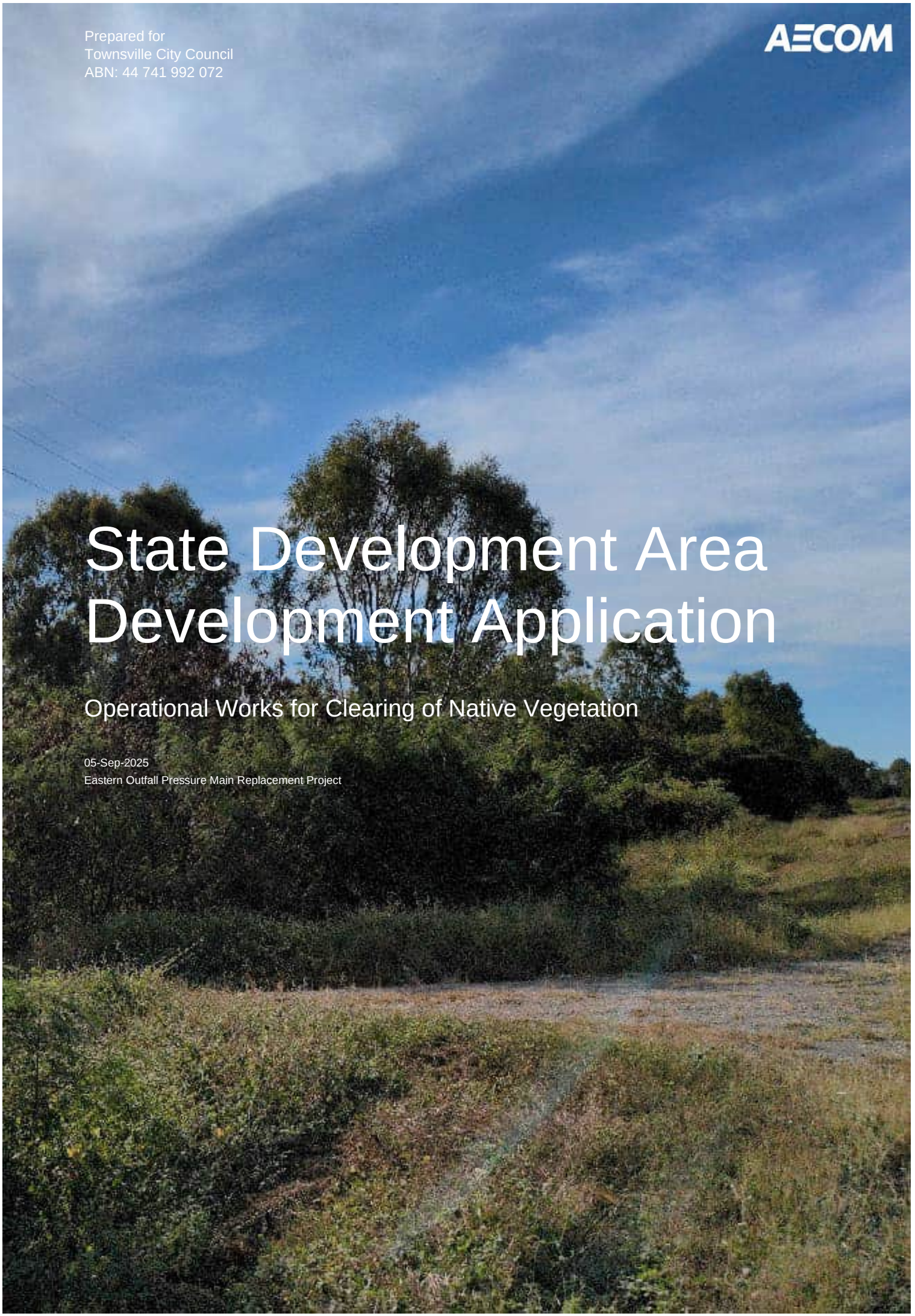
Prepared for
Townsville City Council
ABN: 44 741 992 072



State Development Area Development Application

Operational Works for Clearing of Native Vegetation

05-Sep-2025
Eastern Outfall Pressure Main Replacement Project

State Development Area Development Application

Operational Works for Clearing of Native Vegetation

Client: Townsville City Council

ABN: 44 741 992 072

Prepared by

AECOM Australia Pty Ltd
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			Name/Position	Signature
0	05-Sep-2025	For Submission	Paul Lemcke NQNT Water Infrastructure Lead	

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1.0 Introduction

AECOM Australia Pty Ltd (AECOM) has been engaged by Townsville City Council (TCC) to apply for a State Development Area (SDA) Development Approval for Clearing of Native Vegetation for the Eastern Outfall Pressure Main (EOPM) Replacement Project (the Project). The proposed vegetation clearing will occur over part of Lot 1 on SP313085 and within Ron McLean Drive, which are located within the Townsville SDA.

The project involves the installation of a 3 kilometre (km) long, high-density polyethylene pipe (HDPE) sewer pipeline that runs from Sixth Street, South Townsville, to an area adjacent to Southern Port Road, Stuart. The Project will replace the existing sewer pipeline situated between South Townsville and the Cleveland Bay Purification Plant (CBPP), which predominantly services Townsville's eastern suburbs and forms a crucial part of the existing sewer network (refer to Figure 1). The Project is critical public utility infrastructure that will service continued residential expansion and urban consolidation within the 'Eastern' and 'Western' sewer systems in Townsville.

This SDA Development Application has been prepared to present and evaluate the Project against the requirements of the *Townsville SDA Development Scheme 2019* (Development Scheme) for consideration by the Office of the Coordinator-General (OCG).

Under the Development Scheme, the Project is mapped within the Infrastructure Corridors Precinct, which is intended for the continued operation and establishment of linear infrastructure, including utility services, to service land uses within the Townsville SDA. The Project has been sited within this precinct to achieve co-location with other existing linear infrastructure and to align with the planned land use intent of the Infrastructure Corridors Precinct.

This application relates only to the clearing of native vegetation within the Townsville SDA as made assessable under the Development Scheme.

1.1 Project Background

TCC commenced the planning and design for a duplication of the existing 675 millimetre (mm) diameter nominal (DN675) asbestos cement (AC) EOPM in 2015. The pipeline was aligned within a combination of the Powerlink Queensland (PLQ) easement and state-controlled road corridor from Sixth Street (east), South Townsville, through to the intersection of Racecourse Road and Southern Port Road.

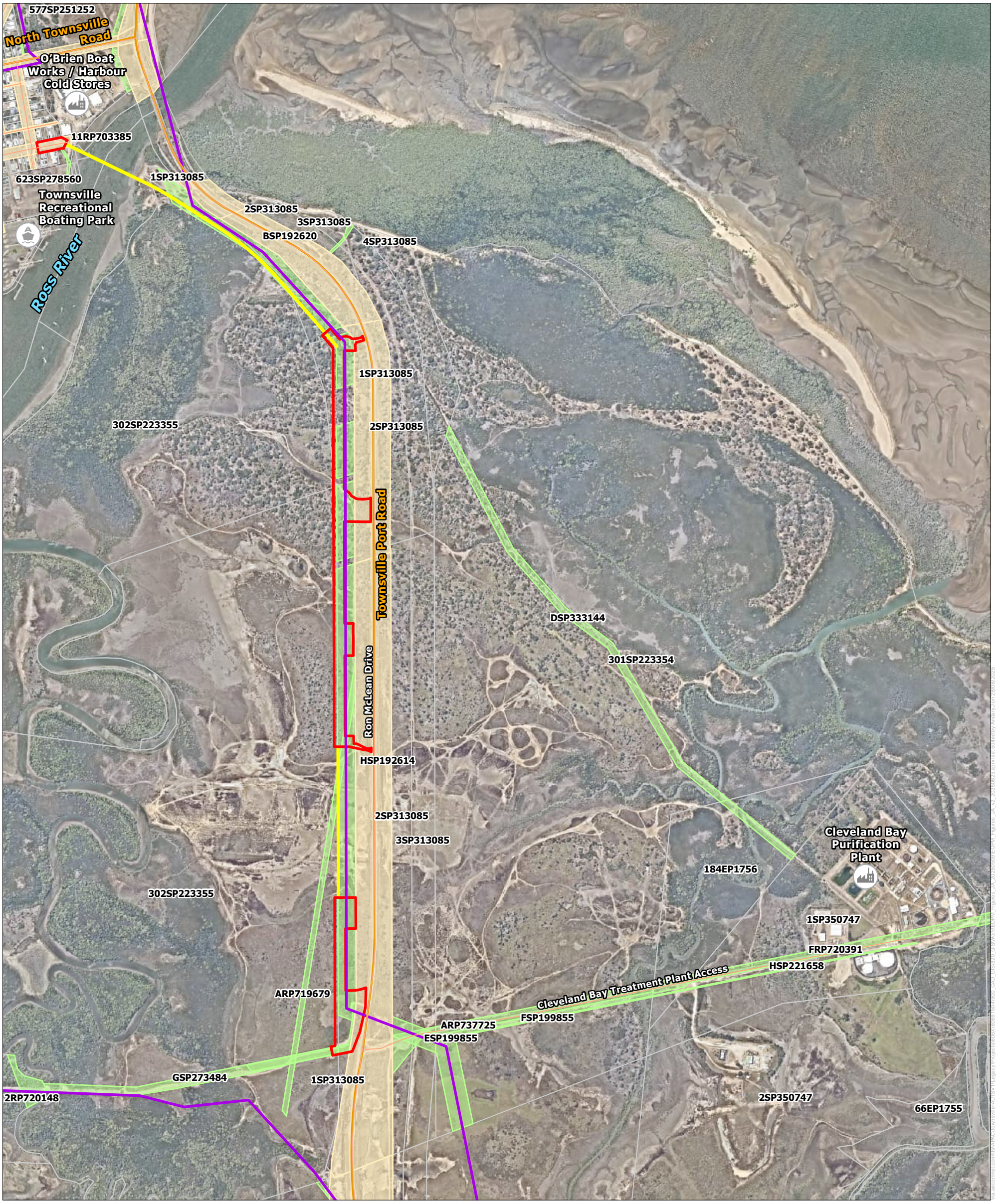
The duplication design comprised a DN710 high-density polyethylene (HDPE) pipe that would be constructed via conventional open trenching in open spaces and under roads. Horizontal Directional Drilling (HDD) would be employed at the crossing of Ross River and micro tunnelling (reinforced concrete enveloper) would be employed at state-controlled or high-traffic roads.

TCC undertook a condition assessment of the existing EOPM, identifying that the pipeline between the Ross River crossing and CBPP is in poor condition, requiring significant renewal works. The existing EOPM is situated within a privately owned easement, which inhibits TCC's rights to access the pipeline. The existing EOPM is also significantly impacted by tidal waters and is frequently inaccessible where it is situated within sensitive, low-lying environments and native vegetation such as mangroves. While operational, the condition of the existing EOPM pipeline will continue to deteriorate, and the risk of an environmental impact becomes greater. Therefore, it was determined that the existing EOPM requires replacement (rather than duplication), with the existing infrastructure to be decommissioned.

A high-level alignment options assessment for the EOPM replacement was undertaken in 2022, which involved reviewing three potential alternatives from the 2015 design.

As design further developed, the pipeline was realigned within the far western portion of the Powerlink easement. The shift in alignment from the 2015 design was due to planning constraints identified through consultation with the Department of Transport and Main Roads (TMR) and PLQ. The replacement scheme also utilises the existing sewage pressure mains along Racecourse Road to transfer sewerage along the final leg to CBPP instead of constructing a new pipeline in that corridor, as was contemplated by the original (2015) proposal.

An overview of the Project Area, described as the Disturbance area and underboring, and nearby infrastructure is presented in Figure 1.



EOPM Replacement Project - SDA Development Application – Operational Work (Clearing of Native Vegetation)

Figure 1: Project Location and Local Infrastructure

Legend

- Disturbance area
- Under-boring
- Lot parcels
- Road parcel
- Easement
- Roads
- State Controlled Road
- Electricity Transmission Lines

AECOM

N

0 170 340 m

2.0 Application Particulars

As previously noted, this application seeks development approval for an SDA Development Application for Operational Works (Development Permit) for Clearing of Native Vegetation, to support the replacement of the existing EOPM infrastructure. Table 1 provides a summary of relevant details for the Project.

