Eastern Outfall Pressure Main (EOPM) Replacement Project

Application Number: **02986** Commencement Date: **08/07/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Eastern Outfall Pressure Main (EOPM) Replacement Project

1.1.2 Project industry type *

Waste Management (sewerage)

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/07/2026

1.1.4 Estimated end date *

01/07/2027

1.2 Proposed Action details

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

The Eastern Outfall Pressure Main (EOPM) Replacement Project (the proposed action, henceforth referred to as the Project) is proposed by Townsville City Council (TCC) and will replace the existing EOPM sewage pipeline that predominantly services Townsville's eastern suburbs. The existing pipeline runs from South Townsville, under the Ross River to the Cleveland Bay Purification Plant (CBPP) and forms a crucial part of the existing Townsville sewerage network. The Project is critical public utility infrastructure that will continue to service the eastern catchment in Townsville.

Alignment and Connections

The Project is mostly located within the Infrastructure Corridors Precinct within the Townsville State Development Area (TSDA). This Precinct is intended for the continued operation and establishment of linear infrastructure, including utility services, to service land uses within the TSDA. The Project has been planned to occur within this precinct to achieve co-location with other existing linear infrastructure and align with the planned land use intent of the Precinct.

The Project connects to existing sewage infrastructure at Sixth Street (east), South Townsville in the north, and the intersection of Racecourse Road and Southern Port Road, Stuart in the south. The Project alignment crosses the Ross River, extending south adjacent to the Southern Port Road (also known as Ron McLean Drive and the Townsville Port Access Road (TPAR)) and runs parallel to the EOPM at a distance of 200-1500 metres (m) west before connecting to the Western Outfall Pressure Main and Southern Suburbs Rising Main at the intersection of Southern Port Road and Racecourse Road (Cleveland Bay Treatment Plant Access Road).

The existing EOPM infrastructure from the proposed cut-in point at Sixth Street (east) and the connection at CBPP will be decommissioned with the intention of being left in situ.

Project Activities

The following works will be undertaken as part of this Project:

- Preparatory and site establishment works comprising:
    - Construction of access tracks and laydown areas
    - Clearing and grubbing
    - Erosion control and stormwater management
- Under-boring Ross River, the area of mangroves on the south bank, and an area of mudflat in the southern section of the alignment, using Horizontal Directional Drilling (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 to allow for the natural regeneration of native grasslands and forblands. Natural regeneration will be monitored, and additional management measures will be considered if natural regeneration is unsuccessful.

These works (excluding HDD components) form the disturbance footprint for the Project and cover an area of approximately 7.06 ha. There are no surface activities proposed outside of the disturbance footprint, so it is also considered the Project area for the Project. For the ecological assessment, a Study Area was utilised that included the disturbance footprint with a 100 m buffer.

A maximum of 5.47 ha of remnant vegetation may be cleared within the disturbance footprint for Project activities. Only 0.84 ha of this area will be permanently impacted to accommodate a permanent access track. The remaining disturbed area will have topsoil reinstated to allow for natural regeneration.

A detailed overview of the Project is provided in **Att-A, Section 2.1, Page 10-15** and the location, including the Project area/disturbance footprint, is illustrated in **Att-A, Figure 1, Page 12**.

Construction Approach

The Project will be constructed using open trenching and HDD trenchless methods. The pipeline 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 disturbance footprint shown on the Project location figure (refer **Att-A, Figure 1, Page 12**) indicates where the open trenching method (i.e. surface impacts) will be utilised. The sections of the pipeline that will be installed via HDD (i.e. nil surface impacts) have been excluded from the disturbance footprint.

Key construction considerations for the Project are:

- A 30 m wide construction corridor to support all activities where open trench installation is proposed.
- Alignment of the Project within 2 m of the western boundary of the existing Powerlink 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 Standard (AS 2566.1) 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:
    - River crossing: DN800 HDPE SDR9 HDPE Pipe (internal diameter of 616 millimetres (mm))
    - All other areas: DN900 HDPE SDR11 PE Pipe (internal diameter of 732 mm).

Where the crossing of sensitive ecological and water features cannot be avoided through design, under-boring has been utilised to avoid disturbance to the surface. HDD has been chosen as the preferred method for under-boring and the locations where it has been selected to be utilised have considered the ground conditions and other constructability constraints in parallel with design progression. The HDD indicative bore pathways are shown in **Att-A, Figure 1, Page 12** and include:

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

The rationale for the HDD method as opposed to conventional open trench construction is summarised as follows:

- HDD Section 1 (905 m section underneath Ross River, near John McIntyre Bridge):
    - Substantial clearing would be required within the low-lying mangrove area using the open trench method, which is a highly sensitive environmental area (AECOM, 2025).
    - This section is also at a low elevation relative to the remaining Project alignment, which would likely result in more extensive management of groundwater and acid sulphate soils during trenching activities.
    - There are limited access points for construction, and construction of temporary access points will likely require substantial earthworks.
    - Geotechnical investigations encountered bore collapses at these test locations due to soft soils in the mangrove area.
- HDD Section 2 (420 m section at a 90 m offset to Southern Port Road):
    - Substantial disturbance would be required in an environmentally sensitive area.

Further details on the open trench construction methodology are available in **Att-A, Section 3.1, Page 18-19**, and for the HDD construction methodology in **Att-A, Section 3.2, Page 19-20**.

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

No

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

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 Matters of National Environmental Significance (MNES) or on Commonwealth land. The EPBC Act identifies 'nationally significant' animals, plants, habitats, and places as MNES to be protected. The Project's disturbance footprint intersects locations with potential to support habitat for MNES. Under the EPBC Act, a referral to Department of Climate Change, Energy, the Environment and Water (DCCEEW) is required if a Project is likely to have a 'significant impact' on MNES.

To assess potential impacts associated with the Project's construction, a significant impact assessment informed by desktop and field investigations was undertaken against the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines: Matters of National Environmental Significance* (DotE, 2013). The findings of this assessment were that significant impacts are not likely to MNES values. TCC are proceeding with an EPBC referral for the Project in good faith and to provide certainty.

Native Title Act 1993

Native title rights and interests may exist on land on which the Project is situated. The Project will be required to adhere to native title obligations.

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 proposed doing of the relevant future act in accordance with S24KA (8) of the *Native Title Act 1993*. No comments were received by either party.

Planning Act 2016

AECOM on behalf of Townsville City Council intends to submit a combined Development Application that seeks a Development Permit for the following assessable development:

- Operational works - prescribed tidal works (for trenchless pipeline installation works below the mean high water springs (MHWS) level within the Ross River, Strategic Port Land (Lot 11 RP703385), Lot 302 SP223355 and Lot 1 SP313085.
- Operational works – work in a Coastal Management District (for open trench pipeline installation works above the MHWS level, but within the coastal management district (CMD) over Lot 302 SP223355 (State coastal land))
- Operational works - the removal, damage and destruction of marine plants (clearance of vegetation below the highest astronomical tide (HAT) level and as determined by AECOM ecology investigations)
- Operational works - clearing native vegetation (the clearance of Category B regulated vegetation that cannot comply with ADVCC for Infrastructure)
- Operational works – works on premises near a State transport corridor.

The application is under preparation with lodgement planned for July 2025 with the State Assessment Referral Agency (SARA).

State Development and Public Works Organisation Act 1971

The Project alignment to the south of the Ross River intersects an area declared as the TSDA under the *State Development and Public Works Organisation Act 1971*. The TSDA is a defined area of land which is dedicated for industrial development.

The Project is located within the Infrastructure Corridors Precinct of the Development Scheme. The Project has been planned to occur within the Infrastructure Corridors Precinct to both achieve co-location with other existing linear infrastructure and to align with the planned land use intent of the Infrastructure Corridors Precinct.

