the Zone, however appropriate management of excavation spoil and vegetation during and after construction is expected to assist in the natural recruitment of vegetation to the disturbance area (minus areas to be kept clear for maintenance access purposes). The water transfer system is not inconsistent with PO 7.1. The water transfer system's interaction with the Conservation Zone is relatively minimal, with siting and alignment selected (and anticipated to be continually refined) to respond to environmental and technical constraints.

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
Remote Areas Zone <i>Desired Outcome</i> A zone that includes a diverse range of uses including pasture growing, grazing, farming, agricultural processing and transportation, mining and petroleum, energy generation and storage, pipeline infrastructure, aerospace and defence-related facilities, Aboriginal lands and related activities, tourist development, workers' accommodation and settlements – DO 1 <i>Performance Outcomes</i> • Land Use and Intensity - PO 1.1 • Built Form and Character - PO 2.1	The water transfer system (main transfer pipeline and Carrapateena lateral branch) is consistent with the Remote Areas Zone. The majority of pipeline infrastructure associated with the water transfer system occurs in the Remote Areas Zone, including the entirety of the Carrapateena lateral branch. The water transfer pipeline is an envisaged form of development within the Zone. The underground nature of the pipeline along the majority of its alignment (with the exception of the Carrapateena lateral branch, above-ground valves and maintenance access points) will mitigate ongoing impacts during operations. The Project will directly and indirectly support a wide range of uses that are crucial for the economic growth of the State, and which are directly envisaged within the Remote Areas Zone. Whilst the water delivery pipeline does not directly satisfy PO 1.1, the provision of a climate resilient water supply can enable existing and future uses anticipated in the Zone to develop without reliance on surface or groundwater resources. In relation to the Carrapateena lateral branch pipeline, which is assumed to be constructed either above-ground or underground, the associated potential impacts to land use are partly absolved by adjacency of the pipeline with existing road infrastructure. Additionally, the entirety of the Carrapateena lateral branch pipeline occurs within BHP's Miscellaneous Purposes Licence (MPL) 152, which runs from the Stuart Highway to the Carrapateena copper mine. Provision of water infrastructure forms part of the MPL. The water delivery pipeline alignment satisfies PO 2.1 by minimising impacts to high value vegetation and natural features that may be compromised via construction. This includes avoiding areas more sensitive to disturbance, such as salt lakes and areas of steep terrain. Communications towers, where they may occur within the Zone in proximity to pipeline infrastructure, are consistent with the desired outcome of the Zone and are considered readily able to achieve consistency with all relevant performance outcomes.
Rural Zone <i>Desired Outcome</i> • A zone supporting the economic prosperity of South Australia primarily through the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources – DO 1 • A zone supporting diversification of existing businesses that promote value-adding such as industry, storage and warehousing activities, the sale and consumption of primary produce, tourist development and accommodation – DO 2	The water transfer system (transfer pipeline only) is not inconsistent with the Rural Zone. The water transfer pipeline interacts with the Rural Zone in two localities, north of Whyalla (land to which the Significant Interface Management Overlay also applies), and west of Port Augusta. Industry and related or associated activities of a comparable scale and form to the pipeline are envisaged in the Rural Zone. The underground nature of the pipeline and its proposed alignment outside of townships and away from developed areas limits its potential impact on the functionality of the Zone. While pipeline infrastructure is not an envisaged form of development in the Rural Zone, the Project does not limit the ability of the Zone to accommodate a range of land uses anticipated to be accommodated within the Zone. Similarly, communications towers (where they may occur within the Zone independent from other Project assets) are a form of development which is commonly associated (as ancillary and subordinate development) with envisaged uses of land in the Rural Zone. By prioritising underground installation, the Project reduces (but not absolves) the impacts of a comparable above-ground pipeline (which would limit use of land, restrict access and have a negative visual impact). Whilst activities will generally be permitted within the pipeline easement, some activities within the permanent pipeline easement that pose a risk to the integrity of the pipeline will

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
<i>Performance Outcomes</i> - Land Use and Intensity - PO 1.1 - Rural Industry - PO 4.3	be mitigated through easement terms. The water transfer system is not inconsistent with PO 4.3 of the Rural Zone. Fragmentation to existing land parcels within the Rural Zone is expected to be negligible, on account of siting and design of pipeline infrastructure adjacent to existing property boundaries where practicable to do so, and through installation below ground. Disruption to existing land uses in the Rural Zone is expected to be negligible on this basis, however some disruption may occur during the construction phase. The Project is assessed as being not inconsistent with PO 1.1 of the Rural Zone. Communications towers, where they may occur within the Zone in proximity to pipeline infrastructure, are not inconsistent with the desired outcome of the Zone and are considered readily able to achieve consistency with all relevant performance outcomes.
Water Transfer System: Transfer pump stations and water storage locations	
Remote Areas Zone <i>Desired Outcome</i> A zone that includes a diverse range of uses including pasture growing, grazing, farming, agricultural processing and transportation, mining and petroleum, energy generation and storage, pipeline infrastructure, aerospace and defence-related facilities, Aboriginal lands and related activities, tourist development, workers' accommodation and settlements – DO 1 <i>Performance Outcomes</i> - Land Use and Intensity - PO 1.1 - Built Form and Character - PO 2.1, 2.2	Transfer pump stations and water storages are consistent with the Remote Areas Zone. Pump stations and water storages are associated with a development type envisaged within the Zone (pipeline infrastructure), achieving consistency with PO 1.1. All proposed water transfer pump stations and storage locations are proposed in the Remote Areas Zone. Due to the necessity of co-location of pump stations and water storages with pipeline infrastructure, they are assessed as directly associated with the pipeline. Large buildings can be incongruous with a natural landscape. Areas of high conservation value have been avoided, consistent with PO 2.1, however in some localities, substantial setbacks from public roads are not possible to achieve due to the necessity for co-location with pipeline infrastructure. This, and the requirement for communications towers to be located in proximity to pump stations and storage locations, potentially creates conflict with PO 2.2, however visual amenity impacts arising from transfer pump stations are expected to be readily mitigated through design and finish of structures, which broadly are of a scale comparable to agricultural buildings. Communications towers are anticipated to be of a scale and visual intensity that is comparable to high voltage transmission towers, which will be present in the locality associated with the Project's power supply (discussed below).
Power supply	
Remote Areas Zone <i>Desired Outcome</i> A zone that includes a diverse range of uses including pasture growing, grazing, farming, agricultural processing and transportation, mining and petroleum, energy generation and storage, pipeline infrastructure, aerospace and defence-related facilities, Aboriginal lands and related activities, tourist development, workers'	Power supply infrastructure is consistent with the Remote Areas Zone. Energy generation, storage and pipeline infrastructure are envisaged within the Zone, consistent with PO 1.1. All proposed power supply assets are proposed in the Remote Areas Zone. Project elements are consistent with the Desired Outcome of the Zone, and alignments follow existing infrastructure corridors where practicable. Power supply infrastructure necessarily includes elements (particularly transmission towers) which can be incongruous with a natural landscape. Areas of high conservation value have been avoided, consistent with PO 2.1, and large structures (predominantly network substation equipment) is either co-located with existing substations, or positioned unobtrusively with substantial setbacks from public viewpoints, consistent with PO 2.2.

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
accommodation and settlements – DO 1 <i>Performance Outcomes</i> - Land Use and Intensity - PO 1.1 - Built Form and Character - PO 2.1, 2.2	
Construction Camps and Laydown Areas	
Remote Areas Zone <i>Desired Outcome</i> A zone that includes a diverse range of uses including pasture growing, grazing, farming, agricultural processing and transportation, mining and petroleum, energy generation and storage, pipeline infrastructure, aerospace and defence-related facilities, Aboriginal lands and related activities, tourist development, workers' accommodation and settlements – DO 1 <i>Performance Outcomes</i> - Land Use and Intensity - PO 1.1 - Built Form and Character - PO 2.1, 2.2 - Hazard Risk Minimisation – PO 3.1	Construction camps and laydowns are consistent with the Remote Areas Zone Workers accommodation is an envisaged and supported form of development in the Remote Areas Zone, satisfying DTS/DPF 1.1. Construction camps are likely to utilise standardised prefabricated structures, amenities and equipment, which would meet relevant Australian Standards and be positioned and laid out to minimise impacts to natural features of the landscape including ephemeral drainage lines and vegetation. This is feasibly achievable through positioning camp infrastructure on previously disturbed areas so far as reasonably practicable, aligning with PO 2.1, PO 2.2 and PO 3.1. Construction camps and laydowns would also include, subject to the finalisation of siting, provision for the temporary storage of construction equipment and materials, including but not limited to; - Site offices and amenities - Storage of construction equipment, machinery, fuels, oils, chemicals and vehicles - Temporary fencing and lighting, power generation and sewage / wastewater handling services - Temporary tank farms for the storage of potable and non-potable water, for human consumption (i.e., drinking, bathing, amenities) and construction use (i.e., for concrete batching, hydrotesting of water-containing structures, dust suppression and conditioning of backfill material). Laydown areas (whether or not co-located with workers accommodation or within the footprint of other Project assets) may occur approximately every 100 km along the transfer system alignment. The temporary nature of construction camps and laydowns, and the preferential use of previously disturbed areas, serves to reduce the potential for conflicts with PO 2.1 and 3.1. Where fuels, oils or other chemicals are to be stored, it is anticipated that compliance with environmental protection requirements (including EPA bunding guidelines) would be readily achievable through the use of standardised equipment and risk management protocols for the safe handling and storage of chemicals.
Strategic Employment Zone <i>Desired Outcome</i> A range of industrial, logistical, warehousing, storage, research and training land uses together with compatible business activities generating wealth and employment for the state — DO 1	Materials laydown areas (Whyalla North) are not inconsistent with the Strategic Employment Zone It is likely that sites will be utilised within the Strategic Employment Zone in the vicinity of Whyalla for materials and equipment storage and laydown. Given the temporary nature of materials and equipment storage (construction phase only) they are assessed as a materially similar land use to workers accommodation, although do not include habitable buildings by definition and are therefore a less sensitive use of land. The establishment of laydown areas within the Zone will temporarily restrict the development of the land for envisaged uses, however the provision of

Zone / Subzone, Desired Outcomes and Performance Outcomes	Assessment
Employment generating land uses are arranged to support efficient movement of goods, maintain access to waterfront areas, create new and enhance existing business clusters, support opportunities for co-location of compatible land uses, and be compatible with location and setting to manage amenity impacts – DO 2 (paraphrased) A pleasant visual amenity – DO 3 <i>Performance Outcomes</i> • Land Use and Intensity - PO 1.1 • Built Form and Character - PO 3.3 • Fencing – PO 6.1	equipment and materials laydown areas in proximity to port facilities and major transport routes supports the efficient use of land sought by the Zone. Materials laydown areas are hence not inconsistent with PO 1.1. The visual amenity impacts of materials laydown areas have not directly been considered, owing to the relatively short duration of impacts and practicality and cost constraints relating to the provision of landscaping and other amenity mitigations. It is likely that any buildings placed within materials laydown areas would be standardised, pre-fabricated structures, and would therefore be readily able to comply with the relevant Australian Standards. Materials laydown areas will require perimeter fencing, which is anticipated to comprise temporary fencing. This, combined with appropriate setbacks from adjoining roads, would serve to minimise the visual impact of materials and equipment storage when viewed from the public realm, in addition to protecting public health and safety through exclusion of the general public from active areas, consistent with PO 3.3 and PO 6.1.

6.4 Assessment of Overlays

An assessment of the Overlays relevant to the stipulated Project assessment is provided in Table 6-3. Overlays which do not spatially interact with the Project assessment area have been excluded. In the event of alteration in siting, alignment or location of Project assets which alters the Project's interaction with Overlays, relevant Overlays would require re-assessment. Figure 7 and Figure 10 (Appendix A) present selected Overlay interactions with the Project's southern and northern extent respectively, excluding Overlays which apply to the entire terrestrial area of the Project. Figure 8 and Figure 9 show detail of Overlay interactions at the desalination plant site and the Lincoln Gap area, respectively.

The assessment has found a general level of consistency with Overlay performance outcomes. Where inconsistencies are apparent, the Project is generally able to demonstrate appropriate control measures, mitigations and offsets through impact assessment in accordance with the Project's adopted mitigation hierarchy of *avoid, minimise, rehabilitate/restore, offset*. In scenarios where the design maturity of Project infrastructure is expected to continue to develop, the Project is broadly able to be designed in compliance with the relevant Overlay performance outcomes.

Development within the Coastal Areas Overlay at Mullaquana Station avoids environmentally important coastal features by means of underground installation, and is set back a sufficient distance from the active intertidal zone to prevent interruption to natural coastal processes. Development is also sited to minimise the potential for future damage due to increasing sea levels, coastal inundation or erosion. However, excavation is proposed within the Coastal Areas Overlay to an extent exceeding 9 m³, and the presence of the intake pump building in the Coastal Areas Overlay is an incongruous feature which does not find consistency with the desired outcome of the Overlay. Further, temporary disturbance activities including excavation near the coast, and stockpiling of excavation, TBM and dredge spoil may (subject to final construction planning and sequencing) be wholly or partly located within the Overlay. It is noted that the precise location of temporary drying, treatment and stockpiling areas are not finalised. However, proposed excavation spoil stockpiling and drying is not inconsistent with the Coastal Areas Overlay, since the activity avoids impacts to the marine and coastal environment, would be temporary in nature, and would be entirely located outside of the active intertidal zone.

