# Calvale to Calliope River Transmission Line Reinforcement Project

Application Number: **02633** Commencement Date: **15/10/2024** Status: **Locked**

# 1. About the project

## 1.1 Project details

**1.1.1 Project title ***

Calvale to Calliope River Transmission Line Reinforcement Project

**1.1.2 Project industry type ***

Energy Generation and Supply (non-renewable)

**1.1.3 Project industry sub-type**

Transmission Line

**1.1.4 Estimated start date ***

01/06/2026

**1.1.4 Estimated end date ***

31/12/2028

## 1.2 Proposed Action details

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

**Proposed Action overview**

Powerlink Queensland (Powerlink)* is proposing to construct and operate a new transmission line located between the Calvale Substation and the Calliope River Substation. This project, known as the Calvale to Calliope River Transmission Line Reinforcement Project (the Proposed Action), extends from 10 kilometres (km) east of Biloela to 2 km north of Clinton, near Gladstone, Queensland.

The Proposed Action comprises of the following components:

- A new double circuit, 87-kilometre (km) 275 kilovolt (kV) transmission line between the existing Calvale Substation and the Calliope River Substation within a 60 metre (m) wide easement. The transmission line is split into five sections (Sections A, B, C, D & E)

- Expansion of the Calliope River Substation (Section E).
- Grid connection of the new transmission line to the Calvale and Calliope River Substations.

Att 1.01 - C2C EPBC Report_Part1of8, Figure 1.1, page 4 shows the location of the Proposed Action.

Powerlink seeks to commence construction of the Proposed Action by June 2026 with a view to conclude construction and commence operations by the end of 2028 to ensure continued supply to the Gladstone region with the scheduled closure of the coal fired Gladstone Power Station by 2028. Typically, the operational life of a transmission line and substation is 50 years.  Powerlink will make a decision in the future on whether to decommission and remove all infrastructure or replace the existing infrastructure with new infrastructure.

*Powerlink Queensland is the registered business name of the Queensland Electricity Transmission Corporation Limited (ABN: 82 078 849 233).

**Purpose of the Proposed Action**

The primary purpose of the Proposed Action is to reinforce electricity supply to the Gladstone region and increase network capacity and reliability to service the growing renewable energy industry in this area. In turn, the Proposed Action will support heavy industry to decarbonise and transition to clean energy and ensures renewable energy to flow into the wider Gladstone region.

The Project will allow for up to 1,800 megawatts (MW) of renewable hosting capacity in the region and increase network capacity and reliability to service the growing renewable energy industry in this area.

In preparation for transitioning the electricity network to renewable energy supply, Powerlink has identified future projects for the Gladstone transmission grid, collectively known as the ‘Gladstone Project’. The Proposed Action is the foundational transmission infrastructure project.

Future transmission infrastructure projects part of the Gladstone Project are not part of the Proposed Action and are not included in this referral.

**Proposed Action activities**

Activities in undertaking the Proposed Action will include:

- Transmission line construction activities (all sections)
    - Site preparation, including site set out, pre-clearance surveys and vegetation clearing.
    - Establishment of laydowns and offices.
    - Installation of gates, grids, clean down bays, waterway crossings, and access tracks.
    - Tower site benching.
    - Drilling of new bores to obtain water for construction activities.
    - Foundation excavation and installation.
    - Establishment of brake and winch sites
    - Structure assembly and erection using a large mobile crane.
    - Assembly of prefabricated steel tower sections adjacent to the final site.
    - Erection of towers in sections
    - Conductor and optical ground wire (OPGW) stringing is carried out as either conventional or aerial stringing..
    - Site rehabilitation, including the replacement of topography, topsoil, seeding to establish a minimum 70% ground cover, and fences where disturbed.
    - Reinstatement of all disturbed areas that will not accommodate permanent infrastructure
- Calliope River Substation 132 kV and 275 kV expansion (excluding upgrade works within the existing substation footprint and fenced compound)
    - Site preparation
    - Earthworks for substation platform expansion
    - Installation of security fencing, drainage, roads, cable trenches, station earthing, and foundations.
    - Drainage works
    - Underground cable trenching
    - Structure construction.
    - Aerial, gantry and support structures.
    - Erection of landing beams, conductors and busbars.
    - Site rehabilitation.
- Temporary infrastructure requirements for the project will include:

- Sites for Water Sourcing and Extraction.  Water is required for dust suppression and development of access tracks during construction and will be sourced from local dams and bores in consultation with landholders, and will only be taken when sufficient supply exists.
- Brake and winch sites.
- Laydown areas
- Several concrete batching plants are anticipated to be required for construction of the Project. Concrete suppliers located in Biloela and Gladstone will be used and to supplement this supply, concrete batching plants will be located within the Disturbance Footprint.
    - Mobile batching plants may be used for construction areas located too far from batching plants and concrete supplies.

Att 1.01 - C2C EPBC Report_Part1of8, section 2.0, pages 10-16, provides a detailed description of the Proposed Action.

**Direct and indirect impacts**

The Project Area (also referred to as the 'Study Area') covers approximately 14,293 hectares (ha) and equates to the boundaries that were assessed during the Ecology field surveys with a buffer. The Project Area is 800 m on each side of the transmission line in Sections A-D, 100 m around Section E, and 100 m around an additional laydown area proposed approximately 1 km north of Section B.

The Disturbance Footprint totals 335 hectares (ha), as shown in Att 1.01 - C2C EPBC Report_Part1of8, Figures 1.3A-1.3E, page 8, delineates the extent of direct impacts. This Disturbance Footprint represents the worst-case clearing scenario.

This referral addresses the potential for direct and indirect impacts to matters of national environmental significance resulting from Powerlink undertaking the Proposed Action. Activities resulting in direct impacts include vegetation clearing, earthworks, boring and other construction activities. Conversely, activities resulting in indirect impacts include edge effects, erosion and sedimentation and dust emissions.

Powerlink is currently undertaking an iterative detailed design and costing exercise to optimise the configuration of the proposed 275 kV line and substation expansions to further minimise and mitigate impacts as a result of undertaking the Proposed Action.

**Land tenure arrangements**

The Proposed Action will be undertaken on freehold, State Forest, reserve, National Park, lands lease, Profit À Prendre and industrial estate land.

The transmission line and substation expansion works will largely be undertaken within an existing easement in favour to Powerlink. Powerlink will acquire new easements to accommodate small portions of the new transmission line within Sections A and E and the entirety of Section C.

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

Yes

### 1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

### 1.2.5 Provide information about the staged development (or relevant larger project).

The Queensland Energy and Jobs Plan (QEJP) identifies a number of transmission projects as critical to the transformation of Queensland's energy system.  These key transmission projects are identified in the Queensland Supergrid Infrastructure Blueprint (Blueprint) that accompanies the (QEJP).

The Proposed Action is the first of a collection of projects which have been identified as Priority Transmission Investments (PTI) and collectively referred to as the 'Gladstone Project'. The primary purpose of the Gladstone Project is the reinforcement of the Gladstone network to support decarbonisation in the region and also provides some incremental renewable connection capacity.

The *Energy (Renewable Transformation and Jobs) Act 2024* sets out the process to allow the Queensland Government to identify and assess PTI projects within a new State-based planning and investment framework, and to direct Powerlink to construct these projects.

Following further planning and modelling of anticipated power system performance, Powerlink has outlined three stages of work needed to address the proposed identified need for the Gladstone Project.

**Stage 1 comprises (the Proposed Action):**

- Building a new 275kV high capacity double circuit line between Calvale and Calliope River substations (Sections A – E)
- Expanding the Calliope River Substation to accommodate the expansion of the 275 kV and 132 kV switchyards.

The anticipated completion date for Stage 1 is December 2028, subject to commencement of construction in June 2026. Construction timeframe is approximately 2.5 years.

**Stage 2 comprises:**

- Rebuild Larcom Creek to Bouldercombe transmission line as a 275 kV high-capacity double circuit line.

The anticipated completion date for Stage 2 is December 2029, subject to commencement of construction in June 2027. Construction timeframe is approximately 2.5 years.

**Stage 3 comprises:**

- Rebuild Calliope River to Larcom Creek transmission line as a 275 kV high-capacity double circuit line.

The anticipated completion date for Stage 3 is March 2031. This stage is dependent upon the substantive completion of all previous stages prior to the commencement of construction. Construction timeframe approximately one (1) year and three (3) months.

As at June 2024, the Gladstone Project has been confirmed as eligible Priority Transmission Investments in the Energy Renewable Transformation and Jobs) Regulation 2024.

Stages 2 and 3 will be referred to DCCEEW at a later date.

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

**Commonwealth legislation**

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) – Matters of national environmental significance (MNES) are protected under the EPBC Act. The Proposed Action has been referred under this Act given the presence of MNES and the outcomes of significant impact assessments.

**Queensland legislation**

- *Aboriginal Cultural Heritage Act 2003* (ACH Act) – Under the ACH Act, Powerlink is required to exercise a duty of care to take all reasonable and practical measures to avoid harming Aboriginal and Torres Strait Islander cultural heritage.
- *Biosecurity Act 2014* (Biosecurity Act) – The Proposed Action will be required meet the General Biosecurity Obligations under the Biosecurity Act, managed through the development and implementation of a Construction Environmental Management Plan (CEMP).
- *Electricity Act 1994* (Electricity Act) – As a transmission entity, Powerlink is required to promote a safe, efficient and reliable supply and use of electricity while also properly considering the environmental effects of its activities under the transmission authority.
- *Electricity Safety Act 2002* (Electricity Safety Act) – As a transmission entity Powerlink must seek to prevent death, injury and destruction that can be caused by electricity.
- *Energy (Renewable Transformation and Jobs) Act 2024* (Energy Act) – The Proposed Action is declared as an eligible Priority Transmission Investments (PTI) under the Energy Act.

- *Environmental Offsets Act 2014* (EO Act) – The EO Act prescribes conditions and processes for offsets for impacts to prescribed environmental matters which include MNES, matters of state (MSES) and local environmental significance (MLES).
- *Environmental Protection Act 1994* (EP Act) & Environmental Protection Regulation 2019 (EP Regulation) – Powerlink will comply with the general environmental duty in the EP Act, particularly when undertaking activities with the potential to cause environmental harm.
- *Fisheries Act 1994* (Fisheries Act) – Potential fisheries habitat (e.g., waterways and marine plants) protected under the Fisheries Act are present within the area. Powerlink will seek to minimise impacts to waterways and marine plants.
- *Forestry Act 1959* (Forestry Act) – The Proposed Action intersects with the Callide Timber Reserve which is protected under the Forestry Act. Powerlink will obtain a permit under the act to facilitate the construction and operation of the Proposed Action within the Callide Timber Reserve.
- *Nature Conservation Act 1992* (NC Act) – The NC Act provides for the creation and management of protected areas, the protection of native wildlife and regulates the clearing of native plants. The Proposed Action will require Protected Plant clearing permits and Species Management Programs (low risk and high risk) will be required to protect and manage animal breeding places. The Proposed Action will also seek the relevant NC Act approvals for impacts upon the Calliope Conservation Park,
- *Planning Act 2016* (Planning Act) – The Planning Act establishes a framework and overarching policy for land use planning and development assessment in Queensland. Powerlink will utilise the Ministerial Infrastructure Designation (MID) approval pathway under the Planning Act to facilitate the land use approval for the Proposed Action. Through the MID assessment process, the Proposed Action will be assessed against the applicable State interests and constraints ordinarily made assessable under the Planning Act.
- *Queensland Heritage Act 1992* (QH Act) – The QH Act provides for the conservation of Queensland's cultural heritage for the benefit of the community and future generations. Should the Proposed Action unearth an archaeological artefact that is an important source of information about an aspect of Queensland history, it must be reported to the Department of the Environment, Tourism, Science and Innovation.
- *State Planning Policy* (SPP) – The SPP outlines State interests that serves as the overarching policy for regional and local planning schemes. The MID assessment process will consider the SPP against the Proposed Action.
- *Stock Route Management Act 2002* (Stock Route Management Act) – This Act provides a framework for management of Queensland's stock routes. The Proposed Action intersects stock routes and will seek to minimise impacts to the operation of existing stock routes.
- *Transport Infrastructure Act 1994* (TI Act) – The TI Act provides a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure. The Proposed Action will intersect State-controlled roads and railway corridors regulated under this act and will require the relevant approvals to interfere with these roads and railway corridors.
- *Vegetation Management Act 1999* (VM Act) – The VM Act regulates and manages the process and impacts of native vegetation clearing. The Proposed Action will require the removal of regulated vegetation under the VM Act. Powerlink is afforded exemptions under the VM Act given the Proposed Action is for electricity infrastructure associated with a MID.
- *Water Act 2000* (Water Act) – This Act provides a framework to deliver sustainable water planning, allocation, management and supply processes to provide for the improved security of water resources in Queensland. Where required, Powerlink will obtain the relevant water licences and permits required to take or interfere with water.

### 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. *

**Engagement Framework**

Powerlink is committed to effective and genuine stakeholder and landholder engagement practices guided under its Stakeholder Engagement Framework.

The aim of Powerlink's engagement for the Calvale to Calliope River Transmission Line Reinforcement Project is to:

- Provide timely, relevant and meaningful information about the project, reflective of the scale and complexity of the project activities
- Ensure landholders, Traditional Owner groups, the wider community and other stakeholders are aware of key project activities and how they can provide input within the scope of consultation processes

- Utilise a range of engagement activities to facilitate two-way information sharing with identified target stakeholder groups.