The completed SDA Application Form and SDA Properly Made Checklist are provided in Appendix A and Appendix B.

Table 1 Summary of Application Details

Applicant Name and Address	Townsville City Council c/- AECOM Australia Pty Ltd 103 Walker Street, Townsville, QLD 4810
Type of Approval Sought	SDA Development Application (Development Permit) for Operational Works for Clearing Native Vegetation.
Real Property Description	• Lot 1 on SP313085 (Freehold lot) • Ron McLean Drive (Road reserve – state-controlled road)
Registered Owner	• Lot 1 on SP313085 – Office of the Coordinator General • Ron McLean Drive – Department of Transport and Main Roads
Local Government Area	Townsville City Council
Assessment Manager	Office of the Coordinator General
Planning Instrument	*Townsville State Development Area Development Scheme 2019*
Development Scheme Precinct	Infrastructure Corridors Precinct
Existing Use	Existing road reserve, Ergon and PLQ transmission lines and Vacant / Vegetated Land
Proposed Operational Work	Clearing of native vegetation including 17,674 m² of Category B remnant vegetation
Owners Consent	OCG TMR

2.1 Owner's Consent

As per Schedule 2, Section 2 of the TSDA Development Scheme, the written consent of the landowner is required for all applications to be properly made (unless in limited circumstances surrounding the acquisition of land).

Consent has been obtained from the OCG as owner of Lot 1 on SP313085 and from TMR for Ron McLean Drive (refer to Appendix C).

Owner's consent is not required from the Department of the Environment, Tourism, Science and Innovation (DETSI) as the 'clearing of native vegetation' is not proposed over the portion of Lot 302 SP223355 that falls within the SDA (determined to be non-remnant vegetation that is not assessable).

2.2 Pre-lodgement

AECOM has been engaging informally with the OCG regarding the Project. The OCG acknowledged that an SDA Development Application for Operational Works (Development Permit) for Clearing of Native Vegetation is required for the Project. Preliminary correspondence with the OCG is enclosed (refer Appendix D).

2.3 Other Relevant Applications

A summary of other applications and permits relevant to the Project are outlined below:

- An *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Referral for the Project was lodged on 16 July 2025 to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) (Reference: EPBC 2025/02986). Assessment of this referral has been completed and a 'not-controlled action' referral decision was received for the Project on 28 August 2025, requiring no further assessment under the EPBC Act.
- A request for a Relevant Purpose Determination (RPD) under Section 22A of the *Vegetation Management Act 1999* has been sought for the clearing of native vegetation, subject to this SDA Development Application. The Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD) issued the RPD on 18 August 2025. Refer to Appendix H for further details.
- A separate Development Application for Operational Works involving Prescribed Tidal Works under the *Planning Act 2016* will be lodged with TCC. This application includes referral to the State Assessment and Referral Agency (SARA) and the Port of Townsville (further details provided in section 6.2.1.4). Pursuant to Section 48(6) of the *Planning Act 2016, a* Ministerial Determination was sought, with the Minister for DSDIP confirming that TCC would be the assessment manager for this application on 07 August 2025 (Reference: MC25/3010). The Prescribed Tidal Works application will be assessed concurrently with this SDA Development Application.

2.4 Supporting Documentation

The following technical reports and documentation are included in support of this SDA Development Application:

- Appendix A – State Development Area Application Form
- Appendix B – SDA Properly Made Checklist
- Appendix C – Owners Consent
- Appendix D – Pre-lodgement Email Correspondence
- Appendix E – Relevant Purpose Determination
- Appendix F – Ecology Technical Report
- Appendix G – 80% Design Drawings
- Appendix H – Assessable Development Plan
- Appendix I – Traffic Impact Assessment
- Appendix J – Acid Sulfate Soils Management Considerations
- Appendix K – Preliminary Construction Environmental Management Plan
- Appendix L – State Development Area Assessment Criteria.

2.5 Applicant Contact

The Applicant contact for this SDA Development Application is:

Alexandra Isgro
Principal Environmental Planner
AECOM Australia Pty Ltd
Phone: +61 432 632 567
Email: alexandra.isgro@aecom.com

3.0 Project Site Context

3.1 Location and Tenure

The Project begins in Sixth Street (east), at the intersection of the existing TCC Eastern Outfall Pressure Main and the Southern Port Road, 2 kilometres (km) south-east of the Townsville central business district on Ross Island. The alignment then crosses the Ross River, extending south adjacent to Southern Port Road, and connects to the Southern Suburbs Rising Main at the intersection of Southern Port Road and Racecourse Road (Cleveland Bay Treatment Plant Access Road). The replacement pipeline will be installed parallel to the existing EOPM and offset at a distance of 200-1500 m.

The overall EOPM Replacement Project applies to various lots; however, this application relates only to the lot and road parcel within the SDA that are detailed in Table 2. Tenure within and adjoining the Project Area is provided in Figure 2 for context.

The Proponent does not propose any land acquisitions for the purpose of the construction and operation of the Project.

Table 2 Tenure and Ownership

Land Parcels			Easements	
Lot on plan	**Tenure**	**Ownership**	**Description**	**Ownership**
Lot 1 on SP313085	Freehold	Office of the Coordinator General	Easement A on SP192616 Easement B on SP192620 Easement H on SP192614 Easement C on SP192619 Easement D on SP192615 Easement F on SP192615 Easement G on SP192615	PLQ
			Easement D on RP720391	TCC
			Easement J on SP286581	TCC
			Easement A on RP719679	North Queensland Electricity Board (Ergon Energy)
Ron McLean Drive / Townsville Port Access Road (TPAR)	State Controlled Road	Department of Transport and Main Roads	N/A	N/A

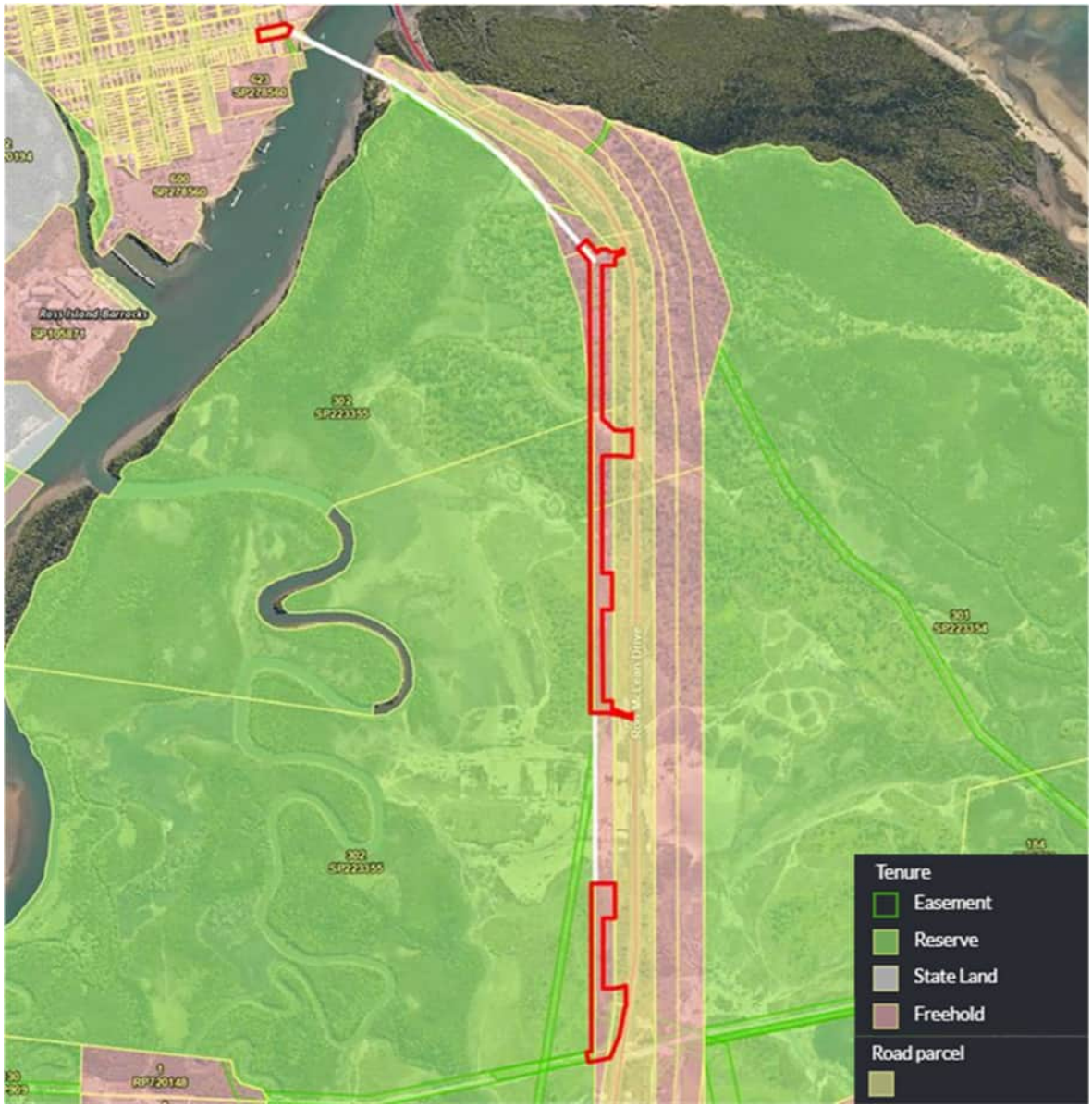


Figure 2 Tenure within and adjoining the Project Area (Red – disturbance footprint, White – boring activities)

3.1.1 Easements

All easements identified on Lot 302 on SP22335 and Lot 1 on SP 313085 are 'easement in gross'. An 'easement in gross' is an easement where there is a burdened lot only and is typically used by public utility and local government entities for drainage, water, sewer and electricity supply. In accordance with the Department of State Development, Infrastructure and Planning (DSDIP) guide on owner's consent, *"the entity with the benefit of the easement is not the owner of the property; consequently, the consent of the entity to an application is not required*".

Furthermore, as this application does not include or require a Development Permit for Building Work, consent from the registered easement holder is not required prior to the approval being issued.

3.2 Previous disturbance

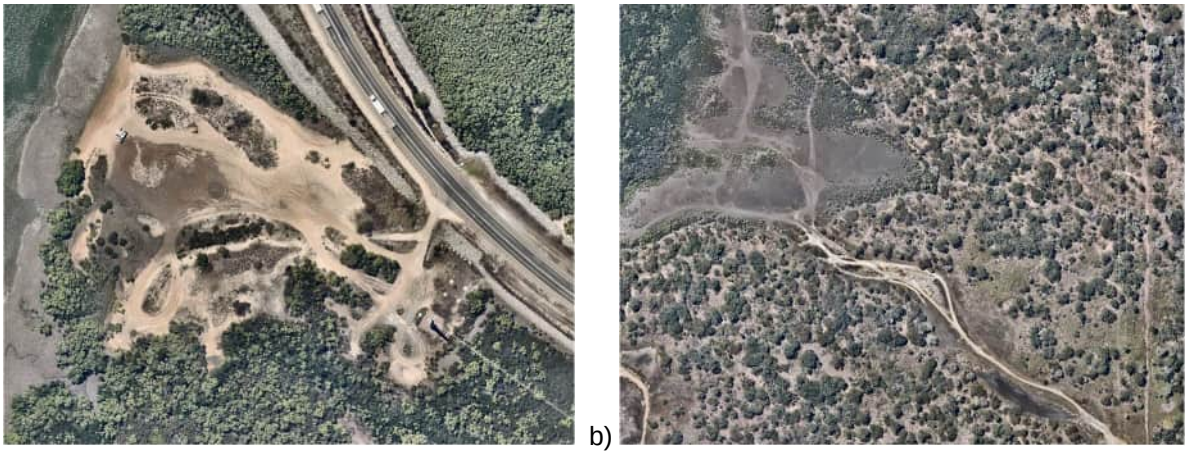
The Project alignment south of Ross River has been subject to high levels of disturbance as result of cleared corridors for community resource infrastructure. In addition, these lots are frequently utilised by the general public for recreational activities, including four-wheel driving, which results in disturbed surface soils and destruction of native vegetation and weed incursion.