All relevant components of the Project demonstrate consistency with, or are able to demonstrate consistency with, the Hazards Overlays for both Bushfire (both Regional and Outback), and Flooding, through appropriate siting, alignment and construction methodology. Additionally, the Project demonstrates consistency with the Airport Building Heights and Building Near Airfields Overlays (noting that consideration should be given to the height of communications towers, if any are proposed within those Overlays), and is broadly able to remain consistent with the objectives of the Key Outback and Rural Routes Overlay, subject to further detail and appropriate siting and design of access track interfaces with State maintained roads. This will be subject to referral to the Commissioner of Highways and relevant traffic management procedures to ensure the continued safe operation of the public road and rail network. Final construction planning and sequencing of relevant components of the Project in accordance with the General Development Policies relevant to access and traffic management will support the Project's consistency with the Key Outback and Rural Routes Overlay, as well as traffic and access performance outcomes expressed through other Zones and Overlays.

The Project necessitates the clearance of native vegetation. Some Project infrastructure within the Native Vegetation Overlay finds inconsistency with specific performance outcomes of the Overlay, however State-significant native vegetation is avoided where possible, and where clearance is necessary the Project proposes proportionate offset strategies in accordance with the mitigation hierarchy. Further, the siting of water transfer system and power supply infrastructure has preferred land previously disturbed. Wherever practicable, existing disturbed areas, access tracks, and infrastructure are utilised to co-locate Project infrastructure to minimise new disturbance and vegetation clearance.

The water transfer system (pipeline infrastructure) generally finds inconsistency with the Water Resources Overlay, due largely to the necessity for project infrastructure to disturb natural drainage lines, or, where pipeline infrastructure is assumed to be installed above-ground, present the potential for an impediment to surface water flows. Erosion and sedimentation of surface water flows (predominantly referring to stormwater) are also possible within the cleared construction corridor for pipeline infrastructure, including the export of sediment to natural drainage lines down-gradient from Project infrastructure. Inconsistency with the Water Resources Overlay is considered able to be controlled through the implementation of appropriate construction and operational management procedures, and engineering solutions which minimise potential impacts. This is evidenced particularly in relation to the Carrapateena lateral branch pipeline, wherein creek and drainage line crossing points are assumed to be constructed by horizontal directional drilling, avoiding disturbance of watercourse banks and precluding those sections of pipeline from presenting an impediment to natural drainage patterns. Construction works are also able to be staged to avoid periods of heavy rainfall. Disturbance is demonstrably minimised to the greatest practicable extent through the adoption of construction methodologies which minimise impacts to watercourse banks and flow regimes, however there remains overall a risk of erosion and sedimentation within the pipeline disturbance corridor which gives rise to inconsistency with the relevant performance outcomes of the Overlay.

Table 6-3: Relevant Overlays

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
Desalination Plant Locality (including marine)	
Coastal Areas Overlay <i>Desired Outcomes</i> The natural coastal environment (including environmentally important features such as mangroves, wetlands, saltmarsh, sand dunes, cliff tops, native vegetation, wildlife habitat, shore and estuarine areas) is conserved and enhanced – DO 1 Provision is made for natural coastal processes; and recognition is given to current and future coastal hazards including sea level rise, flooding, erosion and dune drift to avoid the need, now and in the future, for public expenditure on protection of the environment and development. – DO 2 <i>Performance Outcomes</i> Hazard Risk Minimisation PO 2.2, 2.3, 2.4 Coast Protection Works PO 3.1 Environment Protection PO 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 Access PO 5.1, 5.2, 5.3, 5.4	The desalination plant is not inconsistent with the Overlay. The intake and outfall tunnels/pipelines associated with the desalination plant necessarily occur within the Overlay. The landward boundary of the Overlay is the same as that of the Conservation Zone, and extends into the marine environment on the seaward side. Development within the Coastal Areas Overlay comprises seawater intake and outfall structures associated with the desalination plant. The intake and outfall structures are proposed to be installed sub-surface via tunnel boring, a methodology which protects and preserves the active intertidal and coastal seabed environments (consistent with PO 2.3, PO 3.1, PO 4.1, PO 4.2, PO 4.3, and PO 4.4), but which requires excavation for the purposes of tunnel boring machine (TBM) launch. Further, it is possible that TBM spoil and dredge spoil from marine construction works would be stockpiled and dried in purpose-built structures wholly or partly within the Overlay. The underground installation of intake and outfall tunnels ensures the minimisation of disturbance to natural coastal processes, habitat and vegetation including mangroves and seagrass. Spoil generated from TBM launch box construction, together with dewatered and dried TBM spoil and dewatered dredge spoil, will (subject to an assessment for suitability) be stockpiled and reused on site in accordance with the waste hierarchy. Reuse options include for backfilling the box cut following construction (leaving only the intake and outfall shafts), and as engineered fill for foundations for the desalination plant and the construction of permanent water storage structures. Stormwater diversion bunds will direct clean water around the site and stormwater internal to the site will be directed to a detention basin to mitigate impacts to the coastal zone. Marine infrastructure which must be installed above the seabed (including seawater intake and outfall risers and return water diffusers) are located several kilometres from the active intertidal zone, at a depth that avoids material changes to coastal processes that have the potential to exacerbate coastal erosion or sediment transport. Based on the Reference Design, the outfall riser is located outside of areas of seagrass,

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	and the intake riser is located within an area of Zostera seagrass. Posidonia seagrass is avoided. Modelling has been undertaken to identify and where possible quantify the likely risks posed to the Project under future climate scenarios. This has informed the design and siting of Project infrastructure to proactively minimise the risks posed to the Project by natural hazards including sea level rise, coastal erosion, coastal inundation, storm surge and wave activity, consistent with PO 2.2 and PO 2.4. The Project includes measures for the treatment and management of return water, to minimise impact on the marine environment. Mitigation measures to be adopted during construction will also be developed to avoid or minimise the impacts of construction activities (such as noise, vibration, dust and human activity) upon nesting or foraging fauna utilising habitat including mangroves. Inland components of the Project (desalination plant) will manage stormwater runoff in a manner that avoids detrimental impacts on the marine and onshore environment of coastal areas. The desalination plant site incorporates a treatment train consisting of a gross pollutant trap (GPT) and detention basins, where surface and roof waters will be directed. This infrastructure is intended to capture and treat stormwater, preventing flows (of captured water) to the coast which exceed pre-development flows in volume, velocity or depth, and which maintain pre-development water quality. Public access to the coastal area adjacent proposed infrastructure is limited due to the private ownership of land and the absence of public access tracks to the coastal fringe. Public access to the coast will not be adversely impacted by the Project (consistent with PO 5.1), should it be sought at a later date, other than for health and safety purposes where public access to infrastructure is controlled. No new public access points to the coast are proposed, consistent with PO 5.2, PO 5.3 and PO 5.4. The Project is not fundamentally compatible with the intended use of the coastal reserve, however with appropriate mitigation and control measures in place, nor will it detract from the purpose, management or amenity of the area to an undue degree. Referral to the Coast Protection Board will be required under Schedule 9(3)(3) of the PDI Regulations on the basis that excavation in the Overlay exceeds 9m³.
Hazards (Bushfire - Regional) Overlay <i>Desired Outcomes</i> Development responds to bushfire risk and is sited and designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Siting - PO 1.1 Built Form - PO 2.1 Vehicle Access – Roads and Driveways - PO 5.1, 5.3	The desalination plant is consistent with the Overlay. The desalination plant and terrestrial associated infrastructure are located within the Overlay. Given the scale of the desalination plant and associated infrastructure within the Overlay, emergency access and bushfire risk mitigation are integral to the planning and design phases. The subject land on which the desalination plant is proposed displays minimal topographic variation, and low, sparse vegetation comprising coastal samphire shrubland. Siting is consistent with PO 1.1. The desalination plant is positioned in proximity to existing access tracks, which are proposed to be upgraded to meet the projected access requirements of the Project, and provide suitable evacuation routes. All structures associated with the desalination plant are surrounded by formed access roads, and will be constructed to meet the requirements of PO 5.1 and PO 5.3 of the Overlay. Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Transport, Access and Parking General Development Policy.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	The spacing and separation between buildings, including the associated pump station and water storage, reduces the potential for the trapping of burning debris, consistent with PO 2.1.
Hazards (Flooding - Evidence Required) Overlay <i>Desired Outcomes</i> Development addresses potential flood risks through appropriate design and siting – DO 1 <i>Performance Outcomes</i> Flood Resilience - PO 1.1 Environmental Protection - PO 2.1	The desalination plant is consistent with the Overlay. The desalination plant and terrestrial associated infrastructure are located within the Overlay. The development of the desalination plant aligns with the relevant POs related to flood risk management and the containment of hazardous materials. The Project addresses potential flood risks through appropriate design and siting. The desalination plant and associated infrastructure are located away from minor drainage lines, minimising the risk of floodwater entry. Small berms are able to be established if required to redirect surface water flows away from the buildings. Key site facilities at the desalination plant are designed with measures to prevent spills or leaks from leaving the confines of the building and chemicals are to be stored in covered bunds, consistent with PO 2.1. Dewatered spoil from the TBM launch box excavation, TBM spoil and dredge spoil (if of a suitable quality) will be re-used on site to construct the foundation on which the desalination plant will be placed, enabling a precautionary approach to flood resilience, aligned to the desired outcome of the Overlay, and consistent with PO 1.1 and PO 2.1. Stormwater diversion bunds will direct clean water around the site and stormwater internal to the site will be directed to a detention basin in the southwest of the site to prevent impacts to the coastal zone. Stockpiling and dewatering activities will occur within the Overlay. Consistency with PO 1.1 and PO 2.1 is achievable through design of dam or lagoon walls to an appropriate size to avoid overtopping in rainfall events, and to ensure segregation between wastewater storage areas and surface water flows.
Native Vegetation Overlay <i>Desired Outcomes</i> Areas of native vegetation are protected, retained and restored in order to sustain natural and amenity values – DO 1 <i>Performance Outcomes</i> Environmental Protection - PO 1.1, 1.2, 1.4	The desalination plant is not inconsistent with the Overlay. The locality of the desalination plant is within the Overlay. The desalination plant is located in a land parcel presently used for livestock grazing. The presence of native vegetation has been assessed in detail as part of the EIS, and while clearance is unavoidable, vegetation at the desalination plant site is not as high quality or important as habitat for threatened species as other locations within the region. Clearance has been minimised so far as reasonably practicable taking into account the need for access, infrastructure installation, and bushfire protection, consistent with PO 1.1 and PO 1.2. The use of TBMs to construct intake and outfall structures associated with the desalination plant avoids unnecessary impacts to seagrass, coastal vegetation and mangroves, and the majority of above-seabed structures in the marine environment are positioned on bare sand beyond existing seagrass habitat (apart from the intake structure). Footprints and alignments of Project elements may continue to be refined as the Project progresses via engagement with stakeholders and route analysis. Vegetation clearance will require referral to the Native Vegetation Council, and an appropriate offset strategy will be developed, consistent with PO 1.4.
Water Resources Overlay <i>Desired Outcomes</i> Protection of the quality of surface waters considering	The desalination plant is consistent with the Overlay. The intake and outfall tunnels/pipelines associated with the desalination plant traverse the Water Resources Overlay, which includes the coastal fringe. However, infrastructure where the Water Resources Overlay is present occurs

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
potential water quality effects of climate change – DO 1 Natural function and flow of watercourses is maintained to assist in the management of flood waters and stormwater runoff – DO 2 <i>Performance Outcomes</i> Water Catchment - PO 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8	entirely underground, avoiding impacts to the hydrology and water regime of surface water drainage features. Above-ground infrastructure including the desalination plant, associated pump station and water storage, TBM launch structures and stockpiling and dewatering areas are located entirely outside the Overlay (Figure 8). Stormwater runoff from the desalination plant will be captured and retained in engineered retention structures to prevent impact vectors such as erosion and sedimentation of natural drainage paths, or deterioration of natural surface water quality. Potential impacts to surface water quality arising from earthworks and other construction activities are controlled through the Soil, Erosion and Drainage Management Plan, and may include temporary construction phase sediment control structures in addition to operational drainage systems. Infrastructure will be designed to minimise change to the pre-development flow and water quality from the desalination plant development site during construction (and to adhere to legislative requirements).
Water Transfer System: Transfer pipeline and Carrapateena lateral branch	
Airport Building Heights (Aircraft Landing Area) Overlay <i>Desired Outcomes</i> Management of potential impacts of buildings on the operational and safety requirements of aircraft landing areas – DO 1 <i>Performance Outcomes</i> Built Form – PO 1.1	The water transfer system is consistent with the Overlay. Water transfer system infrastructure occurring within the Overlay is limited to a section of underground pipeline at the Project's northern extent adjacent to Olympic Dam airstrip. Construction and operation of the pipeline is not expected to pose a hazard to aircraft navigation or safety, consistent with PO 1.1.
Building Near Airfields Overlay <i>Desired Outcomes</i> Maintain the operational and safety requirements of airfields, airports and airstrips through management of lighting, turbulence and wildlife-attracting activities – DO 1 <i>Performance Outcomes</i> PO 1.1, 1.2	The water transfer system is consistent with the Overlay. Water transfer system infrastructure occurring within the Overlay is limited to a section of underground pipeline at the Project's northern extent adjacent to Olympic Dam airstrip, and a section of underground pipeline east of the Woomera airstrip. This section includes portions of pipeline installed both by trenching, and by under-boring beneath watercourses. Construction and operation of the pipeline is not expected to pose a hazard to aircraft navigation or safety, consistent with PO 1.1. The management of construction equipment including lighting is readily able to be managed to be consistent with PO 1.2, avoiding impacts to the operational safety of nearby airfields. The height of construction machinery (cranes etc), any lighting required during construction, and communications towers (if proposed to occur within the Overlay) should have regard to the provisions of the Overlay.
Gas and Liquid Petroleum Pipelines Overlay <i>Desired Outcomes</i> Management of risk to life, environment and energy security resulting from encroachment of development on strategic pipelines – DO 1 <i>Performance Outcomes</i> PO 1.3	The water transfer system is not inconsistent with the Overlay Subject to the final alignment and siting of the transfer pipeline, a segment of underground infrastructure occurs within the Overlay at Lincoln Gap. An existing underground liquid petroleum pipeline (the Santos-operated Moomba to Port Bonython Liquids Line (PL 2) is present in the area, protected by the Overlay. Various management plans, including a Construction phase and O&M phase Interface Management Plan, will identify measures to avoid risk to life via damage to adjacent gas infrastructure. This is expected to include infrastructure/pipeline identification and verification survey prior to ground disturbance, plant and materials handling techniques, and incorporating induction and pre-start procedures. The Northern Water Project's water transfer

