Borumba Pumped Hydro Project -Proposed Woolooga Transmission Corridor

Final Corridor Selection Report

NOVEMBER 2023



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Executive summary

This Final Corridor Selection Report (CSR) has been prepared by Queensland Electricity Transmission Corporation Limited, trading as Powerlink Queensland (Powerlink), for the proposed Woolooga transmission connection from the Borumba Pumped Hydro Energy Storage (PHES) Project. Powerlink has engaged AECOM Australia Pty Ltd (AECOM) to undertake technical, spatial and mapping analysis to support the preparation of both the Draft and Final CSRs.

Project background

The Queensland Government has committed to unlocking renewable investment and achieving a Renewable Energy Target (RET) of 80% by 2035. In September 2022, the Queensland Government released the Queensland Energy and Jobs Plan (QEJP), identifying the critical role of long duration PHES in Queensland's energy transformation, and more broadly in meeting our global responsibilities to reduce greenhouse gas emissions. The QEJP also outlined the need for the transmission network to evolve to meet the changing electricity system.

As part of delivering on this commitment, the Queensland Government also announced the creation of Queensland Hydro, a publicly owned entity to carry out detailed analytical studies for a PHES facility at Borumba Dam, located near Imbil and south-west of Gympie. Powerlink has been engaged by Queensland Hydro to develop two new transmission lines to connect the PHES to the existing transmission network.

This includes new high voltage transmission lines connecting the PHES at Woolooga in the north and Halys in the south-west. These connections are the first stage in the development of the transmission network required under the QEJP, providing support for load growth, future renewable energy developments in Wide Bay and Central Queensland, and access to high quality renewables in South West Queensland.

The detailed analytical studies for the PHES are considering a facility capable of generating between 1,500 megawatts (MW) to 2,000MW with up to 24 hours of storage. When operational, the facility will have the capacity to supply electricity to up to two million Queensland homes.

This increase in generation capacity will require new transmission connections. This Final CSR has been prepared on the basis of 500 kilovolt (kV) transmission connections to Powerlink's network for the PHES facility.

The purpose of this Final CSR is to outline the engagement undertaken with landholders, the community and other stakeholders regarding the corridor selection process, how feedback has been considered, and refinements made to finalise a 1km-wide corridor, in which a 70m-wide easement alignment will be determined.

Approach to corridor selection

Initial stakeholder engagement regarding the proposed project began in December 2021 and was followed by the release of a study area in mid-2022, when Powerlink commenced investigations into potential corridor options to connect the PHES facility to the transmission network.

As a key component of the transmission network development processes, Powerlink sought community and stakeholder input on the study area in July and August 2022. This engagement included hearing from local councils, Traditional Owner groups, peak bodies and the wider community to understand and gain better insights into important community matters and what is happening in the area. These investigations also involved a strategic desktop assessment of legislative frameworks, and spatial analysis of land characteristics, environment, heritage and



social constraints. It also included broad and targeted site visits with Traditional Owner representatives to advise on high-level cultural values and constraints.

Corridor options considering these constraints were then developed, including three potential transmission corridors four kilometres (km) in width, with a sub-option for each. These corridor options were taken to the community for their feedback and input in late 2022 and early 2023.

The corridor selection process builds on the outcomes of the earlier corridor options analysis, which examined each of the corridor options based on further assessment of feedback received from community engagement, physical land, environment and heritage values, social impacts, legislative requirements, and technical input from Powerlink in relation to constructability of transmission lines.

Three objectives were identified to inform the approach to corridor selection:



Social

To consider the use of land and the community livelihood within and adjacent to corridor options.



Environment

To consider a balanced approach to corridor selection with the least practicable impact on environment and heritage values.



Economic

To consider construction and operational factors such as cost at a preliminary level, given the scale of the project.

The methodology for corridor selection was developed to incorporate:

- the feedback from engagement with landholders, Traditional Owner groups, the local community and other stakeholders
- publicly available spatial data relating to environment, planning and heritage constraints
- technical information provided by Powerlink relevant to the planning and delivery of transmission line infrastructure.

Corridor selection has been undertaken in two phases:

- 1. corridor selection selecting which 4km-wide corridor option has the least overall impact across the objectives
- 2. corridor refinement identifying a 1km-wide recommended corridor within the 4km-wide corridor option.

Each phase was driven by the identified social, environment and economic objectives.

The Woolooga West corridor was selected as the 4km-wide corridor option with the least overall impact across social, environment and economic objectives when compared to the other corridor options. A 1km-wide recommended corridor was then identified within the selected 4km-wide corridor based on the same set of objectives.

Further information on the 4km-wide corridor analysis and identification of the 1km-wide recommended corridor is set out in Powerlink's Borumba Pumped Hydro Project – Proposed Woolooga Transmission Corridor Draft Corridor Selection Report (available online at powerlink.com.au/borumbatransmission). A summary of the full document is also available on this webpage.

Through feedback and further analysis following the release of the Draft CSR, Powerlink became aware of an area of high residential density near the Black Snake area. In response, a 10km-long deviation in the Black Snake area south of the Wide Bay Highway was identified with lower residential density, that still seeks to achieve the least overall impact across social, environmental and economic factors.



The deviation heads in a south-westerly direction from Oakview before re-joining the recommended corridor in the Black Snake area. The corresponding stretch of the original recommended corridor, located from where the corridor heads south from the Wide Bay Highway in Oakview towards Oakview National Park through to Blacksnake Road in the Black Snake area, was removed from the recommended corridor and the investigation area.

To enable Powerlink to engage with landholders within the deviation and seek input, the release of the Final CSR was delayed to 30 November 2023 and feedback on the corridor deviation occurred between 1 September and 27 October 2023. The discussions and insights throughout the Draft CSR feedback period have resulted in a number of alignment changes to the recommended corridor.

Final 1km-wide corridor

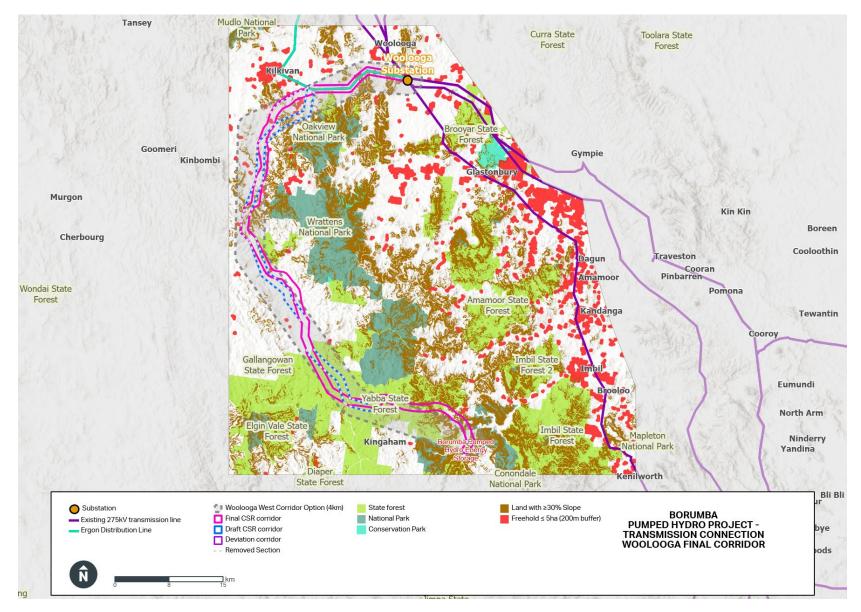
Throughout the corridor selection process, Powerlink sought feedback at various stages to help inform the refinement and selection of a final 1km-wide corridor. Recent feedback on the 1km-wide recommended corridor, as part of the Draft CSR consultation period, identified opportunities within sections of the corridor where improved co-existence between Powerlink's potential infrastructure and existing land uses could be achieved. Working with landholders in those areas, Powerlink considered and adopted feedback resulting in realignments of the corridor with a small increase in length (2km) to the overall corridor.

Through the corridor selection process a final corridor has been identified, in which a 70m-wide easement alignment will be determined. The final 1km-wide corridor maintains the ability to:

- avoid critical infrastructure, community facilities and townships
- avoid National Parks
- minimise impacts on agriculture, intensive land use and strategic cropping land
- minimise impact on areas of potential cultural significance
- optimise the use of State-owned land
- identify potential to co-locate with existing distribution lines
- enhance opportunities for co-existence.



Figure 1: Final 1km-wide corridor





1.0 Introduction

1.1 Project background

The Queensland Government has committed to unlocking renewable investment and achieving a Renewable Energy Target (RET) of 80% by 2035. As part of delivering on this commitment, Queensland Hydro is carrying out detailed analytical studies for a potential Pumped Hydro Energy Storage (PHES) facility at Borumba Dam, located near Imbil and south-west of Gympie.

Land parcels adjoining Borumba Dam were acquired to support a future PHES facility nearly four decades ago. This land is now owned by Queensland Hydro as the delivery entity of the PHES facility.

Detailed analytical studies for the PHES are considering a facility capable of generating between 1,500 megawatts (MW) to 2,000MW with up to 24 hours of storage. When operational, the facility will have the capacity to supply electricity to up to two million Queensland homes.

This increase in generation capacity will require new transmission connections. This Final CSR has been prepared on the basis of 500 kilovolt (kV) transmission connections to our network for the PHES facility.

The Queensland Energy and Jobs Plan (QEJP) applies a whole-of-system planning approach, setting out the pathways and targets that will facilitate a low carbon economy in the future and ensure an orderly, least-cost transformation of Queensland's power system.

Powerlink will play a critical role in supporting the energy transformation over the coming decade.