The area also has a history of being used for illegal dumping of refuse and waste. An article from ABC News discussing this matter with input from the local DESTI ranger was released in October 2022. The ranger quoted in the article that 140 tonnes of waste had been removed from the TPAR reserve within recent years, including whole vehicles, tyres and commercial waste. The article can be found here: Authorities slam 'disgusting' illegal dumping as rubbish piles up in Townsville - ABC News.

A 2023 media release from the Department of Environment and Science (DES) announced a plan to work jointly with TCC to address illegal dumping in the Townsville Port Access Reserve. The media release noted that Penalty Infringement Notices were being issued to prevent further illegal dumping in the Townsville region. The media release can be found here: Crackdown on illegally dumped waste - Department of Environment and Science.

Aerial imagery of previous disturbances at the Project Area and the associated chainages (CH) are shown in Plate 1 below.

a) b)



c)

Plate 1 Disturbance of the EOPM Project Area (*a) CH 300, b) CH 1400, c) CH 2400*)

3.3 Surrounding Land Uses

The Project alignment is wholly contained within the TCC Local Government Area (LGA). The Project alignment located at Sixth Street East, South Townsville, is characterised by a suburban residential area. The Project alignment to the south of the Ross River (located on Ron Mclean Drive) is largely vacant, undeveloped land in an open space characterised by marshes and wetlands, including sections of nature conservation areas and grazing native vegetation.

The Project alignment to the south of the Ross River intersects the Townsville SDA declared under the *State Development and Public Works Organisation Act 1971*. The Townsville SDA is dedicated to industrial development and contains a range of zoning to guide the development of land under the Development Scheme.

3.4 Existing Infrastructure

The Project will be constructed alongside the following forms of infrastructure:

- State-controlled roads (state transport infrastructure)
- Water infrastructure
- Powerlink easement and Ergon easement.

The Project alignment crosses two existing Infrastructure Designations (formerly known as Community Infrastructure Designations) as follows:

- Townsville Port Eastern Access Corridor, gazetted in 2003 for the Department of Transport and Main Roads (TMR).
- Townsville South to Townsville East 132 kilovolt (kV) transmission line, gazetted in 2006, for PLQ.

The gazettal for the Townsville Port Eastern Access Corridor was made in 2003 for rail infrastructure. TMR has been consulted on the planning for the Corridor and on obtaining the necessary permits under the *Transport Infrastructure Act 1994* for the construction and operation of infrastructure associated with TMR-owned land and infrastructure.

The gazettal for the Townsville South to Townsville East 132 kV transmission line was made in 2003 for electricity infrastructure. The infrastructure subject to this designation has been constructed and operated and maintained by PLQ. PLQ has been consulted, and a co-use approval has been obtained in principle, subject to conditions. Any necessary approvals under the *Electricity Act 1994* will be obtained before construction.

The Project alignment also traverses an Ergon easement over Lot 1 on SP313085. The AECOM engineering team has initiated communications with Ergon to discuss the infrastructure in their easement and how the Project may interact with it.

Infrastructure associated with the Project will not be constructed in any part of the TMR Ron McLean Drive corridor; however, some minor vegetation clearing is required within the corridor to allow for site access during construction.

3.5 Topography, Geology and Soils

The Project is situated within the Brigalow Belt Bioregion, specifically in the Townsville Plains subregion. This area includes the coastal flats of the Ross, Black, and Bohle rivers, originating from the eastern slopes of the Hervey Range. The Project alignment occurs within flat tidal areas.

The area's geology and soils generally consist of estuarine deposits, with dominant soils including alluvium, sand, and miscellaneous unconsolidated sediments (silt, mud and minor salt). The Australian soil classification (ASC) has identified Hydrosol and Tenosol as the dominant soil types of the Project Area.

A search of the Environmental Management Register (EMR) and Contaminated Land Register (CLR) has been completed for the Project. These searches have confirmed that Lot 1 on SP313085 is not listed on the EMR or CLR for contaminated soils.

3.6 Acid Sulfate Soils

The Project Area has been mapped within high probability (>70%) areas of acid sulfate soils (ASS). Areas with high probability of ASS occurring are present in low-lying regions, including the mangroves and claypans along the Project alignment. These areas generally align with areas designated for HDD, which will minimise the potential for encountering ASS. A further investigation on ASS was conducted by Douglas Partners in 2023 and reported potential acid sulfate soil (PASS) is present within the maximum investigation depths (refer Appendix J). An Acid Sulfate Soils Management Plan (ASSMP) will be required to be developed as part of the Contractor's Construction Environmental Management Plan (CEMP). As part of the preparation of the ASSMP, the Construction Contractor will be required to complete a supplementary ASS Investigation to collect sufficient data to inform construction risk and management.

3.7 Flora and Fauna

3.7.1 Fauna

Desktop assessments conducted for the Project Area identified 94 threatened fauna species listed under the EPBC Act or NC Act as potentially occurring within the Project, which includes 63 migratory species. Field assessments conducted for the Project identified eight threatened or migratory fauna species within the Project Area, as outlined in the Ecology Technical Report (Appendix F).

A further 44 conservation-significant species and 40 migratory species are considered to potentially occur within the Project Area. Appendix F provides a detailed breakdown of the likelihood of species occurring at the Project Area. Fauna habitat in the broader study area primarily comprises grassland or forbland, mangrove forest and wooded areas associated with the sand berms (see Appendix F).

3.7.2 Flora

Desktop and field investigations for the Project Area have been conducted and are outlined in Appendix F. Desktop reviews indicated the potential presence of 15 conservation significant flora species within 20 km of the Project Area, however field investigations did not identify any conservation significant species on-site. Although not identified, *Paspalidium udum*, is considered likely to occur within the Project Area as it is known to be a cryptic species difficult to identify with known populations in similar habitats nearby.

The vegetation within the locality is generally indicative of low-lying coastal estuarine and tidal flats consisting of a range of terrestrial and marine grasses, mangrove species and wooded areas associated with the sand berms.

3.7.2.1 Regulated Vegetation and Essential Habitat

The Regulated Vegetation Management Map administered by DNRMMRRD identified the Project Area as containing the following vegetation categorisations under the *Vegetation Management Act 1999* (VM Act):

- Category B (remnant vegetation), predominantly present in areas of mangrove, vegetated woodland and saltpans
- Category R (reef-regrowth watercourse vegetation), mapped on the north and south banks of Ross River.
- Category X vegetation to the centre and north of the alignment.

It also crosses essential habitat and the Ross River, which is a VM-mapped watercourse; however, this watercourse will not be impacted due to the HDD under-bore beneath it.

Field surveys were conducted which found that mapped regulated vegetation categories across the Project Area were generally accurate. Field surveys have verified the following regulated vegetation on-site. The following minor adjustments in the mapping of regulated vegetation within the Project Area have been made based on ground-truthed data:

- The area of Category X vegetation mapped in the centre of the alignment was found to be remnant.

- The area of Category R vegetation to the northern side of the Ross River was found to be non-remnant, consisting of concrete and rock cladding.
- Non-remnant vegetation was mapped along the cleared access tracks, roads reserve, powerline easements and fence lines. The Southern Port Road was mapped as Category B, this area and several other easements and access tracks were ground-truthed as non-remnant.
- Category B vegetation was ground-truthed within the remainder of the Project Area except on the south bank of Ross River adjacent to the Southern Port Road, where the pipeline crosses the river, which contains Category C (associated with high-value regrowth RE 11.2.2).

The Project area also includes mapped essential habitat for the following species:

- eastern curlew
- Western Alaskan bar-tailed godwit
- great knot
- estuarine crocodile.

These areas are mapped throughout the Project area to the southern side of the Ross River.

A total area of 17,674 m² of Category B remnant vegetation is required to be cleared within the portion of the Project Area that intersects with the Townsville SDA, and is subject to this SDA Development Application. This area is illustrated below in Figure 3, with mapped Category B vegetation (shown in blue) and essential habitat (shown in blue hash).

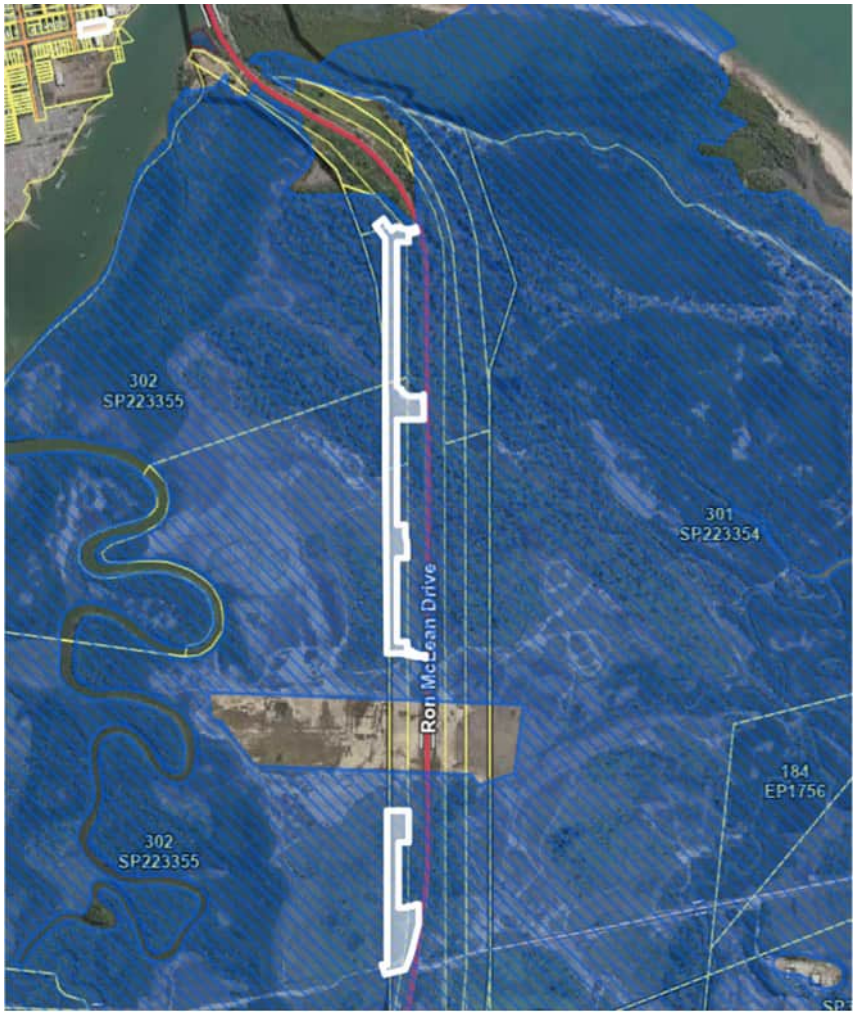


Figure 3 Category B Regulated Vegetation and Essential Habitat (Source: QLD Globe)

3.7.2.2 Vegetation communities

Remnant vegetation located within the Project Area was identified through field surveys to support the regional ecosystems (RE) 11.1.1,11.1.2, 11.1.4, and 11.2.5 which are listed as Least Concern under the VM Act and RE 11.2.2, listed as Of concern. These REs are associated with the following vegetation communities:

- Bare saltpans and / or areas of sparse forblands and / or tussock grasslands.
- Closed forests and low closed forests dominated by mangroves.
- Complex of open shrublands on strand and foredunes.
- Open forests and low open forests in seasonally inundated swamps.

Of the REs confirmed as present across the Project Area, a total area of 17,674 m^2 of remnant RE 11.2.5 has been identified as requiring clearing within the Townsville SDA. RE 11.2.5 is described as *Corymbia-Melaleuca* woodland complex of beach ridges and swales. This RE was identified as offering scattered shelter opportunities, such as hollows which would be suitable for arboreal species including the brushtail possum. The eucalypt canopy provides foraging resources for birds and bats. The community has a sparse structural complexity which includes canopy, subcanopy, shrubs and grasses with a ground and shrub layer dominated by exotic species. RE 11.2.5 identified within the Project Area was typical of the Melaleuca woodland on alluvial plains shown in Plate 2d below.