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	system (main transfer pipeline) does not involve the manufacture, collection, storage or handling of flammable, explosive or otherwise hazardous materials within the Overlay, other than potentially small volumes of fuels, lubricants and sealants during the construction phase. It is reasonable to expect that this activity can be avoided or minimised as part of construction management planning, consistent with PO 1.3. Interactions between existing infrastructure and proposed Project infrastructure are anticipated to be avoidable or, if unavoidable, appropriately managed through the Project's final construction planning and sequencing phase to minimise the potential for adverse impacts or hazards. Referral to the Chief Executive of the Department of the Minister responsible for the administration of the <i>Energy Resources Act 2000</i> may be triggered by this adjacency.
Hazards (Bushfire - Outback) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Vehicle Access – Roads and Driveways – PO 2.1	The water transfer system is consistent with the Overlay. The entirety of the water transfer system (main transfer pipeline and Carrapateena lateral branch) occurs within either the Hazards (Bushfire – Outback) or Hazards (Bushfire – Regional) Overlay. The Hazards (Bushfire – Outback) Overlay relates to the linear infrastructure of the water transfer system only through PO 2.1, which relates to the design and construction of roads and driveways, to facilitate emergency vehicle access and egress, and evacuation of persons. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 2.1. Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Transport, Access and Parking General Development Policy.
Hazards (Bushfire - Regional) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Siting - PO 1.1 Vehicle Access – Roads and Driveways - PO 5.1	The water transfer system is consistent with the Overlay. The entirety of the water transfer system (main transfer pipeline and Carrapateena lateral branch) occurs within either the Hazards (Bushfire – Outback) or Hazards (Bushfire – Regional) Overlay. Water transfer linear infrastructure, once operational, satisfies PO 1.1 by being positioned underground for the majority of its alignment. This avoids creating impediment to movements of vehicles and people over land that would result from an above-ground pipeline. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 5.1.
Hazards (Flooding - Evidence Required) Overlay <i>Desired Outcomes</i> Development addresses potential flood risks through appropriate design and siting – DO 1 <i>Performance Outcomes</i>	The water transfer system is consistent with the Overlay. The Overlay applies to the entirety of the water transfer system. Numerous ephemeral and seasonal drainage lines intersect the Project assessment area, by nature of its scale and linearity. Outside of drainage lines, the water transfer system is expected to be installed predominantly by a pipe-stringing and trenching technique, while within

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
Flood Resilience – PO 1.1	drainage lines (where identified as required to maintain surface water flow and quality) an underboring / trenchless technique is proposed. The water transfer system is consistent with PO 1.1 of the Overlay – related to flood risk management – through underground placement of the majority of pipeline infrastructure. No part of the water transfer system is prone to undue damage due to floodwaters.
Key Outback and Rural Routes Overlay <i>Desired Outcomes</i> Provision of safe and efficient movement on, to and from key outback and rural routes – DO 1 / DO 2 <i>Performance Outcomes</i> Access - Safe Entry and Exit (Traffic Flow) - PO 1.1 Access – On-Site Queuing - PO 2.1 Access – Location (Spacing) - PO 3.1, 4.1 Access – Location (Sight Lines) - PO 5.1 Access – Mud and Debris - PO 6.1 Access – Stormwater - PO 7.1	The water transfer system is not inconsistent with the Overlay. <u>All Project assets considered, due to consistent applicability of the Overlay.</u> Establishment of new access tracks or the maintenance and widening of existing access tracks for light and heavy vehicles from existing State maintained and other roads are required for construction of Project assets. Upgrades and augmentation to road traffic infrastructure to accommodate the movement of Project materials may also be required in some locations, including affecting State maintained road intersections. Any required upgrades are anticipated to be addressed through final construction planning and sequencing, and delivered by the design, build, operate and manage (DBOM) contractor, including through engagement with the Commissioner of Highways and/or a delegate of the Minister for Infrastructure and Transport, where required. The Project achieves consistency with PO 1.1 and PO 3.1 via designing access points to allow safe entry and exit, aiming to meet development needs while minimising traffic flow interference along adjacent State maintained roads. This is achievable through final construction planning and sequencing through the incorporation of sightline assessments of key access points to Project assets (also achieving consistency with PO 5.1), and through designing aprons and crossovers to facilitate the volume and type of vehicles expected at each access point. In relation to transfer pump stations, several assets occur adjacent to high speed public highways with 110 km/h posted speed limits. The traffic impact assessment (GHD 2025b) undertaken for the Project makes recommendations relating to these assets in relation to safe access and traffic management. Access points to Project infrastructure are generally in remote areas of the State, away from populated areas. Due to the relative absence of spatial constraints on the siting and design of access track interfaces with State maintained roads, it is expected that all relevant criteria relating to the position of intersections, sightlines, approach controls and the avoidance of impacts to State maintained roads are able to be met, in accordance with the relevant Austroads guidelines. The Traffic Impact Assessment (GHD 2025b) has identified that sufficient opportunity exists along the Project alignment to achieve compliance with PO 4.1, 5.1, 6.1, and 7.1. Dependent upon the location of new or altered access points, or changes to the nature or frequency of movements through an existing access that interact with a State maintained road (or within 25 metres of an intersection of such road), referral of the Project to the Commissioner of Highways will be required. Further detail on access points, on-site parking provision and management of impacts to key outback and rural routes (State-maintained roads) is given in the assessment of the Transport, Access and Parking General Development Policy.
Native Vegetation Overlay <i>Desired Outcomes</i> Areas of native vegetation are protected, retained and restored in order to sustain natural and amenity values – DO 1	The water transfer system is not inconsistent with the Overlay. The Project will result in the removal of native vegetation. Footprints and alignments of Project elements may continue to be refined as the Project progresses via engagement with stakeholders and route analysis. An offset management plan will be referred to the Native Vegetation Council as part of EIS assessment.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
<i>Performance Outcomes</i> Environmental Protection - PO 1.1, 1.2, 1.4	Ecological works to identify threatened or significant flora and fauna in proximity to the Project assessment area has directly influenced the siting, position and alignment of the water transfer system (consistent with PO 1.1), with an emphasis on the protection of areas of native vegetation, threatened species habitat and areas of importance to biodiversity, carbon storage or amenity value, consistent with PO 1.2. PO 1.4 focuses on enhancing biodiversity and habitat values through revegetation using locally indigenous plant species. Due to the arid nature of the majority of the alignment, for the pipeline disturbance area – rehabilitation via planting is not proposed. However, rehabilitation works will include a range of measures to encourage the natural regrowth of native vegetation active without intervention, including (but not limited to): • Recontouring the land to match the surrounding landform • Deep ripping to break up compacted soils. • Respreading of preserved topsoil containing retained seedstock and rootstock • Respreading of preserved gibber stone where relevant • Respreading cleared vegetation over the topsoil or gibber stone • Ongoing removal and destruction of weeds (where weed control will not destroy/affect regenerated vegetation).
Significant Interface Management Overlay <i>Desired Outcomes</i> The prevention of the establishment of new, and intensification of sensitive receivers to mitigate community exposure to potential adverse hazards and environmental and amenity impacts generated by the lawful operation of proximate significant activities. – DO 1 <i>Performance Outcomes</i> Land Use and Intensity – PO 1.1	The water transfer system is consistent with the Overlay. An instance of the Overlay is present in proximity to the Strategic Employment Zone north of Whyalla. The Project assessment area passes through the Overlay on the western side of the Lincoln Highway. Within the Overlay, the water transfer system (underground main transfer pipeline) is the only development type proposed associated with the Project. The pipeline may affect the future land use options within the Overlay, via establishment of an easement on both sides of the pipeline adjacent the Lincoln Highway. The easement, anticipated to incorporate a width of 20 metres, is likely to preclude the construction of buildings, and limit the use of land within the easement. This supports the operation of the Overlay, in preventing the development of land. The pipeline itself does not conflict with the operation or application of the Overlay.
Water Resources Overlay <i>Desired Outcomes</i> Protection of the quality of surface waters considering potential water quality effects of climate change – DO 1 Natural function and flow of watercourses is maintained to assist in the management of flood waters and stormwater runoff – DO 2 <i>Performance Outcomes</i> Water Catchment - PO 1.1, 1.2, 1.3, 1.6, 1.7, 1.8	The water transfer system is inconsistent with the Overlay. Pipeline infrastructure traverses the Overlay in numerous distinct locations generally associated with mapped watercourses, and additionally through the broad application of the Overlay to areas of the State not subject to specific mapping. The main transfer pipeline and the Carrapateena lateral branch are considered separately for the purposes of assessment against the Overlay due to differing construction methodologies that materially affect the application of the Overlay, and the degree of variance to its objectives. Overall, the construction of the water transfer system is inconsistent with the Performance Outcomes of the Overlay, however construction activities are temporary in nature and during ongoing operations, the degree of variance with the intent of the Overlay is expected to be readily manageable through implementation of surface water management plans, standard measures for erosion control at locations identified to be prone to erosion, and maintenance of natural watercourse banks and contours.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	Control measures for the management of impacts to watercourses during the construction phase include: • Compliance with any Water Affecting Activity Permit conditions (if applicable), • Development of a site erosion and sediment control methodology with consideration of contingencies for moderate to high flows during instream works, • Scheduling works to minimise the construction period within watercourses, • Staging of work to avoid construction activities when heavy rain events are forecast, and • Managing site works and the placement of plant and machinery to avoid erosion and the destabilisation of banks. The rehabilitation of watercourses (as with other areas of disturbance) is expected to occur as soon as practicable following construction. Water transfer system (main transfer pipeline) The main transfer pipeline is consistent with the objectives of the Overlay to protect water quality, manage flood waters and stormwater runoff - achieved via below ground installation, with the original levels and contours of any drainage lines crossed returned to original condition post construction, where disturbed. Whilst this is at odds with PO 1.6, the main transfer pipeline will not alter or impede surface water or flood water flows, nor increase flood velocity or flood levels post-construction. The main transfer pipeline aligns with PO 1.1 by taking measures to ensure watercourses are rehabilitated to pre-construction condition. No part of the main transfer pipeline interacts with swamps or wetlands, and therefore finds compliance with PO 1.2. During construction, interaction with groundwater may occur in areas where the pipeline will be under bored / trenchless. The Groundwater Impact Assessment prepared for the Project has identified locations where impacts to existing groundwater dependent vegetation and ecosystems may occur. In relation to groundwater levels, the change/drawdown will be temporary in nature from dewatering, and it is expected that groundwater will return to pre-construction levels in a relatively short period. This is inconsistent with PO 1.3 since dewatering activities are not in support of works to enhance environmental values. Water transfer system (Carrapateena lateral branch) Investigations are continuing into whether the Carrapateena lateral branch will be installed underground or at surface-level. A surface level installation of the pipeline would comprise HDPE pipe laid on the surface, with HDD or burial still used for creek and road crossings. Where installation is above-ground, the Carrapateena lateral branch is inconsistent with the Water Resources Overlay to the same extent as the main transfer pipeline, and additionally through its potential to impact on surface water flow, velocity, depth and direction, inconsistent with PO 1.6 to a greater extent than the main transfer pipeline. The extent of this inconsistency is partially (although not entirely) absolved through underground installation of pipeline sections which interact with creeks and drainage lines. An assessment of impacts to surface water undertaken as part of the EIS concluded that impacts to surface water flows arising from on-ground installation of the Carrapateena lateral branch pipeline would be minor to negligible.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	Where the Carrapateena lateral branch pipeline is installed underground, it is assessed as being materially comparable to the main transfer pipeline – that is, inconsistent with the Overlay, but with impacts confined to the construction phase.
Water Transfer System: Transfer pump stations and water storage locations	
Hazards (Bushfire - Outback) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> None are applicable.	Transfer pump stations and water storages are consistent with the Overlay. All proposed water transfer pump stations, and the Bimba high point water storage location, occur within the Overlay. No habitable buildings are proposed. The design and operation of access roads are consistent with those proposed for the desalination plant, and are thus taken to be consistent with the Overlay.
Hazards (Flooding - Evidence Required) Overlay <i>Desired Outcomes</i> Development addresses potential flood risks through appropriate design and siting – DO 1 <i>Performance Outcomes</i> Flood Resilience - PO 1.1 Environmental Protection - PO 2.1	Transfer pump stations and water storages are consistent with the Overlay. All localities for proposed transfer pump stations and water storage locations occur within the Overlay. Transfer pump stations will incorporate a finished floor level no less than 300 mm above the modelled 1% AEP flood level, and incorporation of bunds or swales where required. Areas accommodating listed substances (if any) will be roofed and/or incorporated within bunded areas in accordance with EPA guidelines, and to ensure there is no mixing with surface waters. No part of the water transfer system is prone to undue damage due to floodwaters.
Key Outback and Rural Routes Overlay <i>Desired Outcomes</i> Provision of safe and efficient movement on, to and from key outback and rural routes – DO 1 / DO 2 <i>Performance Outcomes</i> PO 1.1, 2.2, 3.1, 4.1, 5.1, 6.1, 7.1	Transfer pump stations and water storages are not inconsistent with the Overlay. The Overlay applies to all transfer pump station and water storage locations as presently proposed. The application of the Overlay to transfer pump stations and water storage locations is taken to be consistent with that discussed in relation to pipeline infrastructure, due to necessary colocation. The water transfer system as a whole, therefore, is assessed to be not inconsistent with the Overlay.
Native Vegetation Overlay <i>Desired Outcomes</i> Areas of native vegetation are protected, retained and restored in order to sustain natural and amenity values – DO 1 <i>Performance Outcomes</i> Environmental Protection - PO 1.1, 1.2, 1.4	Transfer pump stations and water storage locations are not inconsistent with the Overlay. The Project will result in the removal of native vegetation. Locations of relevant Project elements may continue to be refined as the Project progresses via engagement with stakeholders and route analysis. An offset management plan will be referred to the Native Vegetation Council as part of EIS assessment. As a result of the water transfer system being largely located within land used for grazing or otherwise previously disturbed and aligning the pipeline and other Project infrastructure to avoid large areas of native vegetation, the siting of transfer pump stations and water storages have sought to avoid areas of high