A State Development Approval will be sought for Operational works for vegetation clearing within the Townsville State Development Area (TSDA) in accordance with the TSDA Development Scheme and *State Development and Public Works Organisation Act 1971* (over Lot 1 SP313085).

The application is under preparation with lodgement planned for July 2025 with the Office of the Coordinator-General's office.

Aboriginal Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* (ACHA) requires a person who carries out an activity to take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage. Section 23(3) of the ACHA identifies that a person who carries out an activity is taken to have complied with the cultural heritage duty of care if the person is acting in compliance with the Cultural Heritage Duty of Care Guidelines, gazetted in April 2004.

Consultation has been ongoing between TCC and local indigenous groups since 2015 for this Project. Part of this process has been the agreement and execution of a CHMA for the Project with the Bindal People #2 Native Title Applicants, which was formally executed on 18 November 2022.

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. All native plants and animals in Queensland are protected under Section 71 of the NC Act. The Act also provides a legislative basis for research, community education, dedicating, declaring and managing protected areas, and protecting native wildlife and its habitat.

The Project area is not located within a mapped high risk areas for Protected Plants under the NC Act. Furthermore, no NC Act listed plants were identified during the field survey. As such, a Protected Plants permit will not be sought for the Project.

A Low-Risk and High-Risk species management program (SMP) is expected to be sought for the Project to ensure appropriate management measures are in place where active breeding places are encountered during construction activities.

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. A key management measure to ensure this will be the implementation of the Project’s CEMP. A preliminary CEMP has been developed and is provided in **Att-A, Appendix E, Page 440-507.**

Vegetation Management Act 1999

The *Vegetation Management Act 1999* (VM Act) regulates the clearing of native vegetation in Queensland and is administered by the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (DNRMMRRD).

The VM Act categorises and defines native vegetation as vegetation offsets/compliance notices area (Category A), remnant (Category B), high value regrowth (HVR) (Category C), reef regrowth watercourse vegetation (Category R), and non-remnant or other (Category X).

The Project traverses Category R, Category B, and Category X mapped vegetation. 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.

Two operational works development approvals are being sought for the Project (one for the TSDA and one for the remaining areas). A relevant purpose determination is currently undergoing assessment by the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD).

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).

Under the Biosecurity Act, TCC and the Contractor have an obligation to keep the land free of weeds and pests. The CEMP developed for the Project will include a weed and pest management plan, ensure the general biosecurity obligations are upheld during delivery, and establish measures for reporting prohibited or restricted matter.

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.

An operational works development permit is being sought for the removal, damage and destruction of marine plants for the Project. As the Project will be under-bored under the Ross River and will not create a barrier affecting the bed or banks of the fisheries waterway, a development permit for operational works for waterway barrier works is not required.

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

Consultation has been undertaken with the following regulatory stakeholders to further inform constraints for the Project, refine the design, identify risks, and to confirm approval requirements:

- Department of State Development, Infrastructure and Planning
- SARA
- Department of Transport and Main Roads (TMR)
- Planning and Development Team at the Port of Townsville Limited
- Office of the Coordinator-General
- Queensland Parks and Wildlife Services
- Powerlink Queensland
- Maritime Safety Queensland.

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 is provided in **Att-A, Appendix B, Page 394-427.** A letter dated 18 November 2022 verifying consultation between TCC and the Bindal People #2 is provided in **Att-A, Appendix C, Page 428-430**.

Since the execution of the CHMA for the Project, Council 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. Council 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.

1.3.1 Identity: Referring party

Privacy Notice:

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

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

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

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

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Alternatively, email us at privacy@awe.gov.au.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	4006 QLD

Referring party details

Name	Alexandra Isgro
Job title	Principal Environmental Planner
Phone	0432632567
Email	alexandra.isgro@aecom.com
Address	Level 8, 540 Wickham Street, Fortitude Valley QLD 4006

1.3.2 Identity: Person proposing to take the action

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

No

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

Yes

Person proposing to take the action organisation details

ABN/ACN	44741992072
Organisation name	TOWNSVILLE CITY COUNCIL
Organisation address	PO Box 1268, Townsville Qld 4810

Person proposing to take the action details

Name	Matt Schembri
Job title	Acting General Manager Major Projects
Phone	0439672053
Email	Matt.schembri@townsville.qld.gov.au
Address	PO Box 1268, Townsville Qld 4810

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

No

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

No

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

TCC recognises environmental sustainability as a guiding principle in its Corporate Plan and is committed to either avoiding or minimising and mitigating adverse environmental impacts associated with its operations. TCC will continually improve its environmental performance, seeking opportunities to achieve positive environmental outcomes, reduce impact, and encourage a culture of sustainability among its workers and the community.

TCC is committed to:

- Demonstrated environmental leadership and encouraging its workers and the community to adopt more sustainable lifestyles.
- Effective management and protection of the natural and built environment through the implementation of sustainable growth and development patterns.
- Carrying out its operations in an environmentally sustainable manner and integrating sustainability into its processes and decision making.

TCC has a satisfactory record of responsible environmental management.

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

TCC's Environmental Policy is provided in **Att-A, Appendix D, 434-442**. The Environmental Policy applies to all Councillors, Council workers and all Council operations and will apply to this Project. The policy has associated documents which reinforce the commitments and help carry out the objectives made in the Environmental Policy.

1.3.3 Identity: Proposed designated proponent

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

Yes

Proposed designated proponent organisation details

ABN/ACN	44741992072
Organisation name	TOWNSVILLE CITY COUNCIL
Organisation address	PO Box 1268, Townsville Qld 4810

Proposed designated proponent details

Name	Matt Schembri
Job title	Acting General Manager Major Projects
Phone	0439672053
Email	Matt.schembri@townsville.qld.gov.au
Address	PO Box 1268, Townsville Qld 4810

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

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

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	4006 QLD
Representative's name	Alexandra Isgro
Representative's job title	Principal Environmental Planner
Phone	0432632567
Email	alexandra.isgro@aecom.com
Address	Level 8, 540 Wickham Street, Fortitude Valley QLD 4006

Confirmed Person proposing to take the action's identity

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

ABN/ACN	44741992072
Organisation name	TOWNSVILLE CITY COUNCIL
Organisation address	PO Box 1268, Townsville Qld 4810
Representative's name	Matt Schembri
Representative's job title	Acting General Manager Major Projects
Phone	0439672053
Email	Matt.schembri@townsville.qld.gov.au
Address	PO Box 1268, Townsville Qld 4810

Confirmed Proposed designated proponent's identity

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

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

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

No

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

No

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

No

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

No

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

No

1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint

Project Area: 7.09 Ha **Disturbance Footprint:** 7.09 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Southern Port Access Road, Townsville 4810

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

Queensland

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

No

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

The alignment for the pipeline has a 30 m wide disturbance footprint where the pipe will be constructed through open trenching. The land tenure across this area includes the following:

- Land parcels:
  - Sixth Street East - Local Road Reserve
  - Lot 302 SP223355 - Reserve (Environmental Purposes)
  - Lot 1 SP313085 - Freehold
  - Southern Port Road (also known as Ron McLean Drive / TPAR) - State Controlled Road
- Easements:
  - A SP192616 – Owned by Powerlink Queensland
  - B SP192620 – Owned by Powerlink Queensland
  - C SP192619 – Owned by Powerlink Queensland
  - D RP720391 – Owned by TCC
  - A RP719679 – Owned by Ergon Energy
  - H SP192614 – Owned by Powerlink Queensland
  - D SP192615 – Owned by Powerlink Queensland
  - F SP192615 – Owned by Powerlink Queensland
  - G SP192615 – Owned by Powerlink Queensland
  - J SP286581 – Owned by TCC

3. Existing environment

3.1 Physical description

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

Beginning in Sixth Street (east), South Townsville, the Project crosses under the Ross River south of the John McIntyre Bridge before running adjacent to the Ross River and Southern Port Road before terminating at Racecourse Road, Stuart.