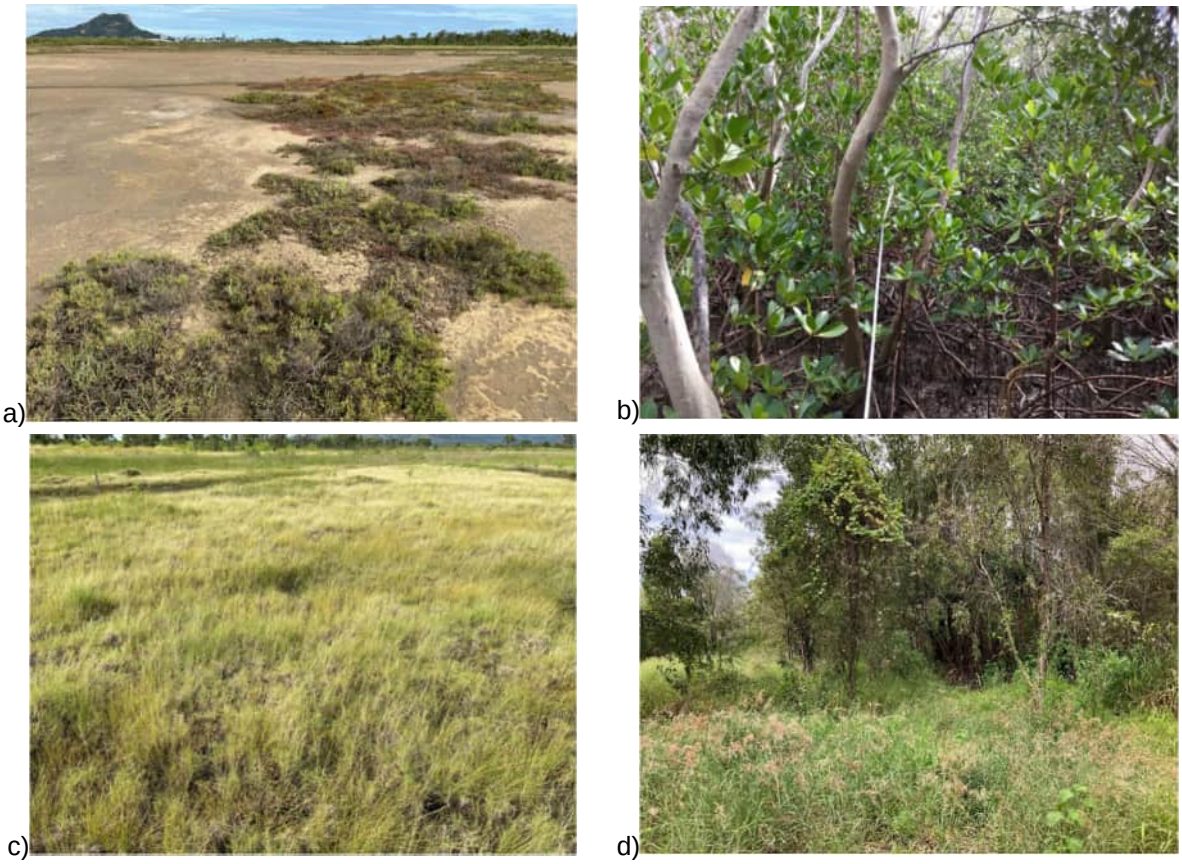


Plate 2 Vegetation Communities within the Project Area (a) Bare saltpans, b) Closed forests and low closed forests dominated by mangroves, c) *Sporobolus virginicus* grassland, d) *Melaleuca* woodland on alluvial plains)

3.8 Hydrology

The Project Area is located within the Ross River catchment, which covers an area of 1,707 km^2. The coastal floodplain area of the Ross River traversed by the Project contains the geomorphic features of mangrove muds and tidal flats. The southern portion of the Project Area is situated entirely within a coastal management district (CMD).

The Project Area is mapped predominantly within a major tidal waterway for waterway barrier works under the *Fisheries Act 1994*. However, due to the HDD construction methodology under the Ross River, the Project does not constitute permanent or temporary waterway barrier works. An assessment of the mean high-water springs and highest astronomical tidal levels was undertaken as part of ecological investigations, which was used to support marine plant assessments.

3.9 Heritage

3.9.1 Aboriginal Cultural Heritage

A search of the Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism (DWATSIPM) database indicated there are three Aboriginal Parties within the Project Area, including:

- Gurambilbarra Wulgurukaba Mada Claim
- Gurambilbarra Wulgurukaba People
- Bindal People #2

One Cultural Heritage Body is present for the Project Area, which is the Gudjuda Reference Group Aboriginal Corporation (CHB020009). The cultural heritage database indicates that two Cultural Heritage Management Plans (CHMPs) have previously been sought within or near the Project Area (CLH000215 and CLH000730), which were registered in 2005 and 2008. No heritage-listed sites within 1 km of the Project Area are registered on the DWATSIPM database; however, the Great Barrier Reef, which is a National Heritage Area and World Heritage Area, is located within 800 m of the Project Area at its closest point.

Consultation has taken place intermittently, and as required, since 2015 between TCC and the Bindal People #2, the relevant Aboriginal party for the Project. This consultation has culminated in the agreement and execution of a Cultural Heritage Management Agreement (CHMA) between TCC and the Bindal People #2, which was formally executed on 18 November 2022 in accordance with the *Aboriginal Cultural Heritage Act 2003* (ACHA). A copy of the CHMA can be provided on request.

Since the execution of the CHMA, TCC has been providing Project updates to the Bindal People #2 to keep them informed of the progress of the works and any changes to the TCC Project team. TCC will continue to provide updates to the Bindal People #2 as the Project advances through the next stages – that is, completion of design and commencement of construction.

3.9.2 Local and State Historic Heritage

A search of the Townsville City Plan and Queensland Heritage Register has determined that the Project is not located in proximity to any sites listed on the Queensland Heritage Register under the *Queensland Heritage Act 1992* or the Local Heritage Register under the Planning Scheme. The closest features of historic heritage to the Project Area are approximately 300 m from the Project Area and include the Victoria Hotel.

3.10 Native Title

The proposed new sewage pressure main (the “future act”) is appropriately described as a “sewage facility” in terms of S24KA(2) of the *Native Title Act 1993* as it is to be operated for the benefit of the general public.

The new sewage pressure main is not intended to prevent native title holders from having reasonable access to land or waters in the vicinity of the pipeline except while it is being constructed and/or for purposes of health and safety.

A “Notice of Intended Future Act” letter was issued to the North Queensland Land Council on 6 February 2025, inviting the Bindal People #2 and the Gurambilbarra Wulgurukaba People to comment on the Project. No comments were received by either party.

4.0 Proposed Development

4.1 Project Overview

The EOPM Replacement Project involves the construction of 3 km of main trunk sewerage pressure main, which will convey wastewater to TCC's Cleveland Bay Sewage Treatment Plant.

The Project will be delivered in the following sequence :

- Preparatory and site establishment works comprising:
  - Construction of access tracks, laydown areas
  - Clearing and grubbing
  - Erosion control and stormwater management
- Under boring the Ross River, the area of mangroves on the south bank, and an area of mudflat in the southern section of the alignment, using HDD, which includes development of launch and receival pits.
- Open trench construction for the remainder of the new pipeline.
- Backfilling of the open trench following pipework installation.
- Permanent access track construction, approximately 4 m wide, adjacent to the trenched section of the pipeline for future maintenance activities.
- Rehabilitation works to reinstate the topsoil over the pipeline to pre-existing levels, allowing for the natural regeneration of native grasslands and forblands. Natural regeneration will be monitored, and if it is unsuccessful, additional management measures will be considered.

Where the crossing of sensitive ecological and water features could not be avoided through design, HDD will be utilised to avoid disturbance to the surface based on ground conditions and other constructability constraints. The HDD indicative bore pathways include:

- Across Ross River and the mangroves on the south bank (approximately 905 m section).
- An area of mudflats in the southern section of the alignment (approximately 420 m section).

HDD construction techniques have been adopted to minimise environmental disturbance, particularly to sensitive areas identified during environmental field assessments. The HDD extents will equate to 44% of the total pipeline length, which is 3,003 m, significantly minimising environmental disturbance and vegetation clearance.

AECOM is completing the detailed design for the Project and has reached the 80% design stage. A set of the current design drawings is provided in Appendix G for reference.

The Project works that are assessable under the Townsville SDA Development Scheme only relate to the clearing of native vegetation within Townsville SDA. The assessable development plan is provided in Appendix L.

4.2 Design and Construction Methodology

The Project alignment has been selected to maximise the use of existing cleared and disturbed areas to achieve avoidance and minimisation of impacts on vegetation where possible. The construction methodology is anticipated to include the following:

- A 30 m wide construction corridor to support all activities where open trench installation is proposed (refer to typical section within Figure 4).
- Alignment of the Project within 2 m of the western boundary of the existing PLQ easement.

- Access for construction on the northern side of the Ross River will be made off existing local roads. Access for construction south of the Ross River will generally be made off existing access tracks that branch off the Southern Port Road.
- For both open trench and HDD sections, stringing of pipes for welding and installation will be facilitated within the pipeline construction corridor (disturbance footprint).
- Trench design for the specific site conditions will be in accordance with Australian Standards and local codes, including the Cairns, Townsville and Mackay Water Alliance Design and Construction Code (CTM Code) with depths to 2.5 m in soft muds and sandy soils requiring benching/battering back.
- Pipe material for sections installed via HDD and open trench will be HDPE.
- Pipe sizing will be generally as follows:
    - Sections installed by HDD: DN800 HDPE SDR9 HDPE Pipe (internal diameter of 616 millimetres (mm))
    - All other areas: DN900 HDPE SDR11 PE Pipe (internal diameter of 732 mm).

4.2.1 Open trench methodology

Open trenching is a common and well-managed construction methodology that can enable the quick installation of pipe sections. The open trench methodology will include:

1. Conduct pre-construction site inspection of soil conditions to confirm excavation stability for trenching. Confirm the long-range forecast and schedule the work to occur outside of high-intensity rainfall periods.
2. Conduct pre-clearance surveys for fauna and flora presence by a suitably qualified specialist and establish environmental controls, including marking no-go zones and installing erosion and sediment control devices.
3. Excavation of a trench during dry conditions.
4. Install the pipe sections, backfill the trench and place geotextile pillow foundation, with all reinstatement works commencing as soon as practicable.
5. Backfill details will be designed to suit the existing ground conditions and include granular materials and backfill. Trench backfill materials will be pervious and will not prevent the movement of water during high tides. Backfill material will be finished at the existing surface level and will not have any impact on water conveyance.

Trenching works are scheduled to occur over multiple months, to suit the pipeline installation (welding, installing, backfilling) rate. The weather will be closely monitored so the selected contractor can prepare the site if rainfall is forecast or imminent.

4.2.2 Construction corridor width

A 30 m wide construction corridor will be necessary for the open trench sections of the pipeline. This has been determined through careful consideration of the activities required in the corridor, which will comprise:

- Excavation of the trench to depths of around 2.5 m in soft muds and sandy soils, which will require benching/battering back and clearances for the zone of influence of the excavation. Trench dewatering equipment will also be required to maintain suitable pipe laying conditions and trench integrity to prevent collapses.
- Allowance for a permanent access track to service the pipeline during the operational phase.
- Width for excavator and truck movements.
- Stringing and welding of the pipeline adjacent to the trench for the subsequent placement in the trench.
- A windrow of the topsoil, which will be placed adjacent to the benched excavation.
- The excavation spoil stockpile, which may require treatment for acid sulphate soils.

The 30 m wide construction corridor is necessary due to the anticipated soft ground conditions and the safety considerations of working around the excavation.

A cross-section of the expected construction approach is illustrated in Figure 4 below.