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	value vegetation. However, there are areas where the clearance of native vegetation is unavoidable. The siting of Project infrastructure in areas of native vegetation has typically taken advantage of areas disturbed by previous activities, such that the extent of clearance is constrained consistent with the Project's adopted mitigation hierarchy of <i>avoid, minimise, rehabilitate/restore, offset</i>. Further, the impact areas have been assessed, via ecological survey, to not represent important habitat for conservation-significant species. Rehabilitation works will include a range of measures to encourage the natural regrowth of native vegetation. For any necessary clearance of native vegetation, the Project will seek approval under the <i>Native Vegetation Act 1991</i>, ensuring that any clearance is offset by significant environmental benefits.
Water Resources Overlay <i>Desired Outcomes</i> Protection of the quality of surface waters considering potential water quality effects of climate change – DO 1 Natural function and flow of watercourses is maintained to assist in the management of flood waters and stormwater runoff – DO 2 <i>Performance Outcomes</i> Water Catchment - PO 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8	Transfer pump stations and water storages are consistent with the Overlay. All presently proposed transfer pump station and water storage locations occur within the broader statewide application of the Overlay. Transfer pump stations and water storages achieve consistency with PO 1.1 and 1.2 by avoiding construction of relevant Project assets near drainage lines and watercourses. Pump stations are not anticipated to be subject to inundation by watercourse adjacency or overland flows, due to their location in relatively flat areas at or near high points. The incorporation of finished floor levels above 1% AEP flood levels and the incorporation of stormwater controls will ensure that surface water flow rates, velocity and depth are maintained close to pre-development levels. Stormwater flows over the area will be directed away from the buildings and working areas by appropriately grading the area away from the pump station building via bunds and/or into swale drains as necessary.
Power supply	
Gas and Liquid Petroleum Pipelines Overlay <i>Desired Outcomes</i> Management of risk to life, environment and energy security resulting from encroachment of development on strategic pipelines – DO 1 <i>Performance Outcomes</i> PO 1.3	Power supply infrastructure is not inconsistent with the Overlay Subject to the final alignment and siting of the transfer pipeline, a segment of the Pandurra 275 kV overhead transmission line occurs within the Overlay in the Lincoln Gap, between the existing Corraberra Hill network substation and the proposed Lincoln Gap transfer pump station and water storage (Figure 9). Given the alignment of the Gas and Liquid Petroleum Pipelines Overlay, it is likely that this transmission line alignment will intersect the alignment of existing underground pipeline infrastructure within the Overlay. Various management plans, including a Construction phase and O&M phase Interface Management Plan, will identify measures to avoid risk to life via damage to adjacent gas infrastructure. This is expected to include infrastructure/pipeline identification and verification survey prior to ground disturbance, plant and materials handling techniques, and incorporating induction and pre-start procedures. The Northern Water Project's power supply system does not involve the manufacture, collection, storage or handling of flammable, explosive or otherwise hazardous materials within the Overlay, other than potentially small volumes of fuels, lubricants and sealants during the construction phase. Construction activities occurring within the Overlay are likely to involve hot works. It is reasonable to expect that risks can be avoided or minimised as part of construction management planning, consistent with PO 1.3. Interactions between existing infrastructure and proposed Project infrastructure are anticipated to be avoidable or, if unavoidable, appropriately managed

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	through final construction planning and sequencing to minimise the potential for adverse impacts or hazards. Referral to the Chief Executive of the Department of the Minister responsible for the administration of the <i>Energy Resources Act 2000</i> may be triggered by this adjacency.
Hazards (Bushfire - Outback) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Vehicle Access – Roads and Driveways – PO 2.1	Power supply is consistent with the Overlay. Power supply infrastructure within the Overlay includes: • New Pandurra 275 kV overhead transmission line (approx. 3 km – existing Corraberra Hill substation to Lincoln Gap pump station) • New Bookaloo 132 kV overhead transmission line (approx. 4 km – new Kootaberra substation to Kalaya pump station) • New Oakden Hills 33 kV overhead transmission line (approx. 15 km – either from existing Mount Gunson substation or SAPN 33 kV distribution system to Mangata pump station). • Solar photovoltaic array and battery energy storage at Bimba high point water storage or at other Project locations • New Mullaquana network substation • Corraberra Hill substation upgrade • New Kootaberra network substation • Mount Gunson substation upgrade The Hazards (Bushfire – Outback) Overlay relates to power supply infrastructure only through PO 2.1, which relates to the design and construction of roads and driveways, to facilitate emergency vehicle access and egress, and evacuation of persons. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 2.1. Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Traffic, Transport and Access General Development Policy.
Hazards (Bushfire - Regional) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Siting - PO 1.1 Built Form - PO 2.1 Vehicle Access – Roads and Driveways - PO 5.1, 5.3	Power supply is consistent with the Overlay. New power supply infrastructure within the Overlay includes: • Mullaquana network substation • Mullaquana 132 kV overhead transmission line (approx. 20 km, Mullaquana network substation to desalination plant) These assets are located in areas of minimal vegetation cover, and will be constructed in accordance with the requirements of the <i>Electricity (General) Regulations 2012</i>, the Office of the Technical Regulator and applicable Australian Standards. Appropriate separation distances will be maintained between transmission infrastructure and construction machinery, vegetation and other objects. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 5.1. Neither asset described herein relies on fire tracks as a means of evacuation or access for fire-fighting purposes, with access roads upgraded to accommodate maintenance vehicles, consistent with PO 5.3.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
	Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Traffic, Transport and Access General Development Policy.
Hazards (Flooding - Evidence Required) Overlay <i>Desired Outcomes</i> Development addresses potential flood risks through appropriate design and siting – DO 1 <i>Performance Outcomes</i> Flood Resilience - PO 1.1 Environmental Protection - PO 2.1	Power supply is consistent with the Overlay. All proposed power supply infrastructure occurs within the Overlay. The Project responds to flood risk relating to linear infrastructure through the micro-siting of transmission tower footings in locations which are not expected to be unduly prone to erosion or scouring in an inundation event. This is principally achieved by the avoidance of ephemeral drainage lines. The position of transmission tower footings are expected to be fine-tuned through final construction planning and sequencing. Network substations will house equipment that contains lubricating and insulating oils, including switchgear and transformers. Substation footings will be designed to incorporate surface water drainage (swales, berms or bunding where required) to prevent the entry of surface water flows into substation equipment enclosures, consistent with PO 1.1 and 2.1.
Key Outback and Rural Routes Overlay <i>Desired Outcomes</i> Provision of safe and efficient movement on, to and from key outback and rural routes – DO 1 / DO 2 <i>Performance Outcomes</i> PO 1.1, 2.2, 3.1, 4.1, 5.1, 6.1, 7.1	Power supply infrastructure is not inconsistent with the Overlay. All power supply infrastructure occurs within the Overlay <u>with the exception of</u> : • Portions of the Mullaquana 132 kV overhead transmission line • Portions of the Pandurra 275 kV overhead transmission line • Corraberra Hill substation upgrade The application of the Overlay to power supply infrastructure locations is taken to be consistent with that discussed in relation to pipeline infrastructure, due to necessary colocation and the identical nature of access requirements. Power supply infrastructure, therefore, is assessed to be not inconsistent with the Overlay.
Native Vegetation Overlay <i>Desired Outcomes</i> Areas of native vegetation are protected, retained and restored in order to sustain natural and amenity values – DO 1 <i>Performance Outcomes</i> Environmental Protection - PO 1.1, 1.2, 1.4	Power supply infrastructure is not inconsistent with the Overlay. All power supply infrastructure occurs within the Overlay. The Project will result in the removal of native vegetation. Locations of relevant Project elements may continue to be refined as the Project progresses via engagement with stakeholders and route analysis. Vegetation clearance will require referral to the Native Vegetation Council. The siting of Project infrastructure in areas of native vegetation has typically taken advantage of areas disturbed by previous activities, such that the extent of clearance is constrained consistent with the Project's adopted mitigation hierarchy of <i>avoid, minimise, rehabilitate/restore, offset</i> . Further, the impact areas have been assessed, via ecological survey, to not represent important habitat for conservation-significant species. Rehabilitation works will include a range of measures to encourage the regrowth of native vegetation. For any necessary clearance of native vegetation, the Project will seek approval under the <i>Native Vegetation Act 1991</i> , ensuring that any clearance is offset by significant environmental benefits.
Water Resources Overlay <i>Desired Outcomes</i> Protection of the quality of surface waters considering potential water quality effects of climate change – DO 1	Power supply infrastructure is consistent with the Overlay. The Overlay applies to the majority of power supply infrastructure, predominantly as a broad application of the Overlay to large areas of the State's inland. The Mullaquana 132 kV transmission line crosses several mapped drainage lines, impacts to which are considered readily avoidable through micro-siting of transmission tower footings.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
Natural function and flow of watercourses is maintained to assist in the management of flood waters and stormwater runoff – DO 2 <i>Performance Outcomes</i> Water Catchment - PO 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8	No swamps or wetlands are known to exist in proximity to power supply infrastructure, consistent with PO 1.2 and PO 1.3. The placement of substations generally on flat or elevated ground serves to minimise the risks posed to the environmental values of the surface hydrology regime, including through the avoidance of areas prone to erosion which could adversely impact on surface water (referring predominantly to stormwater), consistent with PO 1.8. Stormwater drainage infrastructure associated with power supply infrastructure has the potential to find consistency with PO 1.1, PO 1.5 and PO 1.6.
Construction camps and laydown areas	
Hazards (Bushfire - Outback) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Habitable Buildings – PO 1.1 Vehicle Access – Roads and Driveways – PO 2.2	Construction camps and laydowns are consistent with the Overlay. The Overlay applies to the Project assessment area generally north of the Lincoln Gap, and thus is taken to apply to the majority of potential sites for construction camps and materials laydown areas (other than those specifically discussed occurring in the Hazards (Bushfire – Regional) Overlay). Potential construction camp and laydown area locations are expected to occur in proximity to Project infrastructure, in particular the water transfer system. While the landscape in the State’s far north is varied and diverse, areas to be traversed by the Project generally avoid areas of high topographic variation, or extensive vegetation cover that could pose a fire risk to Project assets. Further, potential construction camp and materials laydown areas will, to the extent possible, preference previously disturbed or cleared areas, to minimise the requirement for vegetation clearance. As such, it is expected that consistency with PO 1.1 will be readily achieved. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 2.2. Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Traffic, Transport and Access General Development Policy.
Hazards (Bushfire - Regional) Overlay <i>Desired Outcomes</i> Development responds to the relevant level of bushfire risk and is designed to mitigate the threat and impact of bushfires, taking the effects of climate change into account – DO 1 To facilitate access for emergency service vehicles – DO 2 <i>Performance Outcomes</i> Siting - PO 1.1 Built Form - PO 2.1 Vehicle Access – Roads and Driveways - PO 5.1, 5.3	Materials laydown areas (Whyalla North) are consistent with the Overlay. The sites contemplated for use as materials laydown areas north of Whyalla are previously disturbed and are thus in the most part free from vegetation which poses a bushfire risk, consistent with PO 1.1 and PO 2.1. No habitable buildings are proposed within materials laydown areas north of Whyalla within the Overlay. Within the Overlay, all new or upgraded access points to the Project assessment area will be designed and sited having regard for emergency vehicle access and egress requirements, consistent with PO 5.1 and 5.3. Further detail on Project access points is provided in the assessment of the Key Outback and Rural Routes Overlay, and the Traffic, Transport and Access General Development Policy.
Hazards (Flooding) Overlay <i>Desired Outcome</i> Impacts on people, property, infrastructure and the	Materials laydown areas (Whyalla North) are consistent with the Overlay. Materials laydown areas (Whyalla North) are by nature a temporary use of land, which will not create new allotments, nor create new permanent land uses