The disturbance footprint to the northern bank of the Ross River is a highly modified environment consisting of housing, light industry and road reserve. The pipeline will be under-bored beneath the Ross River northern bank near an old boat ramp, emerging on the adjacent bank of the Ross River within an area of coastal dunes and fringing mangrove forest.

The Project alignment to the south of Ross River is located adjacent to Southern Port Road which is largely undeveloped in an open space characterised by marshes and wetlands, including sections of nature conservation areas and grazing native vegetation. Traversing southward, the Project intersects remnant mangrove forest, open woodland on coastal dunes and *Sporobolus virginicus* grassland on marine clay. Vegetation throughout the alignment was predominately native, with the exception of weedy understory throughout the open woodland on coastal dunes.

The pipeline will be under-bored beneath foreland on marine clay, identified as an environmentally sensitive area, beneath the highest astronomical tide before terminating in *Sporobolus virginicus* grassland.

In general, the vegetation throughout the alignment is in good condition, however there are areas which are variable or modified throughout, associated with access tracks, weeds, fencing and clearing for the powerline to the east.

The Project alignment south of Ross River has been subject to high levels of disturbance as result of cleared corridors for community resource. In addition, these large 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 Department of the Environment, Tourism, Science and Innovation (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.

Recent site photos displaying the current condition of the environment the alignment traverses are displayed in **Att-A, Figure 4, Page 34-42**.

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

The Project alignment will traverse or be parallel to the following forms of infrastructure (refer **Att-A, Figure 5, Page 44**):

- State-controlled roads (state transport infrastructure)
- Public water infrastructure
- Powerlink Queensland and Ergon electricity infrastructure.

The Project alignment traverses two existing Infrastructure Designations (formerly known as Community Infrastructure Designations) being Townsville Port Eastern Access Corridor and Townsville South to Townsville East 132 kV transmission line. The Project alignment also traverses an Ergon easement associated with the existing transmission line and the existing EOPM water infrastructure that is subject to replacement.

The Project is mostly located within the Infrastructure Corridors Precinct within the Townsville State Development Area (TSDA). The Project has been planned to occur within the Infrastructure Corridors Precinct to both achieve co-location with other existing linear infrastructure and to reduce impacts to the environment.

The Infrastructure Corridors Precinct contains the State-controlled Southern Port Road and the PLQ transmission line as well as several access tracks associated with this corridor. The Infrastructure Corridors Precinct is shown in **Att-A, Figure 6, Page 45**.

TMR are also currently in planning phases for the TEARC which is an 8.3 km rail freight line connecting the North Coast Rail Line directly into the Port of Townville. The TEARC will be parallel to Southern Port Road and further support the economic growth of the Port of Townsville. Preservation of the project corridor (gazetting and acquisition of land) is underway by the TMR (Department of Transport and Main Roads, 2024)

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

The disturbance footprint is adjacent the Great Barrier Reef (GBR) region, with the Ross River and tidal mangroves on the southern bank considered part of the GBR region. Due to the HDD boring under the Ross River and the southern bank, there will be no direct Project interaction with the GBR region. At the closest point, the Project alignment is 1.7 km inland from a GBR Marine Park General Use Zone and 2.5 km from a GBR Conservation Park Zone.

The disturbance footprint is located in close proximity to two migratory shorebird roosts. One being the sand spit to the north-eastern side of the John McIntyre Bridge, which is considered to support nationally significant populations of migratory shorebirds for several species of migratory shorebirds (NRA, 2020, 2021a). This roost is located approximately 400 m to the north-east of the disturbance footprint within Sixth Street (east), South Townsville.

The second roosting area was identified within the sparse samphire forbland on marine clays located near the centre of the Project footprint which is tidally inundated. Migratory shorebirds were identified utilising the area immediately adjacent to a tributary of the Ross River approximately 400 m west of the disturbance footprint.

Both of these roosting areas have been considered and avoided where possible within design. HDD under-boring has been incorporated into the construction methodology of the pipeline that traverses these areas to reduce disturbance to roosting shorebirds. The roosting area near the sand spit has been completely avoided through the adoption of HDD, and the disturbance within the roosting area in the marine clays has been reduced with the HDD construction method proposed, where the most ecologically sensitive values were determined.

The GBR region including the heritage area and marine park zones are shown in **Att-A, Figure 7, Page 47**.

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

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 a flat tidal area that ranges from 3-4 m Australian Height Datum.

3.2 Flora and fauna

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

Flora

Desktop and field assessments completed for the Project have verified that no MNES listed threatened flora species occur within the disturbance footprint. A full assessment of flora species for the Project is provided in the Ecology Technical Report – **Att-A, Appendix A, Section 4.2, Page 100-109**.

A total of 29 introduced species including two invasive species were identified as potentially occurring by the desktop assessment. The field survey identified the following restricted species within the Study Area:

- Rubber vine (*Cryptostegia grandiflora*) - Restricted Matter Category 3 and Weed of National Significance
- Chinese apple (*Ziziphus mauritiana*) - Restricted Matter Category 3

The field surveys identified the presence of 53 taxa representing 17 families, with the full species list provided in the Ecology Technical Report – **Att-A, Appendix A, Appendix C, Page 281-288**. The dominant families were Poaceae (15 taxa), followed by Leguminosae (9 taxa) and Chenopodiaceae (5 taxa).

Fauna

The desktop assessment identified 90 MNES listed threatened and/or migratory fauna species under the EPBC Act with the potential to occur within the Study Area. Of these fauna species, 66 were listed as migratory. A full assessment of fauna species for the Project is provided in the Ecology Technical Report - **Att-A, Appendix A, Section 4.3, Page 109-115**. The likelihood of occurrence assessment for these species is provided in the Ecology Technical Report – **Att-A, Appendix A, Appendix D, Page 289-315**.

The following species were observed outside the disturbance footprint, but within the Study Area:

- Eastern curlew *(Numenius madagascariensis*), listed as critically endangered and migratory under the EPBC Act
- Western Alaskan bar-tailed godwit (*Limosa lapponica baueri*), listed as endangered and migratory under the EPBC Act
- Sharp-tailed sandpiper (*Calidris acuminata*) listed as vulnerable and migratory under the EPBC Act
- Whimbrel (*Numenius phaeopus*), osprey (*Pandion haliaetus* syn. *Pandion cristatus*), Caspian tern (*Hydroprogne caspia*) and crested tern (*Thalasseus bergii)* listed as migratory under the EPBC Act

In addition, 44 MNES listed threatened fauna species were assessed as likely or potentially occurring in the Study Area. A total of 28 migratory species are likely to occur, and 12 migratory species have the potential to occur in the Study Area.

The white-throated needletail and fork-tailed swift are predominantly aerial species which were considered as likely flyover visitors, therefore they would only sporadically utilise the airspace above the Study Area. Vegetation within the Study Area is unsuitable for these species to roost or forage.

A total of two introduced fauna species listed under the *Biosecurity Act 2014* were identified within the Study Area, and include:

- Feral pig (Sus scrofa) - *Biosecurity Act 2014* Category 3, 4 and 6
- Dog (*Canis lupus familiaris*) - *Biosecurity Act 2014* Category 3, 4 and 6

A total of 74 native fauna species were recorded during the field survey comprised of 68 birds, five mammals and one amphibian. The full list of species is the Ecology Technical Report – **Att-A, Appendix A, Appendix C, Page 281-288**.