**Project stakeholders**

Powerlink has undertaken consultation with the following Project stakeholder groups:

- Federal and State elected representatives
- Banana Shire Council and Gladstone Regional Council
- Directly affected landholders
- Adjacent landholders
- Traditional Owner Groups – Gaangulu Nation People (GNP) and the Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda People (BGGGTBP).
- Aviation safety authorities
- High pressure gas pipeline operators
- Local businesses and industry groups
- Volunteering and school-based communities
- Local emergency services
- Environmental groups
- General public

**Engagement activities to date**

- (Complete) March-August 2023: Early Engagement and project introduction with key stakeholders and landholders. This involved:
    - Targeted consultation to introduce the project and gain early understanding of key issues and interests.
    - Project web page established on Powerlink website.
- (Complete) June 2024: Release of Draft Corridor Selection Report (CSR). Section C requires a new easement adjacent to an existing transmission line. Powerlink undertook a CSR to identify the appropriate route for Section C. This involved:
    - Consultation with landholders, Traditional Owner groups, the community and other stakeholders, to support the release of the Draft CSR.
- (Complete) August 2024: Release of the Final CSR. This involved:
    - Communication with project stakeholders, to generate awareness of the Final CSR, which confirms the final corridor to be progressed to planning and environmental approvals.
    - The Final CSR includes a summary of feedback received during Draft CSR consultation, and Powerlink's response. This is to demonstrate transparency and close the feedback loop before progressing to the next phase.
- (Ongoing) Mid 2023 – Current: Consultation with landholders and other stakeholders to inform the planning and approvals process. This involves:
    - Targeted consultation with landholders along the final corridor and other key stakeholders (including Traditional Owners).
    - Engage with directly impacted landholders about:
    - Land Access Protocol and Project Participation and Access Allowance (PPAA), and facilitating access for field studies
    - Understanding their concerns and priorities
    - Understanding land use in-detail, including any property-specific or commercial land activities that may be impacted or will co-exist with the project
    - Infrastructure placement, including transmission towers and supporting infrastructure such as access tracks.

**Traditional Owner group engagement**

Powerlink has dedicated team members for engaging with GNP and BGGGTBP about legislative cultural heritage requirements, as well as engagement on project milestones and other partnering opportunities. Engagement with GNP and BGGGTBP has been ongoing since October 2022 through numerous meetings, Project site drive-throughs and surveying.

Ongoing engagement with landholders, Traditional Owner groups, the community and other stakeholders remains a key focus during all phases of Powerlink projects. This ensures Powerlink has the opportunity to strengthen and leverage relationships with key groups throughout the project lifecycle.

# 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.

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### 1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

| | |
|---|---|
| **ABN/ACN** | 18059519041 |
| **Organisation name** | UMWELT (AUSTRALIA) PTY. LTD. |
| **Organisation address** | 2284 NSW |

Referring party details

| | |
|---|---|
| **Name** | Julius Frias |
| **Job title** | Senior Environmental Planner |
| **Phone** | 0487726136 |
| **Email** | JFrias@umwelt.com.au |

| | |
|---|---|
| **Address** | Level 20, 145 Ann Street, Brisbane City, 4000 |

## 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** | 82078849233 |
| **Organisation name** | QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED |
| **Organisation address** | 4014 QLD |

Person proposing to take the action details

| | |
|---|---|
| **Name** | Thomas Hewitt |
| **Job title** | Property Project Manager |
| **Phone** | 0467757586 |
| **Email** | thomas.hewitt@powerlink.com.au |
| **Address** | 33 Harold Street, Viriginia, QLD, 4014 |

**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. ***

Powerlink is a Queensland Government Owned Corporation (GOC) that owns, operates and maintains the Queensland high voltage transmission network. Powerlink have total assets in excess of $8 billion (as at June 2018), comprising of the Queensland transmission network that extends 1,700km from the north of Cairns to the New South Wales border, and comprising of 15,500 circuit kilometres of transmission lines and 147 substations.

Powerlink has a formidable record of responsible environmental management. Powerlink is committed to the protection of the environment as it seeks to expand and upgrade its network to ensure reliable electricity supply and to progress renewable energy development.

Powerlink has not and is not currently subject to any Commonwealth, State or Local proceedings with respect to environmental impacts.

Powerlink has previously referred actions to the Department, see list below (note: this is not an exhaustive list):

- 2021-9060: Genex Kidston Connection Project
- 2011/5801: Paynes Road, Ebenezer - Construction of a Linesman Training Facility.
- 2010/5615: Springdale to Blackwall Transmission Line Project.
- 2010/5346: 275/132kVTransmission Line Replacement Project.
- 2009/5229: Construction of Calliope River 275kV and 132kV Bulk Supply Substation.
- 2009/4840: 275 kV Double-Circuit Transmission Line - Woolooga Substation and New Substation.
- 2008/4479: Larapinta to Algester Transmission Line and Larapinta Substation.
- 2008/4390: 275kV Transmission Line from Ross Substation to Strathmore Substation.
- 2007/3230: Spring Gully to Braemar High Voltage Transmission Line Development.

### 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

Powerlink's Health, Safety and Environment Policy (refer to Att 2 – PLQ HSE Policy) emphasises the prevention or minimization of harm to the environment as a core commitment. The policy outlines several key areas of focus to achieve its environmental objectives (Powerlink, 2024):

Sustainable Decisions:

- Powerlink decisions are informed by data and insights. Powerlink considers the impacts and opportunities of their decisions on the environment and the reliability of their network. Powerlink builds collaborative partnerships to create a positive impact in the community and for their people.

Agile Delivery:

- Powerlink are constantly adapting their systems to respond to the changing requirements and risks of our work. Powerlink's systems are relevant for their people to use. Powerlink focuses on improving the effectiveness of critical processes and controls in their work and builds resilience into our operations aligned with our commitment to our people, customers, contractors, communities and the environment.

Empowered People and Learning:

- Powerlink trusts their people who are empowered to use their expertise and create improvements in their work. Powerlink takes every opportunity to learn, share and continuously improve how they work.

Healthy and Engaged Workforce:

- Powerlink leads with genuine care for their people and wants everyone to go home safe and well every day. Powerlink creates a constructive and engaging workplace so that their people can thrive. Powerlink enable their people to make positive health and wellness choices at work and at home.

Powerlink systematically monitors its compliance obligations and business requirements related to the environment. It has systems in place to develop, resource, monitor, and continuously improve its environmental commitments and objectives. This includes planning, design, construction, operation, and maintenance of an electrically safe network.

## 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** | 82078849233 |
| **Organisation name** | QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED |
| **Organisation address** | 4014 QLD |

Proposed designated proponent details

| | |
|---|---|
| **Name** | Thomas Hewitt |
| **Job title** | Property Project Manager |
| **Phone** | 0467757586 |
| **Email** | thomas.hewitt@powerlink.com.au |
| **Address** | 33 Harold Street, Viriginia, QLD, 4014 |

## 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 | 18059519041 |
| Organisation name | UMWELT (AUSTRALIA) PTY. LTD. |
| Organisation address | 2284 NSW |
| Representative's name | Julius Frias |
| Representative's job title | Senior Environmental Planner |
| Phone | 0487726136 |

| | |
|---|---|
| Email | JFrias@umwelt.com.au |
| Address | Level 20, 145 Ann Street, Brisbane City, 4000 |

### 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 | 82078849233 |
| Organisation name | QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED |
| Organisation address | 4014 QLD |
| Representative's name | Thomas Hewitt |
| Representative's job title | Property Project Manager |
| Phone | 0467757586 |
| Email | thomas.hewitt@powerlink.com.au |
| Address | 33 Harold Street, Viriginia, QLD, 4014 |

### 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

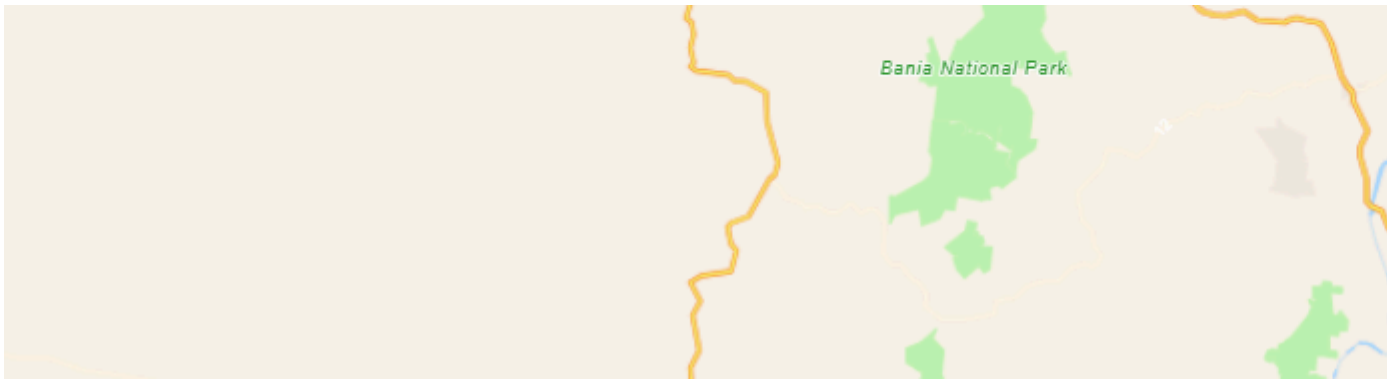
## 1.4 Payment details: Payment allocation

**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:** 14318.44 Ha
**Disturbance Footprint:** 335.67 Ha

Maptaskr © 2024 -24.862441, 151.138772

Powered By Esri - Sources: Esri, TomTom, Garmin, FAO, N…

## 2.2 Footprint details

### 2.2.1 What is the address of the proposed action? *

(Start) Section A – Lot 1 on CP890133; (End) Section E – Lot 113 on CTN799

### 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? *

Land tenure across the Project Area includes freehold, State Forest, reserve, lands lease, land dedicated as road, unallocated State land and Profit À Prendre. Land parcels vary in size, from 1.3 hectares (ha) to 9,630 ha. Ownership of this land is primarily State owned and private freehold.

Most of the Proposed Action alignment will be located within existing easements to the benefit of Powerlink to construct, operate and maintain transmission infrastructure. Parts of Sections A and E and the entirety of Section C will require new easements to accommodate the Proposed Action. These new easements will be up to 60 m wide. The Proposed Action will also require tenure approvals and occupation permits for parts of the alignment within State forests, conservation park and timber reserves.

# 3. Existing environment

## 3.1 Physical description

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

**Location**

The Project Area is over 14,293 hectares (ha) and extends over 87 kilometres (km) from the Calvale Substation to the Calliope River Substation and is located over two local government areas being Banana Shire Council and Gladstone Regional Council.

The Project Area is split into five sections as detailed below.

- Section A
  - Location of start of section: -24.3418, 150.6270
  - Location of end of section: -24.3268, 150.6560
  - Approximate length: 3.5 km
  - Existing Powerlink infrastructure: 132kV and 275kV lines, Calvale substation
- Section B
  - Location of start of section: -24.3268, 150.6560
  - Location of end of section: -23.9344, 150.9174
  - Approximate length: 51.5 km
  - Existing Powerlink infrastructure: One 275kV line
- Section C
  - Location of start of section: -23.9344, 150.9174
  - Location of end of section: -23.9230, 151.0733
  - Approximate length: 16 km
  - Existing Powerlink infrastructure: Two 275kV lines
- Section D
  - Location of start of section: -23.9230, 151.0733
  - Location of end of section: -23.8484, 151.1754
  - Approximate length: 13.5 km
  - Existing Powerlink infrastructure: One 275kV line
- Section E
  - Location of start of section: -23.8484, 151.1754
  - Location of end of section: -23.8580, 151.1943
  - Approximate length: 2 km
  - Existing Powerlink infrastructure: Two 275kV lines, Calliope River substation

Key towns along the Project Area alignment include:

- Biloela – approximately 13 km west-southwest of the start of Section A
- Mount Larcom – approximately 13 km north of the midpoint of Section C
- Calliope – approximately 16 km southwest of the start of Section D
- Yarwun – approximately 4 km north of the midpoint of Section D
- Gladstone Central – approximately 7 km east-northeast of the end of Section E

Refer to Att 3 – Final Corridor Selection Report, Appendix C, page 26-38 for additional information on each Project section.

**Zoning**

The Project Area and surrounding area is primarily zoned as ‘Rural’ under the Gladstone Regional Council Planning Scheme (Gladstone Planning Scheme) and the Banana Shire Council Planning Scheme (Banana Planning Scheme). The land use intent for ‘Rural’ is similar under each planning scheme, recognising a range of rural land uses, including agriculture, and the need to protect the rural character/amenity of the region.

Parts of Section A are located within the Community Facilities Zone under the Banana Planning Scheme and parts of Sections D and E are identified within the Special Purpose Zone, Environmental Management Zone, Conservation Zone and Open Space Zone under the Gladstone Planning Scheme.

Sections D and E are also located within the Gladstone State Development Area (SDA) precincts for port related industry, environmental management and high impact industry. Sections B and C also intersect the Callide Infrastructure Corridor SDA.

There are no changes proposed to the existing zoning of the Project Area to facilitate the Proposed Action. As further discussed in section 1.2.6 of this referral, Powerlink will utilise the Ministerial Infrastructure Designation (MID) pathway under the *Planning Act 2016* (Qld.) to obtain the land use approval for the Proposed Action.

**Access**

The Project Area will be accessed from existing State-controlled and local roads such as the Bruce Highway, Dawson Highway, Coal Road, Biloela-Callide Road, Calliope River Road, Reid Road and Mt Miller Road.