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
environment from high flood risk are minimised by retaining areas free from development, and minimising intensification where development has occurred – DO 1 <i>Performance Outcomes</i> Land Use – PO 2.1 Flood Resilience – PO 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 Environmental Protection – PO 4.1,	susceptible to risks posed by flood potential. Materials laydown areas are assessed as not inconsistent with PO 2.1. No flood protection works are proposed, consistent with PO 3.1. Due to the nature of materials laydown areas, no significant new impermeable surface treatment is proposed (subject to final construction planning and sequencing), other than the roof area of structures intended to store listed substances (if any). It is reasonably foreseeable that crushed rock, or other similarly permeable surface treatment, would be sufficient to mitigate the potential for machinery bogging or drag-out, while avoiding loss of flood storage or impacts to adjoining properties through stormwater diversion – consistent with PO 3.2 and PO 3.3. Significant pre-existing flood and stormwater management infrastructure is pre-existing in the locality of the Whyalla North materials laydown areas, including surface level and underground drainage systems, stormwater basins and culverts designed to retain and/or divert stormwater. Flood mapping undertaken for the Whyalla Stormwater Management Plan (Tonkin 2019) indicates that the subject land is not expected to experience inundation under the 1% AEP rainfall scenario, achieving compliance with PO 3.4 and PO 3.5. Fencing installed around the materials laydown areas would be temporary construction fencing, of a type unlikely to impede floodwaters, should they occur, consistent with PO 3.6. Materials laydown areas will be utilised primarily for the temporary storage of construction equipment, materials and associated uses, managed by the DBOM contractor. Compliance with the relevant Australian Standards (such as AS 1940:2017 <i>The storage and handling of flammable and combustible liquids</i>) and relevant EPA guidelines including EPA 080/16 <i>Bundling and spill management</i> ensures that materials which have the potential to impact on surface water quality are retained in-situ, consistent with PO 4.1, noting that inundation of the subject land is not predicted under the 1% AEP scenario (Tonkin 2019).
Hazards (Flooding - Evidence Required) Overlay <i>Desired Outcomes</i> Development addresses potential flood risks through appropriate design and siting – DO 1 <i>Performance Outcomes</i> Flood Resilience - PO 1.1 Environmental Protection - PO 2.1	Construction camps and laydowns are consistent with the Overlay. The Overlay applies to the KAC Pimba construction camp and laydown area, and other potential materials laydown and/or construction camp localities adjacent the water transfer system. In the absence of specific surface water modelling for all potential sites, and having regard for the terrain and soil types encountered along the alignment of the Project area, it is anticipated that compliance with PO 1.1 and PO 2.1 would be readily achievable through elevation of buildings and structures intended to be habitable, or to contain or store hazardous materials, at least 300mm above natural ground level. The selection of construction camp and materials laydown areas preferences previously disturbed areas which are more likely to have pre-existing stormwater management in place (swales and berms). The avoidance of drainage lines and low-lying areas further mitigates risk.
Key Outback and Rural Routes Overlay <i>Desired Outcomes</i> Provision of safe and efficient movement on, to and from key outback and rural routes – DO 1 / DO 2 <i>Performance Outcomes</i> PO 1.1, 2.1, 3.1, 4.1, 5.1, 6.1, 7.1	Construction camps and laydowns are not inconsistent with the Overlay. The Overlay applies to the majority of potential construction camp and materials laydown areas (with the exception of the Whyalla North materials laydown areas). Due to the proximity of other potential camp and laydown areas to the water transfer system, application of the Overlay to construction camps and laydowns is taken to be consistent with that discussed in relation to pipeline infrastructure, due to necessary colocation. Construction camps and laydowns, therefore, are assessed to be not inconsistent with the Overlay.

Overlays, relevant Desired Outcomes and Performance Outcomes	Assessment
Native Vegetation Overlay <i>Desired Outcomes</i> Areas of native vegetation are protected, retained and restored in order to sustain natural and amenity values – DO 1 <i>Performance Outcomes</i> Environmental Protection - PO 1.1, 1.2, 1.4	Construction camps and laydowns (incl. Whyalla North) are not inconsistent with the Overlay. Locations of relevant Project elements may continue to be refined as the Project progresses via engagement with stakeholders, final construction planning and sequencing and site analysis. Vegetation clearance will require referral to the Native Vegetation Council. The siting of Project infrastructure in areas of native vegetation has typically taken advantage of areas disturbed by previous activities, such that the extent of clearance is constrained consistent with the Project's adopted mitigation hierarchy of <i>avoid, minimise, rehabilitate/restore, offset</i>. Rehabilitation works for temporary disturbance areas will include a range of measures to encourage the regrowth of native vegetation. Where vegetation clearance is required, an offset management plan will be referred to the Native Vegetation Council as part of EIS assessment.
Water Resources Overlay <i>Desired Outcomes</i> Protection of the quality of surface waters considering potential water quality effects of climate change – DO 1 Natural function and flow of watercourses is maintained to assist in the management of flood waters and stormwater runoff – DO 2 <i>Performance Outcomes</i> Water Catchment - PO 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8	Construction camps and laydowns are consistent with the Overlay. The Overlay applies to the majority of potential construction camp and/or materials laydown areas, with the exception (partially) of Whyalla North materials laydown areas. Consistent with the application of the Hazards (Flooding) Overlay, consistency with PO 1.1, PO 1.2 and PO 1.3 is readily achievable through the avoidance of drainage lines, wetlands and low-lying areas for the temporary establishment of construction camps and/or materials laydown areas. The placement of camps and/or materials laydown areas on previously disturbed, or generally on flat or elevated ground serves to minimise the risks posed to the environmental values of the surface hydrology regime, including through the avoidance of areas prone to erosion which could adversely impact on surface water (referring predominantly to stormwater), consistent with PO 1.8. Stormwater drainage has the potential to find consistency with PO 1.1, PO 1.5 and PO 1.6.

6.5 General Development Policies

The General Development Policies (GDPs) defined in Part 4 of the Code provide a range of criteria against which specific aspects of development must be assessed. Table 6-4 identifies the GDPs and performance outcomes relevant to each aspect of the Project, including consideration of both construction and operational phases.

Notwithstanding that final construction planning and sequencing of the Project is not yet finalised, based on the Reference Design (GHD 2025a), the Project is able to achieve consistency with the majority of applicable GDP performance outcomes.

Table 6-4: Relevant General Development Policies

GDP Category	Assessment against Project Elements
Clearance from Overhead Powerlines <i>Desired Outcome:</i> Protection of human health and safety when undertaking development near overhead powerlines <i>Performance Outcomes:</i> All Project assets – PO 1.1	The Project is consistent with, or has the capacity to be consistent with, the GDP. The desalination plant and water transfer pump stations will require connection to existing or new transmission lines. At several points along the Project assessment area, linear infrastructure (both buried water transfer pipeline and proposed power supply infrastructure) occurs adjacent to, or crosses, existing overhead powerlines. Proposed above-ground structures proximate to existing overhead powerlines comprise electricity substations, whose construction will be subject to approval by the Technical Regulator. During the construction phase, adequate separation from existing overhead powerlines is required to be maintained by construction equipment, vehicles and personnel. Satisfaction of the relevant criteria of the <i>Electricity Act 1996</i> are achievable through approval of the Project by the Technical Regulator, and standard construction management procedures.
Design <i>Desired Outcome:</i> Development is: - contextual - by considering, recognising and carefully responding to its natural surroundings or built environment and positively contributes to the character of the immediate area - durable - fit for purpose, adaptable and long lasting - inclusive - by integrating landscape design to optimise pedestrian and cyclist usability, privacy and equitable access, and promoting the provision of quality spaces integrated with the public realm that can be used for access and recreation and help optimise security and safety both internally	The Project is not inconsistent with the GDP, notwithstanding specific inconsistencies with Landscaping and Earthworks performance outcomes. The Project's buildings are designed to a 50-year design life, and are thus durable and fit for purpose. The contextuality of the desalination plant and water transfer pump stations is driven by site selection constraints, but has regard for the landscape character of receiving environments. No part of Project infrastructure is intended for public accessibility, and is not intended to be occupied for extended periods of time, other than by employees. Building layouts will be simple, orderly and aesthetically pleasing in appearance, with due consideration for the incorporation of plant and equipment into building profiles, and the appropriate siting of outdoor storage, waste management, loading and service areas. Buildings will utilise modular construction, where appropriate and efficient, and subject to final construction planning and sequencing have the capacity to be finished in matte, natural colours complementary to the landscape in which they are sited, consistent with PO 1.4 and PO 1.5. Landscaping is not proposed in association with most Project assets – and therefore inconsistent with PO 3.1, 3.2 and 7.5. However, landscaping to achieve the attributes sought in PO 3.1 is considered somewhat unnecessary, given a majority of the buildings proposed will not be occupied for long periods of time, are separated from public roads and sensitive receivers, generally, by significant distances. The Project will undertake rehabilitation of disturbed areas not required during operations, enabling the regrowth of native vegetation which can assist with stormwater infiltration, provide shade and contribute to biodiversity. The GDP relates to construction camps and material laydown areas in relation to the provision of amenable and energy-efficient facilities which protect natural hydrological systems, manage effluent effectively, and minimise land disturbance. The Project's preference for seeking previously disturbed or cleared areas for the temporary establishment of construction camps and/or materials laydown areas

GDP Category	Assessment against Project Elements
and within the public realm, for occupants and visitors sustainable - by integrating sustainable techniques into the design and siting of development and landscaping to improve community health, urban heat, water management, environmental performance, biodiversity and local amenity and to minimise energy consumption.	supports compliance with PO 5.1, PO 6.1 and PO 8.1. Compliance with PO 4.1, PO 4.2 and PO 4.3 is expected to be readily achievable through the siting and layout of temporary workers' accommodation, which is additionally discussed in relation to the <i>Workers Accommodation and Settlements GDP</i>. On-site wastewater treatment systems will be required for a number of Project assets and at multiple locations throughout the construction and operational phases. These include, but may not be limited to; - Human wastewater collection and treatment, and - Dewatering wastewater collection, treatment and (where quality requirements are met) discharge. The collection and treatment of human wastewater arising from construction camps and temporary on-site amenities will occur without discharge of effluent to the environment, consistent with PO 6.1. Where wastewater from dewatering of tunnelling, excavation or dredge spoil is generated, a range of options are available for the management of water from the dewatering process, dependent on the quality of the material. This is further discussed in relation to the <i>Waste Treatment and Management Facilities GDP</i>.
<i>Performance Outcomes:</i> <i>Desalination plant – PO 1.4, 1.5, 3.1, 3.2, 6.1, 7.2, 7.4, 7.5, 7.6, 7.7, 8.1, 15.1, 31.1, 31.2, 32.1</i> <i>Water Transfer System – Transfer pump stations and water storages - PO 1.4, 1.5, 3.1, 3.2, 7.2, 7.4, 7.5, 7.6, 7.7, 8.1, 15.1, 31.1, 31.2, 32.1</i> <i>Water Transfer System – transfer pipeline and Carrapateena lateral branch – PO 31.1, 31.2</i> <i>Construction camps and laydowns – PO 4.1, 4.2, 4.3, 5.1, 6.1, 8.1</i>	As discussed in Traffic, Access and Parking below, on-site car parking at the desalination plant will be prepared during the final construction planning and sequencing of the Project. However, sufficient area is available on site to accommodate car parking that achieves consistency with PO 7.2, 7.3, 7.4, 7.6 and 7.7. Earthworks to accommodate Project access tracks, and the gradient of access tracks, are expected to be relatively minor, given the topography of land is flat-to-gently undulating throughout the Project assessment area. Longitudinal grades associated with access tracks have been limited to 8% for the Reference Design. Earthworks to construct the TBM decline and launch box occur within the Coastal Areas Overlay as noted above, and exceed a total combined vertical height of 2 m, inconsistent with PO 8.1. The assumed decline and launch box design incorporates a piled open-cut sloped excavation method, with an approximate grade of 10% over an approximately 30 m distance. This construction methodology balances environmental impacts with engineering and health and safety considerations, and contemplates the management of stormwater (by inclusion of a sump). The Project achieves general consistency with PO 15.1 largely through the remoteness of the desalination plant and water transfer pump stations. There are limited public roadways from which Project infrastructure is likely to be visible in the landscape to the extent of visual mass being a detriment to the landscape.
	The Project will manage stormwater runoff in a manner that avoids pollution or other detrimental impacts on stormwater quality. The desalination plant site incorporates a treatment train consisting of a gross pollutant trap (GPT) and detention basins, where a majority of surface waters will be directed. This infrastructure is design to capture and treat rainfall from an appropriate rain event. Pollutant discharge levels from the developed areas of the plant have been modelled and found to comply with legislative requirements. At the desalination plant site and all pump station sites, all areas containing chemicals (oils, greases etc) will be within bunded areas within roofed buildings. Excavation of the TBM decline and launch box and tunnel boring may intersect groundwater, resulting in dewatering activities. With the exception of tunnel boring, other earthworks are expected to have short periods of interaction with groundwater. A range of measures will need to be adopted into the Project CEMP to avoid negative impacts to the quantity and quality of surface and groundwater and to maintain the depth and directional flow of surface water and groundwater. This includes the testing of groundwater and receiving surface waters to ensure impacts