Figure 2: Queensland Energy and Jobs Plan

Plan and Blueprint



Three focus areas:

- Clean Energy Economy
- Empowered households and businesses
- Secure jobs and communities



- Queensland SuperGrid
 Infrastructure Blueprint
 outlines the infrastructure to
 enable the decarbonisation of
 the existing electricity system
- Includes Renewable Energy Zones, Pumped Hydro Energy Storage and High Capacity Transmission

Key targets and objectives

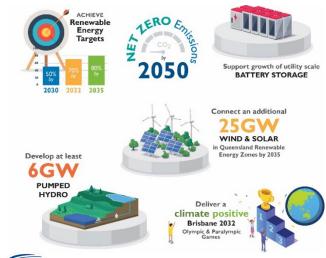
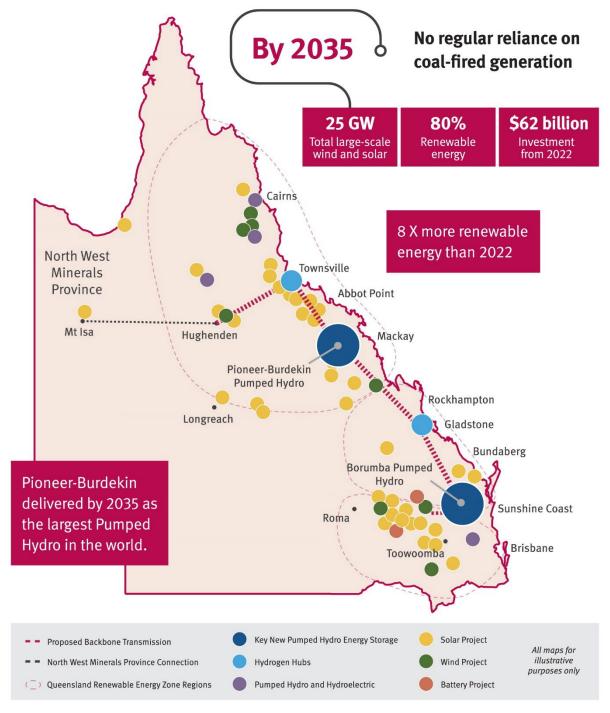




Figure 3: Queensland SuperGrid



The Queensland Government has outlined the optimal infrastructure pathway in the *Queensland SuperGrid Infrastructure Blueprint*.

Projections informed by independent modelling and internal analysis

1.2 Purpose of this report

Powerlink has prepared this Final Corridor Selection Report (Final CSR), to conclude the early engagement, corridor selection and assessment processes, involving landholders, Traditional Owner groups, the community and other stakeholders, to identify a final 1km-wide corridor. Figure 4 provides the timeframe for the corridor selection process and engagement.



Sep/Oct Dec April July Sept/October Dec Use feedback to 970 letters sent Release Draft Corridor Selection Release of investigation Release Borumba to Woolooga First develop corridor to residents -Report with recommended corridor area. Early engagement with corridor deviation and stakeholder options 10 community (1km-wide) and associated Council. Traditional Owners associated engagement with workshop - two (4km-wide) - first info drop-in engagement with landholders, reps & peak bodies - two landholders, community and community info Burnett Stakeholder sessions held community and other stakeholders, community info drop-in other stakeholders, including drop-in Reference Group including 1,415 letters sent to sessions held 132 letters sent to landholders sessions held meeting held landholders 2021 2022 Aug Jan/Feb/March April Nov May/June Nov Established Using investigation Release corridor options for 4,435 project update Seven community info Release area, wider community Borumba community feedback - 2,300 emails and letters sent to drop-in sessions held Borumba to engagement to gain Stakeholder letters sent to residents in residents on feedback regarding Draft CSR Woolooga Final Reference Group better insights into northern corridors, seven themes and Draft Corridor Corridor release and ongoing two community constraints and matters community info drop-in Selection Report timings engagement on report Selection Report info drop-in of interest - two sessions hosted + first 12 community info drop with final findings sessions held community Transmission Sub Group in sessions hosted + third corridor info drop-in sessions and second Burnett Borumba to Woolooga held Stakeholder Reference Stakeholder Reference Group meetings held Group and fourth Burnett Stakeholder Reference Group meetings held

Figure 4: Corridor selection process engagement timeline

The purpose of this Final CSR is to document the overall corridor selection process including early engagement and assessment outcomes as described below:

- consideration of all stakeholder input and feedback in identifying key criteria
- development of objectives, criteria and measures to identify and select a corridor option that has the least overall impact from a social, environmental and economic perspective
- selection of the 4km-wide corridor option, with further refinement to a 1km-wide recommended corridor in consideration of the corridor selection objectives
- engagement with landholders to understand land use and any known constraints
- identification of a final 1km-wide corridor for further refinement to a 70m-wide easement alignment.

Subsequent phases of the project will include further engagement with landholders, Traditional Owner groups, the community and other stakeholders; detailed environmental, heritage and social assessments including targeted investigations; and the development of planning, design and construction considerations.

2.0 Final 1km-wide corridor

Following release of the Draft CSR, landholders, Traditional Owner groups, the community and other stakeholders were invited to provide feedback on the 1km-wide recommended corridor. Valuable feedback influenced the location of the final corridor through identification of how the land is used, local constraints, improvements and future development plans. Based on this feedback, realignments of sections of the previously identified recommended corridor have been adopted.

The final 1km-wide corridor will now be further narrowed down to a 70m-wide easement alignment. Powerlink will keep working closely with landholders, Traditional Owner groups and other



stakeholders, while also completing field and site investigations, to best determine the final alignment.

2.1 Corridor engagement and feedback

Powerlink acknowledges the time and effort undertaken by landholders, Traditional Owner groups, the community and other stakeholders who provided feedback on the Draft CSR. In addition, it is important to note that the analysis of community feedback on the Draft CSR within this report forms part of Powerlink's wider commitment to genuine and meaningful engagement, which has been underway since December 2021. Further details on early engagement matters and related feedback is available in the Draft CSR and associated documents which can be viewed on the Powerlink website - powerlink.com.au/borumbatransmission.

2.1.1 Corridor engagement

Powerlink has established constructive working relationships with nearby landholders and other stakeholders. In April 2023, Powerlink released the recommended corridor in the Draft CSR, completing a further round of community consultation with directly impacted landholders, Traditional Owner groups, the broader community, state government agencies and other stakeholders. Information on the Draft CSR release was shared via:

- phone calls to landholders
- letters and emails to landholders, the community and other stakeholders
- briefings with the Stakeholder Reference Groups, Traditional Owner representatives, local government agencies and environmental groups
- Draft CSR summary fact sheet
- Powerlink website information
- provision of hard copy Draft CSR in local libraries
- media release.

Community consultation on the Draft CSR was open for public comment between 27 April 2023 and 3 July 2023. During this time, feedback was received via various methods including emails, feedback forms and through Powerlink's online interactive mapping, providing the opportunity to comment directly on the 1km-wide recommended corridor map, highlighting their areas of interest and feedback. Throughout this consultation period, Powerlink had over 300 interactions with landholders, providing copies of mapping and discussing on-ground insights as to how properties are used, helping to identify the final corridor.

In addition, three Community Information Drop-In Sessions were held in May 2023 at Manumbar, Gympie and Kilkivan to enable face-to-face engagement. These sessions were promoted via Powerlink's website and social media channels, newspaper advertisements, various community Facebook groups, local government channels, and posters/flyers on community noticeboards in key townships.

Upon the identification of the deviation near the Black Snake area, 132 letters were sent to those landholders in the proposed deviation, seeking input and feedback. To enable Powerlink to engage with landholders within the deviation, the release of the Final CSR was delayed to 30 November 2023 and feedback on the corridor deviation occurred. The corridor deviation was open for feedback from 1 September 2023 until 27 October 2023.



Since December 2021, Powerlink has shared information and gathered feedback for the Borumba Pumped Hydro Project transmission connections (regarding both the Borumba to Halys and Borumba to Woolooga transmission lines) via:

- 44 community information drop-in sessions, attended by more than 2,100 residents
- 5,757 project update emails and 9,057 letters sent to landholders
- more than 594 digital and hardcopy feedback forms received
- 1,148 comments received and responded to on our online interactive map
- phone calls and emails with landholders
- meetings with local community groups and landholders
- letterbox drops across the wider community in the South Burnett, Somerset and Gympie areas
- briefings with Stakeholder Reference Groups, Traditional Owner representatives, state and local government officials, and representatives from a number of state government departments
- selective site visits with Traditional Owner representatives
- social media channels, and advertisements in local newspapers and other publications, and radio stations
- more than 22,390 visits to the project webpage (powerlink.com.au/borumbatransmission).

2.1.2 Corridor feedback

All feedback received during the Draft CSR consultation period has been incorporated by theme into this report with a detailed summary enclosed within Appendix A of the report.

Feedback received from landholders within the recommended corridor was consistent with earlier engagement for the project which commenced in a more targeted manner in July 2022. The themes cover a wide range of topics including biosecurity, impacts to properties, land uses, impact to land values, visual amenity, project resistance and compensation.

The top five matters raised by landholders regarding the Borumba to Woolooga transmission line connection included:

- corridor alignment requests (to minimise property impacts)
- compensation
- loss of property values
- biosecurity (including the control and prevention of invasive weeds and pests)
- community impacts

Through Powerlink's ongoing engagement with landholders, 'corridor alignment' emerged as the most common feedback theme. This included areas that can be taken into consideration within the 1km-wide corridor and included proposed realignment of sections outside of the 4km-wide and 1km-wide corridor. In response to the feedback received, Powerlink has made direct changes to the 1km-wide corridor (see Figure 5), taking into consideration:

- proximity to residential homes
- design constraints
- environmental constraints



business/farming impacts

Ongoing discussions with landholders will consider other areas within the proposed 1km-wide corridor identified through this feedback theme as we determine a potential easement alignment for the 70m-wide easement.