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

Vegetation

The disturbance footprint consists of non-remnant vegetation along the cleared access tracks, road reserve, powerline easements and fence lines. The remainder of the disturbance footprint contains remnant vegetation corresponding to one of four distinct vegetation types:

1. Bare saltpans and / or areas of sparse forblands and / or tussock grasslands (Broad Vegetation Group (BVG) 35b)
2. Closed forests and low closed forests dominated by mangroves (BVG 35a)
3. Complex of open shrublands on strand and foredunes (BVG 28a)
4. Open forests and low open forests in seasonally inundated swamps BVG 22b).

A full description and assessment of vegetation and ecological communities for the Project is provided in the Ecology Technical Report – **Att-A, Appendix A, Section 4.2, Page 100-109**. The vegetation communities are also mapped in **Att-A, Figure 8, Page 53.**

The regional ecosystems that make up these vegetation communities are listed as least concern under the VM Act with the exception of complex of open shrublands on strand and foredunes (regional ecosystem 11.2.2) which is listed as of concern.

The desktop assessment identified the *semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar bioregions* TEC as potentially occurring within the Study Area. However, no TECs were identified during field surveys within the Study Area.

Geology and soils

The geology and soils of the area generally consist of estuarine deposits with dominate soils including alluvium, sand, and miscellaneous unconsolidated sediments (silt, mud and minor salt). The Australian soil classification (ASC) has identified Hydrosols and Tenosols as the dominate soil types of the disturbance footprint.

These dominant soils pose issues for construction considering the soft muddy and sandy nature of the soils and will require specific treatment to prevent erodibility and ensure integrity. A 30 m wide construction corridor is required because of these soft ground conditions to accommodate excavation/trenching activities and safe benching/battering practices.

The disturbance footprint has been mapped within both low probability (6-70%) and high probability (>70%) areas of acid sulfate soils (ASS). Mapped areas with high probability of ASS occurring are present in low-lying regions, including the mangroves and claypans along the Project alignment. The risk of exposing ASS will be managed through the Project's final CEMP. A Preliminary CEMP has been developed for the Project and is provided in **Att-A, Appendix E, Page 439-507**.

3.3 Heritage

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

The Project does not intersect any known local, state or national areas or places of Indigenous or non-Indigenous cultural heritage. The results of the Cultural Heritage Register search indicated there are no recorded cultural heritage values within the land parcels where the Project is proposed. The Cultural Heritage Register search report is available in **Att-A, Appendix F, Page 508-514**.

The GBR is a MNES World Heritage Property and Indigenous and natural MNES National Heritage Place adjacent to the Project in the Ross River estuary. The Project has been designed to avoid any disturbance to this area through adoption of the HDD construction method. The GBR heritage areas are displayed on **Att-A, Figure 7, Page 47.**

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

The Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) Aboriginal Cultural Heritage Database and Register Search (accessed 30 May 2025) confirmed the following for the disturbance footprint:

- There are no Aboriginal or Torres Strait Islander cultural heritage sites recorded
- There are no Cultural Heritage Bodies recorded
- There are no Designated Landscape Areas recorded
- There are no Registered Cultural Heritage Study Areas
- Two existing Cultural Heritage Management Plans exist within the Study Area, CLH000215 and CLH000730.

The Cultural Heritage Register search report is available in **Att-A, Appendix F, Page 508-514**. A copy of the CHMA is provided in **Att-A, Appendix B, Page 394-427.** A letter dated 18 November 2022 verifying consultation between TCC and the Bindal People #2 is provided in **Att-A, Appendix C, Page 428-430**.

Cultural Heritage Management Agreement

A large portion of the disturbance footprint has undergone ground disturbance previously and presents a low potential impact to Indigenous cultural heritage. Areas that have not been previously disturbed and require clearing of remnant vegetation pose a high risk of culturally significant value impacts.

Specific cultural heritage management practices are detailed in the Cultural Heritage Management Agreement (CHMA) which has been developed with the Bindal People #2 Native Title Applicants and will guide engagement during the construction phase. The CHMA was formally executed on 18 November 2022 in accordance with the ACHA.

The CHMA is intended to guide and manage the undertaking of development activities for the Project. The Cultural Heritage Duty of Care provisions established under the ACHA are met by the implementation of the terms of the CHMA. Further details of the CHMA are outlined in the TCC letter dated 18 November 2022 verifying consultation with the Bindal People #2.

A copy of the CHMA is provided in **Att-A, Appendix B, Page 394-427** and the letter dated 18 November 2022 verifying consultation between TCC and the Bindal People #2 is provided in **Att-A, Appendix C, Page 428-430**.

3.4 Hydrology

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

The disturbance footprint is located within the Ross River catchment which covers an area of 1,707 km². The Project traverses the coastal floodplain area of the Ross River and contains the geomorphic features of mangrove muds and tidal flats. The disturbance footprint is situated entirely within a State-regulated coastal management district and is a tidally influenced marine environment that is partially located below the highest astronomical tide as displayed on **Att-A, Figure 7, Page 47.**

The disturbance footprint is mapped predominantly within a major tidal waterway under the *Fisheries Act 1994.*

4. Impacts and mitigation

4.1 Impact details

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

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	Yes	Yes
S15B	National Heritage	Yes	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

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

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

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

Direct impact	Indirect impact	World heritage
No	Yes	Great Barrier Reef

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

Yes

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

Due to the selection of HDD construction techniques under the Ross River and its southern bank, potential direct and indirect impacts from the project's construction have been mostly avoided. The HDD bore methodology includes management measures that reduce the risks of potential impacts occurring from HDD boring, which are detailed in **Att-A, Section 3.2, Page 19-20**. The HDD mitigations include:

- The establishment of entry and exit sites will follow all relevant mitigation measures proposed for surface construction activities, including identifying and protecting nearby sensitive areas by using physical demarcation and/or signage.
- Additional geotechnical investigations to refine the bore paths to avoid impacts to ecological values including additional allowances for specialist bore path design and methodology.
- Longer bore path to ensure the HDD is drilling though consistent and stable geotechnical material.
- A detailed HDD plan including mitigations for hydro-fractures will be developed and implemented by the selected HDD contractor.

Potential indirect impacts from erosion and sediment transport risk associated with open trenching construction activities are possible and will be managed through implementing open trench specific mitigations and appropriate erosion and sediment control measures. These measures are detailed in **Att-A, Section 3.1, Page 18-19**. The open trench mitigations include:

- The pipe will be located underground with cover over the top at a suitable depth to ensure that the covering will be less susceptible to erosion.
- The finished surface of the trench will be finished at the same level as the surrounding ground and will not alter water conveyance.
- Trench backfill materials will be pervious and will not prevent movement of groundwater or movement of water during high tides.
- The completion of the works will be sequential to minimise the amount of time the trench is open by backfilling as soon as possible after the pipe is installed.
- Erosion and sediment controls will be developed in accordance with International Erosion Control Association (IECA) *Best Practice Erosion and Sediment Control Guidelines (IECA, 2008)* and implemented on-site prior to works commencing. Site-specific erosion and sediment control plans will be developed and tailored to suit the location and include specific requirements for the site and discrete locations if necessary.

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

No

4.1.1.6 Describe why you do not consider this to be a Significant Impact. *

The Great Barrier Reef World Heritage Property is present in the Ross River estuary intersecting the Project. This river will be under bored with HDD construction techniques to avoid potential impacts from the Project to the estuary. A significant impact assessment was undertaken against the EPBC Act *Significant Impact Guideline 1.1* to determine if impacts were likely to the GBR World Heritage Property.