GDP Category	Assessment against Project Elements
Infrastructure and Renewable Energy Facilities <i>Desired Outcome:</i> Efficient provision of infrastructure networks and services, renewable energy facilities and ancillary development in a manner that minimises hazard, is environmentally and culturally sensitive and manages adverse visual impacts on natural and rural landscapes and residential amenity. <i>Performance Outcomes:</i> • <i>All Project assets - PO 1.1, 2.1, 2.2, 2.3, 4.1, 6.1, 6.2, 6.3, 12.1, 12.2, 13.1, 13.2</i> • <i>Power Supply – additional assessment – PO 4.2, 4.3, 5.1</i> • <i>Construction camps and laydowns – additional assessment – PO 11.1</i>	from groundwater interaction are minimised. These matters will be subject to further investigations during final construction planning and sequencing. As such, the proposal satisfies, or has the ability to satisfy, PO 31.1 and 31.2. At the desalination plant, loading and unloading areas, and storage of waste receptacles, will occur on sealed surfaces, whereby water will be drained to a GPT for capture and regular collection and disposal of contaminants; complying with PO 32.1. The Project is consistent, or able to achieve consistency, with the majority of GDP Performance Outcomes. The Project achieves general consistency with PO 1.1 largely through the remoteness of the subject land and substantial separation distance from sensitive receivers. Hazards to third parties including envisaged land use of adjacent land are controlled through the limitation of public access to the Project. Possible nuisance impacts including dust generation during earthworks for pipeline installation are temporary in nature. The Project similarly achieves consistency with PO 2.1. The visual impact of Project assets varies, dependent on the scale, siting and design of buildings and infrastructure, however are manageable through siting considerations, and further mitigated by remoteness and substantial separation distance from most public viewpoints and adjacent development. The Reference Design stipulates the use of low-reflectivity finishes and materials. No landscaping is proposed as part of the transfer pump stations, however as noted, landscaping for amenity purposes is considered somewhat unnecessary, given a majority of the buildings proposed will not be occupied for long periods of time, and are separated from public roads and sensitive receivers, generally, by significant distances. In this way the Project is not inconsistent with PO 2.2. Reinstatement of disturbed areas, particularly in relation to the water transfer pipeline, will be undertaken in accordance with the Reference Design utilising stockpiled topsoil and vegetation, consistent with PO 2.3. The Project is assessed to not be in conflict with the Building Near Airfields or the Airport Building Heights Overlays, and is therefore considered to be consistent with PO 4.1. The positioning of communications towers is predominantly anticipated to occur in proximity with other Project assets such as transfer pump stations, or within network or facility substations. Where additional towers are found to be required in additional locations, it is unlikely that a substantial proliferation of communications towers in any given location would arise. Co-location of facilities may be considered, subject to feasibility and reliability investigations, and noting the potential for uninterruptible power supply infrastructure to be co-located with independently-sited communications infrastructure associated with the Project. While consistency with PO 6.1, PO 6.2 and PO 6.3 may not be feasibly achievable, the degree of impact arising from inconsistency is not considered to be materially significant due to the remoteness (by necessity) of independently-sited communications towers and associated power supply infrastructure. Whilst subject to further geotechnical investigations, wastewater from toilet/showers and wash basins is expected to be directed to a suitable septic system. If determined to not be feasible, wastewater will be directed to containment tank which will be regularly emptied. Further details will be prepared as part of final construction planning and sequencing, however, it is expected that consistency with PO 12.1 can be achieved, such as avoiding the risk of polluting water sources, and located away from flood prone, sloping, saline or poorly drained land. The wastewater system will be managed in accordance with the <i>Public Health Act 2011</i> and <i>Public Health (Wastewater) Regulations 2013</i>.

GDP Category	Assessment against Project Elements
	Waste management from temporary facilities established during the construction phase in remote and rural areas are considered to readily be able to achieve consistency with PO 13.1, through the provision of dedicated waste storage enclosures at worksites. Materials and equipment laydown areas are yet to be confirmed, however will be selected having regard to minimising environmental impacts. This is anticipated to be achieved through prioritising previously disturbed areas, and/or areas within existing facilities routinely used for similar purposes. In this way the Project is able to achieve consistency with PO 13.2. Power supply infrastructure is sited in rural or remote areas, reducing risks to public safety as sought by PO 4.2. In accordance with PO 4.3, bushfire risk can be minimised for electricity substations by incorporating sufficient asset protection zones within the compounds. No electricity substation or transmission infrastructure traverses areas of unacceptable fire risk posed by vegetation or land form. The visual impact of the Project's transmission line infrastructure is reduced as sought by PO 5.1, via siting in land cleared of native vegetation and/or resulting in minimal clearance of native vegetation where avoidable, and grouping associated buildings with other Project buildings, such as the desalination plant and pump stations. Construction camps and materials laydown areas are readily able to comply with PO 11.1 through provision, as part of site preparation, of temporary water supply, portable reverse osmosis water treatment plants, and adequate non-potable water to support associated construction activities. Connection to mains water is not proposed for the majority of Project assets due to remoteness.
Interface between Land Uses <i>Desired Outcome:</i> Development located and designed to mitigate effects on or from neighbouring and proximate land uses. <i>Performance Outcomes:</i> • All Project assets - PO 1.2, 2.1, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2, 7.1, 8.1	The Project is consistent with the GDP. Due to substantial separation distances of noise-generating equipment and activities from neighbouring users of land, no impacts to sensitive receivers, or zones primarily intended to accommodate sensitive receivers, is predicted, consistent with PO 1.2. Operational noise sources from the desalination plant, such as plant equipment or the on-site manoeuvring of service and delivery vehicles is not expected to cause noise that is noticeable from nearby receivers, given the large separation distances. The desalination plant, transfer pump stations and power supply infrastructure require 24-hour operation, and staffing of the desalination plant will occur over a 24-hour period. Operational noise emissions from Project infrastructure have been assessed as complying, or able to comply with the applicable noise criteria under the <i>Environment Protection (Commercial and Industrial Noise) Policy 2023</i>. Noise associated with the movement of staff at, and to/from the desalination plant is expected to be minor and limited to occasional light vehicle movements on public roads and within the confines of the site. As such, the Project will not have an unreasonable impact upon the amenity of sensitive receivers as a result of the nature of the development, operational hours and measures to mitigate noise impacts in accordance with PO 2.1, 4.1 and 4.2. Similarly, noise impacts from construction activities of all Project infrastructure including tunnelling, trenching, backfill and construction are not expected to adversely impact on sensitive receivers. Operation of the Project is not anticipated to generate significant air emissions that are harmful or offensive to sensitive receivers. The greatest likelihood of emissions from operation of the desalination plant is the generation of odours from biological by-product collected from the pre-treatment filters of the desalination plant as a result of entrainment, however, under normal operations the volume is expected to be no greater than a typical waste bin/wheelie bin per week – which will be transported off site as needed. As the nearest sensitive receivers are substantially separated from potential odour sources, impacts from odour are unlikely.

GDP Category	Assessment against Project Elements
	Lighting is expected to be directed and/or shielded in accordance with AS 4282 <i>Control of the obtrusive effects of outdoor lighting</i>, in a manner that will not result in light spill that has the potential to impact on any sensitive receiver, including to public roads. Temporary lighting during the construction phase may be required, however as above, the significant separation distance of the Project assessment area from sensitive receivers is such that light spill impacts are unlikely, consistent with PO 6.1 and 6.2. Adoption of materials, such as matte finishes and colours to blend with the surrounding landscape, as sought for buildings in the Remote Areas Zone, will minimise the likelihood of reflectivity/solar glare from buildings, consistent with PO 7.1. It is unlikely the Project will result in the loss of existing communication services due to electrical interference, given the remote location of a majority of Project infrastructure, large separation distance to buildings on adjoining land and the height of the pump stations and storages being less than 10 m, consistent with PO 8.1.
Transport, Access and Parking <i>Desired Outcome:</i> A comprehensive, integrated and connected transport system that is safe, sustainable, efficient, convenient and accessible. <i>Performance Outcomes:</i> • All Project assets - PO 1.1, 1.2, 1.3, 1.4, 2.1, 3.1, 3.2, 3.3, 3.4, 3.7, 3.8, 3.9, 6.1, 6.2, 6.6, 11.1, 11.2	The Project is consistent with, or able to achieve consistency with, the GDP. Context and Summary Access to the Project is via a range of State-maintained, local, and private access roads across the Project assessment area. New access tracks, and upgrades to existing access tracks, are required at several locations along the infrastructure footprint. In several locations, enabling roadworks which affect public road intersections are required, both to establish access points from State-maintained roads and to upgrade existing intersections to facilitate the types of vehicles anticipated by the Project's construction and ongoing maintenance. The construction and/or upgrading of roads and access tracks is anticipated to occur early in the Project's construction phase, to facilitate the establishment of material and equipment laydowns and other temporary construction facilities. Internal access roadways, vehicle parking areas and vehicle manoeuvring areas are proposed within the footprint of the desalination plant, transfer pump stations and, where necessary, electricity substations. Additionally, a permanent maintenance access track is proposed along the transfer pipeline alignment to facilitate access for commissioning and operational maintenance for the life of the Project. At several points along the Project assessment area, crossings of major regional roads and rail lines occur by linear infrastructure, both underground and above-ground. DIT Transport, the Commissioner for Highways, councils, the ARTC, DIT Marine Safety Division and other major stakeholders will be consulted in the development of road, rail and marine traffic management measures. Likely traffic impacts are well understood by regulators and can be readily mitigated through traffic management planning to comply with relevant standards. The Project is unlikely to result in significant impacts to transport and traffic, if managed through conventional management and mitigation measures in accordance with approved management plans. The final design of parking areas, access points, internal roadways and intersection/road upgrades and facilitating roadworks will be subject to final construction planning and sequencing. However, sufficient area is available at all Project worksites which will incorporate access roads and parking to cater for the expected number and type of vehicles, without impacting the function of public roads. Construction The construction phase of the Project has the potential for impacts on access and amenity through temporary changes to the local and regional road traffic conditions or requirements for road upgrades to cater for Project related traffic. Construction activities are likely to cause some inconvenience and disruption at particular

GDP Category	Assessment against Project Elements
	locations and on specific transport routes due to temporary increases to traffic flow and volumes on roads near the Project and transport routes to the area, the presence and movement of heavy machinery and restrictions to access. Dependent on the location, potential impacts may include disruption to current land uses, travel times and deterioration of road pavements from increased use by heavy vehicles. Impacts are expected to be short-term and localised as construction activities progress along the alignment. Impacts from Project-related traffic can be appropriately managed with the implementation of management and control measures and procedures detailed in a Traffic Management Plan and pavement monitoring and management plan. Requirements for upgrades or other changes will be a priority in discussions with local councils and DIT Transport and / or Commissioner for Highways as required. Potential impacts to the rail network from track crossings or construction activities in the vicinity of rail lines will be assessed in the EIS. ARTC, as operator of the transcontinental and Whyalla to Port Augusta rail lines, and SIMEC as operator of the iron ore rail line will continue to be consulted during final construction planning and sequencing to ensure that design, construction and safety standards and requirements are met and that disruption to rail traffic or damage to railway infrastructure from Project construction is avoided. As there are no infrastructure alignments located approximately within 5 km of Whyalla airport (which is the closest airport to project infrastructure), no impacts from construction on airport operations are expected. No transmission lines are proposed in the vicinity of regularly used airports or airfields. Potential impacts of the Project on passenger capacity at regional airports due to movement of the Project workforce during construction will be assessed in the EIS. Significant impacts to USG marine traffic from desalination plant construction activities are not expected, due to the relatively close proximity to shore of Project marine-based works and separation from shipping channels. Construction vessel movements associated with the Project represent a relatively small proportion of overall maritime activity within Upper Spencer Gulf. Construction vessel movements will also be concentrated along a short corridor between Whyalla Port and the offshore workfront and will be scheduled and coordinated with port operations to minimise disruption to existing maritime users. Potential impacts to existing users of marine waters from construction activities will be assessed in the EIS. Any maritime operations will be managed in accordance with applicable maritime safety requirements and standards and a Marine and Coastal Construction and Environmental Management Plan. Operation Road traffic volumes expected to access the desalination plant will largely be the staff arriving and leaving from work. Operational road traffic for the water transfer system would generally be restricted to regular inspection and maintenance activities, predominantly by light 4WD vehicles, with negligible traffic impacts. An exclusion zone around the desalination plant infrastructure on the seabed will be required to prevent damage to seabed infrastructure from certain maritime activities (e.g. trawling or anchoring). The extent of the exclusion zone will be determined by DIT Marine Safety and Compliance following a risk assessment. Consultation will be undertaken with key stakeholders including commercial fishery groups around the design and implementation of an appropriately sized exclusion zone that reduces impacts to users of the adjacent marine waters while also providing protection to seafarers and the Project's marine-based infrastructure. No significant or ongoing impacts to traffic and transport (including marine transport) or access for the community or adjacent landholders are expected once the desalination plant and water transfer system are operational.

Assessment against relevant Performance Outcomes

Movement Systems

The traffic impact assessment undertaken for the Project (GHD 2025b) concluded that ongoing operational impacts to the functional performance of the transport system are minimal, consistent with PO 1.1. The Project's access options to the desalination plant site and transfer system south of Whyalla include access via the Lincoln Highway a route which, for vehicles whose origin point is north of Whyalla, necessitates the use of one or more roads through the township of Whyalla. Playford Avenue, as the direct continuation of the Lincoln Highway, passes through the General Neighbourhood Zone of Whyalla, adjacent to residential properties. However, Playford Avenue (together with Broadbent Avenue, considered as an option) is a NHVR B-double gazetted route and is not considered to be a residential street. Management of the potential impacts to residents from the increase in heavy vehicle traffic associated with the Project is considered able to be addressed through construction traffic management procedures, consistent with PO 1.2. No general public access is proposed to any part of the Project. Site safety inductions including traffic management are considered adequate to address potential conflict where both passenger vehicles and heavy vehicles are likely to be present, consistent with PO 1.3. Consistent with PO 1.4, all on-site traffic movements associated with the Project are able to be fully contained within development sites, avoiding impacts to public roads from queueing.

Sightlines and Vehicle Access

The traffic impact assessment (GHD 2025b) assessed sight distance and turn treatments for several Project assets. These include the two access options to the desalination plant site via Lincoln Highway / Horseshoe Road (option 1) and a new access from the Lincoln Highway to Eight Mile Creek Road (option 2, preferred), Lincoln Gap, Mangata and Kalaya transfer pump stations and various camp and laydown access. The assessment found that approach and safe sight distances at these locations are generally appropriate, noting that further investigation is recommended at the new desalination plant access from the Lincoln Highway, and at the Lincoln Gap pump station to ensure sight distances can be achieved. Consistency with PO 2.1, 3.1, 3.3, and 3.4 is anticipated to be readily achievable through sightline assessment and incorporation of relevant findings into construction traffic management planning to ensure compliance with Austroads guidelines.