2.1.3 Corridor realignments

Powerlink's commitment to early, ongoing and transparent engagement with landholders, Traditional Owner groups and government agencies, has resulted in tangible changes to the corridor. As a result of feedback received, Powerlink has investigated six areas for realignment of the 1km-wide corridor:

1. Kilkivan / Black Snake Locality

Through feedback, and further analysis, Powerlink became aware of an area of high residential density near the Black Snake area. A 10km-long deviation to the recommended corridor was identified south of the Wide Bay Highway heading in a south-westerly direction from Oakview before re-joining the recommended corridor in the Black Snake area. The deviation also seeks to avoid areas of potential cultural significance. This realignment has been **adopted** in the final 1km-wide corridor.

2. Black Snake / Cinnabar Locality

Engagement with landholders identified *two* minor realignments north-west of Wrattens Forest. The realignments seek to minimise operational and intensive land use impacts in this area. These realignments have been **adopted** in the final 1km-wide corridor.

3. Manumbar

This realignment occurs north of Manumbar and is in response to feedback regarding potential impacts to current farming and business practices. While the realignment is outside of the 4km-wide corridor and includes four new parcels, no new landholders are impacted. Powerlink and existing landholders in this area have worked collaboratively to consider this realignment and identify a solution. This realignment has been **adopted** in the final 1km-wide corridor.

4. Gallangowan State Forest

A realignment through state-owned plantation area was requested to accommodate proposed development plans by HQ Plantations to avoid the future loss of productive plantation. This realignment also provides opportunities for improved fire suppression management. This realignment has been **adopted** in the final 1km-wide corridor.

5. Yabba State Forest

During the consultation period for the Draft CSR, flora of significant value was identified. The corridor has moved to the north to ensure the flora and associated canopy are avoided. This realignment has been **adopted** in the final 1km-wide corridor.

With these realignments adopted, the final corridor length has increased by 2km (2%) overall, resulting from landholder consultation to improve co-existence outcomes and from further information obtained from consultation on the Draft CSR. Further detail on the social, environment and economic criteria is contained in Appendix C.



Figure 5 below shows the recommended corridor in blue, while the final corridor realignments are shown in pink. The hatched line areas reveal where changes have been made and these sections removed between the draft and final corridor, based on feedback from landholders and other stakeholders.

Toolara State Forest Goomeri Gympie Kinbombi Roreen Cherbourg Cooloothin Traveston Cooran Forest Tewantin North Arm Ninderry Yandina ional Park Bli Bli State forest
National Park Land with ≥30% Slope Freehold ≤ 5ha (200m buffer) BORUMBA
PUMPED HYDRO PROJECT TRANSMISSION CONNECTION
WOOLOOGA FINAL CORRIDOR Final CSR corridor
Draft CSR corridor
Deviation corridor
Removed Section Existing 275kV transmission line bye ods Ñ

Figure 5: Revised corridor based on feedback from landholders and other stakeholders



2.2 Summary of final 1km-wide corridor

Overall, the final corridor continues to achieve the least overall impact across social, environment and economic objectives.

The final 1km-wide corridor is 2km longer in length and includes six realignments in response to feedback and further information received through our consultation on the Draft CSR. Appendix C identifies the high-level constraints and opportunities across the final corridor.

The impacts on Category A, B, C, R Endangered and Of Concern vegetation has increased, as well as Essential Habitat. Refining the 1km-wide corridor to a 70m-wide easement alignment is expected to further mitigate these impacts. There have been reductions to impacts on agricultural land uses, in particular production from dryland agriculture and plantations through Gallangowan State Forest.

Social, environmental and economic impacts assessed for the final corridor have in broad terms seen minor increases compared to the recommended corridor (by way of example, Endangered RE vegetation has increased from 0.5% to 1% of the total final 1km-wide corridor area). These changes are a result of proposed deviations and realignments informed by detailed consultation with landholders, community and Traditional Owner groups on specific land use and impacts, in particular the requirement to minimise impacts on higher density residential areas; operational, farming and business practices; and targeted areas of high ecological value.

Opportunities to minimise social, environmental and economic impacts will be identified and maximised as the final 1km-wide corridor is refined to a 70m-wide easement alignment. The design phase is key to being able to take advantage of any opportunity to further reduce impacts in conjunction with feedback from landholders and key stakeholders.

Table 1: Assessment of Woolooga 1km-wide recommended corridor and final corridor

Objective and Criteria	Unit	Recommended Corridor (1km- wide)	Final Corridor (1km-wide)
Social			
Criteria 1: Strategic cropping and agricultural land use	На	382	242
Criteria 2: Properties <5ha	Count	5	6
Criteria 3: State-owned land	%	27	27
Criteria 4: Number of properties	Count	129	133
Criteria 5: Intensive use	На	89	94
Environment			
Criteria 1: Endangered RE (Cat A,B,C,R)	На	43	89
Criteria 2: Of Concern RE (Cat A,B,C,R)	На	1757	2193
Criteria 3: Least Concern RE (Cat A,B,C,R)	На	2297	2369
Criteria 4: Essential habitat	На	1545	1755



Criteria 5: National Park	На	0	0
Economic			
Criteria 1: Corridor length	Km	88	90
Criteria 2: Land >30% slope	%	11	11
Criteria 3: Co-location with 275kV line	Km	0	0

The engagement completed to date reflects Powerlink's commitment to a project that serves the needs of Queensland, but also to understanding and responding to the needs of landholders and Traditional Owners. It shows Powerlink's commitment to actively listen to feedback received and respond where feasible to lessen impacts to stakeholders, properties, business operations and environment.

Powerlink has considered and utilised State-owned land to lessen impacts to the community, and as a result, is continuing to engage with the relevant state agencies.

Powerlink acknowledges the deep and ongoing connection the Traditional Owner parties have with the area, and value the insights they have provided. The project team is continuing to engage with Traditional Owner groups beyond the formal consultation period, helping to gain more in-depth insights into areas of cultural significance.

3.0 Legislative and approval requirements

There are a number of potential legislative and approval requirements in order to progress the project. Some of the local, state and federal government approval frameworks are discussed in this section.

3.1 Potential environmental approvals

The final 1km-wide corridor requires further investigation from an environmental perspective. At this scale, the potential for approvals for a transmission line through this corridor can only be provided at a preliminary level. A full list of legislative considerations and other obligations is provided within Appendix D. Potential approvals are identified below and are subject to further corridor refinement, actual infrastructure disturbance locations and further ecological and cultural heritage investigations:

- Ministerial Infrastructure Designation under the Planning Act 2016 (Qld)
- Environment Protection and Biodiversity Conservation Act (EPBC) 1999 (Cth) referral and potential approval for significant impact on Matters of National Environmental Significance
- Clearing permit under the Nature Conservation Act 1992 (Qld)
- Species Management Program (SMP) under the Nature Conservation (Animals) Regulation 2020 (Qld) for the tampering of active breeding places where impact cannot be avoided (Low Risk SMP required for impact to Least Concern species / High Risk SMP is required for impact to colonial breeders, Near Threatened, Vulnerable, Endangered and Critically Endangered species)
- Soil disposal permit under the *Environmental Protection Act (EP Act) (Qld)* to remove contaminated soil for treatment and/or disposal
- Riverine protection permit where the Riverine protection permit exemption requirements under the *Water Act 2000 (Qld)* cannot be met.



Offsets are likely to be applicable to some of the approvals above. To determine the likely offset requirements under the *EPBC Act (Cth)* and *Environmental Offsets Act (Qld)*, field surveys and the following assessments are recommended:

- A Significant Impact Assessment using the EPBC Act Significant Residual Impact Guidelines Policy Statement 1.1
- A Significant Residual Impact Assessment under the Queensland Environmental Offsets Policy Significant Residual Impact Guideline: *Nature Conservation Act* 1992, and Environmental Protection Act 1994.

Prior to the future construction of the project, further assessment of the project's potential legislative obligations should be undertaken once the corridor is further refined, and once additional desktop and field investigations have been undertaken. Additionally, where approvals are required, potential offsets will also need to be considered.

For further detail on legislation potentially applicable to the corridor, refer to Appendix E.

4.0 Conclusion and future studies

The final 1km-wide corridor has been identified for the Woolooga connection for the Borumba Pumped Hydro Project. The assessment used criteria and measures informed by feedback from landholders, Traditional Owner groups, the community and other stakeholders, and spatial analysis.

Engagement conducted as part of the Draft Corridor Selection Report (CSR) process has provided invaluable insights. Powerlink will seek to build on and incorporate further collaboration with landholders, Traditional Owner groups, the community and other stakeholders moving forward. This collaborative approach will strengthen our ability to identify and integrate amicable solutions, resulting in stronger opportunities for co-existence with landholders.

Through the corridor selection and refinement processes, the final 1km-wide corridor:

- avoids critical infrastructure, community facilities and townships
- avoids National Parks
- minimises impacts on agriculture, intensive land use and cropping lands
- optimises the use of State-owned land
- minimise impacts on areas of cultural significance
- identifies potential to co-locate with existing distribution lines
- enhance opportunities for co-existence.

Following release of the Final CSR, additional detailed technical studies and continued engagement will help to narrow down and determine a 70m-wide easement for the final transmission line alignment.

4.1 Future studies

Detailed field studies are required to further identify project constraints at an individual property level, and opportunities within the final 1km-wide corridor to optimise the transmission line design whilst achieving the social, environment and economic objectives of the project. This design phase of the project focuses heavily on identifying specific areas to avoid, mitigate and further manage throughout the design of the proposed transmission line easement alignment.



Planning approval through the use of the Ministerial Infrastructure Designation process will be required for this project. In addition, detailed environmental assessments and approvals will also be undertaken as part of the design phase. Concurrent to these processes, property access and easement negotiations will also commence. To facilitate these processes, there are a number of key factors that require consideration, outlined below.