Due to collocation with existing transmission infrastructure, the Proposed Action will leverage on existing road crossings and access tracks on host-landowner properties. Upgrading of some access tracks and creation of new access tracks as part of the Proposed Action, will be required along some sections of the Project Area. Public roads will not require upgrading to facilitate the construction of the Proposed Action.

**Current condition**

The Project Area traverses a mix of heavily modified and natural environments. The modified natural environments are consistent with varying land uses along the alignment including existing linear infrastructure (transmission lines, transport corridors, gas pipelines), grazing and conservation areas.

During field surveys, weeds were found to be prominent throughout the Project Area, often being the dominating ground layer. Refer to Att 1.02 - C2C EPBC Report_Part2of8, section 6.2.2, page 89 for further detail regarding weeds found within the Project Area.

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

**Existing land uses**

The Project Area is characterised by the existing land uses and activities:

- Section A
  - Grazing, recreational uses, conservation and natural environments and reservoir/dam.
  - Calvale Substation and associated transmission infrastructure.
- Section B
  - Grazing, production forestry, transportation (Dawson Highway, Moura System railway corridor), gas pipelines, plantation forestry and conservation.
  - One existing Powerlink 275 kV transmission line
- Section C
  - Grazing, transportation (Bruce Highway), gas pipelines and telecommunications
  - Two existing Powerlink 275 kV transmission lines
- Section D
  - Grazing, production forestry, rural residential, and conservation, transportation (North Coast railway corridor)
  - One existing Powerlink 275 kV transmission line
- Section E
  - Conservation ,port activities (coal conveyor belt)
  - Calliope River Substation and associated transmission infrastructure.

The existing land uses surrounding the Project Area are analogous to the above mentioned uses.

**Proposed land uses**

The Proposed Action does not seek to introduce new uses to the Project Area. The Proposed Action will be collocated next to existing transmission infrastructure and will materially increase the scale of the existing transmission infrastructure uses within the Project Area. Existing uses within the Project Area may continue during the construction, operation and decommissioning phases of the Proposed Action. Several renewable energy projects, undertaken by separate proponents, are proposed to be developed adjacent to the Proposed Action.

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

**Protected areas and reserves**

The Project area intersects the following State reserves, forests and conservation parks:

- Section B
  - Callide Timber Reserve, intersecting Section B to the south
  - Calliope Range State Forest, intersecting Section B in the centre
- Section D
  - Mount Stowe State Forest, intersecting Section D to the north
  - Calliope Conservation Park, intersecting Section D to the north

**Aquatic values**

Numerous watercourses intersect the Project Area with the largest system being the Calliope River, within Section E, that drains directly into the Pacific Ocean and Great Barrier Reef. Watercourses showed evidence of disturbance, often associated with cattle impacts including pugging, erosion and the presence of weeds. During brief periods of inundation, the aquatic environments within the Study Area may support assemblages of aquatic fauna such as native fish, freshwater and saltwater crustaceans and common amphibians.

While numerous wetland areas are mapped within the Study Area, few wetlands intersect the Disturbance Footprint. A lacustrine wetland (hydrologically modified or artificial) is mapped near Boyles Road, a natural riverine wetland is mapped near Mount Alma Road, another riverine wetland is mapped near Fig Tree Road, and a natural palustrine wetland is mapped near the Calvale Substation. At the Calliope River Substation, intertidal wetlands occur with both mangrove and saltpan vegetation.

Freshwater farm dams throughout the Study Area occur in varying sizes and contain varying levels of water. Most dams have muddy banks with low dense shrubs, whist two dams have some fringing aquatic vegetation including rushes and sedges. All farm dams assessed during the field surveys have shallow sloping muddy banks that have been heavily impacted by cattle and pigs.

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 6.5, pages 103-104 for further detail regarding aquatic values.

### 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 topography of the Project Area is detailed below.

- Section A - 215m to 320m Australian height datum (AHD) with key topographic features including Lake Callide.
- Section B - 65m to 565m AHD with key topographic features including Callide Timber Reserve, Calliope Range State Forest and Calliope River.
- Section C - 25m to 115m AHD being relatively flat to undulating overall.
- Section D - 15m to 200m AHD with key topographic features including Mount Stowe State Forest and Calliope Conservation Park.
- Section E - 2m to 30m AHD with key topographic features including Calliope River and the inlet to Gladstone Harbour.

# 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.

**Desktop and Field Assessments**

To inform the assessment of the Proposed Action, comprehensive desktop analysis and field surveys have been undertaken. The desktop assessment included a review of literature, and searches of publicly available datasets and online mapping to broadly characterise and identify the MNES that may occur within the Study Area. Baseline and targeted field surveys were undertaken throughout 2023 and 2024. These surveys were undertaken in accordance with the relevant guidelines and purposefully timed to align with the seasonal occurrence and peak activity period of threatened and migratory species potentially occurring within the Study Area and surrounds.

Refer to Att 1.01 - C2C EPBC Report_Part1of8, section 4.0, pages 20-43 for further detail regarding the desktop and field assessment methodology.

**Flora**

A total of 265 flora species from 60 families and 182 genera were identified during the field surveys. Of these flora species, the following threatened flora were confirmed present and identified as having a moderate to high likelihood of occurring the Study Area.

- Known to occur
  - *Cycas megacarpa* – Endangered
- High likelihood of occurrence
  - *Atalaya collina* (Yarwun whitewood) – Endangered
  - *Bertya opponens* (coolabah bertya) – Vulnerable
  - *Polianthion minutiflorum* – Vulnerable
  - *Samadera bidwillii* (quassia) – Vulnerable
- Moderate likelihood of occurrence
  - *Cossinia Australiana* – Endangered

Further information on the results of the flora surveys is discussed in Att 1.02 - C2C EPBC Report_Part2of8, section 6.2, pages 86-89.

52 introduced species were observed in the Study Area as further discussed in Att 1.02 - C2C EPBC Report_Part2of8, section 6.2.2, page 89.

**Fauna**

A total of 183 fauna species were recording during the field surveys comprising 129 birds, 44 mammals, 4 reptiles and 6 amphibians. The desktop assessment identified 63 threatened fauna species as potentially occurring within the Study Area. Of these fauna species, the following threatened fauna were confirmed present and identified as having a moderate to high likelihood of occurring the Study Area.

- Known to occur
  - *Geophaps scripta scripta* (squatter pigeon (southern)) – Vulnerable
  - *Pteropus poliocephalus* (grey-headed flying fox) – Vulnerable
  - *Apus pacificus* (fork-tailed swift) – Migratory
  - *Pandion haliaetus* (eastern osprey) – Migratory
- High likelihood of occurrence
  - *Hirundapus caudacutus* (white-throated needletail) – Vulnerable (Migratory)
  - *Petauroides volans* (greater gilder (southern and central)) – Endangered
  - *Petaurus australis australis* (yellow-bellied glider (south-eastern)) – Vulnerable
  - *Phascolarctos cinereus* (koala) – Endangered
  - *Xeromys myoides* (water mouse) – Vulnerable
  - *Symposiarchrus trivirgatus* (spectacled monarch) – Migratory
- Moderate likelihood of occurrence

- *Arenaria interpres* (ruddy turnstone) – Vulnerable (Migratory)
- *Calidris canutus* (red knot) – Vulnerable (Migratory)
- *Calidris acuminata* (sharp-tailed sandpiper) – Vulnerable (Migratory)
- *Calidris ferruginea* (curlew sandpiper) – Critically Endangered (Migratory)
- *Calidris tenuirostris* (great knot) – Vulnerable (Migratory)
- *Charadrius leschenaultia* (greater sand plover) – Vulnerable (Migratory)
- *Charadrius mongolus* (lesser sand plover)– Endangered (Migratory)
- *Gallinago hardwickii* (Latham's snipe) – Vulnerable (Migratory)
- *Grantiella picta* (painted honeyeater) – Vulnerable
- *Limosa lapponica baueri* (Nunivak bar-tailed godwit) – Endangered (Migratory)
- *Limosa limosa* (black-tailed godwit) – Endangered (Migratory)
- *Numenius madagascariensis* (eastern curlew – Critically Endangered (Migratory)
- *Pluvialis squatarola* (grey plover) – Vulnerable (Migratory)
- *Rostratula australis* (Australian painted snipe) – Endangered
- *Tringa nebularia* (common greenshank) – Endangered (Migratory)
- *Turnix melanogaster* (black-breasted button-quail) – Vulnerable
- *Xenus cinereus* (terek sandpiper) – Vulnerable (Migratory)
- *Dasyurus hallucatus* (northern quoll) – Endangered
- *Macroderma gigas (*ghost bat) – Vulnerable
- *Delma torquate* (collared delma) – Vulnerable
- *Caretta caretta* (loggerhead turtle) – Endangered (Migratory)
- *Chelonia mydas* (green turtle) – Vulnerable (Migratory)
- *Eretmochelys imbricata* (hawksbill turtle) – Vulnerable (Migratory)
- *Lepidochelys olivacea* (olive ridley turtle) – Endangered (Migratory)
- *Natator depressus* (flatback turtle) – Vulnerable (Migratory)
- *Actitis hypoleucos* (common sandpiper) – Migratory
- *Calidris melanotos* (pectoral sandpiper) – Migratory
- *Calidris ruficollis*(Rred-necked stint) – Migratory
- *Cuculus optatus* (Oriental cuckoo) – Migratory
- *Limosa lapponica* (bar-tailed godwit) – Migratory
- *Limicola falcinellus* (broad-billed sandpiper) – Migratory
- *Numenius minutus* (little curlew) – Migratory
- *Numenius phaeopus* (whimbrel) – Migratory
- *Pluvialis fulva* (Pacific golden plover) – Migratory
- *Tringa brevipes* (grey-tailed tattler) – Migratory
- *Tringa stagnatilis* (marsh sandpiper) – Migratory

Further information on the results of the fauna surveys is discussed in Att 1.03 - C2C EPBC Report_Part3of8, sections 6.4, pages 98-103.

A total of 10 introduced fauna species were recorded within the Study Area as further discussed in Att 1.03 - C2C EPBC Report_Part3of8, sections 6.4.6, page 103.

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

**Vegetation Communities**

The field surveys confirmed the presence of 24 Regional Ecosystems (REs) in remnant and regrowth condition within the Project Area. Att 1.02 - C2C EPBC Report_Part2of8, section 6.1.2, table 6.2, pages 53-79 details the extent, condition and description of the ground-truthed REs.

Despite a wide diversity of vegetation communities, RE 11.11.15 is the dominant across the Project Area, particularly from Sections A to D. This RE is dominated by *Eucalypts crebra*, occasionally with *Corymbia erythrophloia*, on metamorphosed sediments and interbedded volcanics. Section E is dominated by RE 12.1.3, comprising mangrove shrubland of *Rhizophora stylosa* and *Ceriops australis* on estuaries. Elsewhere in Section E, large areas are dominated by cleared, non-remnant vegetation and regrowth eucalypt woodland.

The desktop assessment identified 11 Threatened Ecological Communities (TEC) that may occur within the Project Area. Of the 11 TECs, four were confirmed to be present within or adjacent to the Project Area:

- Brigalow (Acacia harpophylla dominant and co-dominant (Brigalow TEC) – outside of the Project Area.
- Semi-evergreen vine thickets of the Brigalow Belt (North and South) Nandewar Bioregions (SEVT TEC)
- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast South East Queensland bioregions (Eucalypt Floodplain Forest TEC); and
- Subtropical and Temperate Coastal Saltmarsh (Coastal Saltmarsh TEC).

The remaining TECs are considered unlikely to occur within the Project Area and suitable REs were not identified either through the desktop of field surveys. Refer to Att 1.02 - C2C EPBC Report_Part2of8, section 6,13, pages 79-85, for further detail regarding TECs.

During field surveys, weeds were found to be prominent throughout the Project Area, often being the dominating ground layer. Refer to Att 1.02 - C2C EPBC Report_Part2of8, section 6.2.2, page 89, for further detail regarding weeds found within the Project Area.

**Soils**

A desktop review identified a diversity of soil types within the Project Area. Identified soils included chromosol, vertosol, rudosols, kandosols, hydrosols, kurosols, tenosols and dermosols. Section E is a located within a low-lying area and acid sulfate soils are a high probability of occurrence.

There is a high probability that there are parcels of land registered on the environmental management and contaminated land database within the Project Area, given particular land uses along the Project Area alignment being railways and gas pipelines.

# 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 eastern end of the Project Area around Calliope River Island (Section E) intersects the Great Barrier Reef (GBR) world heritage area (WHA), a Declared property inscribed on the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage List (WHL) in 1981. The GBR is listed as a place of Outstanding Universal Value that meets Criterion (vii – superlative natural phenomena), (viii – outstanding examples of stages of earth's history), (ix - outstanding examples of on-going evolution) and (x - important habitats for conservation of biological diversity) (UNESCO, 2024).

The GBR was listed on the National Heritage List (NHL) in 2007 after satisfying national heritage criterion in accordance with subitem 1A(3) of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003. The GBR satisfies criterion A (important course of pattern), B (rarity), C (potential to yield information), D (principal characteristics of a class of place or environment) and E (aesthetic characteristics) (DCCEEW, 2024).

The UNESCO WHL description for the GBR mentions several species that contribute to the natural values of the GBR including six species of turtles, turtle nesting sites, 242 species of birds including 40 species of sea birds, whales, dolphins, dugong, algae and sea grasses. A Matters of National Significance (MNES) Assessment undertaken by Umwelt in 2024 identified many species significant to the GBRWHA within, or with a likelihood to occur within, the project area. Further, the project area encompasses important habitat for conservation and biological diversity including tidal flats dominated by mangroves, sedges and grasses analogous with RES 12.1.3 (remnant and regrowth) and 12.1.12.