Separation distances between new access points and railway level crossings are adequate to achieve consistency with PO 3.7. The Project achieves compliance with PO 3.8 through fit for purpose construction to account for the volume and type of vehicles anticipated. To support this, the traffic impact assessment includes swept-path assessment and recommendations for upgrades to sections of public road and existing access track. The Project does not achieve consistency with PO 3.9 on account of the extent of the Project assessment area, the presence of multiple worksites and likelihood of vehicle movements between sites requiring the use of public roads. However, it is considered that no feasible alternative is present due to the scale of Project infrastructure, and vehicle circulation between activity areas will not cause undue adverse impacts to the functionality of the road network.

Vehicle Parking Areas

No part of the Project includes a parking area which requires the use of public roads for movement from one part of the parking area to another, consistent with PO 6.1. No landscaping of parking areas is proposed due to the preclusion of public access, and the nature of development. Separation distances to sensitive receivers are substantial, such that no visibility, noise, glare or emissions impacts from vehicles in parking areas are credible. The Project is thus not inconsistent with PO 6.2. Parking

GDP Category	Assessment against Project Elements
	areas proposed as part of the Project incorporate all required service vehicle access requirements, including access and egress in a continuous forward motion consistent with the relevant Hazards (Bushfire) Overlays. The Project is consistent with PO 6.6. Heavy Vehicle Parking Separation distances to sensitive receivers are substantial, such that no visibility, noise, glare, emissions, vibration, hazard or odour impacts from vehicles in parking areas are credible, consistent with PO 11.1. The design of internal roadways at the desalination plant and transfer pump stations have regard for the relevant Hazards (Bushfire) Overlays and for traffic and access performance outcomes of the relevant Zones and Subzones, such that roadways will be formed from an all-weather trafficable formed surface commensurate with the expected volume of vehicles requiring access during all phases of the Project's lifecycle. Access and egress of heavy vehicles in a continuous forward motion and the on-site queueing capacity of Project assets assists in ensuring minimal hazard to vehicular traffic on public roads.
Waste Treatment and Management Facilities <i>Desired Outcome:</i> Mitigation of the potential environmental and amenity impacts of waste treatment and management facilities. <i>Performance Outcomes</i> Desalination Plant – PO 1.1, 2.1, 2.2, 2.3	The Project is compliant, or able to achieve compliance, with the GDP. Waste treatment and management facilities associated with the Project are, by nature, ancillary and subordinate to the primary intended use of land (being the construction of a desalination plant). The management of excavation and dewatering waste streams readily achieves compliance with PO 1.1 through significant separation distances from sensitive receivers, specifically from noise, air and dust emission vectors. The Project is able to achieve compliance with PO 2.1 and PO 2.3 to the extent practicable (noting interaction with both the marine environment and groundwater) through specific proposed treatments of waste streams identified as likely to contain higher concentrations of potential contaminants, such as slurry drying wastewater and dredge wastewater. Separation of waste streams assists in segregating waste streams of potentially higher impact potential, enabling the safe and efficient disposal. The Project is readily compliant with PO 2.2 through the establishment of substantial waste management and treatment infrastructure at the desalination plant site for the specific purpose of avoiding impacts to the environment and natural hydrological systems.
Workers Accommodation and Settlements <i>Desired Outcome:</i> Appropriately designed and located accommodation for seasonal and short-term workers in rural areas that minimises environmental and social impacts. Construction camps and laydowns – PO 1.1, 1.2, 1.3, 1.4	Construction camps and laydowns are able to achieve consistency with the GDP. Construction camp and materials laydown areas defined in Section 1.2.5.1 are anticipated to readily achieve compliance with all Performance Outcomes of the GDP. Principally, this is achievable through: - Avoidance of areas of scenic, tourism or conservation significance by the Project in general, consistent with PO 1.1, - Remoteness of Project infrastructure, meaning that nuisance impacts to adjacent land uses are precluded on the basis of separation distance, consistent with PO 1.2, - The use of pre-fabricated or otherwise standardised, modular structures for the establishment of construction camps, compliant with the relevant Australian Standards and consistent with PO 1.3, and - The establishment of temporary power supply, amenities and water tankage, treatment for potability and supply to habitable buildings as part of construction camp site preparation.

7. Key Planning Issues and Conclusions

Based on an ‘in-principle’ assessment of Project asset classes against relevant Zones, Subzones, Overlays and General Development Policies of the Planning and Design Code, and assessment of the Project against the relevant State Planning Policies and Region Plans, utilising a stipulated Project assessment area and the Reference Design (GHD 2025a), the planning assessment identifies the following:

- The Project overall is **consistent** with strategic planning instruments including the State Planning Policies and applicable Regional Plans.
- The Project overall is **not inconsistent** with the Planning and Design Code.
 - Aspects of the desalination plant (the intake pump building, excavation works for TBM launch infrastructure) are inconsistent with the Conservation Zone, Visitor Experience Subzone and Coastal Areas Overlay due to the extent of excavation required, and the scale of development proposed within the Zone, Subzone and Overlay.
 - The transfer pipeline is inconsistent with the Water Resources Overlay due largely to the necessity for project infrastructure to disturb natural drainage lines, and potentially interacting with groundwater for underground pipeline installation works. The extent of this inconsistency is partly absolved through the temporary nature of disturbance works (construction phase only) and the minor extent of potential impacts to surface hydrology arising from above-ground sections of pipeline. The development of the Project’s SEDMP is considered to adequately control potential impacts.
 - Marine aspects of the desalination plant (intake and outfall pipelines, tunnels and seabed-mounted intake riser and return water diffusers) are consistent with the Coastal Waters and Offshore Islands Zone, reflective of the Project’s approach to mitigating potential impacts to the marine and coastal environment, including the avoidance of areas of Posidonia seagrass (noting that some Zostera seagrass may be impacted), and areas of economic and primary production significance.
 - The Project is consistent with the Remote Areas Zone, which hosts the majority of Project infrastructure.
 - The Project is readily consistent with the relevant Hazards Overlays, including both bushfire and flooding Overlays.
 - The Project is not inconsistent with all other assessed Zones, Subzones and Overlays, on the basis of Project infrastructure having no material impact on the function or application of those instruments.
 - Final construction planning and sequencing of the Project is anticipated to readily achieve consistency with the relevant GDPs, through compliance with the design principles adopted through the Reference Design (GHD 2025a).

The Project supports a number of key aspirations of the State Planning Policies, and the Eyre and Western and Far North Regional Plans. A new climate resilient supply of water represents significant economic benefit to existing and future industries.

It is considered that the Project satisfies, or has the capacity to satisfy, a majority of applicable provisions of the Code. Where there is conflict between Code provisions and the outcomes sought by the Project, there is limited consequence to the proper planning of the locality, or impact upon adjoining land or the receiving environment.

On the basis of the above, the Project is supported from a planning and land use perspective, subject to appropriate mitigations and control measures implemented where inconsistency with the Code may present the possibility of environmental impacts.

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Appendix A Maps – Zones, Subzones and Selected Overlays