Social

- Collaboration ongoing engagement with affected landholders and Traditional Owner groups on the final 1km-wide corridor to understand use of land, areas of cultural value and where it is possible to minimise potential impacts.
- Visual amenity assessment further assess visual amenity in relation to possible transmission tower locations, proximity from dwellings and areas with significant community value.

Environment, heritage and planning

- Ecology based on the vegetation present within the 1km-wide final corridor, there is
 potential for the corridor to contain areas of habitat for threatened flora and fauna species
 or threatened ecological communities. Further assessment will be undertaken to determine
 the potential impact to habitat for threatened flora and fauna species. Assessment should
 comprise a detailed desktop assessment and targeted field surveys.
- Biosecurity matters field investigations, ecology reports and detailed discussions with landholders are needed to identify potential biosecurity risks and the appropriate management plans.
- Heritage studies ongoing close engagement with Traditional Owner groups and subject matter experts is required to identify any potential risk to Indigenous and Non-Indigenous heritage values that should be avoided or managed.

Economic

Design phase – various detailed investigations are required to assist and define the
detailed design of the final easement alignment including tower locations. These studies
are not limited to but include land use, terrain, geology, soil and ground conditions, flood
potential and unexploded ordnance (UXO). Field investigations including sampling and
analysis are recommended where possible and can be combined with technical surveys
where appropriate.

The corridor selection process has relied on data from publicly available data sources and the feedback of all engagement activities undertaken to date. Investigations will need to be undertaken and mapped at the individual lot-based/property-specific level and taken into consideration during the design of the proposed transmission line.

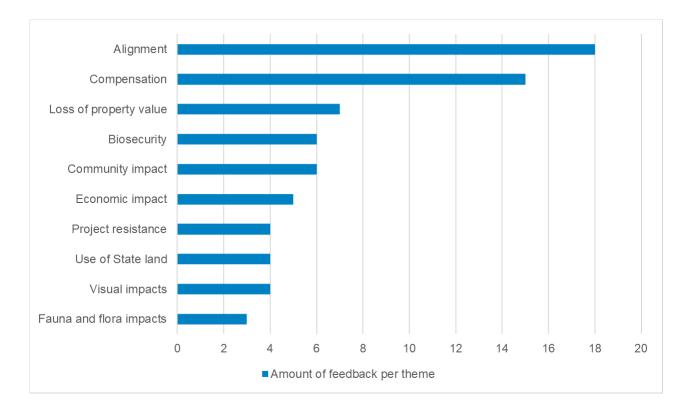


Appendix A – Feedback themes and responses

The need to balance community and landholder expectations with the project objectives remains a priority for Powerlink as the project moves into the design phase, narrowing the final 1km-wide corridor to a 70m-wide easement alignment.

Feedback received through the Draft Corridor Selection Report (CSR) consultation phase has been categorised into 10 themes listed below as a reflection of the key interests and concerns raised by interested parties.

Figure 6: Key themes from landholder engagement on Draft CSR



Each theme summary shows how Powerlink has considered, will look to include in future steps, or provided further details for clarity. Feedback at this stage may still be considered and used in future stages such as easement and land access negotiations, tower placement and easement alignment.

Alignment

- Powerlink has carefully evaluated feedback on alignments for feasibility, including social
 and environmental impacts, to determine where realignments were required to the final
 1km-wide corridor. Through the feedback received, there were realignments to six sections
 of the final corridor.
- The majority of the feedback received related to the alignment within the 1km-wide corridor.
 Powerlink will continue to work collaboratively with landholders to assess and accommodate alignment requests to determine a 70m-wide easement alignment.

Compensation

 Powerlink is committed to being fair, transparent and equitable when negotiating payments with hosting landholders.



 Powerlink acknowledges the impact of the project on landholders and in accordance with our new SuperGrid Landholder Payment Framework, will look to make payments not only to hosting landholders, but also adjoining landholders within 1km of a new easement alignment. In addition, Powerlink offers a Project Participation and Access Allowance to eligible landholders whose properties we expect will be affected by field investigations. This payment is separate and in addition to landholder payments for hosting the line.

Loss of property value

 Powerlink will seek the use of third-party valuation services to help inform and work through compensable matters with landholders. This will take into consideration elements such as the value of the property both before and after the project and other elements that are required to be compensated under the *Acquisition of Land Act 1967* which is a foundational element of our SuperGrid Landholder Payment Framework.

Biosecurity

- Powerlink seeks to understand landholders' biosecurity arrangements and current practices to limit any introduction or further spread of invasive weeds and pests.
- To address biosecurity concerns, Powerlink will implement strict biosecurity measures and controls. This may include regular inspection and monitoring of project sites, and wash down stations for all project vehicles to go through before and after entering a landholder's property.

Community impacts

- Powerlink acknowledges the importance of understanding social impacts resulting from the
 proposed transmission line. We will undertake further social assessments to understand the
 potential impacts. This approach enhances our ability to make informed decisions that
 consider and respect the diverse social dynamics within affected communities.
- We recognise the process can be challenging and create uncertainty for communities. For this reason Powerlink is focused on ensuring early and proactive engagement with communities, underpinned by the provision of clear and timely information. In addition, we offer landholders and community members' support through a professional counselling service (Rural Health Connect). This is an independent provider and is completely confidential with several sessions provided free of charge, for a range of health items, including mental health. To access this program, you can call 0493 432 144 or contact https://ruralhealthconnect.com.au/employee-assistance-program. Select EAP from the services menu and when registering enter the EAP Program Code: 'Landholder Assist'.

Economic impact

 A part of Powerlink's commitment to fair, transparent and equitable negotiations is to understand the current and future potential economic loss and or impacts resulting from a proposed transmission line. Powerlink will seek the use of third-party services such as valuation services and other subject matter experts to help inform and work through monetary and non-monetary matters with landholders.

Project resistance

As part of Powerlink's commitment to open dialogue and transparent processes, we
recognise the existence of varying degrees of project resistance. By acknowledging and
responding to feedback received, we aim to build a collaborative environment that respects
diverse perspectives and contributes to the overall understanding of the project.

Use of State-owned Land

Feedback suggested that additional State-owned land be utilised for this project. Powerlink
has investigated opportunities to use and maximise State-owned land wherever practical,
while ensuring least overall impact across social, environment and economic objectives.
Investigations concluded that any further use of State-owned land beyond that in the final



1km-wide corridor will only achieve an incremental increase in State-owned land, yet have significant impacts on high value environmental areas including National Parks and State Forest.

Visual impacts

Visual amenity is a key consideration in the design phase of a Powerlink project. Powerlink
is committed to working with landholders and the surrounding community to understand the
most appropriate location for a transmission line and associated towers. Powerlink will seek
to minimise and mitigate any potential impacts by strategically designing the line where
possible (e.g. avoiding known high community valued areas), noting other environment,
social and economic factors.

Fauna and Flora Impacts

- As Powerlink moves into the design phase of the project, a key focus will be siting of transmission towers and access that avoids impacts on fauna and flora.
- Extensive consultation and environmental investigations are required to establish the
 easement alignment for the transmission line. This includes commissioning an
 Environmental Assessment Report (EAR) to address likely impacts on matters of local,
 state and national environmental significance. The EAR will address the requirements for
 project interfaces with endangered, vulnerable, rare and threatened species within the final
 corridor with avoidance being a priority.
- Continued environmental investigations will aid Powerlink to minimise impacts, including the use of third-party subject matter experts such as an ecologist to confirm any impacts and advise on measures to minimise, mitigate or avoid.
- The development of the EAR also allows Powerlink to employ contemporary environmental
 management practices during construction to mitigate impacts on native fauna. One such
 method includes the employment of fauna spotter-catchers to enact an approved Species
 Management Plan to protect fauna from the acute effects of construction and limit the
 impact to their breeding seasons.
- The design of our infrastructure also reflects the need to protect local fauna. For example, in areas where fauna interactions are likely, fauna-friendly anti-climb barriers are installed on towers. Where practicable Powerlink seeks to retain habitat features, such as hollow logs, or relocates them in adjacent areas.



Appendix B – Key considerations

Table 2: Woolooga 1km-wide final corridor – key considerations

Considerations	Final 1km-wide corridor		
Opportunity for co-location with existing 275kV network	The opportunity to co-locate with Powerlink's existing transmission lines is not present within this corridor. However, the 1 km-wide final corridor captures an existing Energy Queensland distribution line in the northern portion of the corridor to take advantage of this existing infrastructure easement. This easement is approximately 15km in length.		
Number of crossings (roads and rail)	Local roads will be traversed through this corridor including: Wide Bay Highway Gympie – Woolooga Road Dray Road Schollick Road Cemetery Road Sinai Road Rossmore Road Stringer Road Livingstone Road Blacksnake Road	 Godber Road Oakey Creek Road Nutting Road Kinbombi Road Kabunga Road Manumbar Road Kilcoy-Murgon Road Bella Creek Road Several unnamed roads There are no rail lines traversed by the corridor.	
Flood hazard areas (Hectares (ha) of moderate or higher risk)	The corridor avoids high risk areas for major flooding. The corridor intersects the following watercourses as defined and mapped under the <i>Water Act 2000</i> : • Fat Hen Creek	The corridor intersects drainage features as defined and mapped under the <i>Water Act 2000</i> : unnamed tributary of Black Creek unnamed tributary of Hookey Creek unnamed tributary of Serpentine Creek	



Considerations	Final 1km-wide corridor		
	West Coast Creek	unnamed tributary of Wide Bay Creek	
	Serpentine Creek	 unnamed tributary of Coppermine Creek 	
	Coppermine Creek	 unnamed tributary of Kabunga Creek 	
	Wide Bay Creek	Small unnamed drainage features are present throughout the	
	Kingaham Creek	corridor.	
	Yabba Creek		
Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and Arts (formerly DSDATSIP)	No DSDATSIP sites are located within the final 1km-wide of	corridor.	
Protected plant survey trigger area	Protected plant survey trigger areas are present within the corridor, however it was selected to avoid these areas to the greatest extent practicable at the 1km-wide scale.		
Wetlands – General Ecological Significant / High Ecological Significant	Areas of wetland of State significance (High Ecological Significant wetlands (HES), Great Barrier Reef (GBR HES)) are mapped as occurring within the corridor south of Wide Bay Creek.		
Unexploded ordnance (UXO)	Department of Defence mapping indicates there is one UXO area of slight potential within Jimmys Scrub State Forest. This area was the 3 rd Australian Armoured Division Tank Range in 1943. Jimmys Scrub State Forest is located between Kinbombi Road and Kabunga State Forest. This area will require further assessment and management during subsequent stages of the project.		
Airports, heliports and landing strips	There are no mapped airports, heliports or landing strips within the final 1 km-wide corridor.		



