

Borumba to Woolooga Transmission Line Corridor

Project Overview

The Borumba Pumped Hydro Project, located close to Imbil, will be capable of dispatching 2,000MW and storing energy for up to 24 hours. When fully operational, the pumped hydro facility will have the capacity to power up to two million Queensland homes.

It is a nation-building infrastructure project of high strategic importance to Queensland and the future energy system. It will play a significant role in the State's renewable energy transformation – long duration storage is critical to ensuring Queenslanders have affordable, reliable and clean energy.

Powerlink has been engaged by Queensland Hydro to develop two new transmission lines to connect the pumped hydro facility to the transmission network.

Based on the projected power output of the facility, it is necessary to build two new double circuit transmission lines, up to 500kV, from the Lake Borumba site to Woolooga in the north, and Halys in the south-west.

Community engagement

Powerlink began early engagement in December 2021 to share information and raise local awareness about the project. In July 2022, we released a study area to start gathering feedback on potential transmission line corridor options.

Through community information drop-in sessions, briefings with key stakeholders, and discussions with Traditional Owner groups, we received valuable input about what is important and what is happening in the community.

We assessed this feedback and in November 2022 released corridor options for connections to the Woolooga and Halys substations. Community information drop-in sessions were held in November and December 2022, January and February 2023 to provide further opportunity for feedback on the corridor options.

We appreciate that landholders, Traditional Owner groups and the wider community have concerns and questions about the impacts of the proposed transmission lines, and all feedback and input received forms an integral part of our corridor selection process.

Our team carefully considered the corridor options from a social, environmental and economic perspective in order to recommend a corridor that achieved the best balance of these objectives.

Engagement snapshot

Since December 2021, we have used multiple channels to share information and gather feedback including:

- 37 community information drop-in sessions, attended by more than 2,000 residents
- 2,060 project update emails and 7,200 letters sent to landholders
- more than 500 digital and hardcopy feedback forms received
- 1,000 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 Owners, state and local government officials, and representatives from a number of state government departments
- social media channels, advertisements in local newspapers and other publications, and radio stations
- more than 13,000 visits to the project website.

Top feedback themes

The items of interest raised by landholders, the community and other stakeholders throughout this engagement process were:

- impact on properties throughout planning, construction and operation
- visual impacts of the transmission line
- importance of preserving local wildlife
- investigate the use of state-owned land
- opportunity for infrastructure to co-locate with existing transmission lines
- impacts to remnant vegetation in the region
- avoidance of areas with heritage or cultural significance
- perceived health effects from Electric and Magnetic Fields (EMF)
- biosecurity and compliance with environmental legislation.



Comparing the Borumba to Woolooga Transmission Line Corridor Options

Through landholder, Traditional Owner and community feedback, along with technical assessments, five potential corridor options were identified:

Woolooga West

This corridor traverses north-west from the proposed pumped hydro facility and is the longest corridor option as it travels up and around Wrattens National Park. The corridor travels through Yabba and Gallangowan state forests. It then follows in a north-east direction, south of the Wide Bay Highway, connecting into Woolooga Substation from the west.

Woolooga Central (with Options A or B)

This corridor is the most direct option, travelling north from the proposed pumped hydro facility between Wrattens National Park and Amamoor State Forest, towards Woolooga Substation.