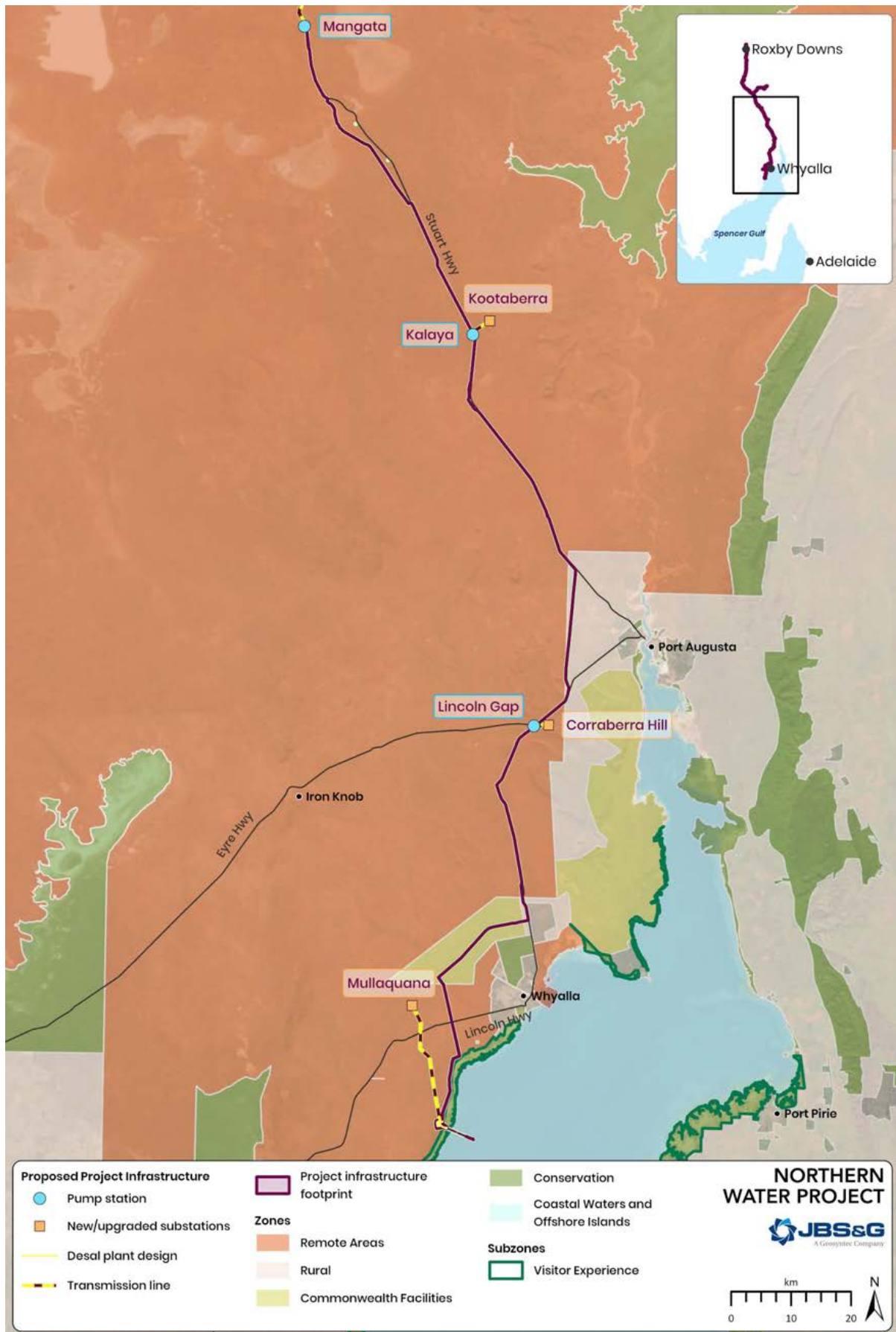


Figure 5: Zones and Subzones - southern extent

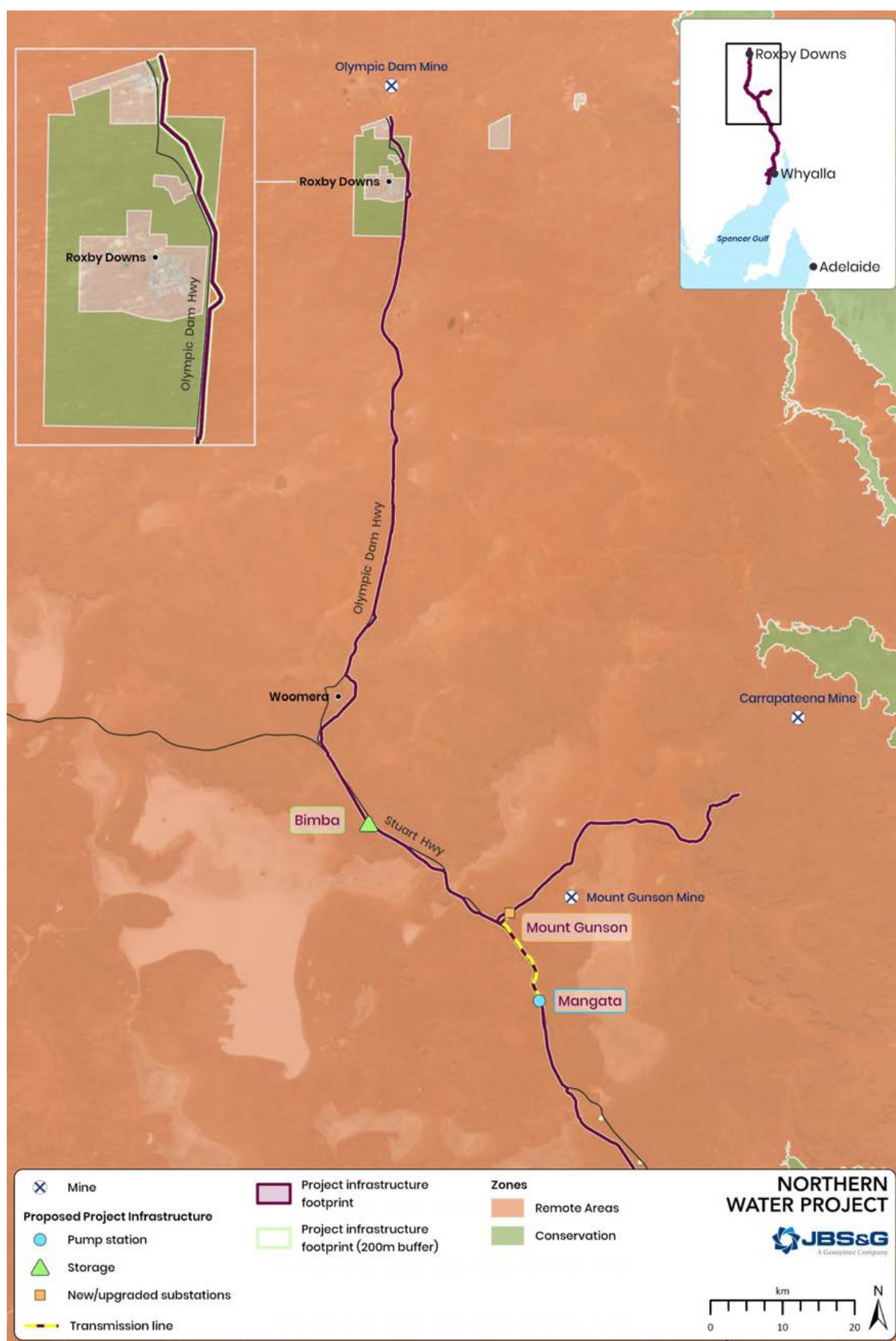


Figure 6: Zones and Subzones - northern extent

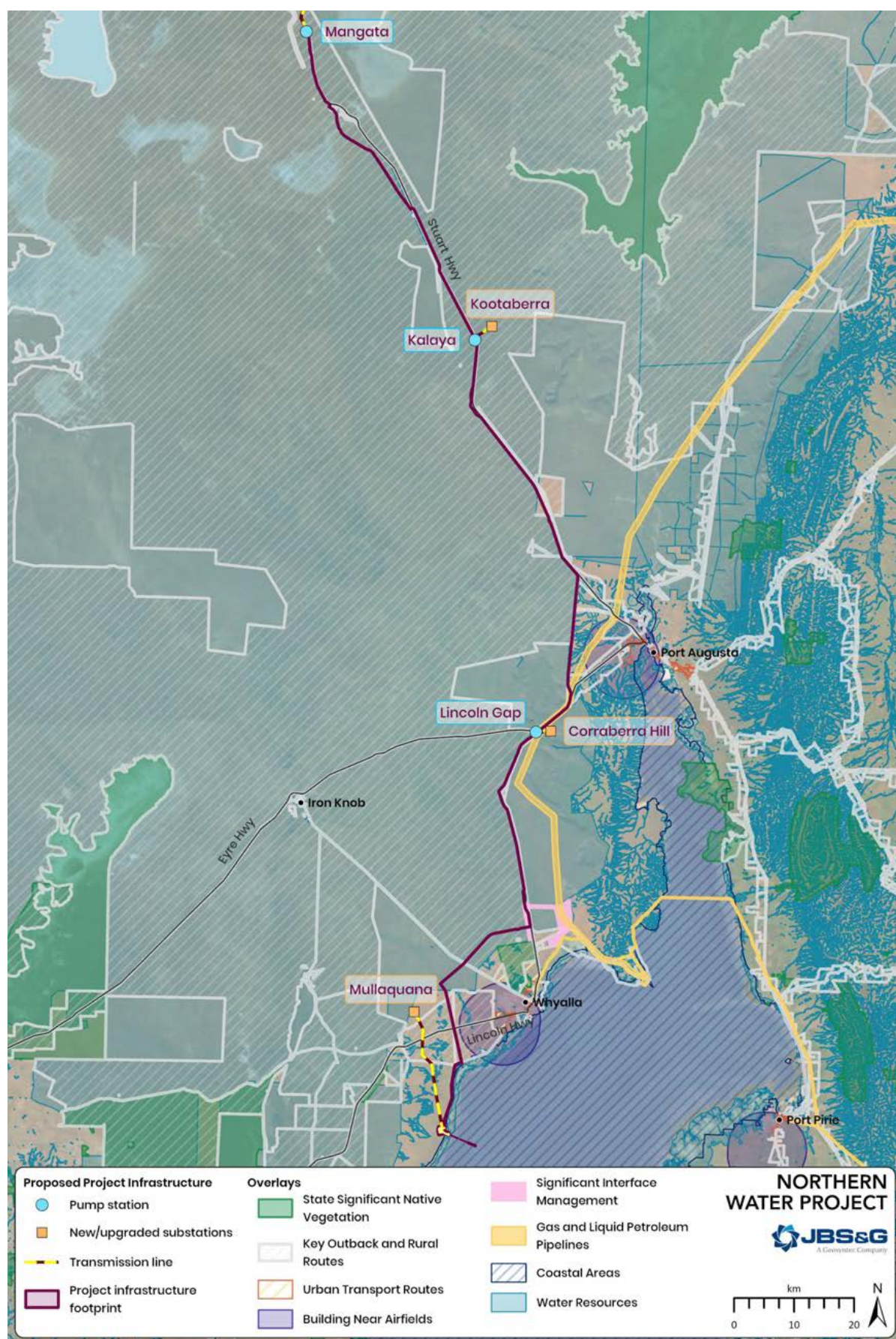


Figure 7: Selected Overlays - southern extent

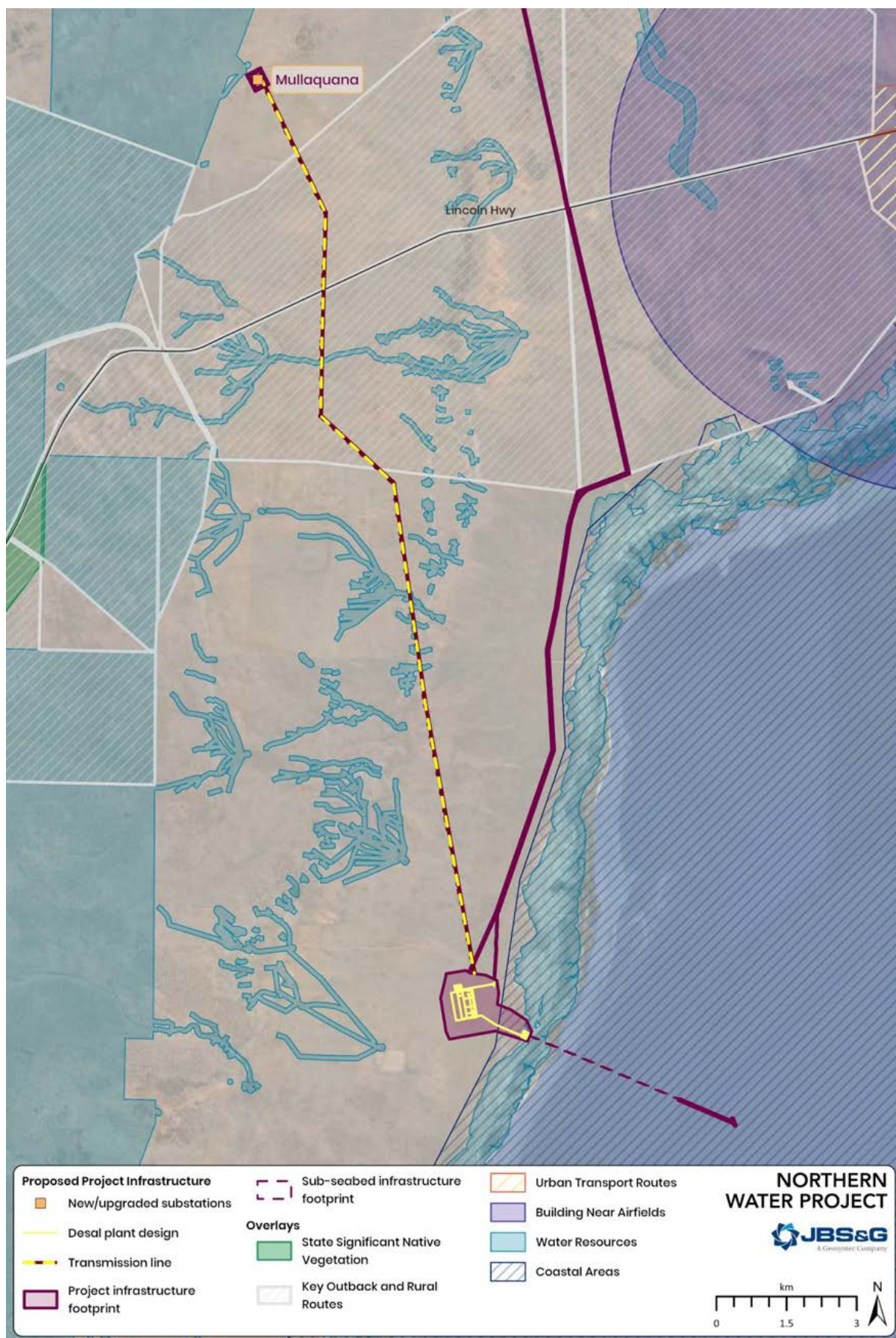


Figure 8: Selected Overlays - desalination plant and surrounds detail



Figure 9: Selected Overlays - Lincoln Gap and surrounds detail

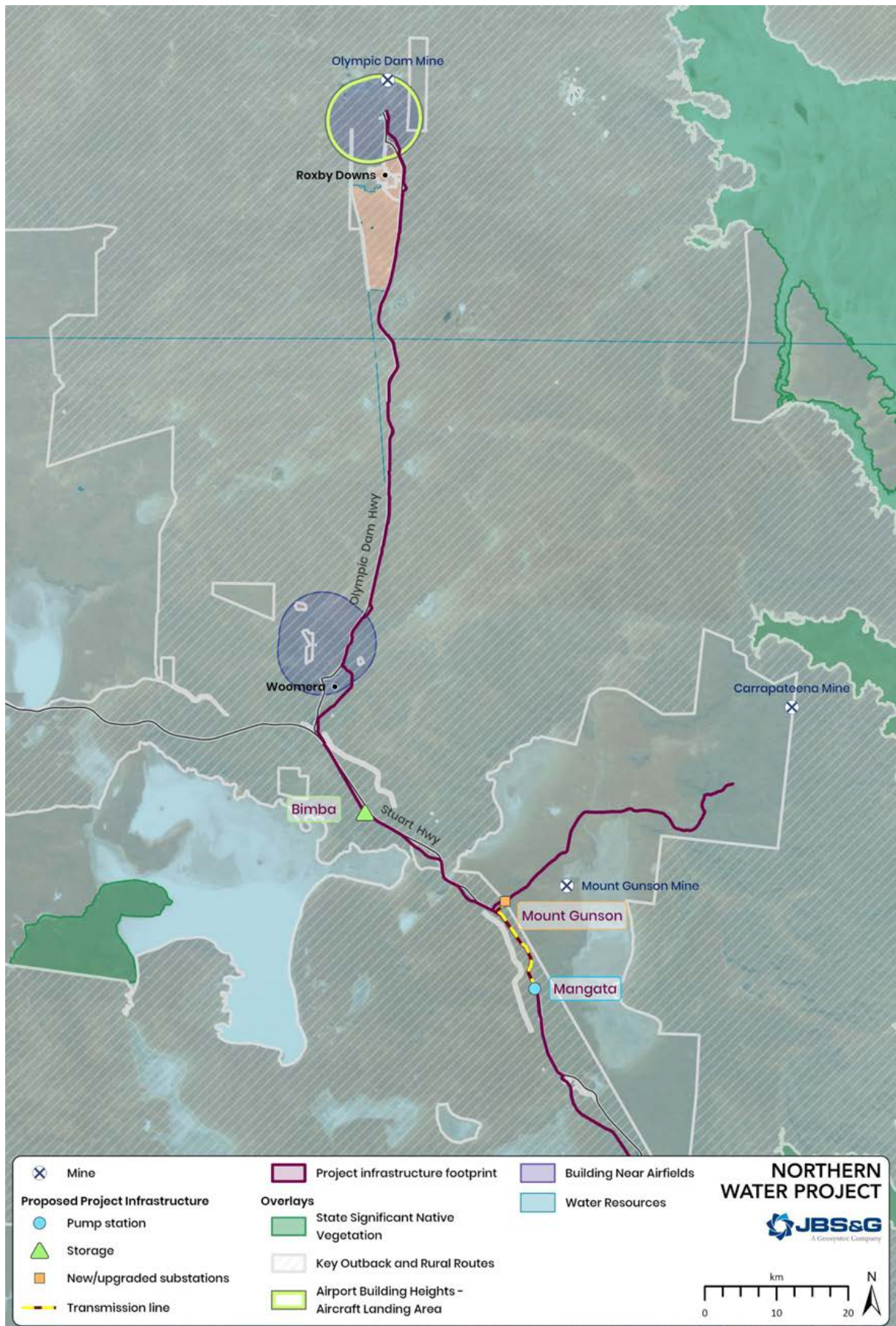


Figure 10: Selected Overlays - northern extent

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Adelaide

Kaurna Country | 100 Hutt Street,
Adelaide, SA 5000
T: 08 8431 7113

Brisbane

Turrbal/Yuggera Country | Level 37,
123 Eagle Street, Brisbane, QLD 4000
T: 07 3211 5350

Bunbury

Wardandi Country | 177 Spencer Street,
Bunbury, WA 6230
T: 08 9792 4797

Byron Bay

Bundjalung Country | 1/64 Kingsley Street,
Byron Bay NSW 2481
T: 07 3211 5350

Gold Coast

Yugambah Country | Level 2/14
Edgewater Court, Robina, QLD 4226
T: 07 3211 5350

Hobart

Muwinina Country | Level 2,
137 Liverpool Street, Hobart, TAS 7000
T: 03 6208 3700

Melbourne

Wurundjeri Country | Level 19,
31 Queen Street, Melbourne, VIC 3000
T: 03 9642 0599

Perth

Whadjuk Country | Allendale Square,
Level 9, 77 St Georges Terrace, WA 6000
T: 08 9380 3100

Sydney

Gadigal Country | Level 8,
179 Elizabeth Street, Sydney, NSW 2000
T: 02 8245 0300

Wollongong

Dharawal Country | Level 1,
1 Burelli Street, Wollongong, NSW 2500
T: 02 4225 2647