Considerations	Final 1km-wide corridor
Mining lease	There is one mining lease within the final 1km-wide corridor.
Strategic cropping and agricultural lands	Areas of Strategic Cropping Land (SCL) are present within the corridor near Lake Borumba. The area of SCL and agricultural lands within the 1km- wide recommended corridor is 242ha.
State-owned land	The following areas of State-owned land, comprising of both State Forest and other state-owned land within the corridor: Oakview State Forest Jimmys Scrub State Forest Gallangowan State Forest Yabba State Forest State-owned land held by Government departments
Intensive use lands	The corridor contains 94ha of land which is mapped for intensive land.
Number of lots	The total number of freehold properties within the 1km-wide recommended corridor is 133, including lots partially within the corridor.
Proximity to public amenity (townships, town halls, churches, schools)	Small properties of less than 5ha have been used as a proxy for the locations of housing clusters as well as townships and associated community infrastructure. Properties smaller than 5ha have been considered as high priority areas to avoid. Additionally, further work has been completed to engage with the community and understand where clusters of residences exist on larger lots.



Appendix C – Detailed constraints mapping of final corridor

Figure 7: Detailed constraints mapping of final corridor

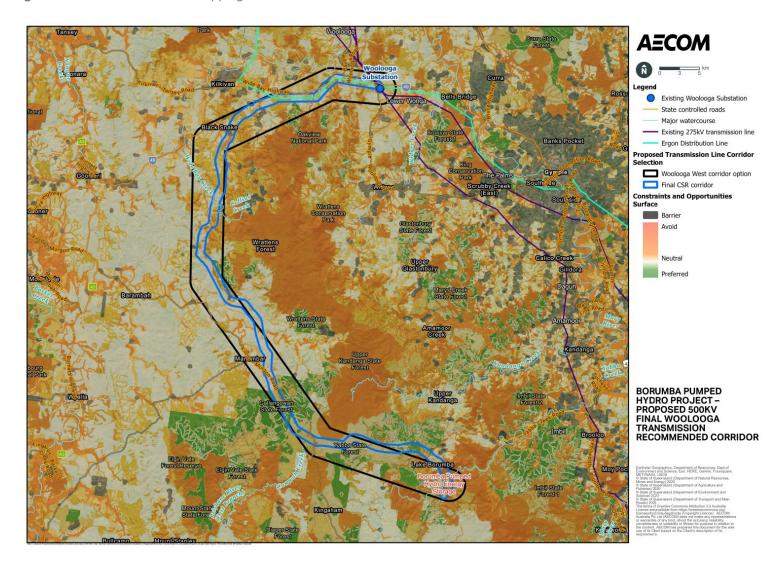




Table 3: Table of changes to final 1km-wide corridor when compared to recommended 1km-wide corridor (against social objectives)

Social	Result
Tenure	No change to tenures
Land Use	Decrease in agricultural land use from 382ha to 242ha.
Property	Increase by 4 (from 129 to 133 properties due to realignments)
Resource Interest	Increase of one mining lease
Transport	One unmapped landing strip is avoided by the final 1km-wide corridor
Native Title	No change

Figure 8: Land use constraints

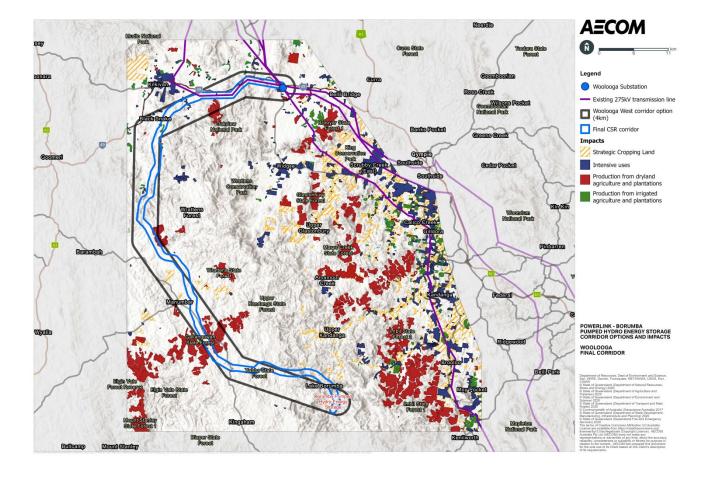




Table 4: Table of changes to final 1km-wide corridor when compared to recommended 1km-wide corridor (against environment objectives)

Environment	Result
Heritage	Minimise impacts on areas of cultural sensitivity
Flora	Increase to category A,B,C,R Endangered vegetation by 46ha Increase Of Concern vegetation by 436ha Increase to Least Concern by 72ha Increase to Essential Habitat by 210ha Opportunities to minimise impact to flora will continue to be investigated
Fauna	Increase to Essential Habitat by 210ha Opportunities to minimise impact to Essential Habitat through this area will continue to be investigated

Figure 9: Protected plants constraints

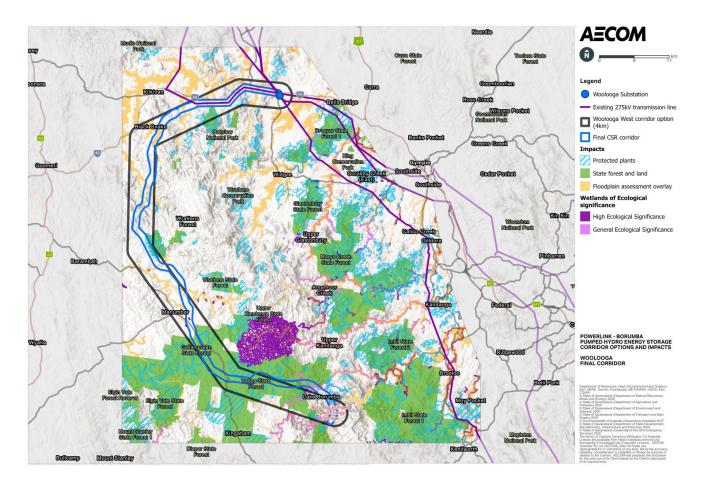




Figure 10: Heritage and essential habitat constraints

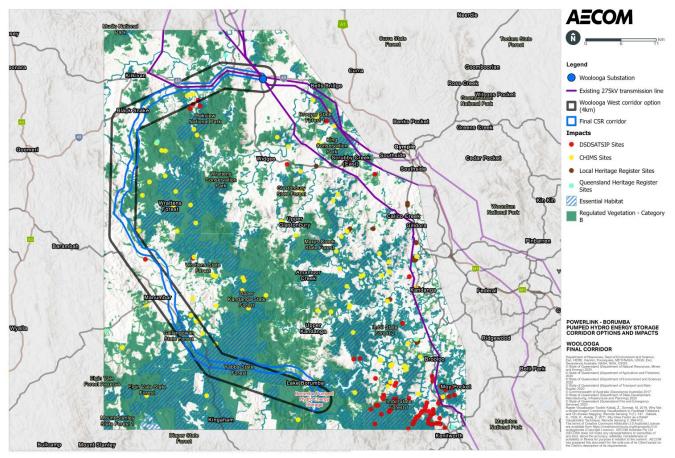


Table 5: Table of changes to final 1km-wide corridor when compared to recommended 1km-wide corridor (against economic objectives)

Economic	Result
Topography	No change
Geology	No change
Soils	No change
Hydrology	No change
Contaminated Land	No change
UXO	No change



Appendix D – Detailed flora and fauna information

EPBC Act-listed five threatened ecological communities are listed in in Table 6.

Table 6: EPBC Act listed threatened ecological communities

Common name	Threatened category	Likelihood within Study Area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Likely
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Likely
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	May
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	May
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	May

The Protected Matters Search Tool (PMST) identified 30 EPBC Act-listed threatened flora species with potential to occur within the final 1km-wide corridor listed in Table 7.