An action is considered likely to have a significant impact on the World Heritage values of a declared World Heritage property if there is a real chance or possibility that it will cause:

- One or more of the World Heritage values to be lost
- One or more of the World Heritage values to be degraded or damaged, or
- One or more of the World Heritage values to be notably altered, modified, obscured or diminished.

Based on the significant impact assessment presented in **Att-A, Section 9.1, Page 64-65**, it is unlikely that the Project will have a significant impact on the GBR World Heritage Property. This is due to:

- The Project has been collocated with existing infrastructure to avoid cumulative impacts on geology and landform
- The Project has avoided direct impacts by under boring the clay plains and estuary of Ross River
- Habitat within the disturbance footprint is highly disturbed and marginal compared to the adjacent habitat located outside the disturbance footprint

Indirect impacts will be managed with appropriate controls and measures included within the final CEMP.

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

No

4.1.1.9 Please elaborate why you do not think your proposed action is a controlled action. *

Based on the significant impact assessment presented in **Att-A, Section 9.1, Page 64-65**, it is unlikely that the Project will have a significant impact on the GBR World Heritage Property. This is due to:

- The Project has been collocated with existing infrastructure to avoid cumulative impacts on geology and landform
- The Project has avoided direct impacts by under boring the clay plains and estuary of Ross River
- Habitat within the disturbance footprint is highly disturbed and marginal compared to the adjacent habitat located outside the disturbance footprint
- Indirect impacts will be managed with appropriate controls and measures included within the final CEMP.

As the Project is unlikely to significant impact the GBR World Heritage Property, the Project is unlikely to be considered a “Controlled Action” due to this matter.

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

Direct impacts to the GBR World Heritage Property have been avoided through the inclusion of HDD construction to under bore the clay plains and estuary of Ross River.

The potential impacts to the GBR World Heritage Property would be indirectly from unmitigated erosion and sedimentation from open trenching construction. To mitigate this risk appropriate erosion and sediment control measures will be included in the final CEMP and implemented for construction, such as the following:

- Minimisation of the construction footprint and micro-siting works nearby to the Ross River and tidally inundated areas, and where possible, minimising volume of earth disturbed or stored in runoff.
- Implementation of best practice erosion and sediment control plans at all work sites, including specific plans for works within or adjacent to watercourses and tidally inundated areas.
- Timing of major earth works to coincide with low rainfall as much as practicable.
- Development and implementation of a progressive Rehabilitation Management Plan. This is to include a vegetation/land clearing strategy which includes minimisation, staging and salvage and re-use where possible.
- The use and storage of hazardous substances will be managed in accordance with relevant legislation, guidelines, and standards.
- Spill management procedures developed and equipment available to deploy if needed.
- Imported materials will be classified as ‘clean earth’ under Queensland’s *Environmental Protection Regulation 2019*.

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

There are no proposed offsets for the GBR World Heritage Area.

4.1.2 National Heritage

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

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

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

Direct impact	Indirect impact	National heritage
No	Yes	Great Barrier Reef

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

Yes

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

Due to the selection of HDD construction techniques under the Ross River and its southern bank, potential direct and indirect impacts from the project's construction have been mostly avoided. The HDD bore methodology includes management measures that reduce the risks of potential impacts occurring from HDD boring, which are detailed in **Att-A, Section 3.2, Page 19-20**. The HDD mitigations include:

- The establishment of entry and exit sites will follow all relevant mitigation measures proposed for surface construction activities, including identifying and protecting nearby sensitive areas by using physical demarcation and/or signage.
- Additional geotechnical investigations to refine the bore paths to avoid impacts to ecological values including additional allowances for specialist bore path design and methodology.
- Longer bore path to ensure the HDD is drilling though consistent and stable geotechnical material.
- A detailed HDD plan including mitigations for hydro-fractures will be developed and implemented by the selected HDD contractor.

Potential indirect impacts from erosion and sediment transport risk associated with open trenching construction activities are possible and will be managed through implementing open trench specific mitigations and appropriate erosion and sediment control measures. These measures are detailed in **Att-A, Section 3.1, Page 18-19**. The open trench mitigations include:

- The pipe will be located underground with cover over the top at a suitable depth to ensure that the covering will be less susceptible to erosion.
- The finished surface of the trench will be finished at the same level as the surrounding ground and will not alter water conveyance.
- Trench backfill materials will be pervious and will not prevent movement of groundwater or movement of water during high tides.
- The completion of the works will be sequential to minimise the amount of time the trench is open by backfilling as soon as possible after the pipe is installed.
- Erosion and sediment controls will be developed in accordance with International Erosion Control Association (IECA) *Best Practice Erosion and Sediment Control Guidelines (IECA, 2008)* and implemented on-site prior to works commencing. Site-specific erosion and sediment control plans will be developed and tailored to suit the location and include specific requirements for the site and discrete locations if necessary.

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

No

4.1.2.6 Describe why you do not consider this to be a Significant Impact. *

The Great Barrier Reef National Heritage Place is present in the Ross River estuary intersecting the Project. This river will be under bored with HDD construction techniques to avoid potential impacts from the Project to the estuary. A significant impact assessment was undertaken against the EPBC Act *Significant Impact Guideline 1.1* to determine if impacts were likely to the GBR National Heritage Place.

An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- One or more of the National Heritage values to be lost
- One or more of the National Heritage values to be degraded or damaged, or
- One or more of the National Heritage values to be notably altered, modified, obscured or diminished.

Based on the significant impact assessment presented in **Att-A, Section 9.1, Page 64-65**, it is unlikely that the Project will have a significant impact on the GBR National Heritage Place. This is due to:

- The Project has been collocated with existing infrastructure to avoid cumulative impacts on geology and landform
- The Project has avoided direct impacts by under boring the clay plains and estuary of Ross River
- Habitat within the disturbance footprint is highly disturbed and marginal compared to the adjacent habitat located outside the disturbance footprint
- Indirect impacts will be managed with appropriate controls and measures included within the final CEMP.

As the Project is unlikely to significant impact the GBR National Heritage Place, the Project is unlikely to be considered a “Controlled Action” due to this matter.

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

No

4.1.2.9 Please elaborate why you do not think your proposed action is a controlled action. *

Based on the significant impact assessment presented in **Att-A, Section 9.1, Page 64-65**, it is unlikely that the Project will have a significant impact on the GBR National Heritage Place. This is due to:

- The Project has been collocated with existing infrastructure to avoid cumulative impacts on geology and landform
- The Project has avoided direct impacts by under boring the clay plains and estuary of Ross River
- Habitat within the disturbance footprint is highly disturbed and marginal compared to the adjacent habitat located outside the disturbance footprint
- Indirect impacts will be managed with appropriate controls and measures included within the final CEMP.

As the Project is unlikely to significant impact the GBR National Heritage Place, the Project is unlikely to be considered a “Controlled Action” due to this matter.

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

Direct impacts to the GBR National Heritage Place have been avoided through the inclusion of HDD construction to under bore the clay plains and estuary of Ross River.

The potential impacts to the GBR National Heritage Place would be indirectly from unmitigated erosion and sedimentation from open trenching construction. To mitigate this risk appropriate erosion and sediment control measures will be included in the final CEMP and implemented for construction, such as the following:

- Minimisation of the construction footprint and micro-siting works nearby to the Ross River and tidally inundated areas, and where possible, minimising volume of earth disturbed or stored in runoff.
- Implementation of best practice erosion and sediment control plans at all work sites, including specific plans for works within or adjacent to watercourses and tidally inundated areas.
- Timing of major earth works to coincide with low rainfall as much as practicable.
- Development and implementation of a progressive Rehabilitation Management Plan. This is to include a vegetation/land clearing strategy which includes minimisation, staging and salvage and re-use where possible.
- The use and storage of hazardous substances will be managed in accordance with relevant legislation, guidelines, and standards.
- Spill management procedures developed and equipment available to deploy if needed.