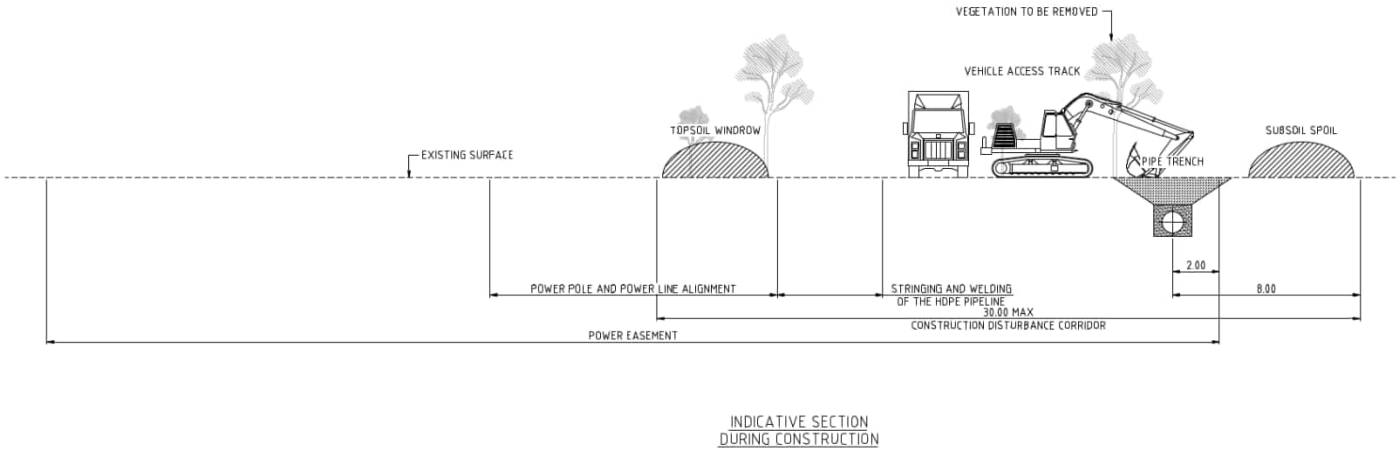


Figure 4 Open trench construction typical section

4.2.3 Permanent access tracks

Permanent access tracks within the pipeline corridor, where open trenched, are required to enable maintenance inspections along the pipeline by TCC once operational. The permanent access track will be used for regular maintenance of scour, isolation and air valves. The typical formation will comprise a 4 m wide, unsealed access track offset 2 m from the pipeline centreline.

The access track will remain clear of vegetation permanently; however, all other areas within the Project corridor will be reinstated with topsoil to allow for the natural regeneration of native grasslands and forblands.

4.3 Timing of Works

TCC anticipates to commence construction works in mid-2026 and anticipates the timeline for completion by late 2026 to early 2027.

4.4 Operation of Project

Once commissioned, the Project will operate in accordance with TCC's Standard Operating Procedures and the specific Recycled Water Management Plan being developed for the scheme. The Townsville Water Directorate of TCC will solely operate the proposed infrastructure as part of its distribution network.

Future maintenance works are likely to include inspections of pipeline appurtenances (e.g., air valves or valves) twice yearly. If a break or leak occurs in the future, emergency repairs would be required.

4.5 Assessable Development

4.5.1 Clearing of Native Vegetation within TSDA

Field surveys of the Project Area were conducted by the AECOM ecology team in February 2023. These surveys ground-truthed the REs within the Project Area and are presented in Figure 3 of the Ecology Technical Report (refer to Appendix F). Results of these surveys are discussed in Section 3.7.1 of this report.

To facilitate the delivery of the Project, the clearing of 17,674 m² of Category B Least Concern native vegetation within the Townsville SDA is required, which is regulated under the VM Act (see Table 3).

The assessable vegetation clearing area includes the ground-truthed RE 11.2.5 that exists within the open trench sections of the Project Area within Category B areas (refer to Assessable Development Area within Figure 5).

Additional vegetation clearance is proposed outside the SDA, which equates to 3,062 m² (refer to Table 4). This vegetation clearance is not assessable as part of this SDA Development Application.

Table 3 SDA assessable vegetation clearing in the Project Area

Vegetation community	Area to be cleared (SDA area only)
Category B remnant vegetation containing RE 11.2.5	17,674 m^2
Total	**17,674 m^2**

Table 4 Assessable vegetation clearing in Project Area (not within SDA)

Vegetation community	Area to be cleared (overall)
Category B remnant vegetation containing RE 11.2.5	3,062 m^2
Total	**3,062 m^2**

The assessable vegetation clearing areas presented above exclude the mangroves, non-woody herbage and grassland regional ecosystems (RE 11.1.1 and RE 11.1.2) as ground-truthed through AECOM ecological investigations. They also exclude non-remnant areas as ground-truthed by AECOM and areas that contain existing infrastructure (e.g., electricity towers, and tracks) and are areas for essential management. This approach aligns with advice received from DNRMMRRD while seeking the relevant purpose determination for the Project.

The sections of the pipeline that will be installed using HDD methods will not involve vegetation clearance.

The clearing of Category B remnant vegetation cannot be reasonably avoided. However, the design of the Project seeks to reasonably avoid and minimise vegetation clearing along the corridor by:

- Ensuring the proposed infrastructure is strategically located alongside an existing infrastructure corridor, including Southern Port Road / Ron McLean Drive, the existing EOPM and a Powerlink 132 kilovolt transmission line corridor. The corridor shows evidence of fringe impacts and disturbance as a result of this infrastructure, and illegal dumping and recreational vehicle use continue to this day.
- The adoption of HDD (trenchless) construction methods for 44% of the pipeline length to significantly reduce surface impacts in the more environmentally sensitive locations.

4.5.1.1 Clearing method

The clearing of native vegetation is likely to be undertaken by a bulldozer, with a grubbing attachment to remove stumps and roots.

4.5.2 Relevant Purpose Determination

In accordance with Schedule 10, Part 3, Division 1, Item 4 (1) of the Planning Regulation, operational work that is the clearing of native vegetation on prescribed land is prohibited development to the extent the work -

a. Is not for a relevant purpose under the Vegetation Management Act 1999, section 22A; and

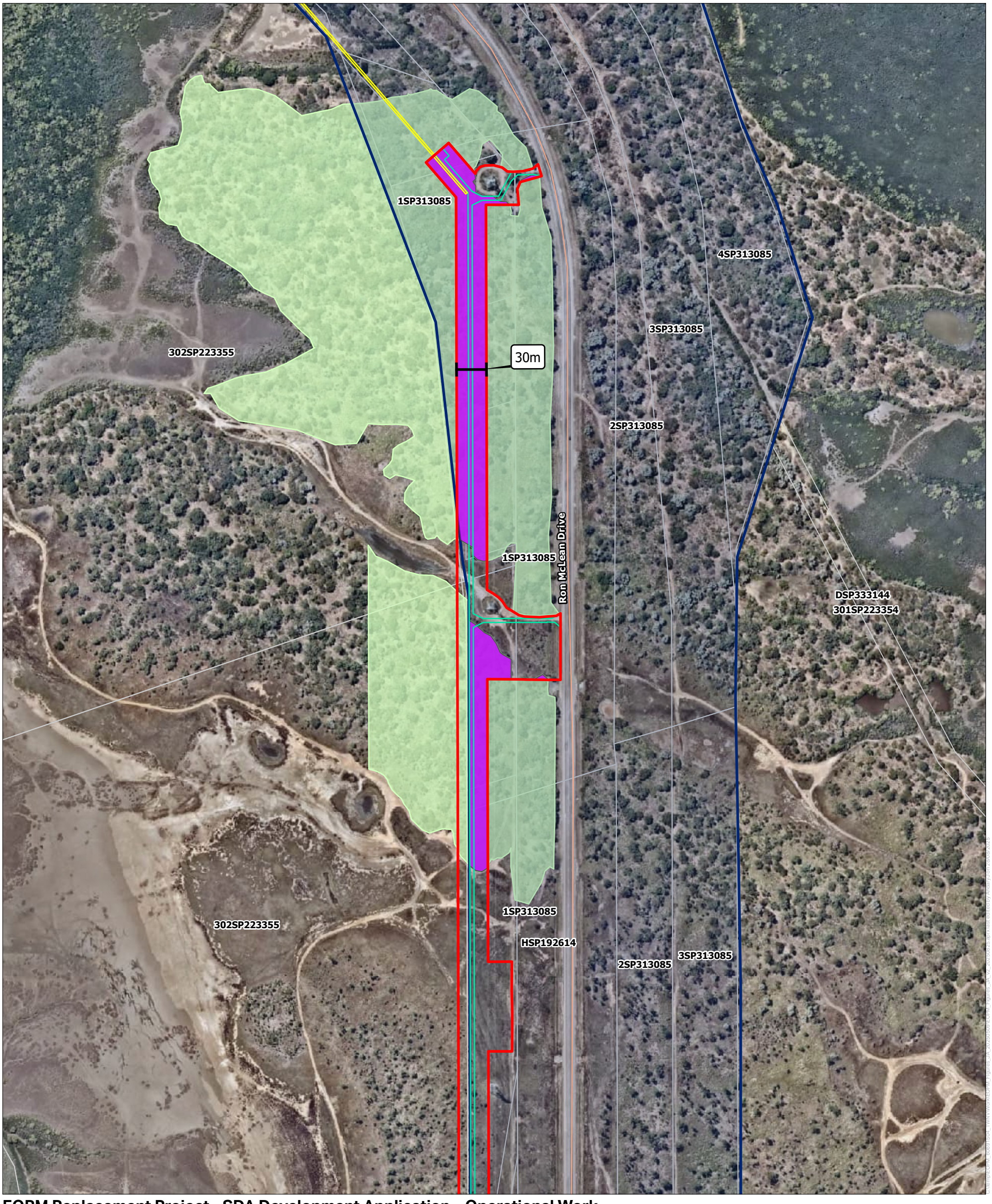
b. Is not exempt clearing work; and

c. Is not accepted development under schedule 7, Part 3, Section 12.

On 18 August 2025, DNRMMRRD issued a RPD for the Project, which is provided in Appendix E. DNRMMRRD confirmed that the proposed development to clear vegetation meets the relevant requirements of section 22A of the VM Act, including being a relevant infrastructure activity, and subsequently approved a relevant purpose determination plan (2025/001504). The RPD is valid for 2 years until 19 August 2027.

4.5.3 Accepted Development Vegetation Clearing Code

As per Appendix 2 of the *Accepted Development Vegetation Clearing Code (ADVCC) Clearing for infrastructure*, sparse vegetation has a 20 m clearing width limit and a 2 ha clearing area limit, which applies to RE 11.2.5 within the Project Area. The proposed clearing cannot comply (as a whole) with the ADVCC, as a 30 m wide corridor needs to be cleared; therefore, a Development Permit for clearing native vegetation is required.



EOPM Replacement Project - SDA Development Application – Operational Work (Clearing of Native Vegetation)

Figure 5: Operational Work for clearing native vegetation within the TSDA

Legend

- Disturbance Area
- Under-boring
- Permanent access tracks
- Lot parcels
- Roads
- Townsville SDA
- Ground-truthed Regional Ecosystem 11.2.5

Intersecting Disturbance Area

- Clearing Native Vegetation (17,674m^2)

AECOM

N

0 60 120 m

A separate Development Approval for Clearing Native Vegetation is being sought for the Project's proposed vegetation clearing outside the TSDA in accordance with the Planning Act 2016. Only the vegetation clearing that is proposed within the TSDA area forms part of this Development Application

5.0 Impact Assessment

5.1 Avoidance

The Project has been designed to avoid, to the greatest extent possible, areas of ecological value. This was achieved using the following approaches developed as part of the Ecology Technical Report (see Section 8.1 of Appendix E):

- Prioritising the co-location of the new pipeline alongside existing disturbance such as the Southern Port Road, powerline easement and existing EOPM infrastructure.
- The construction methodology will include HDD at areas with high ecological value. Recommendations made in an earlier design phase to increase the length of under-bored pipeline to avoid environmental impacts have been implemented in the latest design.

The initial design included only 300 m of HDD in the Ross River section, which has now increased to over 900 m, avoiding impacts to high-value mangrove and forbland vegetation as well (see Section 8.1 of Appendix E). Increasing the length of HDD has also reduced the direct impact area by approximately 1.5 ha. The construction methodologies for HDD and open trenching have in-built mitigations within their procedures to avoid and minimise potential impacts from the activities as much as possible. Any residual risks linked to the construction phase will be managed through the implementation of a final CEMP by the selected construction contractor. A preliminary CEMP has been prepared by AECOM for the Project and is provided in Appendix K.

5.2 Vegetation Clearing

Mitigation measures to reduce the impacts of vegetation clearing include the following and have been informed by the Ecology Technical Report (see Section 8.2 of Appendix E):

- Topsoil will be removed, stockpiled and reapplied in the same land zone from where it was removed for any rehabilitation works.
- Ensure the development of the design minimises clearing in sensitive environments, specifically riparian areas and areas ground-truthed as remnant to the greatest extent possible.
- Construction workers will be inducted and trained to ensure they are aware of vegetation management measures including:
    - Clearing requirements and penalties (for over-clearing)
    - Exclusion zones
    - Sensitive areas
    - Approval conditions.
- If threatened flora locations are identified during construction and are to be retained within the disturbance footprint, they will be clearly marked out within the site induction. Further, the siting of infrastructure will avoid areas that may contain threatened flora species as a priority and where possible.
- A weed management program will be implemented. This includes the treatment of weeds prior to clearing and management of stockpiles (storage areas) to avoid the spread of weeds.