**Natural Values**

The following species that contribute to the significant natural values ascribed to the GBR in either WHL or NHL entries are noted as known or potentially occurring within the Project Area (Umwelt, 2024):

Known to occur

- *Pandion haliaetus* (Eastern Osprey)
- Mangroves – tidal flats dominated by mangroves, sedges and grasses

Moderate likelihood of occurrence:

- *Caretta caretta* (Loggerhead Turtle)

- *Chelonia mydas* (Green Turtle)
- *Eretmochelys imbricata* (Hawksbill Turtle)
- *Lepidochelys olivacea* (Olive Ridley Turtle)
- *Chelonia depressa* (Flatback Turtle)
- *Arenaria interpres* (Ruddy turnstone)
- *Calidris acuminata* (Sharp-tailed sandpiper)
- *Calidris canutus* (Red knot)
- *Calidris ferruginea* (Curlew sandpiper)
- *Limosa lapponica baueri* (Nunivak bar-tailed godwit)
- *Limosa limosa* (Black-tailed godwit)
- *Numenius madagascariensis* (Eastern curlew)
- *Rostratula australis* (Australian painted snipe)
- *Xenus cinereus* (Terek sandpiper)
- *Actitus hypoleucos* (Common sandpiper)
- *Calidris melanotos* (Pectoral sandpiper)
- *Calidris ruficollis* (Red-necked stint)
- *Limicola falcinellus* (Broad-billed sandpiper)
- *Numenius minutus* (Little curlew)
- *Numenius phaeopus* (Whimbrel)
- *Pluvialis fulva* (Pacific golden plover)
- *Tringa stagnatilis* (Marsh sandpiper)

Low likelihood of occurrence:

- *Dermochelys coriacea* (Leatherback Turtle)

**Historic Values**

The GBR NHL entry notes that there *"…are over 30 historic shipwrecks in the area, and on the islands are ruins and operating lighthouses that are of cultural and historical significance*." (Great Barrier Reef Marine Park Authority, 1981, p.5).

There are no documented shipwrecks within the Project Area.

There are no historic values recognised on other statutory heritage registers or lists within the Project Area.

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

The eastern end of the Project Area around Calliope River Island (Section E) is within the GBR WHA and NHL listing areas. The project area is within the Country of the Bailai, Gurang, Gooreng Gooreng and Taribelang Bunda People who are the Native Title holders since 3 May 2018 (QCD2017/010).

The GBR WHL entry, against Criterion (ix), notes that (UNESCO, 2024):

*"Human interaction with the natural environment is illustrated by strong ongoing links between Aboriginal and Torres Strait Islanders and their sea-country, and includes numerous shell deposits (middens) and fish traps, plus the application of story places and marine totems."*

The Statement of Significance for the GBR NHL entry further notes that the GBR (Great Barrier Reef Marine Park Authority, 1981):

*"…is also of cultural importance, containing many middens and other archaeological sites of Aboriginal or Torres Strait Islander origin. Some notable examples occur on Lizard and Hinchinbrook Islands, and on Stanley, Cliff and Clack Islands where there are spectacular galleries of rock paintings."*

Indigenous heritage values within the Project Area have yet to be fully researched, described and assessed through engagement with the BGGGTGP people. Desktop review for this referral indicates potential for tangible and intangible sites and values to occur within the Project Area.

**Tangible values**

Nearby archaeological evidence, including shell middens on Facing Island and other coastal islands, stone arrangements, footprints near Gladstone mudflat, and artefacts in intertidal zones and waterways, provide tangible links to traditional lifeways, represent the potential for tangible evidence of Indigenous occupation and past use within the

project area, and are indicative of the Indigenous values that may be associated. The Queensland *Aboriginal Cultural Heritage Database and Register* (Queensland Government, 2021) records eight Indigenous cultural heritage sites within 5 km of project area (six being artefact scatters, one a culturally scarred tree, and one “cultural” site). Previous archaeological investigations undertaken in the vicinity of the project area notes that occupation of the Gladstone coastal strip, including Port Curtis began some 5,000 years ago. Shell middens/scatters, artefact scatters, isolated artefacts, scarred trees and cultural sites have been recorded throughout the Gladstone region providing evidence of extensive and intensive use of the littoral and marine resources of the coastal region.

Potential tangible site types within the intersected part of the project area are most likely to include surface and subsurface stone artefact scatters and isolated artefacts, middens, scarred trees, camping and occupation sites, hearths and ovens. Artefactual material representative of visitation and utilisation of the project area by Aboriginal people may have scientific significance and may be of cultural significance to the Bailai, Gurang, Gooreng Gooreng and Taribelang Bunda People.

**Intangible values**

Indigenous values extend beyond physical evidence of past occupation and use to include intangibles including language, Dreaming stories, and totemic relationships. Values may also be ascribed to other features occurring in the landscape, including prominent and unusual landforms, specific plant (e.g. ancient trees, bush food species) and animal species. The confirmed presence of these, or the likely presence of these, may be of cultural importance to Indigenous people.

While the intangible values of the eastern end of the project area are yet to be fully researched, documented through consultation, and understood, review of publicly available literature indicates the potential for intangible values to be present.

Publicly available, primary ethnographic research specific to the project area and immediate surrounds, is limited. While some specific Dreaming stories from the immediate vicinity of the project area have been lost, others, such as the kangaroo rat Dreaming story, and tales related to the nearby Great Barrier Reef continue to be passed on through generations (Gladstone Ports Corporation, 2009). The presence of tribal and clan totems for the Gooreng Gooreng people, including animals like the owl, flying fox, and sea turtle (Helon, 2022), indicate an enduring spiritual connection to the local ecosystem.

# 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. *

**Surface water**

The Project Area falls within the Fitzroy and Calliope drainage basins. Major watercourses classified under the *Water Act 2000* (Qld) (Water Act) that intersect the Project include:

- Callide Creek (intersects Section A)
- Calliope River (intersects Section B and Section E)
- Farmer Creek (intersects Section C).

A series of unmapped watercourses under the Water Act are also located throughout the Study Area. Larcom Creek is not mapped under the *Water Act 2000* however, it is a minor watercourse present throughout the centre of Section C. Drainage features under the *Water Act 2000* are mapped within Sections D and E.

The new transmission line is not expected to impact upon hydrology or water quality of existing watercourses, as the infrastructure can be designed to span over constraints without the need to clear or disturb beds or banks.

**Flooding**

Sections B, C, D and E are mapped within the Queensland Floodplain Assessment Overlay as containing flood prone areas.

**Water plans**

Water plans developed under the Water Act set out requirements and frameworks for water availability, water entitlements including take, priorities and mechanisms for future water requirement. The Project Area is located within water plan areas regulated by the Water Plan (Calliope River Basin) 2006 and Water Plan (Fitzroy Basin) 2011.

**Groundwater**

The Proposed Action will require new bores to access water for dust suppression. The bores will be drilled in accordance with existing standards and requirements and the relevant permits and licences obtained. Subject to licence and permit conditions, the bores will be retained on site for landowner use.

# 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.

—

**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. ***

The Proposed Action's transmission line and substation expansion construction activities in Section E will be undertaken on land within the Great Barrier Reef (GBR) World Heritage Area (WHA) (Calliope River Island). This includes the clearing of vegetation and ground disturbance.

Construction activities will occur upstream of the GBR WHA with the Project Area crossing waterways at a number of locations however indirect water quality impacts are not expected through the application of industry standard erosion and sediment control measures.

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

Yes

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

The WHA includes Calliope River Island which is partly developed due to the existing Calliope River substation, access from the east and transmission lines connecting to the north and south as well as other cleared areas from previous activities. Other parts of the island are in a relatively natural coastal estuarine state. It also includes the surrounding marine waterways which will not be subject to development apart from the stringing of transmission lines across the waterway to the north beside existing transmission lines.

Calliope River Island is located close to existing industrial and urban activity being the City of Gladstone, the Port of Gladstone and the Gladstone State Development Area.

The Proposed Action adjoins the existing Calliope River substation and transmission line connections. It will not introduce a new type of development into a natural area but will increase the footprint and scale of an existing development.

**Aboriginal values**

The Proposed Action has the potential to impact Aboriginal cultural heritage values. The extent of direct and indirect tangible and intangible Aboriginal cultural heritage impacts within the WHA will be determined during further consultation with Traditional Owners for the area, including the preparation of a Heritage Impact Assessment and a Cultural Values Assessment.

**Natural values**

The attached EPBC Report has undertaken significant assessments of marine and terrestrial species including shorebird/migratory birds relevant to the WHA (see Att 1.03 - C2C EPBC Report_Part3of8 to Att 1.08 - C2C EPBC Report_Part8of8, Appendix E - Significant Impact Assessment, pages E-1-E-202). The SIAs identified that the clearing of the Subtropical Eucalypt floodplain forest and woodland of the NSW North Coast and Southeast Qld bioregions on Calliope River Island (within the WHA) is a potential significant impact (see further details below).

**Waterways and water quality**

Construction works upstream of the GBR WHA, will be managed through the stringent application of industry standard erosion and sediment control measures to avoid any impacts to water quality consistent with the requirements of the Reef 2050 Long-Term Sustainability Plan (DCCEEW, 2023).

Following construction, worksites will be rehabilitated and vegetated to avoid operational water quality impacts.

Powerlink's Environmental Management Plan (refer to Att 4 – PLQ Project EMP)* requires 'no adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition'. In particular, it requires compliance with the IECA Best Practice Erosion and Sediment Control Guidelines 2008 and the preparation of a Project Erosion and Sediment control Plan prior to construction. The EMP identifies 10 requirements to achieve a no adverse impact outcome. Furthermore, a full-time Certified Professional in Erosion and Sediment Control (CPESC) will be dedicated to the Project to ensure that erosion and sedimentation are appropriately managed.

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

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

Yes

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

The Proposed Action includes clearing and ground disturbance activities to establish permanent transmission infrastructure within the GBR WHA, which will impact Threatened Ecological Communities and potentially Aboriginal cultural heritage values.

### 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. *

**Refinement of the design and construction methodology**

Powerlink are continuing to refine the project design as well as the construction methodology to minimise impacts. Ongoing ecological and heritage investigations will guide this refinement process.

**Construction Environmental Management**

Powerlink's EMP (refer to Att 4 – PLQ Project EMP)* describes the environmental management requirements for the construction of the proposed action to avoid and minimise environmental impacts.

**Natural values**

The attached EPBC Report has assessed ecological MNES relevant to the WHA including terrestrial and marine species and shorebirds/migratory birds. Section 8 of the MNES Assessment report identifies avoidance, mitigation and management measures for these species (refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.0, pages 124-135).

**Aboriginal values**

Powerlink has been engaging with Traditional Owners about the action and will continue to work with Traditional Owners in the preparation of:

- Cultural Values Assessment which will include:

    - a desktop review and stakeholder mapping exercise to establish a baseline understanding of available information on cultural values and local knowledge holders;
    - in-depth On Country consultation with local knowledge holders;
    - value mapping exercise to identify, record, classify and analyse cultural resources or assets of significance;
    - preparation of a draft Aboriginal CVA report including the findings of consultation outcomes along with relevant desktop research through detailed description of the cultural values and potential interactions between the cultural values identified and different aspects of Powerlink site development planning, and ongoing management and other recommendations as identified during consultation.
- Heritage Impact Assessment which will include:
    - a desktop review of archaeological and other relevant heritage studies, reports, publications to understand the tangible values associated with the project area;
    - consolidation of CVA findings on cultural values (intangible values);
    - significant impact assessment against the Commonwealth SIG 1.1 guidelines;
    - archaeological field investigation of the project area and impact footprint to identify any physical evidence association with Aboriginal and historical occupation and use of the project areas and to understand archaeological potential;
    - preparation of a heritage impact assessment report.

**Waterways and water quality**

Powerlink's Environmental Management Plan (refer to Att 4 – PLQ Project EMP* requires 'no adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition'. In particular, it requires compliance with the IECA Best Practice Erosion and Sediment Control Guidelines 2008 and the preparation of a Project Erosion and Sediment control Plan prior to construction. The EMP identifies 10 requirements to achieve a no adverse impact outcome.

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

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

Further impact assessment and consultation is required to ascertain the degree of impact and any offsets required. Where required, Powerlink is committed to providing suitable offsets for activities that will result in a significant residual impact. As further discussed in section 4.1.4.11 of this form, a Draft Offsets Framework has been developed for threatened species and ecological communities.

## 4.1.2 National Heritage

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

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

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

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

Yes

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

The Proposed Action's transmission line and substation expansion construction activities in Section E will be undertaken on land recorded on the National Heritage List (NHL) (Calliope River Island). This includes the clearing of vegetation and ground disturbance.

Construction activities will occur upstream of the NHL with the Project Area crossing waterways at a number of locations, however indirect water quality impacts are not expected through the application of industry standard erosion and sediment control measures.

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

Yes

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

The NHL includes Calliope River Island which is partly developed due to the existing Calliope River substation, access from the east and transmission lines connecting to the north and south as well as other cleared areas from previous activities. Other parts of the island are in a relatively natural coastal estuarine state. It also includes the surrounding marine waterways which will not be subject to development apart from the stringing of transmission lines across the waterway to the north beside existing transmission lines.

Calliope River Island is located close to existing industrial and urban activity being the City of Gladstone, the Port of Gladstone and the Gladstone State Development Area.

The Proposed Action adjoins the existing Calliope River substation and transmission line connections. It will not introduce a new development into a natural area but will increase the footprint and scale of an existing development.