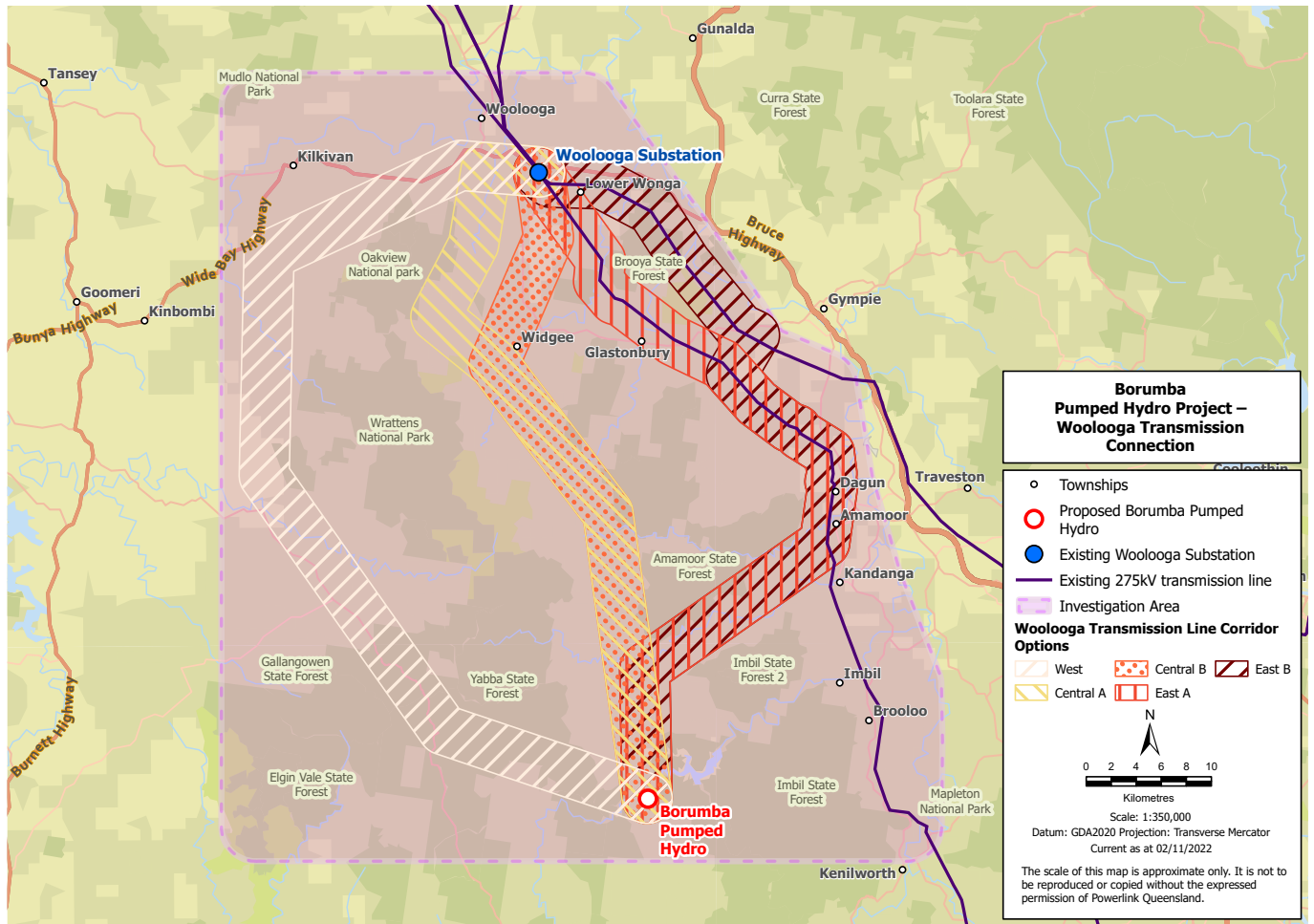
From this corridor, there are two options to connect into Woolooga Substation. Option A heads further west next to Oakview National Park and then connects into Woolooga Substation from the west. Option B veers directly into Woolooga Substation, connecting from the south.

Woolooga East (with Options A or B)

This corridor co-locates with the existing 275kV transmission line between Amamoor and the Woolooga Substation. The corridor travels north from the proposed pumped hydro facility and veers north-east between Amamoor and Imbil state forests to connect to the existing 275kV transmission line between Kandanga and Amamoor.

From this corridor, there are two options to connect into Woolooga Substation. Option A is a co-located route into Woolooga Substation and is the most direct option. Option B travels north of Glastonbury and co-locates with another 275kV transmission line for the remaining distance, connecting into Woolooga Substation from the east. A co-location option would still require the acquisition of additional land and the construction of a new transmission line connection. A significant proportion of the co-located area includes rural residential lots of less than 10 hectares in size.

Map 1. Borumba to Woolooga Corridor Transmission Line Options



Comparing the corridors

We take a comprehensive approach when assessing corridors for potential development to gain a detailed understanding of the area and its potential impacts. Under State and Federal Government planning and approval frameworks, we must consider a wide range of criteria in determining the recommended corridor.

The Draft Corridor Selection Report (CSR) provides detailed analysis of the corridor options against social, environmental and economic perspectives.



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.

Importantly, landholder and community feedback helped shape the criteria used to inform the corridor selection process.

In comparing all corridor options, the report highlights one 4km-wide corridor as having the least overall impact. It then identifies a 1km-wide recommended corridor within the wider 4km-wide corridor.

Borumba to Woolooga Transmission Line Corridor

To assess the multiple corridor options, we used both qualitative and quantitative analysis to compare potential impacts. We undertook a comparative assessment of each corridor option against key criteria. This analysis is shown in the table below. By comparing the options against each other, **we have identified Woolooga West 4km-wide corridor as having the least overall impact across social, environmental and economic factors.**