Table 7: EPBC Act listed threatened flora

Scientific name	Common name	Threatened category	Likelihood within Study area
Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood	Critically Endangered	Known
Rhodomyrtus psidioides	Native Guava	Critically Endangered	Likely
Coleus nitidus listed as Plectranthus nitidus	Nightcap Plectranthus, Silver Plectranthus	Endangered	Likely
Coleus omissus listed as Plectranthus omissus	Null	Endangered	Known
Cossinia australiana	Cossinia	Endangered	Known
Cycas megacarpa	null	Endangered	May
Lepidium peregrinum	Wandering Pepper-cress	Endangered	May
Macrozamia pauli- guilielmi	Pineapple Zamia	Endangered	Likely



Scientific name	Common name	Threatened category	Likelihood within Study area
Phebalium distans	Mt Berryman Phebalium	Endangered	May
Acacia grandiflora	null	Vulnerable	May
Arthraxon hispidus	Hairy-joint Grass	Vulnerable	Likely
Bosistoa transversa	Three-leaved Bosistoa, Yellow Satinheart	Vulnerable	Known
Cadellia pentastylis	Ooline	Vulnerable	May
Cryptostylis hunteriana	Leafless Tongue-orchid	Vulnerable	May
Cupaniopsis shirleyana	Wedge-leaf Tuckeroo	Vulnerable	Likely
Denhamia parvifolia	Small-leaved Denhamia	Vulnerable	May
Dichanthium setosum	Bluegrass	Vulnerable	Likely
Floydia praealta	Ball Nut, Possum Nut, Big Nut, Beefwood	Vulnerable	Likely
Fontainea venosa	N/A	Vulnerable	Known
Haloragis exalata subsp. velutina	Tall Velvet Sea-berry	Vulnerable	May
Macadamia integrifolia	Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak	Vulnerable	Known
Macadamia ternifolia	Small-fruited Queensland Nut, Gympie Nut	Vulnerable	Likely
Persicaria elatior	Knotweed, Tall Knotweed	Vulnerable	May
Picris evae	Hawkweed	Vulnerable	May
Rhaponticum australe	Austral Cornflower, Native Thistle	Vulnerable	May
Romnalda strobilacea	Null	Vulnerable	May
Samadera bidwillii	Quassia	Vulnerable	Likely
Sarcochilus weinthalii	Blotched Sarcochilus, Weinthals Sarcanth	Vulnerable	Known
Sophora fraseri	N/A	Vulnerable	May
Thesium australe	Austral Toadflax, Toadflax	Vulnerable	May



High risk areas for protected plants are mapped over land where plants listed as Endangered, Vulnerable or near threatened under the *Queensland Nature Conservation Act 1992* are known or likely to occur.

The PMST report identified 57 EPBC Act-listed threatened and migratory species that have the potential to occur within the final 1km-wide corridor as outlined in Table 8.

Table 8: EPBC Act listed threatened fauna

Scientific name	Common name	Threatened category	Likelihood
Birds			
Anthochaera phrygia	Regent Honeyeater	Critically Endangered	May
Calidris ferruginea	Curlew Sandpiper	Critically Endangered	May
Cyclopsitta diophthalma coxeni	Coxen's Fig-Parrot	Critically Endangered	Likely
Lathamus discolor	Swift Parrot	Critically Endangered	May
Botaurus poiciloptilus	Australasian Bittern	Endangered	May
Erythrotriorchis radiatus	Red Goshawk	Endangered	Known
Rostratula australis	Australian Painted Snipe	Endangered	Likely
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable	Known
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	Vulnerable	May
Falco hypoleucos	Grey Falcon	Vulnerable	Likely
Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable	Known
Grantiella picta	Painted Honeyeater	Vulnerable	May
Hirundapus caudacutus	White-throated Needletail	Vulnerable	Known
Stagonopleura guttata	Diamond Firetail	Vulnerable	May
Turnix melanogaster	Black-breasted Button- quail	Vulnerable	Known
Fish			
Maccullochella mariensis	Mary River Cod	Endangered	Known
Neoceratodus forsteri	Australian Lungfish, Queensland Lungfish	Vulnerable	Known
Frog			
Mixophyes fleayi	Fleay's Frog	Endangered	Likely
Mixophyes iteratus	Giant Barred Frog, Southern Barred Frog	Vulnerable	Known
Assa darlingtoni	Pouched Frog	Vulnerable	May



Scientific name	Common name	Threatened category	Likelihood
Mammals			
Dasyurus hallucatus	Northern Quoll, Digul (Gogo-Yimidir), Wijingadda (Dambimangari), Wiminji (Martu)	Endangered	Likely
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted- tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered	Known
Petauroides volans	Greater Glider (southern and central)	Endangered	Known
Phascolarctos cinereus (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Endangered	Known
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	Vulnerable	May
Macroderma gigas	Ghost Bat	Vulnerable	May
Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat	Vulnerable	May
Petaurus australis australis	Yellow-bellied Glider (south-eastern)	Vulnerable	Known
Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable	May
Potorous tridactylus tridactylus	Long-nosed Potoroo (northern)	Vulnerable	Likely
Pseudomys novaehollandiae	New Holland Mouse, Pookila	Vulnerable	May
Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Known
Reptiles			
Elseya albagula	Southern Snapping Turtle, White-throated Snapping Turtle	Critically Endangered	Known
Nangura spinosa	Nangur Spiny Skink	Critically Endangered	Known
Phyllurus kabikabi	Oakview Leaf-tailed Gecko	Critically Endangered	Known
Elusor macrurus	Mary River Turtle, Mary River Tortoise	Endangered	Known
Hemiaspis damelii	Grey Snake	Endangered	Likely



Scientific name	Common name	Threatened category	Likelihood
Coeranoscincus reticulatus	Three-toed Snake-tooth Skink	Vulnerable	Likely
Delma torquata	Adorned Delma, Collared Delma	Vulnerable	Мау
Egernia rugosa	Yakka Skink	Vulnerable	Known
Furina dunmalli	Dunmall's Snake	Vulnerable	May
Migratory			
Actitis hypoleucos	Common Sandpiper	Migratory	May
Apus pacificus	Fork-tailed Swift	Migratory	Known
Calidris acuminata	Sharp-tailed Sandpiper	Migratory	May
Calidris ferruginea	Curlew Sandpiper	Migratory	May
Calidris melanotos	Pectoral Sandpiper	Migratory	May
Crocodylus porosus	Salt-water Crocodile, Estuarine Crocodile	Migratory	Likely
Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo	Migratory	Known
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	Migratory	Known
Hirundapus caudacutus	White-throated Needletail	Migratory	Known
Monarcha melanopsis	Black-faced Monarch	Migratory	Known
Motacilla flava	Yellow Wagtail	Migratory	May
Myiagra cyanoleuca	Satin Flycatcher	Migratory	Known
Pandion haliaetus	Osprey	Migratory	Likely
Rhipidura rufifrons	Rufous Fantail	Migratory	Known
Symposiachrus trivirgatus	Spectacled Monarch	Migratory (as Monarcha trivirgatus)	Known
Tringa nebularia	Common Greenshank, Greenshank	Migratory	May

The final 1km-wide corridor includes major-risk waterways for waterway barrier works, as well as high, moderate and low risk waterways.



Appendix E – Summary of legislative considerations

A summary of legislation potentially applicable to the project is provided below in Table 9 based on the 1km-wide recommended corridor. However, further design and detailed investigations and assessment will be required to confirm the appropriate approval pathway for the project.

Table 9: Summary of legislation Legislation **Summary** Commonwealth Legislation Environment The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the centrepiece of Commonwealth environmental laws. Protection and Biodiversity Broadly, it protects and regulates impacts on the following Matters of Conservation Act National Environmental Significance (MNES): 1999 The world heritage values of a declared world heritage property The national heritage values of a declared national heritage place The ecological character of a declared Ramsar wetland (wetlands of international importance) Listed threatened species and ecological communities Listed migratory species Nuclear actions (including uranium mining) Commonwealth marine areas The Great Barrier Reef Marine Park A water resource, in relation to coal seam gas development and large coal mining development. Actions that have, will have, or are likely to have a significant impact on MNES and actions by the Commonwealth, or involving Commonwealth land are called controlled actions and require approval under the EPBC Act. The process of assessing and approving a controlled action under the EPBC Act potentially involves three stages, including referral, assessment and approval. At the first stage a person refers a proposed action for determination of whether it is a controlled action. If the proposed action is determined to involve a controlled action it is then assessed in accordance with the EPBC Act before the Minister (or delegate of the Minister) determines whether it can proceed and any conditions that should apply. Native Title Act The Native Title Act 1993 (NT Act) establishes a national framework for 1993 the protection and recognition of Native Title, including by conferring on Indigenous people who hold (or claim to hold) Native Title rights and interests in respect of any land or waters, the right to be consulted with and in some cases to participate in decisions about activities proposed to be undertaken. Native Title interests and rights may continue to exist over a number of

impacted tenures including reserves, State Forest and National Parks, land that is or has been subject to lease, waters that are not privately owned, as well as parcels of unallocated state land. The NT Act prescribes the statutory process to allow parties to reach agreement about the use of



Legislation	Summary
	land or waters where Native Title may continue to exist and for state governments and territories to grant interests over that land to both Native Title claimants and non-Native Title parties.
State legislation	
Aboriginal Cultural Heritage Act 2003	The purpose of the <i>Aboriginal Cultural Heritage Act 2003</i> (ACH Act) is to provide effective recognition, protection and conservation of Aboriginal and Torres Strait Islander cultural heritage. The ACH Act protects all Aboriginal cultural heritage in Queensland, whether or not it has been recorded in a database.
	The ACH Act requires anyone who carries out a land use activity to exercise a duty of care to take all reasonable and practicable measures to avoid harm to Aboriginal cultural heritage.
	Failure to comply with the duty of care is an offence, including unlawfully harming, excavating, relocating, taking away and possessing Aboriginal cultural heritage.
Acquisition of Land Act 1967	The purpose of the <i>Acquisition of Land Act 1967</i> is to provide a legal framework for the compulsory or voluntary acquisition of interests in land by constructing authorities, limited powers of entry to and occupation of land, and to set out the rights to and process for claiming compensation.
Biosecurity Act 2014	The <i>Biosecurity Act 2014</i> (Biosecurity Act) provides a biosecurity system framework which aims to minimise biosecurity risk and facilitate responses to biosecurity impacts, to ensure the safety and quality of agricultural inputs and to align the state's management of biosecurity risk and other requirements for plant and animal responses to biosecurity risk with federal and international obligations. The Act also aims to manage emerging endemic and exotic pests and diseases as well as the transfer of diseases between humans and animals and contaminants in carriers.
	Under the Act, a general biosecurity obligation is placed on all persons to undertake all reasonable and practicable measures to prevent or minimise biosecurity risk. Additionally, the movement of biosecurity matter must comply with movement restrictions associated with each relevant biosecurity zone, and biosecurity instrument permits are required for the movement of biosecurity matter which cannot comply with movement restrictions.
Electricity Act 1994	The <i>Electricity Act 1994</i> (Electricity Act) sets out the requirements that all electricity industry participants are required to promote a safe, efficient and reliable supply and use of electricity. The Act also requires that the supply of electricity is undertaken in an environmentally sound manner. Under Section 31(b) of the Electricity Act, a transmission entity is required to properly consider the environmental effects of its activities under the transmission authority. Powerlink will be required to implement project-specific Environmental
	Management Plans (EMPs) to comply with requirements of the Electricity Act. The EMPs will be implemented through the construction, operation and maintenance stages of the Project.