**Aboriginal values**

The extent of direct and indirect tangible and intangible Aboriginal cultural heritage impacts within the NHL will be determined during further consultation with Traditional Owners for the area, including the preparation of a Heritage Impact Assessment and a Cultural Values Assessment.

**Natural values**

The attached EPBC Report has undertaken significant impact assessments of marine and terrestrial species include shorebird/migratory birds relevant to the NHL (see Att 1.03 - C2C EPBC Report_Part3of8 to Att 1.08 - C2C EPBC Report_Part8of8, Appendix E - Significant Impact Assessment, pages E-1-E-202). The SIAs identified that the clearing of the Subtropical Eucalypt floodplain forest and woodland of the NSW North Coast and Southeast Qld bioregions on Calliope River Island (within the WHA) is a potential significant impact (see further details below).

**Waterways and water quality**

Construction works upstream of the NHL, will be managed through the stringent application of industry standard erosion and sediment control measures to avoid any impacts to water quality consistent with the requirements of the Reef 2050 Long-Term Sustainability Plan (DCCEEW, 2023).

Following construction, worksites will be rehabilitated and vegetated to avoid operational water quality impacts.

Powerlink's Environmental Management Plan (refer to Att 4 – PLQ Project EMP)* requires 'no adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition'. In particular, it requires compliance with the IECA Best Practice Erosion and Sediment Control Guidelines 2008 and the preparation of a Project Erosion and Sediment control Plan prior to construction. The EMP identifies 10 requirements to achieve a no adverse impact outcome.

The eastern end of the Project Area around Calliope River Island (Section E) is within the GBR WHA and NHL areas. The WHA and NHL area share the same boundaries within the Project Area

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

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

Yes

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

The Proposed Action includes clearing and ground disturbance activities to establish permanent transmission infrastructure within the NHL area, which will impact Threatened Ecological Communities and potentially Aboriginal cultural heritage values.

### 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. *

**Refinement of the design and construction methodology**

Powerlink is continuing to refine the project design as well as the construction methodology to minimise impacts. Ongoing ecological and heritage investigations will guide this refinement process.

**Construction Environmental Management**

Powerlink's EMP (refer to Att 4 – PLQ Project EMP)* describes the environmental management requirements for the construction of the proposed action to avoid and minimise environmental impacts.

**Natural values**

The attached EPBC Report has assessed ecological MNES relevant to the WHA including terrestrial and marine species and shorebirds/migratory birds. Section 8 of the MNES Assessment report identifies avoidance, mitigation and management measures for these species.

**Aboriginal values**

Powerlink has been engaging with Traditional Owners about the action and will continue to work with Traditional Owners in the preparation of:

- Cultural Values Assessment which will include:
    - a desktop review and stakeholder mapping exercise to establish a baseline understanding of available information on cultural values and local knowledge holders;
    - in-depth On Country consultation with local knowledge holders;
    - value mapping exercise to identify, record, classify and analyse cultural resources or assets of significance;

    - preparation of a draft Aboriginal CVA report including the findings of consultation outcomes along with relevant desktop research through detailed description of the cultural values and potential interactions between the cultural values identified and different aspects of Powerlink site development planning, and ongoing management and other recommendations as identified during consultation.
- Heritage Impact Assessment which will include:
    - a desktop review of archaeological and other relevant heritage studies, reports, publications to understand the tangible values associated with the project area;
    - consolidation of CVA findings on cultural values (intangible values);
    - significant impact assessment against the Commonwealth SIG 1.1 guidelines;
    - archaeological field investigation of the project area and impact footprint to identify any physical evidence association with Aboriginal and historical occupation and use of the project areas and to understand archaeological potential;
    - preparation of a heritage impact assessment report.

**Waterways and water quality**

Powerlink's Environmental Management Plan (refer to Att 4 – PLQ Project EMP)* requires 'no adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition'. In particular, it requires compliance with the IECA Best Practice Erosion and Sediment Control Guidelines 2008 and the preparation of a Project Erosion and Sediment control Plan prior to construction. The EMP identifies 10 requirements to achieve a no adverse impact outcome.

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

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

Further impact assessment and consultation is required to ascertain the degree of impact and any offsets required. Where required, Powerlink is committed to providing suitable offsets for activities that will result in a significant residual impact. As further discussed in section 4.1.4.11 of this form, a Draft Offsets Framework has been developed for threatened species and ecological communities.

## 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.

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### 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 proposed action is not located directly within or proximate to a Ramsar Wetland. The closest Ramsar Wetland, Shoalwater and Corio Bays Area (Shoalwater Bay Training Area; in part – Corio Bay) is located approximately 100 km north-northwest of the proposed action.

### 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 | Atalaya collina | Yarwun Whitewood |
| Yes | Yes | Bertya opponens | |
| Yes | Yes | Calidris canutus | Red Knot, Knot |
| Yes | Yes | Calidris ferruginea | Curlew Sandpiper |
| Yes | Yes | Calidris tenuirostris | Great Knot |
| No | Yes | Caretta caretta | Loggerhead Turtle |
| Yes | Yes | Charadrius leschenaultii | Greater Sand Plover, Large Sand Plover |
| Yes | Yes | Charadrius mongolus | Lesser Sand Plover, Mongolian Plover |
| No | Yes | Chelonia mydas | Green Turtle |
| Yes | Yes | Cossinia australiana | Cossinia |
| Yes | Yes | Cycas megacarpa | |
| Yes | Yes | Dasyurus hallucatus | Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] |
| Yes | Yes | Delma torquata | Adorned Delma, Collared Delma |
| No | Yes | Eretmochelys imbricata | Hawksbill Turtle |
| Yes | Yes | Geophaps scripta scripta | Squatter Pigeon (southern) |
| Yes | Yes | Grantiella picta | Painted Honeyeater |

| Direct impact | Indirect impact | Species | Common name |
|---|---|---|---|
| Yes | Yes | Hirundapus caudacutus | White-throated Needletail |
| No | Yes | Lepidochelys olivacea | Olive Ridley Turtle, Pacific Ridley Turtle |
| Yes | Yes | Limosa lapponica baueri | Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit |
| Yes | Yes | Macroderma gigas | Ghost Bat |
| No | Yes | Natator depressus | Flatback Turtle |
| Yes | Yes | Numenius madagascariensis | Eastern Curlew, Far Eastern Curlew |
| Yes | Yes | Petauroides volans | Greater Glider (southern and central) |
| Yes | Yes | Petaurus australis australis | Yellow-bellied Glider (south-eastern) |
| Yes | Yes | 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 | Polianthion minutiflorum | |
| Yes | Yes | Pteropus poliocephalus | Grey-headed Flying-fox |
| Yes | Yes | Rostratula australis | Australian Painted Snipe |
| Yes | Yes | Samadera bidwillii | Quassia |
| Yes | Yes | Turnix melanogaster | Black-breasted Button-quail |
| No | Yes | Xeromys myoides | Water Mouse, False Water Rat, Yirrkoo |

**Ecological communities**

| Direct impact | Indirect impact | Ecological community |
|---|---|---|
| Yes | Yes | Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions |
| No | Yes | Subtropical and Temperate Coastal Saltmarsh |
| Yes | Yes | Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions |

**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 Proposed Action involves activities that have the potential to directly or indirectly impact on threatened species and threatened ecological communities (TEC). Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 7.0, pages 108-123 for a detailed description of activities.

The Proposed Action's potential direct and indirect impacts to the relevant threatened species and TECs are summarised below.

**Direct impacts**

Clearing or loss of the following TECs (refer to Att 1.03 - C2C EPBC Report_Part3of8, Appendix E, section 12, pages E-1-E-15 for further detail):

- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and the Nandewar bioregions TEC (SEVT TEC) – 2.4 ha
- Subtropical Eucalypt floodplain forest and woodland of the NSW North Coast and Southeast QLD bioregions TEC (Eucalypt Floodplain Forest TEC) – 10.4 ha

Other direct impacts to TECs listed above include vegetation clearing requirements that may induce further fragmentation of the community within the Project Area.

Clearing or loss of the following threatened flora species (refer to Att 1.04 - C2C EPBC Report_Part4of8, Appendix E, section 13, pages E-19-E-60 for further detail):

- Yarwun whitewood (*Atalaya collina)* – 0.6 ha of mapped potential habitat.
- Coolabah bertya (*Bertya opponens*) – 69.4 ha of mapped potential habitat.
- *Cossinia Australiana* – 3.1 ha of mapped potential habitat.
- *Cycas megacarpa* – 65.4 ha consisting of: 34.0 ha known (confirmed) habitat (inclusive of up to 343 individuals) and 31.4 ha known (suspected) habitat.
- *Polianthion minutiflorum* – 12.6 ha of mapped potential habitat.
- Quassia (*Samadera bidwillii*) – 100.4 ha of mapped potential habitat.

Other potential direct impacts to threatened flora species listed above include fragmentation and degradation, edge effects, soil erosion, dust generation, introduction and exacerbation of introduced flora species and increased intensity and frequency of fires.

Clearing or loss of suitable habitat for the following threatened fauna species (refer to Att 1.04 - C2C EPBC Report_Part4of8, Appendix E - Att 1.08 - C2C EPBC Report_Part8of8, Appendix E, inclusive for further detail).

- Squatter pigeon (southern) (Geophaps scripta scripta) – 323.5 ha of modelled habitat consisting of 6.7 ha of potential breeding habitat, 0.3 ha of potential foraging habitat and 316.5 ha of potential dispersal habitat.
- Painted Honeyeater (*Grantiella picta*) – 41.6 ha of potential foraging habitat.
- White-throated Needletail (*Hirundapus caudacutus*) – 122.8 ha of habitat consisting of 22.3 ha of roosting and foraging habitat and 100.5 of foraging and dispersal habitat.
- Australian Painted Snipe (*Rostratula australis*) – 4.9 ha of seasonal breeding, foraging and dispersal habitat.
- Black-breasted Button-quail (*Turnix melanogaster)* – 3.1 ha of nesting and foraging habitat.
- Threatened Shorebirds: Ruddy turnstone (*Arenaria interpres*), Red knot (*Calidris canutus*), Sharp-tailed sandpiper (*Calidris acuminata*), Great knot (*Calidris tenuirostris*), Greater sand plover (*Charadrius leschenaultia*), Latham's snipe (*Gallinago hardwickii*), Grey plover (*Pluvialis squatarola*), Terek sandpiper (*Xenus cinereus*), Curlew sandpiper (*Calidris ferruginea*), Lesser sand plover (*Charadrius mongolus*), Nunivak bar-tailed godwit (*Limosa lapponica baueri*), Black-tailed godwit (*Limosa limosa*), Eastern curlew (*Numenius madagascariensis*), Common greenshank (*Tringa nebularia*) – 0.7 ha of roosting and foraging habitat. Due to unknown reasons, please note that the following endangered and migratory species were not able to be captured in the summary table in 4.1.4 Impact details (Threatened Species and Ecological Communities) of this form and have been noted in the summary table in 4.1.5 Impact details (Migratory Species) of this form - Black-tailed godwit (*Limosa limosa*), Common greenshank (*Tringa nebularia*), Grey plover (*Pluvialis squatarola*), Latham's snipe (*Gallinago hardwickii*), Ruddy turnstone (*Arenaria interpres*), Sharp-tailed sandpiper (*Calidris acuminata*), Terek sandpiper (*Xenus cinereus*).
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – 77.6 ha of modelled habitat consisting of 41.8 ha of potential roosting and foraging habitat and 35.8 of foraging and dispersal habitat.
- Greater Glider (southern and central) (*Petauroides volans*) – 121.2 ha of habitat consisting of 81.7 ha of likely or current denning habitat and 39.5 ha of potential or future denning habitat.

- Yellow-bellied Glider (south-eastern) (Petaurus australis australis) – 77 ha of denning, foraging and dispersal habitat.
- Koala (*Phascolarctos cinereus*) – 321.5 ha of modelled habitat consisting of 114.5 ha of breeding, foraging and dispersal habitat, 10.8 ha of potential climate refugia habitat and 196.2 ha of dispersal only habitat.
- Northern Quoll (*Dasyurus hallucatus*) – 127.4 ha of habitat consisting of 33.9 ha of denning and refuge habitat and 93.5 ha of foraging and dispersal habitat.
- Ghost Bat (*Macroderma gigas*) – 335 ha of seasonal foraging and dispersal habitat.
- Collared Delma (*Delma torquata*) – 14.9 ha of potential breeding and foraging habitat.

Other potential direct impacts to threatened fauna species listed above include mortality from vehicle strike, disturbance to foraging behaviours due to increased noise and activity during construction, altered foraging habitat, degradation of habitat adjacent to the disturbance footprint and exacerbation of pest populations.

**Indirect impacts**

- Potential indirect impacts to TECs listed above and the Subtropical and Temperate Coastal Saltmarsh include further weed and pest incursion, increased edge effects, elevated dust, litter and chemical spills.
- Potential indirect impacts to threatened flora species listed above as well as the water mouse and marine turtles, include weed and pest incursion, elevated dust, erosion, sedimentation and reduced water quality and altered fire regimes.
- Potential indirect impacts to threatened fauna species listed above include weed and pest incursion, elevated dust, erosion, sedimentation and reduced water quality, increased noise and artificial light and altered fire regimes.

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 7.1.2, pages 113-121 for further detail on indirect impacts.

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

Yes

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

A Significant Impact Assessment (SIA) was undertaken for each threatened flora and fauna species and TECs known to occur or likely to occur within the Study Area. The SIAs were undertaken in accordance with the Commonwealth Significant Impact Guidelines 1.1 – MNES (Department of the Environment 2013).