Imported materials will be classified as ‘clean earth’ under Queensland’s *Environmental Protection Regulation 2019*.

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

Offsets have not been proposed for the GBR National Heritage Place.

4.1.3 Ramsar Wetland

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

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

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

Direct impact	Indirect impact	Ramsar wetland
Yes		Bowling Green Bay

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

No

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

The disturbance footprint is within 20 km of Bowling green bay, a Ramsar listed wetland. The Project would not impact this Ramsar wetland given its distance to Project activities. The potential direct and indirect impacts from the disturbance caused by the Projects construction and operation have been mostly avoided due to the selection of HDD construction techniques to traverse the Ross River.

Potential indirect impacts from erosion and sedimentation and the open trenching construction activities will be managed and minimised through the implementation of mitigations and appropriate erosion and sediment control measures.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Arenaria interpres	Ruddy Turnstone
No	No	Botaurus poiciloptilus	Australasian Bittern
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
Yes	Yes	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calidris tenuirostris	Great Knot
Yes	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
Yes	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
No	No	Dasyurus hallucatus	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	Dichanthium setosum	bluegrass
No	No	Egernia rugosa	Yakka Skink
No	No	Elseya irwini	Irwin's Turtle, White-headed Snapping Turtle
No	No	Erythrotriorchis radiatus	Red Goshawk
No	No	Falco hypoleucos	Grey Falcon
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Geophaps scripta scripta	Squatter Pigeon (southern)
No	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Leichhardtia araujacea	
No	No	Leichhardtia brevifolia	
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
Yes	Yes	Limosa limosa	Black-tailed Godwit
No	No	Macroderma gigas	Ghost Bat
No	No	Myrmecodia beccarii	Ant Plant
No	No	Neochmia ruficauda ruficauda	Star Finch (eastern), Star Finch (southern)
Yes	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
Yes	Yes	Pluvialis squatarola	Grey Plover
No	No	Poephila cincta cincta	Southern Black-throated Finch
No	No	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
Yes		Pteropus conspicillatus	Spectacled Flying-fox
Yes	Yes	Rostratula australis	Australian Painted Snipe
Yes	Yes	Saccolaimus saccolaimus nudicluniatus	Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat
Yes	Yes	Sternula albifrons	Little Tern
No	No	Tephrosia leveillei	
No	No	Tringa nebularia	Common Greenshank, Greenshank
No	No	Tyto novaehollandiae kimberli	Masked Owl (northern)
No	No	Varanus mertensi	Mertens' Water Monitor, Mertens's Water Monitor
Yes	Yes	Xenus cinereus	Terek Sandpiper
No	Yes	Xeromys myoides	Water Mouse, False Water Rat, Yirrkoo

Ecological communities

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

Yes

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

The design of the Project has been developed and refined to maximise use of disturbed areas, and avoid and minimise further vegetation clearing wherever feasible, however, due to the requirements of the Project, some disturbance of vegetation is unavoidable.

The disturbance footprint has been aligned where possible with existing easements and access tracks which have been subject to previous vegetation removal and ground disturbance. Most of these easements have become highly degraded and provide minimal ecological value. The HDD construction method will minimise and avoid impacts to vegetation where possible and the micro-siting of the entry and exit points will be refined to minimise requirements for clearing.

With these clearing avoiding measures in place, up to 5.5 ha of remnant vegetation may be cleared for the Project which is habitat for MNES listed threatened and migratory species. The impact of this loss varies for each species according to its utilisation of the Study Area and habitat requirements. This impact is assessed for each known, likely or potentially occurring species in Ecology Technical Report – **Att-A, Appendix A, Section 7.1, Page 118-126**.

Vegetation clearing is the main direct impact from the Project that results in the loss of vegetation values and habitat, with the severity of impacts more pronounced in areas that provide values for conservation significant species and communities. Potential direct and impacts resulting from clearing native vegetation and other construction activities can include:

- Direct mortality and injury to fauna during vegetation clearing and construction activities.
- Reduced patch size of vegetation communities potentially compromising the viability of the community and associated habitat.
- Loss of habitat causing a reduction of biological diversity or loss of local populations and genotypes.
- Increase in edge effects, leading to fragmentation, increase in light, noise and vibration penetration and disturbance, changes to predation viability, alterations in microclimates, and increased weed/pest incursion.
- Loss of floristic diversity and the food resources this provides such as foliage, flowers, nectar, fruit and seeds.
- Fragmentation of habitats resulting in reduced dispersal opportunities for fauna and increased risk of predation.
- Destruction of abiotic features necessary to support vegetation communities and habitat types.
- Direct displacement of fauna from the Disturbance Footprint, an overall reduction in fauna diversity and/or loss of local populations
- Loss, or reduced availability, of microhabitat features (e.g. leaf litter, ground timber, dense shrubs) and/or important habitat features (e.g., tree hollows, recognised forage trees) for threatened and migratory species which rely on the availability of nesting, foraging, breeding and shelter habitat for survival.
- Erosion, sediment runoff and alteration to hydrology, leading to the loss of topsoil and exposure of subsoil, changes to water quality and nutrient levels, and watercourse turbidity.
- Generation and deposition of airborne dust, sand and soil as well as environmental spills may have potential impacts on vegetation and watercourses.

Operation and maintenance

Potential impacts on MNES associated with the operation phase of the Project are considered to be very low as activities will be limited to periodic maintenance. Traversing maintenance vehicles may inadvertently introduce weeds and potentially collide with ground dwelling MNES resulting in injury or mortality.

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

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

Listed threatened ecological communities

The semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar bioregions TEC potentially occurring in the disturbance footprint was not identified during the field surveys so the Project will not have any impacts on listed TECs.

Listed threatened species

An initial screening assessment was undertaken by AECOM to identify MNES listed threatened species that are at risk of potential impacts from the Project. Those that were found to have a low potential risk were not assessed further.

Six individual MNES species, and two migratory groups, migratory shorebird species and migratory terrestrial species, were identified as having a potential risk of being impacted by the Project and were assessed further against the significant impact assessment criteria. This was based on species listing status, cryptic nature or potential presence within the disturbance footprint. The six individual species assessed were:

- Eastern curlew (*Numenius madagascariensis*)
- Western Alaskan bar-tailed godwit (*Limosa lapponica baueri*)
- Great knot (*Calidris tenuirostris*)
- Sharp-tailed sandpiper (*Calidris acuminata*)
- Water mouse (*Xeromys myoides*)
- Whimbrel (*Numenius phaeopus*).

Att-A, Section 9.4, Page 65-69 detail the results of the significant impact assessments for the listed threatened and migratory species. The assessments identified that none of the listed species will be significantly impacted by the Project.

The full significant impact assessment for each species and group are provided in the Ecological Technical Report – **Att-A, Appendix A, Appendix E, Page 316-376**.

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

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

The results of the significant impact assessments for the listed threatened and migratory species detailed in **Att-A, Section 9.4, Page 65-69** identified that none of the listed species will be significantly impacted by the Project, on the basis that:

- The Project area was found to lack habitat considered critical for the survival of the particular species, or important habitat for the particular species OR
- The Project area was found to be unable to support an important population or ecologically significant proportion of a population OR
- The Project design and proposed mitigation measures were considered appropriate to reduce impacts to the species.

As such, the Project is unlikely to be considered a “Controlled Action” due to this.