5.3 Fauna habitat fragmentation

While the extent of vegetation clearing for the proposed works will mean that impacts to fauna and their habitat will occur, it will be managed through a range of measures as outlined in Section 8.2 of the Ecology Technical Report (Appendix E) including:

- Engaging suitably qualified fauna spotter-catchers to undertake pre-clearance habitat searches and be present during vegetation clearing activities to minimise fauna harm (Section 8.2 of Appendix E).

- Clear guidance in the final CEMP on areas to be cleared and retained, methods for clearing, role of the spotter-catcher and other relevant environmental protection matters.
- Identification and mapping of clear no-go zones to avoid disturbance to areas of sensitive vegetation and habitat, such as identified nests, potential breeding places, trees that are to be retained and important microhabitat for conservation significant species (Section 8.2 of Appendix E). Important microhabitat that will be avoided wherever possible including hollow bearing trees.
- Identification and clear marking of habitat trees that can be retained without compromising safety.
- Considering relocation of habitat features such as felled trees and logs to other areas where practical to provide microhabitat for fauna.
- Maintaining connectivity and fauna passage will be a priority at each design stage going forward. This will include staging works such that temporary barriers to fauna movement during construction (i.e. trenches) are restricted to smaller portions of the disturbance footprint at any one time (Section 8.2 of Appendix E).
- Planning and conducting vegetation clearing in a sequential manner, to allow fauna to escape to adjacent native vegetation.
- Minimising impacts to fish passage, migration and movement barriers where possible during design and construction of the instream works. Waterway works should be paused or completed, and bunds removed during highest astronomical tide.
- A Weed and Pest Management Plan will be developed and included in the final CEMP, which will include the control of terrestrial and aquatic weeds and pests.

5.4 HDD management

An HDD drilling plan will be developed prior to works commencing and detail a pre-determined bore path based upon the constraints of each location such as vegetation and root structures, water depths, geotechnical characteristics, and existing infrastructure. A Trenchless Assessment Report has been prepared for the Project by Trenchless Advisor (2024). This assessment verified the constructability of HDD and the risk of a hydro-fracture was low and could be managed through typical HDD methodology. The drilling fluid and excess cuttings will be tested to ensure it does not contain contaminates and will be disposed of at an appropriate off-site location.

Potentially impacts of HDD on ecological values has been avoided to the greatest extent possible through the location of entry and exit sites in existing disturbed areas and the analysis and mitigation of hydro-fracture risk in the Trenchless Assessment Report (Trenchless Advisor, 2024).

Mitigations that will be implemented during the use of HDD include:

- Establishment of entry and exit sites are to be in line with measures required for surface construction activities.
- Nearby sensitive areas will be identified by physical demarcation and/or signage.
- Additional geotechnical investigations will be conducted to refine the bore paths to avoid impacts to ecological values.
- Longer bore paths will be prioritised to ensure HDD activities are conducted through consistent and stable geotechnical material.
- Monitoring of downhole pressure to ensure hydrostatic pressure within the borehole does not exceed the soil's earth pressure to prevent hydro-fractures.
- Appropriate drilling fluid management to maintain flow back to entry and exit points to reduce risk of hydro-fracture in shallow soil cover and poor formations.

5.5 Traffic

A Traffic Impact Assessment (TIA) has been developed in response to advice received from SARA during the pre-lodgement meeting on 13 March 2025 to evaluate potential traffic impacts resulting from construction activities associated with the pipeline replacement and provide recommendations to mitigate the impacts (see Appendix H). The TIA has been prepared to evaluate potential traffic impacts on the State Controlled Road network and considers factors such as heavy vehicle movements, deliveries, and temporary access requirements to ensure road capacity, safety and amenity are appropriately managed.

The findings of the assessment demonstrated that the Project will have minimal impact on the traffic operation and road pavements of Ron McLean Drive (Townsville Port Road). A copy of the TIA prepared by AECOM is provided at Appendix I.

5.5.1 Site Access Impacts

There are four existing accesses to the Powerlink corridor along the west of Ron McLean Drive. It is proposed that these existing accesses are utilised during the construction phase and ongoing operation of the EOPM Project (see Section 2.3 of Appendix I). The construction phase is expected to require daily use of multiple access points for a relatively short time period (approximately 12 months) while the operational phase will have very low associated traffic movements (<1 per week) for the lifetime of the asset.

Based on the speed environment (being 110 km/h for access 1, 2 and 3 and 90 km/h for access 4), the required Safe Intersection Sight Distance (SISD) is approximately 300 m for access 1, 2 and 3 and 226 m for access 4 (see Sections 2.3 and 4.0 Appendix I). A site inspection revealed the following:

- Access 1 – There is an existing access to the Powerlink corridor located at approximately TMR Chainage 4.37 km (i.e. 4.37 km from the Townsville Port Road / Bruce Highway intersection). The available sight distances at the proposed access location in both directions were found to exceed the required 300 m distance.
- Access 2 – An existing access intersection with Townsville Port Road is located at approximately TMR Chainage 5.09 km, providing a link to the adjacent Powerlink infrastructure corridor. Field measurements collected indicated that the proposed access location has adequate sight distance of more than 300 m in both directions.
- Access 3—There is an existing access to the Powerlink corridor located at approximate TMR Chainage 5.78 km. This intersection operates in its existing form as a three-way priority-controlled (give-way) intersection, with priority given to Townsville Port Road. Based on field measurements taken at the site, adequate sight distances of more than 300 m were achieved in both directions.
- Access 4 –There is an existing access to the Powerlink corridor located at approximately TMR Chainage 6.23 km, which has been identified for potential use by the Project. Due to existing road geometry and vegetation, the sightlines were found to be less than the minimum 226 m requirement. The TIA recommends that this access not be used during construction.

A detailed assessment was undertaken to evaluate the construction impacts on the operation and safety of the Site Access / Townsville Port Road intersections. The assessment found the proposed Site Access / Townsville Port Road intersections are expected to operate satisfactorily under the forecast traffic conditions in 2026 (Section 2.3 of Appendix I). The SIDRA Intersection Analysis Software analysis revealed that during the AM and PM peak hour periods, Access 1, 2 and 3 all operated within acceptable limits of Degree of Saturation and Level of Service during their respective critical construction periods. As noted above, Access 4 is not recommended to be used for construction purposes due to the limited sight distance at this location. On this basis, it is concluded that the traffic impacts of the Project on the accesses can be considered minimal.

A swept path assessment was also undertaken to demonstrate that the largest design vehicle can enter and exit the subject site without impacting upon the through traffic on the Townsville Port Road (see Section 5.2.3 of Appendix I). The assessment revealed the swept path envelope is compliant at Access 1, 2 and 3, upon the condition that the Contractor upgrade the accesses to a rural access treatment as per Figure 7.4 of Austroads Guide to Road Design Part 4 (2023) and any supplementary TMR standards, including the Road Planning and Design Manual Volume 3 – Guide to Road Design (2024).

5.5.2 Traffic impacts

Traffic generated during construction activities associated with the Project Area was identified to be expected to primarily utilise the State-controlled road network, specifically Ron McLean Drive. Based on assumptions developed by the pipeline design team, it was identified that relatively low volumes of traffic were expected to be generated by the Project throughout the construction phase, with maximum or peak daily traffic movements in the order of 80 vehicles per day (see Section 5.2 of Appendix H). The construction period is anticipated to be the peak traffic generation phase of the Project.

The low volume of development traffic is anticipated to have a negligible impact on the operation of the relevant sections of the Ron McLean Drive due to the higher traffic volumes currently utilising these links. The increase in daily traffic volumes associated with the construction phase of the project did not exceed 5% of the background traffic volumes forecasted in 2026 (see Section 5.4 of Appendix H). These volumes were well within the capacity for a two-way, two-lane sealed rural road. As such it is expected that the impact of the Project on the operation of the surrounding Ron McLean Drive link can be considered minimal.

Turn warrant assessments were undertaken to establish potential turn warrant requirements for the proposed access intersections for the sites off Ron McLean Drive. The low volumes estimated at the accesses placed the warrant at the lower end of the Basic Left and Right Turn (BAL / BAR) Treatment requirement (see Section 6.1 of Appendix H).

The low traffic volumes anticipated, combined with the short-term timeframes of the construction works for each site (12 months), mean that the full provision of BAL / BAR treatments is not required. Based on this, the provision of a suitable rural access treatment, designed to accommodate the movements of the largest vehicle expected (19 m truck and dog vehicle), is considered acceptable to cater for the traffic volumes generated by the Project (see Section 6.1 of Appendix H).

Additional traffic management controls, such as advisory “truck turning” signage, can be provided on the Ron McLean Drive approaches to the intersections during the construction phase to further delineate the access locations and reduce the potential for conflicts between the construction traffic and opposing traffic (see Section 6.1 of Appendix H).

5.5.3 Pavement impacts

A preliminary desktop pavement impact assessment for the relevant road network was undertaken for the project's construction phase. The impact was identified to be negligible on the Ron McLean Drive, with the increase in pavement loading determined to be less than the 5% threshold. Therefore, mitigation measures are not required to address pavement impacts caused by the construction of the proposed Project (see Section 6.3 of Appendix H).

5.6 Construction Environmental Management Plan

TCC requires the Construction Contractor to develop a CEMP to manage potential environmental impacts from the construction. The CEMP will address key activities likely to have an environmental impact and require the implementation of strategies to protect and manage water quality, waste, flora and fauna, soils (including erosion and sediment), air quality and cultural heritage. The Construction Contractor’s CEMP will be informed by the Preliminary CEMP developed by AECOM to support this application (Appendix K).

5.6.1 Erosion and Sediment Control

As part of the Construction Contractor's CEMP, an ESCP will be developed to mitigate and manage impacts of erosion and sedimentation within the Project Area. The ESCP will include the following measures as outlined in the Preliminary CEMP (Table 19 of **Error! Reference source not found.**). Measures will be implemented prior to and during construction as well as during operation of the Project.

- The ESCP will include site-specific measures that consider soil type, weather, receiving environments to minimise risk and manage sedimentation or contamination from site.
- Site stabilisation products and measures will be used during extended construction works and landscaping will be completed as soon as practicable upon construction completion.
- Sediment basins and other sediment controls will be operated and maintained in a manner that minimises the risk of environmental harm and prevents sediment from stockpiles discharging to receiving environments.
- Sedimentation and stabilisation devices may include silt fences, bunding and silt curtains.
- Refuelling, chemical storage and maintenance activities will be undertaken in designated containment areas away from environmentally sensitive locations. Containment areas will be designed and managed in accordance with relevant regulatory requirements and standards.
- Chemical Spill Procedures will be clearly outlined to manage potential contaminants during construction.
- Clean water will be diverted around disturbed areas and stockpiles as part of surface water quality management measures.
- Vegetation clearing and soil disturbing works will be minimised to that necessary to conduct the works. Works will be staged to minimise the area of exposed earth at any given time.
- The Contractor shall remove temporary controls when permanent measures are in place and/or site stabilisation has occurred. Areas used for erosion and sediment control shall be rehabilitated following completion of construction.
- To accommodate trenching activities in soft ground conditions the following measures have been developed:
    - The construction corridor has been design to be 30 m to accommodate trenching activities.
    - Excavation of trenches will be minimised to depths of around 2.5 m in soft muds and sandy soils
    - Benching, battering back and clearances for the zone of influence of the excavation will be designated.
- Trench dewatering equipment will also be required to maintain suitable pipe laying conditions and trench integrity to prevent collapses.

5.7 Acid Sulfate Soils

AECOM have prepared an Acid Sulfate Soils (ASS) Management Considerations Report, which is provided in Appendix J. The ASS Management Considerations Report provides a summary of obligations for the assessment and management of ASS, surface water and groundwater during all phases of construction, and mitigation of adverse effects on sensitive environmental values during the planning and delivery of this Project. Appropriate management and mitigation measures have been incorporated into the design, including horizontal directional drilling and nominated laydown areas. Refer to the supporting report for further details (Appendix J).

6.0 Legislative and Policy Framework

The following sections provide the relevant legislative policy framework applicable to the Project and how the Project has sought to ensure compliance is achieved and maintained.