**Potential or likely significant impact**

The Proposed Action has the potential or is likely to result in a significant impact on the following threatened flora and fauna species and TECs.

- Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar Bioregions (SEVT TEC) – The SIA concluded that the Proposed Action has the potential to have a significant impact due to:
    - Potential to reduce the extent of the ecological community
    - Potential to adversely affect habitat critical to the survival of the ecological community
    - Potential interfere with the recovery of the ecological community

Refer to to Att 1.03 - C2C EPBC Report_Part3of8, Appendix E, section 12.1.6, pages E-2-E-6, for the SIA for the SEVT TEC.

- Subtropical Eucalypt floodplain forest and woodland of the NSW North Coast and Southeast QLD bioregions (Eucalypt Floodplain Forest TEC) – The SIA concluded that the Proposed Action has the potential to have a significant impact due to:
    - Potential to reduce the extent of the ecological community
    - Potential to fragment or increase fragmentation of the ecological community, for example by clearing vegetation for roads or transmission lines
    - Potential to adversely affect habitat critical to the survival of the ecological community
    - Potential to interfere with the recovery of the ecological community

Refer to Att 1.03 - C2C EPBC Report_Part3of8, Appendix E, section 12.3.6, pages E-15-E-18, for the SIA for the Eucalypt Floodplain Forest TEC.

- *Cycas megacarpa* – The SIA concluded that the Proposed Action will likely have a significant impact due to the following impacts:
    - Potential to lead to a long-term decrease in the size of a population
    - Likely to adversely affect habitat critical to the survival of a species
    - Potential to disrupt the breeding cycle of a population
    - Potential to interfere substantially with the recovery of the species

Refer to Att 1.04 - C2C EPBC Report_Part4of8, Appendix E, section 13.4.8, pages E-42-E-46**,** for the SIA for the Cycas megacarpa.

- Greater glider (southern and central) (*Petauroides volans*) – The SIA concluded that the Proposed Action has the potential to have a significant impact due to:
    - Potential to fragment an existing population into two or more populations
    - Potential to adversely affect habitat critical to the survival of a species
    - Potential to disrupt the breeding cycle of a population.
    - Potential to interfere with the recovery of the species.

Refer to Att 1.06 - C2C EPBC Report_Part6of8, Appendix E, Section 14.8.8, page E-123-E-127, for the SIA for the Greater glider (southern and central).

- Yellow-bellied glider (south-eastern) (*Petaurus australis australis*) – The SIA concluded that the Proposed Action has the potential to have a significant impact due to:
    - Potential to fragment an existing important population into two or more populations
    - Potential to adversely affect habitat critical to the survival of a species
    - Potential to disrupt the breeding cycle of an important population

Refer to to Att 1.06 - C2C EPBC Report_Part6of8, Appendix E, Section 14.9.8, page E-132-E-135, for the SIA for the Yellow-bellied glider (south-eastern)

- Koala (*Phascolarctos cinereus*) – The SIA concluded that the Proposed Action will likely have a significant impact due to:
    - Like to adversely affect habitat critical to the survival of a species
    - Potential to interfere with the recovery of the species.

Refer to Att 1.06 - C2C EPBC Report_Part6of8, Appendix E, Section 14.10.8, page E-140-E-144, for the SIA for the Koala (Phascolarctos cinereus).

- Collared delma (*Delma torquata*) – The SIA concluded that the Proposed Action will likely have a significant impact due to:
    - Potential to fragment an existing important population into two or more populations
    - Likely to adversely affect habitat critical to the survival of a species

Refer to Att 1.07 - C2C EPBC Report_Part7of8, Appendix E, Section 14.14.8, page E-173-E-176, for the SIA for the Collared delma (Delma torquata).

**Likely no significant impact**

The Proposed Action is not considered to have a significant impact on the remaining threatened flora and fauna species and TECs.

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

Yes

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

The Proposed Action has the potential or is likely to result in a significant impact on the following threatened flora and fauna species and TECs based on the SIAs undertaken.

- Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar Bioregions (SEVT TEC)
- Subtropical Eucalypt floodplain forest and woodland of the NSW North Coast and Southeast QLD bioregions (Eucalypt Floodplain Forest TEC)
- *Cycas megacarpa*.

- Greater glider (southern and central) (*Petauroides volans*)
- Yellow-bellied glider (south-eastern) (*Petaurus australis australis*)
- Koala (*Phascolarctos cinereus*)
- Collared delma (*Delma torquata*)

On this basis, the Proposed Action is anticipated to be a controlled action.

### 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. *

Powerlink has implemented the hierarchy of management principles in the planning for and development of the Proposed Action. These principles and order in which they have been applied is as follows: Avoid → Minimise → Mitigate → Remediate and rehabilitate → Offset (where necessary). The Avoid, Minimise and Mitigate (and manage) approaches have been summarised below. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.0, page 124 for further information regarding the hierarchy of management principles.

**Avoid**

The siting of permanent infrastructure components within Study Area has been carefully considered in the context of environmentally sensitive areas including known MNES habitat. The primary purpose of this exercise was to maximise opportunities to reduce the clearing of vegetation and direct impacts on MNES habitat. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.1, pages 124-125 for comprehensive information regarding the activities undertaken to avoid impacts.

**Minimise**

The following measures will be implemented to minimise the loss of vegetation and habitats:

- Vegetation clearing will be restricted to the minimal amount necessary for the construction of the Project activities. Micro-siting of infrastructure such as tower footprints will be undertaken during the detailed design phase to further reduce impacts and to ensure areas of high ecological significance are avoided as a priority.
- Construction of the Project will occur progressively and in phases. By doing this, only a small subset of the Disturbance Footprint will be impacted at one time. Indirect impacts resulting from the construction of the Project will be localised and temporary, and actively managed as detailed in following sections. Furthermore, clearing extents represent a maximum area. Direct impacts to MNES will be minimised where possible including through micro-siting.
- Areas of high terrain will allow spanning of the majority of vegetated areas, particularly in habitats of low open woodlands that feature very sparse canopy trees of very low height. In such areas, clearing is likely to be limited to that required for tower footprints and access tracks. These tower and access locations will be determined during the detailed design phase.
- Waterway crossings containing riparian vegetation corridors will be spanned in most instances, and particularly where values for and occurrences of listed threatened flora and fauna species have been identified by desktop mapping or surveys. Larger waterways will have higher towers and longer spans in order to avoid the bed and banks of waterways and place towers as far back from fringing vegetation. For access tracks across ephemeral waterways, existing crossings or clearings will be used. Any clearing required within a riparian corridor will be minimised with larger habitat trees retained.
- Rehabilitation of construction sites will occur progressively as the construction process advances. Disturbed areas not required for access roads and maintenance areas around structures will be restored as soon as practicable.

**Mitigate and manage**

The Proposed Action will incorporate the general mitigation and management measures and MNES-specific mitigation measures, that includes the following.

- The Project will be governed by several management plans including but not limited to: a comprehensive Environmental Management Plan (EMP) – the Powerlink EMP (refer to Att 4 – PLQ Project EMP)* will provide the framework for this, which will include actions to limit and reduce the potential impacts on MNES and biodiversity more broadly across the life of the Project, a Bushfire Management Plan (BMP), a Weed and Pest Management Plan (WPMP), an Erosion and Sediment Control Management Plan, an Acid Sulfate Soils Management Plan, a Vegetation and Fauna Management Plan (VFMP), Cycas megacarpa Species Management Plan and a Water

Quality Monitoring Plan. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.3, pages 126-133 for further details on management plans.

- Clearly demarcate vegetation clearance areas to avoid over-clearing within mapped habitat.
- Clearly demarcate no-go zones. These areas may include threatened species habitat that is mapped within the Disturbance Footprint and removal is not required for the Project.
- Although not currently known to occur, in areas of mapped northern quoll, collared delma and water mouse habitat planned for clearing, spotter-catchers will search for individuals and potential nests/burrows belonging to the species.
- A qualified fauna spotter will be present at all times during clearing and where possible will inspect habitat features (including but not limited to, hollow-bearing trees and stags, caves and rocky boulder piles) for MNES prior to felling, using work platforms, inspection cameras, or other methods deemed safe and suitable. Spotters will also be present during earthworks where exposed trenches and holes will be left for periods greater than 24 hours.
- The Disturbance Footprint plus a 5 m buffer (to account for GPS inaccuracies) will be surveyed by suitably qualified persons to identify potential threatened flora species, and will record the location, extent, and numbers present. Individuals adjacent to the Disturbance Footprint to be retained will be demarcated to ensure their presence is known and avoided during construction where possible.
- Where they cannot be retained, hollow-bearing trees and stags will be soft felled to minimise the chances of injury or death and inspected by a fauna spotter-catcher to identify any potentially denning greater glider (southern and central) or yellow-bellied glider individuals.
- In areas of mapped squatter pigeon (southern), Australian painted snipe, black-breasted button-quail and shorebird species habitat planned for clearing, spotter-catchers will complete flushing surveys to encourage the dispersal of any individuals present out of the clearing path.
- Where potential habitat may be suitable for squatter pigeon (southern) and black-breasted button-quail breeding or nesting, nest and egg searches will also be conducted.
- In the event a koala is detected during clearing works, the clearance of vegetation should be halted until the individual leaves the location on its own accord.
- Water extraction will be conducted at an alternative location within the Study Area should any migratory wetland birds be identified utilising the habitat.
- With respect to threatened flora, Powerlink will exercise an unexpected finds protocol to determine if the individual or population would be directly impacted by the Proposed Action and if so, a significant impact assessment against the guidelines would be undertaken and engagement with DCCEEW initiated to determine the next steps. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.3.2.1, pages 131-133 for further details on the Unexpected finds protocol for Threatened flora.

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.3.1, pages 127-130 for a comprehensive list of general mitigation measures and Att 1.03 - C2C EPBC Report_Part3of8, section 8.3.2, pages 131-133 for MNES-specific mitigation measures.

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

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

Powerlink is in the process of refining and finalising its Draft Offsets Framework for the Proposed Action and the other stages of the 'Gladstone Project' (refer to section 1.2.5 of this form for further information on the 'Gladstone Project'). The Draft Offsets Framework currently comprises of six phases:

- Phase 1: Identify Offset Options
- Phase 2: Evaluate Offset Feasibility
- Phase 3: Approval / Endorsement
- Phase 4: Secure the Offset
- Phase 5: Offset Management
- Phase 6: Offset Transfer

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.5, pages 134-135 for further information regarding the Draft Offsets Framework. Powerlink is currently in Phase 1 of this process where offsets liability for threatened species and TECs have been identified and an assessment of offset land suitability is progressing.

Please note that the Draft Offsets Framework is subject to change and further refinement.

Powerlink is committed to providing suitable offsets for activities that will result in a significant residual impact to threatened species and TECs.

### 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 |
| Yes | Yes | Apus pacificus | Fork-tailed Swift |
| Yes | Yes | Arenaria interpres | Ruddy Turnstone |
| Yes | Yes | Calidris acuminata | Sharp-tailed Sandpiper |
| Yes | Yes | Calidris melanotos | Pectoral Sandpiper |
| Yes | Yes | Calidris ruficollis | Red-necked Stint |
| Yes | Yes | Cuculus optatus | Oriental Cuckoo, Horsfield's Cuckoo |
| Yes | Yes | Gallinago hardwickii | Latham's Snipe, Japanese Snipe |
| Yes | Yes | Limicola falcinellus | Broad-billed Sandpiper |
| Yes | Yes | Limosa lapponica | Bar-tailed Godwit |
| Yes | Yes | Limosa limosa | Black-tailed Godwit |
| Yes | Yes | Numenius minutus | Little Curlew, Little Whimbrel |
| Yes | Yes | Numenius phaeopus | Whimbrel |
| Yes | Yes | Pandion haliaetus | Osprey |
| Yes | Yes | Pluvialis fulva | Pacific Golden Plover |
| Yes | Yes | Pluvialis squatarola | Grey Plover |
| Yes | Yes | Tringa brevipes | Grey-tailed 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 Proposed Action involves activities that have the potential to directly or indirectly impact on EPBC listed migratory species. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 7.0, pages 108-123 for a detailed description of activities.

The Proposed Action's potential direct and indirect impacts to the relevant migratory species are summarised below.

**Direct impacts**

Vegetation clearing is a direct impact that can result in the loss of vegetation values and habitat. The direct impact to suitable habitat for migratory species is as follows (refer to Att 1.07 - C2C EPBC Report_Part7of8, Appendix E - Att 1.08 - C2C EPBC Report_Part8of8, Appendix E, inclusive for further detail for further detail):

- Fork-tailed Swift (*Apus pacificus*) – These species were recorded over the Study Area on three separate occasions during field surveys. Clearing for the Proposed Action will result in the clearing of 335 ha of foraging and dispersal habitat.
- Oriental cuckoo (*Culculus optatus)* – The oriental cuckoo was not recorded within the Study Area during surveys but is to have a moderator likelihood of occurrence. Clearing for the Proposed Action will result in the clearing of 135.5 ha of foraging and dispersal habitat.
- Migratory shorebirds: Common sandpiper (*Actitis hypoleucos*), Pectoral sandpiper (*Calidris melanotos*), Red-necked stint (*Calidris ruficollis*), Bar-tailed godwit (*Limosa lapponica*), Broad-billed sandpiper (*Limicola falcinellus*), Little curlew (*Numenius minutus*), Whimbrel (Numenius phaeopus), Pacific golden plover (*Pluvialis fulva*), Grey-tailed tattler (*Tringa brevipes*), Marsh sandpiper (*Tringa stagnatilis*) – Suitable habitat within the Study Area is limited, however connectivity to similar habitat is maintained both upstream and downstream along the Calliope River. It is unlikely that these species will depend on the habitat within the Study Area, due to the small patch size and the existing human disturbances such as clearing for the existing transmission line, the presence of feral predators, litter, and noise and activity from the existing roads and substations. Despite this, the Proposed Action will result in the clearing of 0.7 ha of roosting and foraging habitat.
- Eastern Osprey (*Pandion haliaetus*) – A single eastern osprey was identified during a field survey. Clearing for the proposed action will result in the clearing of 10.3 ha of nesting and foraging habitat.