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

Avoidance

The Project has been designed to avoid, to the greatest extent possible, areas of ecological value. This was achieved using the following approaches:

- 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 under boring 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 under-boring in the Ross River section, which has now increased to over 900 m, avoiding impacts to high-value mangrove and forbland vegetation as well. Increasing the length of under-boring 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.

Mitigation

Mitigation and management measures will be implemented during construction by the selected Contractor to reduce the residual impacts that cannot be avoided through design. A Preliminary CEMP has been developed and includes the recommended mitigation and management measures that the selected contractor will consider incorporating into the final CEMP. The measures relevant to MNES values are summarised in **Att-A, Section 8.2, Page 58-62** and the preliminary CEMP for the Project is provided in **Att-A, Appendix E, Page 439-507**.

Operation and maintenance

Any impacts during this phase would be mitigated through implementation of the CEMP and specific controls like weed hygiene procedures and site speed limits.

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

No offsets are proposed for threatened species and ecological communities.

4.1.5 Migratory Species

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

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

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

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Actitis hypoleucos	Common Sandpiper
No	Yes	Anous stolidus	Common Noddy
No	Yes	Apus pacificus	Fork-tailed Swift
Yes	Yes	Arenaria interpres	Ruddy Turnstone
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
Yes	Yes	Calidris alba	Sanderling
Yes	Yes	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calidris melanotos	Pectoral Sandpiper
Yes	Yes	Calidris ruficollis	Red-necked Stint
Yes	Yes	Calidris tenuirostris	Great Knot
Yes	Yes	Charadrius bicinctus	Double-banded Plover
Yes	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
Yes	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
Yes	Yes	Charadrius veredus	Oriental Plover, Oriental Dotterel
Yes	Yes	Chlidonias leucopterus	White-winged Tern, White-winged Black Tern
No	Yes	Crocodylus porosus	Salt-water Crocodile, Estuarine Crocodile
Yes	Yes	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
No	Yes	Fregata ariel	Lesser Frigatebird, Least Frigatebird
No	Yes	Fregata minor	Great Frigatebird, Greater Frigatebird
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	Yes	Gelochelidon nilotica	Gull-billed Tern

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Glareola maldivarum	Oriental Pratincole
No	No	Hirundapus caudacutus	White-throated Needletail
Yes	Yes	Hydroprogne caspia	Caspian Tern
Yes		Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle
Yes	Yes	Limicola falcinellus	Broad-billed Sandpiper
Yes	Yes	Limosa lapponica	Bar-tailed Godwit
Yes	Yes	Motacilla flava	Yellow Wagtail
Yes	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
Yes	Yes	Numenius minutus	Little Curlew, Little Whimbrel
Yes	Yes	Numenius phaeopus	Whimbrel
Yes	Yes	Pandion haliaetus	Osprey
Yes	Yes	Plegadis falcinellus	Glossy Ibis
Yes	Yes	Pluvialis fulva	Pacific Golden Plover
Yes	Yes	Pluvialis squatarola	Grey Plover
Yes		Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
Yes	Yes	Sterna hirundo	Common Tern
Yes	Yes	Sternula albifrons	Little Tern
No	Yes	Sula leucogaster	Brown Booby
Yes	Yes	Thalasseus bergii	Greater Crested Tern
Yes	Yes	Tringa brevipes	Grey-tailed Tattler
Yes	Yes	Tringa glareola	Wood Sandpiper
No	Yes	Tringa incana	Wandering Tattler
Yes	Yes	Tringa nebularia	Common Greenshank, Greenshank
Yes	Yes	Tringa stagnatilis	Marsh Sandpiper, Little Greenshank
Yes	Yes	Xenus cinereus	Terek Sandpiper

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

Yes

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

The design of the Project has been developed and refined to maximise the use of disturbed areas and avoid and minimise further vegetation clearing wherever feasible; however, due to the requirements of the Project, some disturbance of vegetation is unavoidable.

The disturbance footprint has been aligned where possible with existing easements and access tracks, which have been subject to previous vegetation removal and ground disturbance. Most of these easements have become highly degraded and provide minimal ecological value. The HDD construction method will minimise and avoid impacts to vegetation where possible and the micro-siting of the entry and exit points will be refined to minimise requirements for clearing.

With these clearing avoiding measures in place, up to 5.5 ha of remnant vegetation may be cleared for the Project which is habitat for MNES listed threatened and migratory species. The impact of this loss varies for each species according to its utilisation of the Study Area and habitat requirements. This impact is assessed for each known, likely or potentially occurring species in Ecology Technical Report – **Att-A, Appendix A, Section 7.1, Page 118-126**.

Vegetation clearing is the main direct impact from the Project that results in the loss of vegetation values and habitat, with the severity of impacts more pronounced in areas that provide values for conservation significant species and communities. Potential direct and indirect impacts resulting from clearing native vegetation and other construction activities can include:

- Direct mortality and injury to fauna during vegetation clearing and construction activities.
- Reduced patch size of vegetation communities potentially compromising the viability of the community and associated habitat.
- Loss of habitat causing a reduction of biological diversity or loss of local populations and genotypes.
- Increase in edge effects, leading to fragmentation, increase in light, noise and vibration penetration and disturbance, changes to predation viability, alterations in microclimates, and increased weed/pest incursion.
- Loss of floristic diversity and the food resources this provides such as foliage, flowers, nectar, fruit and seeds.
- Fragmentation of habitats resulting in reduced dispersal opportunities for fauna and increased risk of predation.
- Destruction of abiotic features necessary to support vegetation communities and habitat types.
- Direct displacement of fauna from the Disturbance Footprint, an overall reduction in fauna diversity and/or loss of local populations
- Loss, or reduced availability, of microhabitat features (e.g. leaf litter, ground timber, dense shrubs) and/or important habitat features (e.g., tree hollows, recognised forage trees) for threatened and migratory species which rely on the availability of nesting, foraging, breeding and shelter habitat for survival.
- Erosion, sediment runoff and alteration to hydrology, leading to the loss of topsoil and exposure of subsoil, changes to water quality and nutrient levels, and watercourse turbidity.
- Generation and deposition of airborne dust, sand and soil as well as environmental spills may have potential impacts on vegetation and watercourses.

Operation and maintenance

Potential impacts on MNES associated with the operation phase of the Project are considered to be very low as activities will be limited to periodic maintenance. Traversing maintenance vehicles may inadvertently introduce weeds and potentially collide with ground dwelling MNES resulting in injury or mortality.

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

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

An initial screening assessment was undertaken identify MNES listed threatened species that are at risk of potential impacts from the Project. Those that were found to have a low potential risk were not assessed further.

Five individual migratory MNES species, and two migratory groups, migratory shorebird species and migratory terrestrial species, were identified as having a potential risk of being impacted by the Project and were assessed further against the significant impact assessment criteria. This was based on species listing status, cryptic nature or potential presence within the disturbance footprint. The five individual migratory species assessed were:

- Eastern curlew (*Numenius madagascariensis*)
- Western Alaskan bar-tailed godwit (*Limosa lapponica baueri*)
- Great knot (*Calidris tenuirostris*)
- Sharp-tailed sandpiper (*Calidris acuminata*)
- Whimbrel (*Numenius phaeopus*).

Att-A, Section 9.4, Page 65-69 detail the results of the significant impact assessments for the listed migratory species. The assessments identified that none of the listed species will be significantly impacted by the Project.

Marginal foraging and rooting habitat attributed to the EPBC Act listed migratory species, whimbrel (*Numenius phaeopus*), was identified throughout the Study Area and individuals were identified during field surveys. The habitat is considered marginal as they are either degraded (in the form of historically cleared habitat adjacent to the road corridor) or not typically utilised by the species (*Sporobolus virginicus* grassland). Habitat for the whimbrel is widespread in northern Queensland, and the Study Area does not support an ecologically significant population nor important habitat for particular life-cycle stages. As such, significant residual impacts to this species are not expected from the Project.