6.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act establishes a process for environmental assessment and approval of proposed actions that have, will have or are likely to have a significant impact on MNES, the environment, or Commonwealth land. The EPBC Act identifies 'nationally significant' animals, plants, habitats, and places as MNES to be protected. The disturbance footprint intersects locations with potential to support habitat for MNES. To assess potential impacts associated with the Project construction, a significant impact assessment informed by desktop and field investigations was undertaken against the EPBC Act significant impact guidelines.

Under the EPBC Act, a referral to DCCEEW is required if the Project is likely to have a 'significant impact' on MNES or the environment. The determination is made with reference to the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines: Matters of National Environmental Significance* (Department of the Environment, Water, Heritage and the Arts, 2013) and other EPBC Act policy statements including significant impact guidelines for individual threatened species, groups of species, threatened ecological communities and migratory species.

If a significant residual impact on MNES values as a result of Project activities is identified, referral of the Project to DCCEEW under the EPBC Act is required. This process allows DCCEEW to decide if the Project can continue without further assessment or conditions (not a controlled action), or that the Project is likely to significantly impact MNES and requires conditions or further assessment (controlled action). If impacts to MNES cannot be avoided, mitigated or managed by the Proponent, offsets under the EPBC Act Environmental Offsets Policy (Department of Sustainability, Environment, Water, Population and Communities, 2012) may be required.

The EPBC Protected Matters Search Tool (PMST) identified the following within a 5 km search area of the Project Area:

- Great Barrier Reef World Heritage Area
- Great Barrier Reef National Heritage Place
- Bowling Green Bay Wetlands of International Importance
- Great Barrier Reef Marine Park
- 1 threatened ecological community
- 58 threatened species
- 64 migratory species.

Ecological assessments have determined that no significant impact is expected as a result of the Project, however, due to the size of the Project, a referral to DCCEEW has been prepared and was submitted on 16 July 2025 (Reference: EPBC 2025/02986). Assessment of this referral has been completed and a 'not-controlled action' referral decision was received for the Project on 28 August 2025, requiring no further assessment under the EPBC Act. No offsets at the Commonwealth level will be required.

6.2 State Development and Public Works Organisation Act 1971

State Development Areas can be created under section 77 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The Development Scheme has been prepared pursuant to sections 79 to 80 of the SDPWO Act and takes effect on the date stated in the gazette notice published under section 80(1)(a) of the SDPWO Act. Development should be carried out in accordance with the SDPWO Act and the Development Scheme.

6.2.1 Development Scheme

As previously noted, the Project is located within the Townsville SDA, which is shown below in Figure 6. The Townsville SDA was declared in 2003 under the SDPWO Act and is located approximately 6 km south-east of the Townsville central business district and 2 km south of the Port of Townsville.

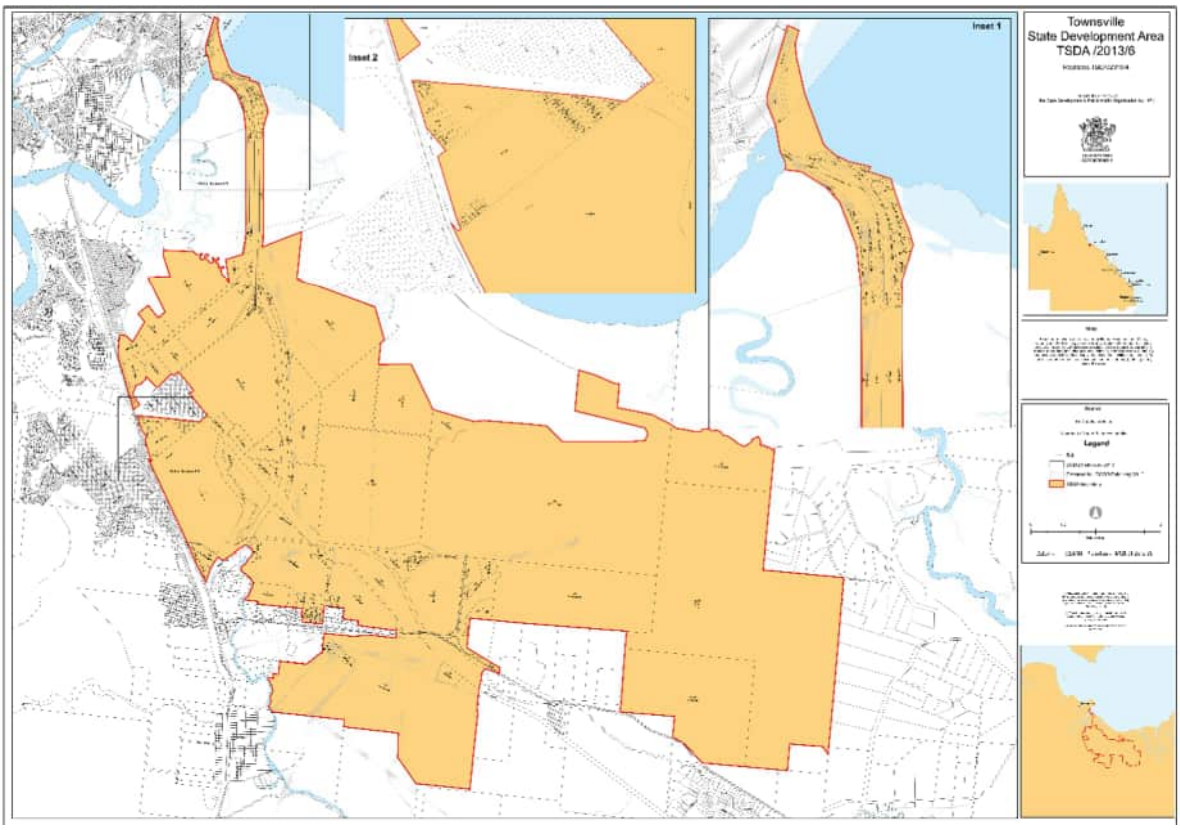


Figure 6 Townsville SDA map (Development Scheme, 2019)

Once an SDA is declared, a Development Scheme is prepared and gazetted by the Minister and Governor in TCC to provide statutory land use controls for the purpose of assessing development application for land within the SDA. The Development Scheme overrides any town planning schemes that would otherwise apply to the development area (i.e. *Townsville City Plan 2014*).

The relevant statutory planning instrument for the Townsville SDA is the *Townsville SDA Development Scheme 2019*. Under the Development Scheme, the Project is located within the Infrastructure Corridor Precinct, as shown in Figure 7. This precinct is intended for the continued operation and establishment of efficient, effective and safe routes for linear infrastructure including utility services, transportation infrastructure and transport corridors servicing the Townsville SDA and the Port of Townsville. The precinct is envisaged to support infrastructure including roads, rail, water and gas pipelines, conveyors, electricity and communication networks, and sewerage networks. The Project aligns with the intent of the precinct, by providing a new pipeline to support the expansion of residential development in the eastern suburbs of Townsville.

An assessment against the preferred development intent for the Infrastructure Corridor Precinct is provided in Appendix L.

Pursuant to Table 5, Column 2 in the Development Scheme, Operational Work for the clearing of native vegetation is ‘assessable development’. Clearing of native vegetation in accordance with Schedule 21 of the Planning Regulation is not considered assessable development under the SDA Development Scheme. Schedule 1 in the Development Scheme defines native vegetation as ‘vegetation under the *Vegetation Management Act 1999*’. The VM Act defines ‘vegetation’ as:

> *Vegetation is a native tree or plant other than the following –*
>
> *(a) grass or non-woody herbage*

(b) a plant within a grassland regional ecosystem identified in the VM REDD as having a grassland structure;

(c) a mangrove.

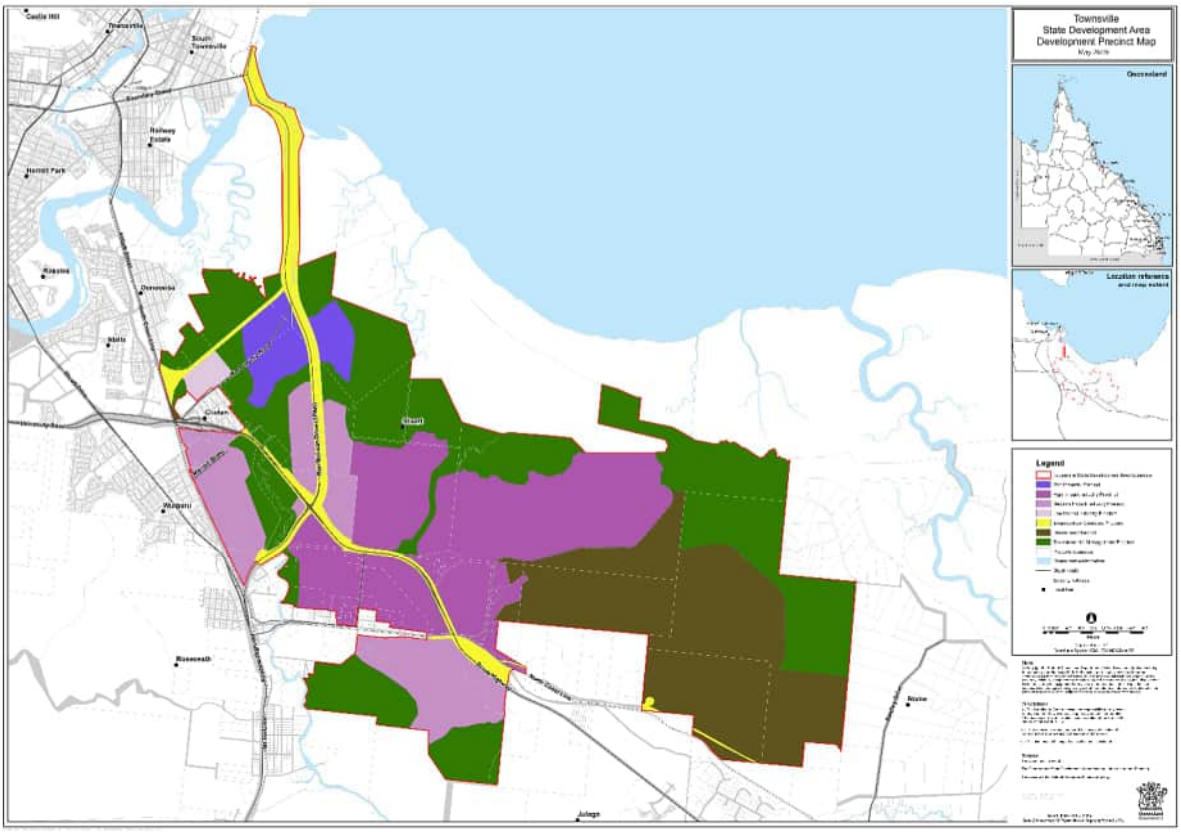


Figure 7 Townsville State Development Area Precinct map

6.2.1.1 Strategic Vision

The strategic vision of the Development Scheme is:

a) *Be the preferred location in North Queensland for the establishment of industrial development of regional, State and national significance, including supporting infrastructure, which is reliant on direct access to one or more of the Port of Townsville, national freight rail and major road networks*

b) *Ensure development of the Townsville SDA occurs in a logical sequence and is equally focused on the short- and long-term economic benefits to the region and State*

c) *Facilitate the continued operation and future expansion of existing industrial operations and regionally significant extractive resources*

d) *Facilitate a coordinated approach to the delivery of infrastructure, and maximise the efficient use of existing and future port, road, rail and ancillary infrastructure*

e) *Recognise and protect environmental, cultural heritage and community values*

f) *Contribute to maintaining the outstanding universal value of the Great Barrier Reef World Heritage Area.*

The strategic vision is also *"supported by the overall objectives for development and preferred development intents of development precincts within the Townsville SDA".* The Project will comply with the strategic vision and overall objectives for development within the Townsville SDA, as discussed in Section 6.2.1.2 and Appendix L.

6.2.1.2 Overall Objectives

Table 5 provides commentary on how the Project supports the overall objectives for the Development Scheme.