Due to unknown reasons, please note that the following endangered and migratory species were not able to be captured in the summary table in 4.1.4 Impact details (Threatened Species and Ecological Communities) of this form and have been noted in the summary table in 4.1.5 Impact details (Migratory Species) of this form - Black-tailed godwit (*Limosa limosa*), Common greenshank (*Tringa nebularia*), Grey plover (*Pluvialis squatarola*), Latham's snipe (*Gallinago hardwickii*), Ruddy turnstone (*Arenaria interpres*), Sharp-tailed sandpiper (*Calidris acuminata*), Terek sandpiper (*Xenus cinereus*). To remove any doubt, an assessment against the migratory criteria has not been undertaken for these migratory species that are also listed as threatened species.

In addition to the above, potential direct impacts to migratory species include the following:

- 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.
- Loss of or disturbance to microhabitat features such as tree hollows, leaf litter, ground timber, rocks and dense shrubs.
- 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.
- Destruction of abiotic features necessary to support vegetation communities and habitat types.
- Strike from moving vehicles/machinery resulting in injury or fatality.
- Entrapment in habitat during removal.

**Indirect impacts**

Potential indirect impacts on migratory species as a result of the Proposed Action include:

- Increased edge effects reducing the condition of quality of remaining vegetation communities and habitat types.
- The establishment and spread of exotic species that may displace native species, native habitat resources and alter fire regimes.

- Soil exposure resulting in an increased risk of erosion and sedimentation of water bodies, reducing water quality and degrading aquatic habitats.
- Increased risk of contamination associated with activities such as refuelling or storage of chemicals.
- Changes in hydrology from installation of infrastructure creating a barrier to surface flow and increasing stormwater run-off.
- Changes to soil chemistry at the Calliope River due to importation of foreign soils, exposure of subsoils or exposure of acid sulfate soils.
- Generation of dust emissions leading to excessive deposition of dust on leaves of plants suppressing photosynthesis and growth.
- Increased noise and light levels affecting foraging and breeding behaviour for some fauna species or resulting in complete avoidance and displacement from habitats.
- Periodic burst of elevated noise levels may startle and disorientate fauna species within proximity.
- Although unlikely, increased anthropogenic activity may lead to temporary increased pest levels

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 7.1.2, pages 113-120 for further detail on indirect impacts.

### 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. *

A Significant Impact Assessment (SIA) was undertaken for each migratory species known to occur or likely to occur within the Study Area. The SIAs were undertaken in accordance with the *Commonwealth Significant Impact Guidelines 1.1 – MNES (Department of the Environment 2013).* The SIA and survey effort also considered the *Draft referral guideline for the 14 birds listed migratory under the EPBC Act (Department of the Environment, 2015)* and *EPBC Act Policy Statement 3.21: Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (Department of the Environment and Energy, 2017).*

**Migratory shorebirds**

Given the large number of shorebird species to be assessed, one assessment was undertaken for all species due to their similar habitat requirements and limited impacts resulting from the Proposed Action.

The SIA for migratory shorebirds concluded that the Proposed Action is unlikely to have a significant impact on the following migratory shorebird species: common sandpiper (*Actitis hypoleucos*), pectoral sandpiper (*Calidris melanotos*), red-necked stint (*Calidris ruficollis*), bar-tailed godwit (*Limosa lapponica*), broad-billed sandpiper (*Limicola falcinellus*), little curlew (*Numenius minutus*), whimbrel (Numenius phaeopus), Pacific golden plover (*Pluvialis fulva*), grey-tailed tattler (*Tringa brevipes*), marsh sandpiper (*Tringa stagnatilis*), due to:

- All shorebird species are a non-breeding migrant to Australia. Modelled habitat within the Study Area may be suitable for foraging and dispersal, however, it has already been modified through historical clearing, weeds and pests. No important habitat is considered to occur within the Study Area. A maximum of 2.2 ha of potential habitat will be cleared as part of the Proposed Action.
- The Proposed Action will employ best practice control methods for weeds and pests including monitoring and adaptive management. Based on this, it is unlikely the Project will result in an invasive species that is harmful to the species.
- The Study Area is unlikely to support an ecologically significant proportion of the national population or international population at any time. It is unlikely that any population present will rely on the potential habitat within the Study Area for any part of its lifecycle. Home ranges and territories are not maintained while the birds are in Australia. Therefore, utilisation will be limited to short periods within the migratory season.

Refer to Att 1.08 - C2C EPBC Report_Part8of8, Appendix E, section 15.3.8, pages E-195-E-197**,** for the SIA for migratory shorebird species.

**Fork-tailed Swift (*Apus pacificus*)**

The SIA for the Fork-tailed Swift concluded that the Proposed Action is unlikely to have a significant impact due to:

- No fragmentation impacts are anticipated due to the species high mobility capacity. The Proposed Action will not lead to the further degradation of retained habitat, as potential indirect impacts such as altered fire regimes, edge

effects, weeds and pests will be actively managed via Project management plans.

- Across the Study Area, existing cleared areas created for fences, tracks, roads or for grazing purposes are likely to act as conduits for pest movement. Clearing for the Project is therefore unlikely to further facilitate the movement of any pests that occur. The Project will employ best practice control methods for weeds and pests and is unlikely to introduce or exacerbate weeds or pests beyond existing levels.
- Based on the species aerial nature and broad habitat requirements, it is unlikely the population will rely on the potential habitat within the Study Area for any part of its lifecycle. Utilisation will be limited to the migratory period (October to April), while flocks are completing local movements and/or foraging.

Refer to Att 1.07 - C2C EPBC Report_Part7of8, Appendix E, section 15.1.8, pages E-184-E-186**,** for the SIA for the Fork-tailed Swift.

**Oriental cuckoo (*Culculus optatus)***

The SIA for the Oriental cuckoo concluded that the Proposed Action is unlikely to have a significant impact due to:

- This species is considered to be a common and secure species. Modelled potential habitat within the Disturbance Footprint and has already been modified through historical clearing, weeds and pests.
- Invasive species that the Oriental cuckoo, including black rat and rubber vine, were recorded throughout the field survey program. The Proposed Action will employ best practice control methods for weeds and pests and is unlikely to introduce or exacerbate weeds or pests beyond existing levels.
- Mapped habitat is unlikely to support an ecologically significant proportion of the national or international population. This is supported by no observations of oriental cuckoo being made throughout the field survey program.

Refer to Att 1.07 - C2C EPBC Report_Part7of8, Appendix E, section 15.2.8, pages E-188-E-190, for the SIA for the Oriental cuckoo.

**Eastern Osprey (*Pandion haliaetus*)**

The SIA for the Eastern Osprey concluded that the Proposed Action is unlikely to have a significant impact due to:

- This species is considered to be common and secure. Modelled potential habitat within the Disturbance Footprint and has already been modified through historical clearing, weeds and pests.
- The referral guidelines note that “any species that greatly reduces fish abundance” is considered to be harmful to the eastern osprey. The Proposed Action will employ best practice control methods for weeds and pests and is unlikely to introduce or exacerbate weeds or pests beyond existing levels.
- Mapped habitat is unlikely to support an ecologically significant proportion of the national or international population. This is supported by only a single individual recorded throughout the field survey program.
- While nesting may occur in the woodlands adjacent to the Calliope River and the powerline towers, this habitat will not be significantly affected.

Refer to Att 1.08 - C2C EPBC Report_Part8of8, Appendix E, section 15.4.8, pages E-200-E-202, for the SIA for the Eastern Osprey.

### 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 Proposed Action has been assessed against the Significant Impact Guidelines 1.1 which identified that the Proposed Action is unlikely to have a significant impact on migratory species. Refer to response in section 4.1.5.6 of this form.

### 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. *

Powerlink has implemented the hierarchy of management principles in the planning for and development of the Proposed Action. These principles and order in which they have been applied is as follows: Avoid → Minimise → Mitigate → Remediate and rehabilitate → Offset (where necessary). The Avoid, Minimise and Mitigate (and manage) approaches have been summarised below. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.0, page 124. for further information regarding the hierarchy of management principles.

**Avoid**

The siting of permanent infrastructure components within Study Area has been carefully considered in the context of environmentally sensitive areas including known MNES habitat. The primary purpose of this exercise was to maximise opportunities to reduce the clearing of vegetation and direct impacts on MNES habitat. Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.1, pages 124-125 for comprehensive information regarding the activities undertaken to avoid impacts.

**Minimise**

The following measures will be implemented to minimise the loss of vegetation and habitats:

- Vegetation clearing will be restricted to the minimal amount necessary for the construction of the Project activities. Micro-siting of infrastructure such as tower footprints will be undertaken during the detailed design phase to further reduce impacts and to ensure areas of high ecological significance are avoided as a priority.
- Construction of the Project will occur progressively and in phases. By doing this, only a small subset of the Disturbance Footprint will be impacted at one time. Indirect impacts resulting from the construction of the Project will be localised and temporary, and actively managed as detailed in following sections. Furthermore, clearing extents represent a maximum area. Direct impacts to MNES will be minimised where possible including through micro-siting.
- Areas of high terrain will allow spanning of the majority of vegetated areas, particularly in habitats of low open woodlands that feature very sparse canopy trees of very low height. In such areas, clearing is likely to be limited to that required for tower footprints and access tracks. These tower and access locations will be determined during the detailed design phase.
- Waterway crossings containing riparian vegetation corridors will be spanned in most instances, and particularly where values for and occurrences of listed threatened flora and fauna species have been identified by desktop mapping or surveys. Larger waterways will have higher towers and longer spans in order to avoid the bed and banks of waterways and place towers as far back from fringing vegetation. For access tracks across ephemeral waterways, existing crossings or clearings will be used. Any clearing required within a riparian corridor will be minimised with larger habitat trees retained.
- Rehabilitation of construction sites will occur progressively as the construction process advances. Disturbed areas not required for access roads and maintenance areas around structures will be restored as soon as practicable.

**Mitigate and manage**

The Proposed Action will incorporate the general mitigation and management measures, that includes the following.

- Microhabitat features such as large fallen logs will be relocated to adjacent areas of undisturbed vegetation prior to vegetation clearing where practicable.
- Clearly demarcate no-go zones. These areas may include threatened species habitat that is mapped within the Disturbance Footprint and removal is not required for the Project.
- Biosecurity Management Plans will be developed and incorporate guidance from Powerlink’s project specific EMP.
- An Erosion and Sediment Control Plan (ESCP) by a Certified Professional in Erosion and Sediment Control (CPESC) will be developed in accordance with IECA Best Practice Erosion and Sediment Control Guidelines 2008. The ESCP will be developed to minimise habitat degradation in areas adjacent to construction.
- Pre-clearance searches of habitat will be undertaken prior to clearing by a qualified fauna spotter, with habitat features/trees clearly identified and searched for fauna.
- Outline measures to replace/relocate habitat and resources that will be unavoidably lost. This will include rehabilitation procedures for the decommissioning of infrastructure if those areas are not otherwise useful to the

ongoing land use.
- Training/information requirements for all personnel working on the Project, including but not limited to inductions, daily toolbox talks and/or site walk overs which discuss the management measures or risks at particular locations.

Refer to Att 1.03 - C2C EPBC Report_Part3of8, section 8.3.1, pages 127-130 for a comprehensive list of general mitigation measures.

In addition to the general mitigation and management measures, the following species-specific mitigation measures will be implemented for migratory shorebirds and the Eastern osprey.

Migratory shorebirds and Eastern osprey:

- Acid sulfate soils will be managed in accordance with Powerlink's Acid Sulfate Soils Management Plan.
- Powerlink has committed to no night works during the construction phase.
- A Water Quality Monitoring Program will be implemented at the Calliope River, to compare pre and post construction water quality and determine extent of Project related impacts.
- Temporary site offices, stockpiling/laydown areas, plant and equipment storage areas will be located away from waterbodies and will be sited within already cleared or disturbed areas.
- Appropriate spill prevention and response plans will be developed to cover Project activities, and the types and quantities of fuel, oil and chemicals held.
- Appropriate sediment and erosion control measures will be implemented to avoid potential contamination of surface water or adjacent habitats and increases in areas of pooling water, which may create breeding habitat for cane toads.
- No off-track driving within the mangrove or saltmarsh habitat will be permitted.
- Migratory shorebirds only:
- In areas of mapped habitat planned for clearing, spotter-catchers will complete flushing surveys to encourage the dispersal of any individuals present out of the clearing path.
- Water extraction will be conducted at an alternative location within the Study Area should any migratory shorebird be identified utilising the habitat.
- Water extraction activities will be strictly controlled and monitored in liaison with the landholder to ensure no waterbodies are completed drained.

For each waterbody, a single access point will be utilised for water extraction to minimise areas of disturbance and allow potentially occurring individuals to avoid the same area during construction.

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

No offset is proposed as the significant impact assessment concluded that the Proposed Action is unlikely to have a significant impact on 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 does not involve or include nuclear actions.