Woolooga 4km-wide corridor options	Measurement Unit	West	Central A	Central B	East A	East B
Social						
Criterion 1: Impact on strategic cropping and agricultural land	ha	1857	2319	2408	6360	5650
Criterion 2: Number of properties affected that are <5 ha	count	28	54	110	840	1207
Criterion 3: Proportion of state-owned land within the corridor	%	27%	4%	4%	7%	10%
Criterion 4: Number of properties affected	count	457	458	508	2004	2635
Criterion 4: Impact on intensive land use	ha	343	432	557	2676	3378
Environment						
Criterion 1: Cat A,B,C,R Endangered RE	ha	571	476	288	215	175
Criterion 2: Cat A,B,C,R Of Concern RE	ha	8891	5151	4515	4113	4067
Criterion 3: Cat A,B,C,R Least Concern RE	ha	8377	8664	5993	7238	8998
Criterion 4: Impact to essential habitat	ha	5470	2074	1713	3624	4926
Criterion 5: Impact to National Parks	ha	323	964	471	592	592
Economic						
Criterion 1: Corridor length	km	83	61	54	69	72
Criterion 2: Land with >30% slope	%	12%	26%	20%	16%	14%
Criterion 3: Opportunity to co-locate with existing transmission lines	km	0	0	0	64%	60%

In Queensland, there are three types of vegetation status shown on vegetation management maps – endangered regional ecosystem (RE), of concern RE, and least concern RE. Within each of these categories, there can be four types of vegetation:

Category A area – vegetation that is subject to compliance notices, offsets, and voluntary declarations

Category B area – remnant vegetation shown on a RE or remnant map

Category C area – high value regrowth vegetation

Category R area – regrowth watercourse area

Borumba to Woolooga Transmission Line Corridor

Compared to the other 4km-wide corridor options, the Woolooga West Corridor provides the lowest impact on social criteria, including number of properties and impacts on strategic cropping and intensive land use.

The corridor also provides the greatest opportunity for the use of state-owned land. While it does not reflect the shortest line length, there is a lower portion of steep terrain and a greater ability to avoid highly sensitive areas within National Parks.

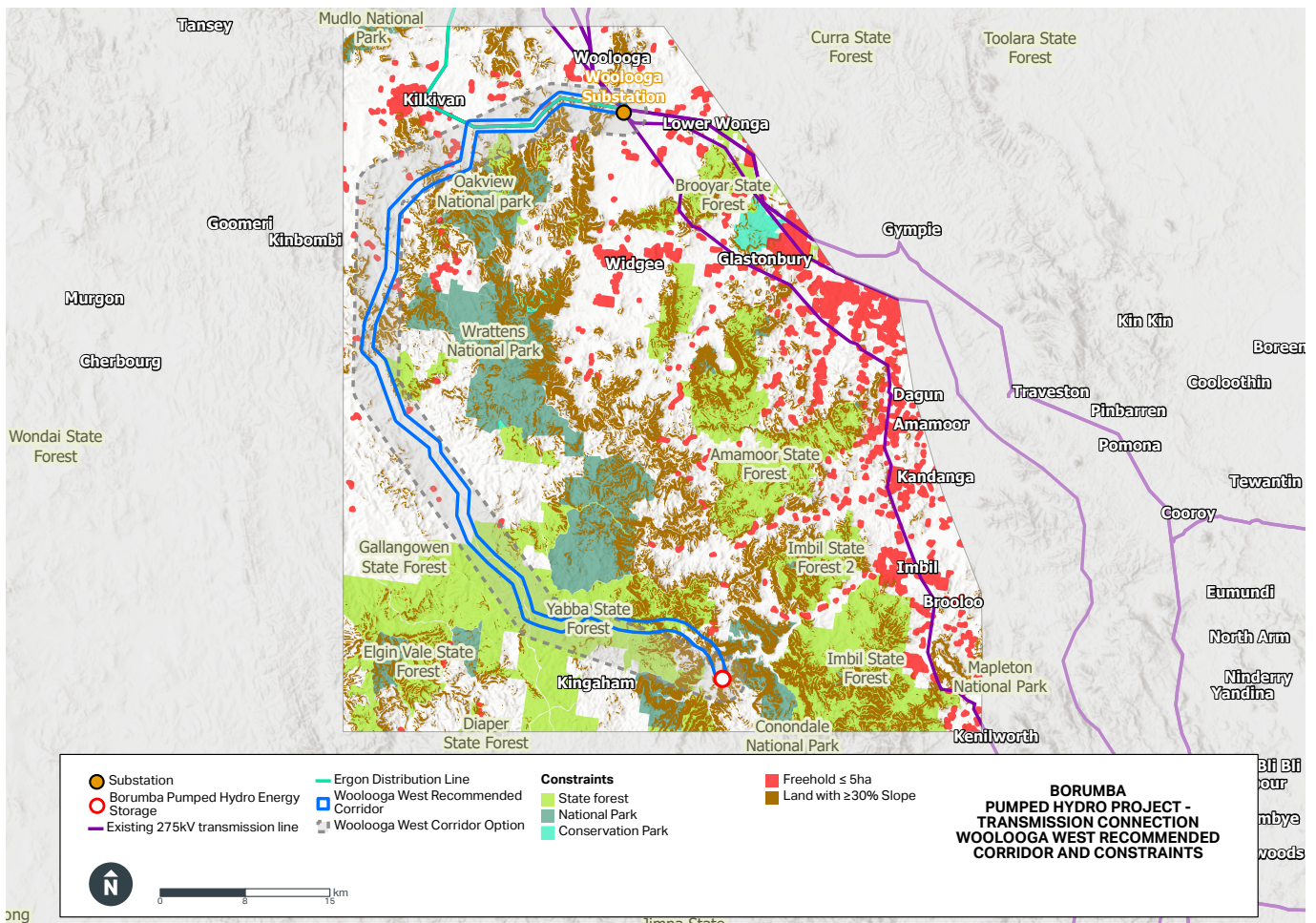
To summarise, the Woolooga West corridor:

- has the highest percentage of state-owned land
- impacts on the least number of properties, in particular those less than 5ha in size
- has the least impact on National Parks, which are able to be avoided through refinement to a 1km-wide corridor
- has the least impact on strategic cropping and agricultural land
- has the least impact on intensive land use (such as feedlots etc.).

For more detailed information on the comparative assessment, please see the complete Draft Corridor Selection Report.

Woolooga West Recommended Corridor

We've listened to feedback from landholders, Traditional Owners, the wider community, and through analysis of spatial data have now selected a 1km-wide recommended corridor within the Woolooga West corridor for further investigation and feedback. This is outlined in blue below.



Borumba to Woolooga Transmission Line Corridor

How we listened

Key feedback received	Included	Outcome
Minimise impact to private properties	✓	Lowest number of private properties impacted
Avoid going through townships	✓	Avoids community centres
Use state-owned land	✓	Highest percentage of state-owned land
Avoid impacts to small block of land	✓	Recommended corridor routed away from small residential blocks
Avoid impacts to agricultural/farming land	✓	Least impact on agricultural farming land
Avoid ridgelines, gullies and tributaries which have high potential for sensitive cultural heritage values	✓	The recommended corridor extends outside the 4km-wide corridor option to avoid sensitive environmental and cultural heritage sites
Minimise impacts to vegetation and wildlife	✓	National Parks and conservation areas will not be impacted. Opportunities to minimise the impact on remnant vegetation have been found

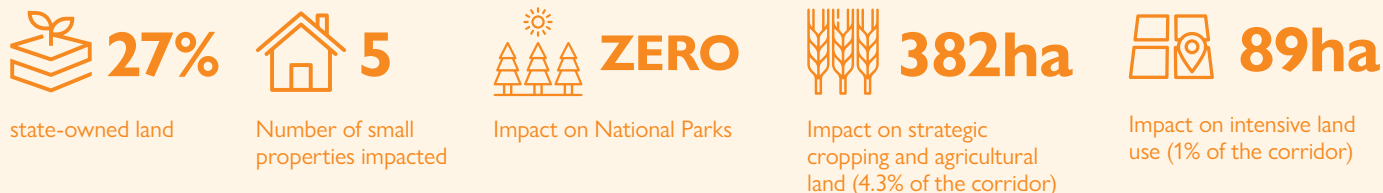
We listened to feedback and minimised impact to landholders, particularly smaller parcels of land in the area. Additionally, important infrastructure, community facilities, townships and known tourist areas have been avoided, while impacts on agriculture, intensive land use and cropping lands have been minimised.

State forests and other state-owned land have been utilised where practicable, further reducing impacts to houses and community areas.

There has been community feedback asking us to consider using National Parks to increase use of state-owned land. National Parks are special places dedicated to protecting and conserving outstanding examples of Queensland's natural environment and cultural values. An important part of our planning approach is to avoid impacting on these conserved areas wherever possible.

We have also made sure to take into account the ecology, flora and fauna in the area. We chose routes that avoid or minimise impacts to endangered and of concern regional ecosystems, essential habitat, protected plants and wetlands.

Below is a short overview of the Woolooga West 1km-wide recommended corridor.



The recommended corridor will now be part of further investigations for development of the project, including detailed discussions with landholders in the 1km-wide corridor.

Have your say

You can provide feedback by phone, email, or through our feedback form or interactive map on our website at powerlink.com.au/borumbatransmission or scan the QR code below. We will review all feedback and submissions on the report and respond in writing.

We invite you to share your comments on the report and are seeking your thoughts by close of business on Monday 3 July 2023.

To learn more about the Borumba Pumped Hydro Project - Transmission Line Connections, please contact:
 Borumba to Woolooga project team on 07 3898 4988
 Borumba to Halys project team on 07 3898 4911

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