Legislation	Summary
Electrical Safety Act 2002	The <i>Electrical Safety Act 2002</i> (Electrical Safety Act) seeks to prevent through regulation, the death, injury and destruction that can be caused by electricity. Accordingly, the purpose of the Electrical Safety Act is to establish a legislative framework for:
	 preventing persons from being killed or injured by electricity
	 preventing property from being destroyed or damaged by electricity.
Environmental Offsets Act 2014	The purpose of the <i>Environmental Offsets Act 2014</i> (EO Act) is to counterbalance the significant residual impacts of particular activities on prescribed environmental matters through the use of environmental offsets.
	Prescribed environmental matters are described under the EO Act as a:
	Matter of National Environmental Significance (MNES)
	Matter of State Environmental Significance (MSES)
	 Matter of Local Environmental Significance (MLES).
	An environmental offset may be required as a condition of development approval, where following consideration of avoidance and mitigation measures, a prescribed activity is likely to result in a significant residual impact on a prescribed environmental matter. Once the administering authority has decided that a prescribed activity is required to provide an offset, the environmental offset is required to be delivered in accordance with the EO Act, the <i>Environmental Offsets Regulation 2014</i> (EO Regulation) and the Queensland Environmental Offsets Policy. The desktop assessment has identified that MNES and MSES are potentially present within the final 1km-wide corridor, however this will need to be confirmed during future phases of the project through field surveys.
	To avoid duplication between jurisdictions, state and local governments can only impose an offset condition in relation to a prescribed activity if the same, or substantially the same impact, or substantially the same matter has not been subject to assessment under the EPBC Act.
	It is important to note that advice from Queensland Treasury is that the EO Act does not apply to the designation of premises for development of infrastructure, however the designation decision can still apply compensatory measures/requirements akin to an offset.
Environmental Protection Act 1994	The purpose of the <i>Environmental Protection Act 1994</i> (EP Act) is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.
	The EP Act regulates activities that will or may have the potential to cause environmental harm and prescribes several mechanisms to ensure that objectives are met. The two primary environmental duties that apply to everyone in Queensland are:
	 general environmental duty – a person must not carry out any activity that causes, or is likely to cause environmental harm, unless all reasonable and practicable measures to prevent or



Legislation	Summary
	minimise the harm have been taken. Environmental harm is defined in Section 14 of the EP Act as any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value and includes environmental nuisance • duty to notify of environmental harm – a person must inform the
	administering authority and landholder or occupier when an incident has occurred that may have caused or threatens serious or material environmental harm that is not authorised.
	The EP Act also provides the power to administering authorities to order actions to be taken to improve environmental performance, conduct audits and environmental evaluations of activities, approve environmental management programs and impose penalties or prosecute persons for non-compliance with the requirements of the EP Act.
	The EP Act is supported by the following subordinate legislation:
	Environmental Protection Regulation 2019 (EP Regulation)
	 Environmental Protection (Air) Policy 2019 (EPP (Air))
	 Environmental Protection (Noise) Policy 2019 (EPP (Noise))
	 Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (EPP (Water and Wetland Biodiversity)).
	The EP Act also describes Environmentally Relevant Activities (ERAs) for which an Environmental Authority (EA) is required. Some significant construction activities can trigger the requirement for an ERA.
Fisheries Act 1994	The Fisheries Act 1994 (Fisheries Act) provides for the use, conservation and enhancement of fisheries resources and fish habitats in Queensland. The Department of Agriculture and Fisheries (DAF) is responsible for development assessment under the Fisheries Act in combination with the Planning Act, along with the conservation and management of fish habitats in Queensland.
	A development under the Fisheries Act can be either an accepted development or assessable development for, relevantly, works involving the construction or raising of waterway barrier works. An accepted development must comply with all the requirements within the relevant accepted development requirements. If the development does not comply, it is assessable development, and a development application must be lodged.
	The final 1km-wide corridor contains waterways for waterway barrier works. If proposed works by Powerlink traverse mapped waterways, this may require waterway barrier works and therefore trigger a requirement to obtain a development permit for operational works, that is constructing or raising waterway barrier works, unless the works are designed to comply with accepted development requirements under the Fisheries Act.
Forestry Act 1959	The Forestry Act 1959 (Forestry Act) provides for forest reservations, the management, silvicultural treatment and protection of State Forests, and the sale and disposal of forest products and quarry material, the property



Legislation	Summary
	of the Crown on State Forests, timber reserves and on other lands, and for other purposes. The Forestry Act is administered primarily by the DAF.
	State Forests are managed by the Department of Environment and Science (DES) and Queensland Parks and Wildlife Service (QPWS). Areas of State Forest may require revocation to facilitate the provision of infrastructure. This process is regulated under the <i>Forestry Act 1959</i> and where the future intent of the revoked area is for a particular purpose other than a tourist purpose or use as a public road, a regulation to revoke all or part of an area may only be made where the Legislative Assembly has passed a resolution requesting the Governor in Council to make the revocation.
	An application to revoke an area of State Forest should only be undertaken as a last resort where no alternative options are available. Revocation of state land will only be considered when it can be demonstrated that it is in the interests of the specific tenure or where there is a net forest production benefit outcome to the QPWS managed area as an outcome.
	Purposes relevant to the project which may be considered by the State for revocation include:
	 where there is a mutual benefit to the state and applicant
	 to enable essential public infrastructure works to be undertaken to support delivery of a specific government commitment.
Nature Conservation Act 1992	The purpose of the <i>Nature Conservation Act 1992</i> (NC Act) is the conservation of nature while allowing for the involvement of landholders and Indigenous people in the management of protected areas in which they have an interest under Aboriginal tradition or Island custom.
	A framework is created under the NC Act for the dedication, declaration and management of protected areas, protection of wildlife and its habitat. The clearing regulatory requirements and the list of critically endangered, endangered, vulnerable or near threatened plants are contained in the <i>Nature Conservation (Plants) Regulation 2020.</i>
	The final 1km-wide corridor potentially contains protected plants and protected areas, however this will require confirmation during further ecological surveys during the next phase of the project. The clearing of native flora species and native fauna habitat protected under the NC Act. It is recommended that detailed ecological field surveys are undertaken to confirm the requirements of the NC Act, which may include protected plants permits.
Planning Act 2016	The Planning Act 2016 (Planning Act) establishes a framework and overarching policy for land use planning and development assessment in Queensland. The purpose of the Planning Act is to provide an efficient, effective, transparent, integrated, coordinated and accountable system of land use planning and development assessment to facilitate the achievement of ecological sustainability.
	The Planning Act and <i>Planning Regulation 2017</i> (Planning Regulation) describes the type of development, the level of assessment required for particular development, responsible entity for assessing development,



Legislation	Summary
	assessment benchmarks, as well as the process for making, assessing and deciding development applications.
	The Planning Act and Planning Regulation also prescribes the assessment and approval process for the designation of premises for development of infrastructure (an 'infrastructure designation') prescribed within the Planning Regulation. Infrastructure designation is a Ministerial approval pathway, which is commonly used to facilitate electricity distribution and transmission infrastructure. Where an infrastructure designation is obtained, assessable development in relation to the infrastructure is deemed accepted development under the Planning Act, excluding building works under the <i>Building Act 1975</i> . This means that when an infrastructure designation is in effect, the development does not require any further development approvals for development normally assessable under the Planning Act, apart from building works.
	In practice, an infrastructure designation assessment will address the applicable State interests and constraints ordinarily made assessable under the Planning Act (i.e., vegetation clearing, waterway barrier works, etc).
Queensland Heritage Act 1992	The objective of the <i>Queensland Heritage Act 1992</i> is to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations. The <i>Queensland Heritage Act 1992</i> is administered by DES and establishes the Queensland Heritage Council. The purpose of the Act is to identify and protect places that have special heritage values to the community and future generations.
	The <i>Queensland Heritage Act 1992</i> conserves and protects Queensland Heritage Places by:
	establishing heritage registers
	 regulating development that may impact on registered places
	 establishing a process for reporting discoveries of objects that may be of cultural heritage significance.
	Section 89 of the <i>Queensland Heritage Act 1992</i> requires a person to notify DES of an archaeological artefact that is an important source of information about an aspect of Queensland history.
State Planning Policy	The State Planning Policy (SPP) identifies matters of State interest requiring protection and enhancement. The SPP is at the top of the planning hierarchy in Queensland and is the overarching policy for all other regional and local planning instruments. The SPP States that the SPP applies to the extent relevant, when designating premises for infrastructure under the Planning Act and development applications.
Stock Route Management Act 2002	The Stock Route Management Act 2002 (Stock Route Management Act) provides a framework for management of Queensland's stock routes. Local government authorities are responsible for the day-to-day administration and management of stock routes. The Queensland Stock Route Network Management Strategy has been prepared under the Stock Route Management Act. The strategy is a tool to link legislative principles with decision making, to ensure a consistent approach.