Remnant and marginal habitat attributed to EPBC migratory shorebird species and migratory terrestrial bird species was identified throughout the Study Area and sitings of individuals including the Caspian tern (*Hydroprogne caspia*), crested tern (*Thalasseus bergii*) and osprey (Pandion haliaetus syn. Pandion cristatus) were identified during field surveys. Remnant areas of vegetation are considered marginal due to being degraded from historical clearing and is not typically utilised by migratory species groups. Additionally, habitat within the Project area is considered both remnant and marginal foraging and roosting only utilisation during high or king tides, thus does not support an ecologically significant population.

The full significant impact assessment for each group is provided in the Ecological Technical Report–Att–A**, Appendix A, Appendix E, Page 316-376**.

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

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

The results of the significant impact assessments for the listed migratory species and groups detailed in **Att-A, Section 9.4, Page 65-69** identified that none of the listed species will be significantly impacted by the Project.

As such, the Project is unlikely to be considered a “Controlled Action” due to this matter.

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

The design of the Project has been developed and refined to maximise the use of disturbed areas and avoid and minimise further vegetation clearing wherever feasible; however, due to the requirements of the Project, some disturbance of vegetation is unavoidable.

The disturbance footprint has been aligned where possible with existing easements and access tracks, which have been subject to previous vegetation removal and ground disturbance. Most of these easements have become highly degraded and provide minimal ecological value. The HDD construction method will minimise and avoid impacts to vegetation where possible and the micro-siting of the entry and exit points will be refined to minimise requirements for clearing.

With these clearing avoiding measures in place, up to 5.5 ha of remnant vegetation may be cleared for the Project which is habitat for MNES listed threatened and migratory species. The impact of this loss varies for each species according to its utilisation of the Study Area and habitat requirements. This impact is assessed for each known, likely or potentially occurring species in Ecology Technical Report – **Att-A, Appendix A, Section 7.1, Page 118-126**.

Vegetation clearing is the main direct impact from the Project that results in the loss of vegetation values and habitat, with the severity of impacts more pronounced in areas that provide values for conservation significant species and communities. Potential direct and impacts resulting from clearing native vegetation and other construction activities can include:

- Direct mortality and injury to fauna during vegetation clearing and construction activities.
- Reduced patch size of vegetation communities potentially compromising the viability of the community and associated habitat.
- Loss of habitat causing a reduction of biological diversity or loss of local populations and genotypes.
- Increase in edge effects, leading to fragmentation, increase in light, noise and vibration penetration and disturbance, changes to predation viability, alterations in microclimates, and increased weed/pest incursion.
- Loss of floristic diversity and the food resources this provides such as foliage, flowers, nectar, fruit and seeds.
- Fragmentation of habitats resulting in reduced dispersal opportunities for fauna and increased risk of predation.
- Destruction of abiotic features necessary to support vegetation communities and habitat types.
- Direct displacement of fauna from the Disturbance Footprint, an overall reduction in fauna diversity and/or loss of local populations
- Loss, or reduced availability, of microhabitat features (e.g. leaf litter, ground timber, dense shrubs) and/or important habitat features (e.g., tree hollows, recognised forage trees) for threatened and migratory species which rely on the availability of nesting, foraging, breeding and shelter habitat for survival.
- Erosion, sediment runoff and alteration to hydrology, leading to the loss of topsoil and exposure of subsoil, changes to water quality and nutrient levels, and watercourse turbidity.
- Generation and deposition of airborne dust, sand and soil as well as environmental spills may have potential impacts on vegetation and watercourses.

Operation and maintenance

Potential impacts on MNES associated with the operation phase of the Project are considered to be very low as activities will be limited to periodic maintenance. Traversing maintenance vehicles may inadvertently introduce weeds and potentially collide with ground-dwelling MNES, resulting in injury or mortality.

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

No offsets are proposed for migratory species.

4.1.6 Nuclear

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

No

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

The proposed action is not a nuclear action.

4.1.7 Commonwealth Marine Area

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

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

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

—

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

No

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

The disturbance footprint is not within a Commonwealth Marine Area and is not near any such area. The closest marine area is 25 km from the Project and is associated with the Great Barrier Reef Marine Park. Therefore, the Project would not impact upon any Commonwealth Marine Area.

4.1.8 Great Barrier Reef

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

No

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

The Great Barrier Reef Marine Park does not overlap with the Great Barrier Reef World Heritage Property and National Heritage Place in the vicinity of the Project. The disturbance footprint at its closest point is 1.5 km inland from the GBR Marine Park and there would be no significant residual impacts from HDD construction under the Ross River estuary. As such it is unlikely that there would be direct or indirect impacts to the GBR Marine Park from the Project.

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

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

No

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

The Project is not a mining or coal seam gas development.

4.1.10 Commonwealth Land

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

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

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

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

No

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

The Project Area is not on Commonwealth Land.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

—

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

No

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

The Project is not overseas and therefore will not impact Commonwealth Heritage Places Overseas.

4.1.12 Commonwealth or Commonwealth Agency

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

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

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

None

Conclusion on the likelihood of unlikely significant impacts

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

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

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

No

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

TCC originally commenced the planning and design for the duplication of the existing 675 millimetre (mm) diameter nominal (DN675) asbestos cement Eastern Outfall Pressure Main pipeline in 2015. The pipeline was aligned within a combination of the Powerlink easement and state-controlled road corridor from Sixth Street (east), South Townsville, through to the intersection of Racecourse Road and Southern Port Road, as shown in **Att-A, Figure 2, Page 14**.

The EOPM duplication design comprised a DN710 high-density polyethylene (HDPE) pipe that would be constructed via conventional open trenching in open spaces and under roads. 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 coating reinstatement 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. 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 was undertaken in 2022 which involved a review of three potential alternatives with minor deviations 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 Powerlink Queensland (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 alignment, as was contemplated by the original proposal.

The existing EOPM pipeline forms a crucial part of the existing Townsville sewerage network. The replacement pipeline (the Project) will be a critical public utility infrastructure that will service the 'Eastern' sewer system in Townsville.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	24/07/2025	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.1.3 Natural features, important or unique values that applies to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.1.2 (World Heritage) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.1.6 (World Heritage) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.1.9 (World Heritage) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.2.2 (National Heritage) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.2.6 (National Heritage) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.2.9 (National Heritage) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-A - EOPM EPBC Referral MNES Report.pdf MNES Report for the EOPM Replacement Project	23/07/2025	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	4006 QLD
Representative's name	Alexandra Isgro
Representative's job title	Principal Environmental Planner
Phone	0432632567
Email	alexandra.isgro@aecom.com
Address	Level 8, 540 Wickham Street, Fortitude Valley QLD 4006

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

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

☑ By checking this box, I, **Alexandra Isgro of AECOM AUSTRALIA PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

Completed Person proposing to take the action's declaration

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

ABN/ACN	44741992072
Organisation name	TOWNSVILLE CITY COUNCIL
Organisation address	PO Box 1268, Townsville Qld 4810
Representative's name	Matt Schembri

Representative's job title	Acting General Manager Major Projects
Phone	0439672053
Email	Matt.schembri@townsville.qld.gov.au
Address	PO Box 1268, Townsville Qld 4810

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

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

☑ I, **Matt Schembri of TOWNSVILLE CITY COUNCIL**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

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

✔ Completed Proposed designated proponent's declaration

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

Same as Person proposing to take the action information.

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

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

☑ I, **Matt Schembri of TOWNSVILLE CITY COUNCIL**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

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