Table 5 Project Assessment against Overall Objectives in Development Scheme

Objective	Applicant Response
1. Development within the Townsville SDA will:	
a) Capitalises on the Townsville SDA's strategic location, supports the role and function of the Port of Townsville and stimulates economic growth.	**Not Applicable** The application is for clearing of native vegetation, which will facilitate the EOPM Replacement Project, a new sewer main to service the Townsville population.
b) Ensures lots are appropriately sized to accommodate preferred development.	**Not Applicable** The application does not seek to alter lot sizes.
c) Ensures the integrity and functionality of the Townsville SDA is maintained and protected from incompatible development.	**Complies** The application is for the clearing of native vegetation, which will facilitate the EOPM Replacement Project. The Project has been sited within the Infrastructure Corridors Precinct.
d) Avoids or minimises adverse impacts on sensitive land uses.	**Complies** The application is for the clearing of native vegetation within the Infrastructure Corridors Precinct. Adverse impacts to sensitive land uses will be avoided through the implementation of mitigation and management measures provided in the supporting reports of this DA.
e) Ensures design, construction and operation is consistent with current best practice.	**Complies** Any construction and operation associated with the clearing of native vegetation will be consistent with current best practice. TCC has been planning the Project since 2015. AECOM are currently undertaking the detailed design for the project with 80% design reached (see Appendix G). The chosen contractor will be required to prepare and implement a CEMP that will align with the Preliminary CEMP provided in Appendix K.
f) Avoids adverse impacts on environmental, cultural heritage and community values, or minimises, mitigates or offsets impacts where they cannot be avoided.	**Complies** The Project has been designed to avoid and minimise adverse impacts to environmental, cultural heritage and community values. Proposed clearing works have been sited to avoid highly sensitive environments utilising HDD and other design techniques to minimise impacts. The chosen contractor will be required to prepare and implement a CEMP that will align with the Preliminary CEMP provided in Appendix K.

Objective	Applicant Response
g) Uses water and energy efficiently and minimises potential impacts on water quality and climate change.	**Not Applicable** The application does not require water or energy, nor will it impact on water quality and climate change.
h) Manages impacts of air quality on the capacity of the Townsville airshed.	**Not Applicable** The application is for clearing of native vegetation.
i) Uses land and infrastructure efficiently and does not compromise or adversely impact on infrastructure, infrastructure corridors and future development opportunities.	**Complies** The Project has been sited within an existing infrastructure corridor in a way that will not alter or impact the corridor. Design has sited works in a way that they will not impact the efficiency of existing infrastructure or future development opportunities.
j) Is adequately serviced by infrastructure, generally in accordance with established infrastructure planning.	**Not Applicable** The application is for clearing of native vegetation and does not require servicing by infrastructure.
k) Manages the risks associated with natural hazards, to protect people and property.	**Not Applicable** The application is for clearing of native vegetation.
l) Achieves appropriate levels of flood immunity consistent with current best practice.	**Not Applicable** The application is for clearing of native vegetation.
m) Ensures no net worsening of flood levels on land for existing and potential urban uses and on environmental values.	**Not Applicable** The application is for clearing of native vegetation.

6.2.1.3 SDA Wide Assessment Criteria

A review assessment criteria outlined in Section 2.5 of the Development Scheme has been conducted in Appendix L.

6.2.1.4 Referrals

Section 2.1 (2)(e) in the Development Scheme states that a properly made SDA application must state the referral triggers under the Planning Act (and referral entities if known). Based on a review of the Development Assessment Mapping System (DAMS), the Project Area is mapped within the following categories:

- Coastal Protection
  - Coastal management district
  - Coastal Area – Erosion Prone Area, Medium and High Storm Tide Inundation Areas
- Fish Habitat Areas
  - Queensland waterways for waterway barrier works - Major (tidal)
- Native Vegetation Clearing

  - Vegetation management coastal and non-coastal bio-regions and sub-regions – Coastal bioregions and sub-regions
  - l habitat
  - Regulated vegetation management map (Category A and B extract) – Category B
  - Vegetation management regional ecosystem map – Category A or B area that is a least concern regional ecosystem
- Priority Ports
  - Townsville Master Planned Area – Environmental management, Infrastructure and supply chain corridors, Marine services and recreation
- State Transport
  - State Transport Corridor – State-controlled road
  - Area within 25 m of a State-controlled road
  - Area within 100 m of a State-controlled road intersection
  - Limited Access Roads – LAR 1
- Electricity Infrastructure
  - Powerlink easement
- Infrastructure Designations
  - Infrastructure Designation 188 – Townsville Port Eastern Access Corridor

Whilst the application may require referral under the *Planning Regulation 2017*, as per section 2.1 (7) of the Development Scheme, the OCG may determine during the application stage that a referral under the Development Scheme does not apply to the application because:

> *(a) the development the subject of the application has already been subject to another referral and/or public consultation process and this information is contained within the planning report accompanying the application and*
>
> *(b) the Coordinator-General is satisfied with the referral and/or public consultation undertaken or*
>
> *(c) the Coordinator-General is satisfied the development subject to the application will not impact adversely on the interests of a third party.*

It is noted that a separate Development Application for Operational Works involving Prescribed Tidal Works will be lodged with the local government (i.e. TCC). This application to TCC will involve referral to SARA and the Port of Townsville for the following triggers under Schedule 10 of the *Planning Regulation 2017*.

Table 6 Schedule 10 Triggers associated with *Planning Act 2016* Development Application

Schedule 10 Trigger	Referral	Agency and Powers
10.9.4.2.5.1	Operational work on premises near a state transport corridor.	SARA as a Concurrence Agency
10.17.3.2.1	Assessable development under s28 in tidal waters	SARA as a Concurrence Agency
10.6.3.3.1.1	Operational work that is the removal, destruction, or damage of marine plants	SARA as a Concurrence Agency
10.3.4.1.1	Native vegetation clearing	SARA as a Concurrence Agency
10.13.3.1.1	Prescribed assessable development within limits of a port	Port of Townsville as an Advice Agency

This SDA Application is limited to clearing native vegetation within the TSDA, and referral to other agencies is at the discretion of the OCG. TCC and SARA (including technical agencies) will comprehensively consider all other assessable components of the Project under the *Planning Act 2016*.

6.2.1.5 Public Notification

Section 2.3 in the Development Scheme states that public consultation is required unless the application concerns development for reconfiguring a lot or operational works for the clearing of native vegetation. Therefore, public consultation will not be required for this application.

6.2.1.6 Offsets

Environmental offsets for development made assessable under the TSDA Development Scheme are provided in accordance with the relevant Commonwealth or State environmental offset framework. As assessment is not required under the EPBC Act, offsets under this Act will not apply.

A significant residual impact assessment has been completed for the Project and is provided in Appendix F of the Ecology Technical Report (Appendix F). The assessment for impacts to essential habitat concluded that a significant residual impact is unlikely, as the Project will not result in a greater than 10% permanent reduction in the extent of essential habitat mapped on site.

Offsets are not expected to be required for the Project.

6.3 Townsville City Plan 2014

Table 7 provides a summary of the applicable zoning for the Project Area under the *Townsville City Plan 2014*. However, this SDA development application is assessable under the Development Scheme, and as such, the Project does not require any further assessment against the provisions of the *Townsville City Plan 2014*.

Table 7 Zoning under Planning Scheme

Lot on Plan	Zoning
Lot 1 on SP313085	Special Purpose Zone
Ron McLean Drive / TPAR	State Controlled Road Reserve adjoining Special Purpose Zone

6.4 Environmental Protection Act 1994

The objective of the *Environmental Protection Act 1994* (EP Act) is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development). The EP Act provides the key legislative framework for the protection of the environment in Queensland. Section 319 of the EP Act imposes a 'general environmental duty', which specifies that a person must not undertake any activity that may harm the environment without taking reasonable and practical measures to prevent or minimise the harm.

All Project activities will be undertaken in accordance with the EP Act and the general environmental duty requirements. Implementing the Project CEMP will be a key management measure to ensure this.

6.5 Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NC Act) prohibits the taking or destruction, without authorisation, of protected flora and fauna species in the wild. Under Section 71 of the NC Act, all native plants and animals in Queensland are protected. The NC Act also provides a legislative basis for research, community education, dedicating, declaring and managing protected areas, and protecting native wildlife and its habitat.

Threatened species are listed under the NC Act in the *Nature Conservation (Animals) Regulation 2020* and the *Nature Conservation (Plants) Regulation 2020.* Additionally, some least concern species are protected under the NC Act for their cultural significance or their inclusion within international migratory bird agreements. These include echidna (*Tachyglossus aculeatus*), platypus (*Ornithorhynchus anatinus*) and migratory bird species listed under the Bonn Convention, Japan-Australia Migratory Bird Agreement (JAMBA), China-Australia Migratory Bird Agreement (CAMBA) and Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Activities that affect protected plants are regulated under the subordinate Nature Conservation (Plants) Regulation 2020 which requires a flora survey be carried out where areas of clearing are to occur within 'High Risk Areas' shown on the 'Flora Survey Trigger Map'. High Risk Areas generally include suitable regional ecosystems within 2 km radius of known locations of Critically Endangered, Endangered, Vulnerable, or Near Threatened (CREVNT) plants listed under the NC Act and contain habitat likely to have one or more endangered plant species.

The Project Area is not located within a mapped high risk area for Protected Plants under the NC Act. Furthermore, no NC Act listed plants were identified during the field survey.

It is expected that a Low-Risk and High-Risk Species Management Program (SMP) will be sought for the Project prior to construction commencing.

6.6 Biosecurity Act 2014

The *Biosecurity Act 2014* (Biosecurity Act) provides a framework for an effective biosecurity system for Queensland, to ensure the safety and quality of animal feed, fertilisers, and other agricultural inputs, and to help align responses to biosecurity risks in the State with national and international obligations which is administered by the Department of Primary Industries (DPI). Restricted matter is a biosecurity matter found in Queensland and has a significant impact on human health, social amenity, the economy, or the environment. Prohibited matter is biosecurity matter that is not found in Queensland but would have a significant adverse impact on our health, way of life, the economy, or the environment if it entered the state. Under the Act, invasive plants and animals are categorised as either a 'Prohibited Matter' or a 'Restricted Matter'.

TCC and the Contractor have an obligation under the Biosecurity Act to keep the land free of weeds and pests. The Construction Contractor's CEMP will be developed for the Project in accordance with the Preliminary CEMP (Appendix K) developed to support the submission of this application and will include a weed and pest management plan. In accordance with the Preliminary CEMP (Appendix K), the Construction Contractor's CEMP will ensure the general biosecurity obligations are upheld during delivery, and measures for reporting prohibited or restricted matter are established.

6.7 Fisheries Act 1994

The *Fisheries Act 1994* (Fisheries Act) and the *Fisheries Regulation 1995* govern both commercial and recreational fishing activities and provide for the management, use, development and protection of fisheries resources and fish habitats, and the management of aquaculture activities. This includes removal, damage or disturbance to marine plants, including mangroves, plants on tidal lands and plants adjacent to marine plants, including saltmarsh and melaleucas. The Project will utilise HDD at the Ross River and will not create a barrier affecting the bed or banks of the fisheries waterway.

A separate development permit is being sought for the impact to marine plants outside the TSDA in accordance with the *Planning Act 2016* and Fisheries Act.

7.0 Conclusion

This SDA Development Application and associated appendices have been prepared on behalf of TCC to support an application for Operational Works (Development Permit) for Clearing of Native Vegetation under the *State Development and Public Works Organisation Act 1971* to facilitate the construction of the replacement sewer pipeline (the EOPM) within the Townsville SDA.

The Project is essential public infrastructure that will benefit and serve the community. It is necessary to service residential expansion and urban consolidation within the eastern and western sewer systems in Townsville. As such, the proposed vegetation clearing is for a relevant purpose.

The design of the Project seeks to reasonably avoid and minimise vegetation clearing along its route by:

- Ensuring the proposed infrastructure is strategically located alongside an existing infrastructure corridor, including Ron McLean Drive, the existing EOPM and a Powerlink 132 kilovolt transmission line corridor. The corridor shows evidence of fringe impacts and disturbance as a result of this infrastructure, and illegal dumping and recreational vehicle use continue to this day.
- Adopting HDD (trenchless) construction methods for 44% of the pipeline length to significantly reduce surface impacts in the more environmentally sensitive locations.

The technical assessments supporting this SDA Development Application outline the measures that will be adopted to ensure potential impacts are suitably managed and mitigated. The Project is compliant with the Strategic Vision, Overall Objectives and SDA Wide Assessment Criteria under the Development Scheme and approval by the OCG is recommended.