Legislation	Summary
Transport Infrastructure Act 1994	The overall objective of the <i>Transport Infrastructure Act 1994</i> (Transport Infrastructure Act) is to provide a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure. The Act is administered by the Department of Transport and Main Roads (DTMR).
	Under section 50 of the Act, the ancillary works and encroachments within State-controlled roads can only be undertaken with the written permission of DTMR.
	Under section 33 of the Transport Infrastructure Act, written approval is required from the DTMR to carry out road works on a State-controlled Road (SCR) or interfere with a SCR or its operation. This may include where road works to a Council Road interferes with a SCR or its operations.
	Under section 62 of the Transport Infrastructure Act, written approval is required from DTMR to locate a permitted access on a SCR. A decision of access approval may include conditions or restrictions on the location or use of the permitted road access, type or number of vehicles to use the permitted road access location.
	Under the <i>Transport Infrastructure (Rail) Regulation 2006</i> permission from the railway manager (Queensland Rail) is required to take over dimensional road loads across Queensland Rail infrastructure (e.g. rail level crossings and rail bridges).
Vegetation Management Act 1999	The Vegetation Management Act 1999 (VM Act) regulates and manages the process and impacts of native vegetation clearing. The objectives of the VM Act include conservation of remnant regional ecosystems, prevention of the loss of biodiversity, maintenance of ecological processes, and conservation of vegetation in areas of high nature conservation value or lands vulnerable to land degradation.
	The Study Area contains areas of regulated vegetation under the VM Act, classified as Category A (declared), Category B (remnant), Category C (high value regrowth) and Category R (watercourse regrowth). Areas of Category X (non-remnant) vegetation also exist throughout the final 1km-wide corridor. The regional ecosystems (REs) present across the Woolooga Study Area include Endangered, Of Concern and Least Concern vegetation communities.
	Clearing of any relevant remnant or regulated regrowth vegetation constitutes operational work under schedule 10 of the <i>Planning Regulation 2017</i> , which will require development approval unless a vegetation clearing code or exemption applies. Under Section 22A of the VM Act, an application for operational work, including applications where Department of Resources (DoR) is a concurrence agency, cannot be accepted as properly made unless the Chief Executive is satisfied that the development is for a relevant purpose. Exemptions exist for electricity infrastructure where associated with an infrastructure designation.
	Any infrastructure designation or development application will need to demonstrate that Powerlink has sought to reduce the impacts of vegetation clearing through the hierarchy of avoid, minimise and mitigate. Where a significant residual impact remains, an offset, or compensatory measures may be required.



Legislation	Summary
Water Act 2000	The Water Act 2000 (Water 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. The Water Act is supported by the Water Regulation 2016 and various water resource plans for the defined geographic regions. The Water Act provides a framework for relevant:
	 The sustainable management of Queensland's water resources and quarry material by establishing a system for the:
	 Planning, allocation and use of water
	 Allocation of quarry material and riverine protection
	 The sustainable and secure supply and demand management for the south-east Queensland region and other designated regions.
	Under the Water Act, water licences or permits are required to take water and to interfere with the flow of water on, under or adjoining land, including interfering with water in aquifers (if determined necessary).
Matters of State Environmental Significance	Matters of State Environmental Significance (MSES) are a component of the biodiversity state interest that is defined under the SPP and <i>Environmental Offsets Regulation 2014</i> . MSES includes certain environmental values that are protected under Queensland legislation. MSES are defined as:
	 Protected areas (including all classes of protected areas except coordinated conservation areas) under the Nature Conservation Act 1992
	 Marine parks and land within a 'marine National Park', 'Conservation Park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004
	 Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008
	 Threatened wildlife under the Nature Conservation Act 1992 and special Least Concern animals under the Nature Conservation (Wildlife) Regulation 2006
	 Regulated vegetation under the Vegetation Management Act 1999 that is:
	 Category B areas on the regulated vegetation management map, that are 'Endangered' or 'Of Concern' regional ecosystems Category C areas on the regulated vegetation management map that are 'Endangered' or 'Of Concern' regional ecosystems Category R areas on the regulated vegetation management map Regional ecosystems that intersect with watercourses identified on
	the vegetation management watercourse and drainage feature map



Legislation	Summary
	Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
	 Strategic Environmental Areas under the Regional Planning Interests Act 2014
	 Wetlands in a wetland protection area of wetlands of high ecological significance shown on the map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019
	 Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2
	Legally secured offset areas.
Regional Plans	The Study Area is subject to the following regional plans:
	South East Queensland Regional Plan 2017 (ShapingSEQ)
	 Wide Bay Burnett Regional Plan 2011 Reference is also made to the Draft Wide Bay Burnett Regional Plan 2022, expected to be released late 2023.
South East Queensland Regional Plan	ShapingSEQ is a state planning instrument providing a framework to manage growth, change, land use and development in SEQ and is underpinned by five key themes: grow, prosper, connect, sustain and live.
2017 (ShapingSEQ)	ShapingSEQ was prepared by the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) in 2017 and guides the future infrastructure planning and investment of 12 Local Government Areas (LGAs) within the region.
	ShapingSEQ defines the desired future settlement pattern that aims to use land more efficiently, while protecting the values important to the community into the following regional land use classifications:
	Urban Footprint
	Rural Living Area
	 Regional Landscape and Rural Production Area.
	Key themes related to electricity infrastructure in ShapingSEQ include:
	Theme 3 – Connect
	 Our communities will have secure, high-quality food and water supplies as key elements of the region's sustainability, and will maximise technological advances in energy production, including renewable production and battery storage.
	Theme 4 – Sustain
	 SEQ will have reduced greenhouse gas emissions and be more resilient to the projected effects of climate change. SEQ will be carbon neutral and have zero net waste, and the region's food, water and energy supply systems will be flexible, reliable and secure.



Legislation	Summary
	 ShapingSEQ seeks to protect regional scenic amenity areas from development that would compromise their value. Regionally significant amenity is mapped to the east of Strategic Area 3 and to the south-east of Strategic Area 4.
State Government Supported Infrastructure Koala Conservation Policy July 2017 (SGSIKCP)	This policy (SGSIKCP) is to ensure that state activities not regulated through planning schemes or in accordance with the koala assessment benchmarks in Schedule 11 of the <i>Planning Regulation 2017</i> meet the same requirements as the <i>Planning Regulation 2017</i> , to ensure equitable treatment of state and non-State infrastructure projects. The corridor is not located within the area covered by the SGSIKCP.
Wide Bay Burnett Regional Plan 2011	The Wide Bay region's economic drivers are in the agriculture, fishing and tourism sectors. As the gateway to the southern Great Barrier Reef and Fraser Island, tourism is also an important economic driver. The Wide Bay Regional Plan was prepared by the Department of Local Government and Planning in 2011 and covers the LGAs of Bundaberg Regional Council, Cherbourg Aboriginal Shire Council, Fraser Coast Regional Council, Gympie Regional Council, North Burnett Regional Council and South Burnett Regional Council.
	The Wide Bay Burnett Regional Plan aims to respond to the variety of distinct challenges facing the region over the next two decades and beyond by guiding and supporting projected growth. The plan recognises that the economy and population comprise an ageing population and workforce, a limited but strong number of economic drivers, and a need to prepare for, and appropriately respond to, the anticipated impacts of climate change.
	The Wide Bay Regional Plan 2011 identifies that energy requirements are escalating due to population growth, industrial development and economic growth.
	Reference is also made to the Draft Wide Bay Burnett Regional Plan 2022, expected to be released late 2023.
Local Laws	The Local Government Act 2020 (Local Government Act) allows for councils to create laws for matters that the Council has function or power under the Local Government Act to undertake and to regulate specific matters within their local government area (LGA). While the Planning Scheme is exempt where an Infrastructure Designation has been enacted, local laws imposed by each local government authority will still apply and may trigger approvals for certain activities.



Appendix F – Acronyms in Woolooga Final Corridor Selection Report

Table 10: Acronym list

ACH Act	Aboriginal Cultural Heritage Act 2003
ALA	Acquisition of Land Act 1967
AECOM	Infrastructure Consulting Firm (Architecture, Engineering, Construction, Operations and Management)
CHIMS	Cultural Heritage Inventory Management System
CSR	Corridor Selection Report
Cth	Commonwealth
DAF	Department of Agriculture and Fisheries
DES	Department of Environment and Science
DSDILGP	Department of State Development Infrastructure, Local Government and Planning
DOR	Department of Resources
DSDSATSIP	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships
DTMR	Department of Transport and Main Roads
EA	Environmental Authority
EAR	Environmental Assessment Report
EMF	Electric and magnetic fields
EMP	Environmental Management Plan
ENA	Energy Networks Australia
EO Act	Environmental Offsets Act 2014
EO Regulation	Environmental Offsets Regulation 2014
EP Act	Environmental Protection Act 1994
EPP (Air)	Environmental Protection (Air) Policy 2019
EPP (Noise)	Environmental Protection (Noise) Policy 2019
EP Regulation	Environmental Protection Regulation 2019
EPP (Water and Wetland Biodiversity)	Environmental Protection (Water and Wetland Biodiversity) Policy 2019
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ERA	Environmentally Relevant Activities
GBR	Great Barrier Reef
GES	General Ecological Significance
ha	Hectares
HES	High Ecological Significance



km	Kilometres
kV	Kilovolt
LGA	Local Government Area
m	Metres
MCA	Multi-Criteria Analysis
MLES	Matter of Local Environmental Significance
MNES	Matter of National Environmental Significance
MSES	Matter of State Environmental Significance
MW	Megawatts
NC Act	Nature Conservation Act 1992
NT Act	Native Title Act 1993
PHES	Pumped Hydro Energy Storage
PMST	Protected Matters Search Tool
QEJP	Queensland Energy and Jobs Plan
QPWS	Queensland Parks and Wildlife Service
RE	Regional ecosystem
RET	Renewable Energy Target
SCL	Strategic cropping land
SCR	State-controlled road
SEQ	South East Queensland
SGSIKCP	State Government Supported Infrastructure Koala Conservation Policy July 2017
SMP	Species Management Program
SPP	State Planning Policy
UXO	Unexploded ordnance
VM Act	Vegetation Management Act 1999