### 4.1.7 Commonwealth Marine Area

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

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

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

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

No

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

The proposed action is not directly located within a 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 Project Area is located upstream of the Great Barrier Reef. Construction works upstream of the Great Barrier Reef, will be managed through the stringent application of industry standard erosion and sediment control measures to avoid any impacts to water quality consistent with the requirements of the Reef 2050 Long-Term Sustainability Plan (DCCEEW, 2023).

Following construction, worksites will be rehabilitated and vegetated to avoid operational water quality impacts.

Powerlink's Environmental Management Plan (Att 4 – PLQ Project EMP)* requires 'no adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition'. In particular, it requires compliance with the IECA Best Practice Erosion and Sediment Control Guidelines 2008 and the preparation of a Project Erosion and Sediment control Plan prior to construction. The EMP identifies 10 requirements to achieve a no adverse impact outcome.

*Powerlink's Project EMP is subject to change and will be continually updated as the Project is further developed.

### 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 Proposed Action will not involve coal gas seam developments or large coal mining developments.

### 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.

—

#### 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 Proposed Action will not be located 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.

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

No

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

The Proposed Action is not located on a Commonwealth heritage place 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:

- World Heritage (S12)
- National Heritage (S15B)
- Threatened Species and Ecological Communities (S18)

### 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:

- Ramsar Wetland (S16)
- 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. ***

**Strategic objectives**

The Proposed Action will support the Commonwealth and Queensland Government in achieving emission reduction targets by contributing to the transition to clean energy generation. Queensland currently generates 12.3 GW of electricity from fossil fuel sources, approximately 4.7 GW (38%) of which is generated in the Central Queensland region to support local communities and energy-intensive industrial activities primarily located around Gladstone. Over half of the region's fossil fuel generation capacity will be decommissioned by 2035 due to the forecast closures of the Callide B Power Station (2028) and the Gladstone Power Station (2029). Alternative generation capacity will be required to address the potential shortfall in power generation and to cater for likely future increases in electricity use. Energy generation diversification, particularly the use of decentralised renewable sources, will reduce greenhouse gas emissions contributing to future climate change, and reduce vulnerabilities to the impacts of climate change.

In addition to strong alignment with State and Commonwealth policies regarding emissions reductions and renewable infrastructure delivery, the Study Area was selected due to proximity to existing high voltage transmission infrastructure, large areas of previously cleared land, relatively low population density, distance from nearest sensitive land uses, constructability, and commercial viability. Further, existing land uses with the Study Area are generally suitable for coexistence with transmission supply, ensuring that the Project will have minimal amenity impacts to landowners following the application of appropriate mitigation and management measures.

**Design process**

The layout and associated disturbance footprint have been developed through a number of design iterations and reviews to minimise, and where possible, avoid impacts on any known site constraints, particularly impacts relating to ecological values and impacts on local communities.

The corridor selected makes use of existing spare Powerlink easements in Sections A, B, D and E which collocated adjacent to existing transmission lines. This in turn, reduces impacts compared to alternative locations.

Section C requires a new easement adjacent to an existing transmission line. Powerlink undertook a Corridor Selection Report (CSR) to identify the appropriate route for Section C. Ultimately the, northern side of the existing line was chosen over the southern side as it reduces the level of interaction required for crossing existing transmission infrastructure and minimises the risk of complex outages on Powerlink‘s transmission network.

Refer to Att 3 – Final Corridor Selection Report,, section 4.0, page 14 to 16 that summarises the key findings of Powerlink’s Corridor Selection Report.

The location of tower structures has been determined based on the careful consideration of environmental and heritage constraints. Hardstand areas, supporting ancillary infrastructure (e.g. access roads, cabling, etc.), and construction areas (e.g. stockpiling, laydown areas, etc.) have been selected to balance constructability requirements with the minimisation of impacts on known ecological values. Given the complexities of the terrain associated with the Project, constructability has also been a significant driver in the location and route selection for access tracks. Where possible, the design has sought to co-locate Project infrastructure including access tracks, transmission structures and cabling to minimise the fragmentation of native vegetation and reduce the overall impact area required to facilitate construction activities. Further, areas utilised for construction, such as stockpiling and laydown areas, will be located within cleared corridors where possible. It is noted that necessary firebreaks and safety buffers will be incorporated within infrastructure corridors where appropriate.

Not undertaking the Proposed Action would result in reduced support for Commonwealth and Queensland emissions reduction policies and would negatively impact on the transition to clean energy in Central Queensland.

**Conclusion**

Overall, there are no possible alternatives for the Proposed Action. The proposed layout represents a suitable balance between environmental values, local communities and the need to develop a design that achieves minimum performance requirements to deliver viable transmission infrastructure. The co-location of transmission infrastructure is also preferred in avoidance and minimisation of potential impacts to environmental and heritage values.

# 5. Lodgement

## 5.1 Attachments

1.2.1 Overview of the proposed action

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.01 - C2C EPBC Report_Part1of8.pdf<br>Proposed Action EPBC Report Part 1 of 8. | 06/11/2024 | 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 2 - PLQ HSE Policy.pdf<br>Powerlink's Health, Safety and Environment Policy. | 31/07/2024 | No | High |

3.1.1 Current condition of the project area's environment

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.02 - C2C EPBC Report_Part2of8.pdf<br>Proposed Action EPBC Report Part 2 of 8 | 06/11/2024 | No | High |
| #2. | Document | Att 3 - Final Corridor Selection Report.pdf<br>To outline the engagement undertaken regarding the corridor selection process, how feedback has been considered, and how the final transmission line corridor was determined | 01/08/2024 | 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 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 06/11/2024 | No | High |

3.2.1 Flora and fauna within the affected area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.01 - C2C EPBC Report_Part1of8.pdf<br>Proposed Action EPBC Report Part 1 of 8. | 05/11/2024 | No | High |
| #2. | Document | Att 1.02 - C2C EPBC Report_Part2of8.pdf<br>Proposed Action EPBC Report Part 2 of 8 | 05/11/2024 | No | High |
| #3. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | | High |

3.2.2 Vegetation within the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.02 - C2C EPBC Report_Part2of8.pdf<br>Proposed Action EPBC Report Part 2 of 8 | 05/11/2024 | No | High |

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

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Link | Great Barrier Reef<br>https://whc.unesco.org/en/list/154/ | | | High |
| #2. | Link | Great Barrier Reef World Heritage Area<br>https://www.dcceew.gov.au/parks-heritage/great-b.. | | | High |
| #3. | Link | Nomination of the Great Barrier Reef by the Commonwealth of Australia for inclusion in the WHL<br>https://elibrary.gbrmpa.gov.au/jspui/retrieve/0b.. | 01/01/1981 | | High |

3.3.2 Indigenous heritage values that apply to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Link | Aboriginal Tribes Australia DNA Project<br>https://www.familytreedna.com/groups/aboriginal-.. | | | High |
| #2. | Link | Great Barrier Reef<br>https://whc.unesco.org/en/list/154/ | | | High |
| #3. | Link | Koongo Yallarm - Book 1 - The Dreaming to 1934 - A pictorial history of the Port of Gladstone<br>https://gpcl.com.au/wp-content/uploads/2022/08/G.. | 01/01/2009 | | High |
| #4. | Link | Nomination of the Great Barrier Reef by the Commonwealth of Australia for inclusion in the WHL<br>https://elibrary.gbrmpa.gov.au/jspui/retrieve/0b.. | 01/01/1981 | | High |
| #5. | Link | Search the Aboriginal and Torres Strait Islander Cultural Heritage Database and Register<br>https://www.culturalheritage.qld.gov.au/achris/p.. | | | High |

4.1.1.5 (World Heritage) Why you consider the direct and/or indirect impact to be a Significant Impact

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.04 - C2C EPBC Report_Part4of8.pdf<br>Proposed Action EPBC Report Part 4 of 8 | 06/11/2024 | No | High |
| #3. | Document | Att 1.05 - C2C EPBC Report_Part5of8.pdf<br>Proposed Action EPBC Report Part 5 of 8 | 06/11/2024 | No | High |
| #4. | Document | Att 1.06 - C2C EPBC Report_Part6of8.pdf<br>Proposed Action EPBC Report Part 6 of 8 | 06/11/2024 | No | High |
| #5. | Document | Att 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 06/11/2024 | No | High |
| #6. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 06/11/2024 | No | High |
| #7. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 08/10/2024 | No | High |
| #8. | Link | Reef 2050 Long-Term Sustainability Plan<br>https://www.dcceew.gov.au/sites/default/files/do.. | | | High |

4.1.1.10 (World Heritage) Avoidance or mitigation measures proposed for this action

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |

| | | | | | |
|---|---|---|---|---|---|
| #2. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 07/10/2024 | No | High |

4.1.2.5 (National Heritage) Why you consider the direct and/or indirect impact to be a Significant Impact

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.04 - C2C EPBC Report_Part4of8.pdf<br>Proposed Action EPBC Report Part 4 of 8 | 05/11/2024 | No | High |
| #3. | Document | Att 1.05 - C2C EPBC Report_Part5of8.pdf<br>Proposed Action EPBC Report Part 5 of 8 | 05/11/2024 | No | High |
| #4. | Document | Att 1.06 - C2C EPBC Report_Part6of8.pdf<br>Proposed Action EPBC Report Part 6 of 8 | 05/11/2024 | No | High |
| #5. | Document | Att 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 05/11/2024 | No | High |
| #6. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 05/11/2024 | No | High |
| #7. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 07/10/2024 | No | High |
| #8. | Link | Reef 2050 Long-Term Sustainability Plan<br>https://www.dcceew.gov.au/sites/default/files/do.. | | | High |

4.1.2.10 (National Heritage) Avoidance or mitigation measures proposed for this action

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 07/10/2024 | 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 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.04 - C2C EPBC Report_Part4of8.pdf<br>Proposed Action EPBC Report Part 4 of 8 | 05/11/2024 | No | High |
| #3. | Document | Att 1.05 - C2C EPBC Report_Part5of8.pdf<br>Proposed Action EPBC Report Part 5 of 8 | 05/11/2024 | No | High |
| #4. | Document | Att 1.06 - C2C EPBC Report_Part6of8.pdf<br>Proposed Action EPBC Report Part 6 of 8 | 05/11/2024 | No | High |

| | | | | | |
|---|---|---|---|---|---|
| #5. | Document | Att 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 05/11/2024 | No | High |
| #6. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 05/11/2024 | No | High |

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.04 - C2C EPBC Report_Part4of8.pdf<br>Proposed Action EPBC Report Part 4 of 8 | 05/11/2024 | No | High |
| #3. | Document | Att 1.05 - C2C EPBC Report_Part5of8.pdf<br>Proposed Action EPBC Report Part 5 of 8 | 05/11/2024 | No | High |
| #4. | Document | Att 1.06 - C2C EPBC Report_Part6of8.pdf<br>Proposed Action EPBC Report Part 6 of 8 | 05/11/2024 | No | High |
| #5. | Document | Att 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 05/11/2024 | No | High |
| #6. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 05/11/2024 | 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 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 07/10/2024 | No | High |

4.1.4.11 (Threatened Species and Ecological Communities) Proposed offsets relevant to avoidance or mitigation measures

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | 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 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 05/11/2024 | No | High |
| #3. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 05/11/2024 | 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 1.07 - C2C EPBC Report_Part7of8.pdf<br>Proposed Action EPBC Report Part 7 of 8 | 05/11/2024 | No | High |
| #2. | Document | Att 1.08 - C2C EPBC Report_Part8of8.pdf<br>Proposed Action EPBC Report Part 8 of 8 | 05/11/2024 | | High |

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

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 1.03 - C2C EPBC Report_Part3of8.pdf<br>Proposed Action EPBC Report Part 3 of 8 | 05/11/2024 | No | High |

4.1.8.3 (Great Barrier Reef) Why your action is unlikely to have a direct and/or indirect impact

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 4 - PLQ Project EMP.pdf<br>This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the Proposed Action. | 07/10/2024 | No | High |
| #2. | Link | Reef 2050 Long-Term Sustainability Plan<br>https://www.dcceew.gov.au/sites/default/files/do.. | | | High |

4.3.8 Why alternatives for your proposed action were not possible

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att 3 - Final Corridor Selection Report.pdf<br>To outline the engagement undertaken regarding the corridor selection process, how feedback has been considered, and how the final transmission line corridor was determined | 31/07/2024 | No | High |

# 5.2 Declarations

## Completed Referring party's declaration

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

| | |
|---|---|
| ABN/ACN | 18059519041 |
| Organisation name | UMWELT (AUSTRALIA) PTY. LTD. |
| Organisation address | 2284 NSW |
| Representative's name | Julius Frias |
| Representative's job title | Senior Environmental Planner |
| Phone | 0487726136 |

| | |
|---|---|
| Email | JFrias@umwelt.com.au |
| Address | Level 20, 145 Ann Street, Brisbane City, 4000 |

☑ 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, **Julius Frias of UMWELT (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 | 82078849233 |
| Organisation name | QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED |
| Organisation address | 4014 QLD |
| Representative's name | Thomas Hewitt |
| Representative's job title | Property Project Manager |
| Phone | 0467757586 |
| Email | thomas.hewitt@powerlink.com.au |
| Address | 33 Harold Street, Viriginia, QLD, 4014 |

☑ 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, **Thomas Hewitt of QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED**, 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.

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Same as Person proposing to take the action information.

- [x] Check this box to indicate you have read the referral form. *

- [x] I would like to receive notifications and track the referral progress through the EPBC portal. *

- [x] I, **Thomas Hewitt of QUEENSLAND ELECTRICITY TRANSMISSION CORPORATION LIMITED**, 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. *