

Borumba to Halys 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 develop 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 Halys Transmission Line Corridor Options

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

Halys North

This corridor traverses north-west from the proposed pumped hydro facility before heading south towards Tarong, bypassing Nanango township. This option avoids townships, existing infrastructure and irrigated agriculture to the north of the existing transmission line.

Halys Central

This corridor traverses south-east from the proposed pumped hydro facility before heading west towards Tarong Substation. This route is more direct than the Halys South option (description below) but does not co-locate with existing transmission lines.

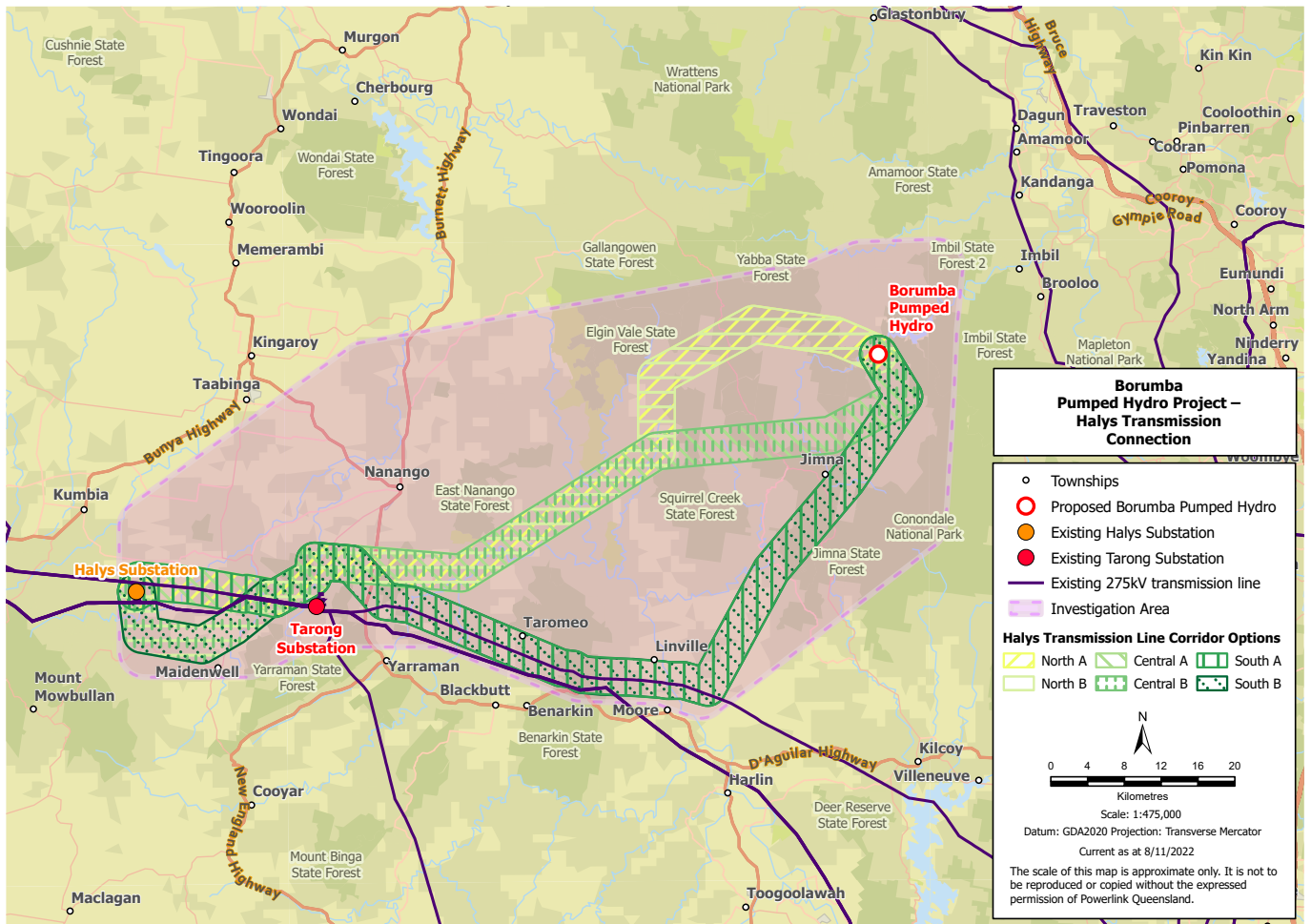
Halys South

This corridor traverses south-east from the proposed pumped hydro facility and veers south-west towards Jimna before co-locating with the existing transmission lines east of Linville. The corridor co-locates with existing transmission lines to the west before heading north to avoid built infrastructure at Tarong Substation.

Options A and B

When Halys North, Halys Central and Halys South corridors reach Tarong, we have identified two options to connect into Halys Substation. Option A prioritises co-location with existing transmission lines between Tarong and Halys substations. Option B diverts south of existing transmission lines towards Maidenwell before connecting back into Halys Substation from the south.

Map 1. Borumba to Halys Transmission Line Corridor Options



A northern corridor option was initially considered which extended from Elgin Vale State Forest, passing in between Kingaroy and Nanango and connecting to Tarong and Halys substations. Following engagement with landholders, Traditional Owners and the wider community, this option was not considered further. This is largely due to the significant impacts on strategic cropping land and production from dryland agriculture and plantations. This includes impacts on many productive farming properties between Runnymede, Coolabunia and Ellesmere areas.

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 corridors.

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.

Borumba to Halys Transmission Line Corridor

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.

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 Halys Central (Option A) 4km-wide corridor as having the least overall impact across social, environmental and economic factors.**

Halys 4km-wide corridor options	Measurement Unit	North A	North B	Central A	Central B	South A	South B
Social							
Criterion 1: Impact on strategic cropping and agricultural land	ha	4421	4103	4859	4540	7918	7595
Criterion 2: Number of properties affected that are <5 ha	count	281	246	281	246	685	651
Criterion 3: Proportion of state-owned land within the corridor	%	22	22	15	15	17	16
Criterion 4: Number of properties affected	count	762	761	762	761	1484	1483
Criterion 4: Impact on intensive land use	ha	546	571	546	571	1535	1560
Environment							
Criterion 1: Cat A,B,C,R Endangered RE	ha	1278	1067	1276	1067	2427	2217
Criterion 2: Cat A,B,C,R Of Concern RE	ha	12560	13172	8868	8480	7271	7883
Criterion 3: Cat A,B,C,R Least Concern RE	ha	6807	6753	6238	6185	7540	7487
Criterion 4: Impact to essential habitat	ha	6582	6774	4264	4456	5677	5869
Criterion 5: Impact to National Parks	ha	186	186	271	271	538	538
Economic							
Criterion 1: Corridor length	km	98	103	97	102	113	117
Criterion 2: Land with >30% slope	%	13%	12%	11%	10%	11%	10%
Criterion 3: Opportunity to co-locate with existing transmission lines	km	15%	1%	15%	1%	47%	32%

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

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This corridor has the lowest impact on social criteria, similar to the Halys North corridor option and includes opportunities to use state-owned land while limiting impacts on the number, size and use of properties.

This corridor generally has the least overall impact on environmental criteria including essential habitat, with higher impacts on National Parks able to be avoided by narrowing down to a 1km-wide corridor. The corridor is also the shortest of those assessed and provides the ability to co-locate with existing Powerlink transmission lines around Tarong Power Station and Halys Substation.

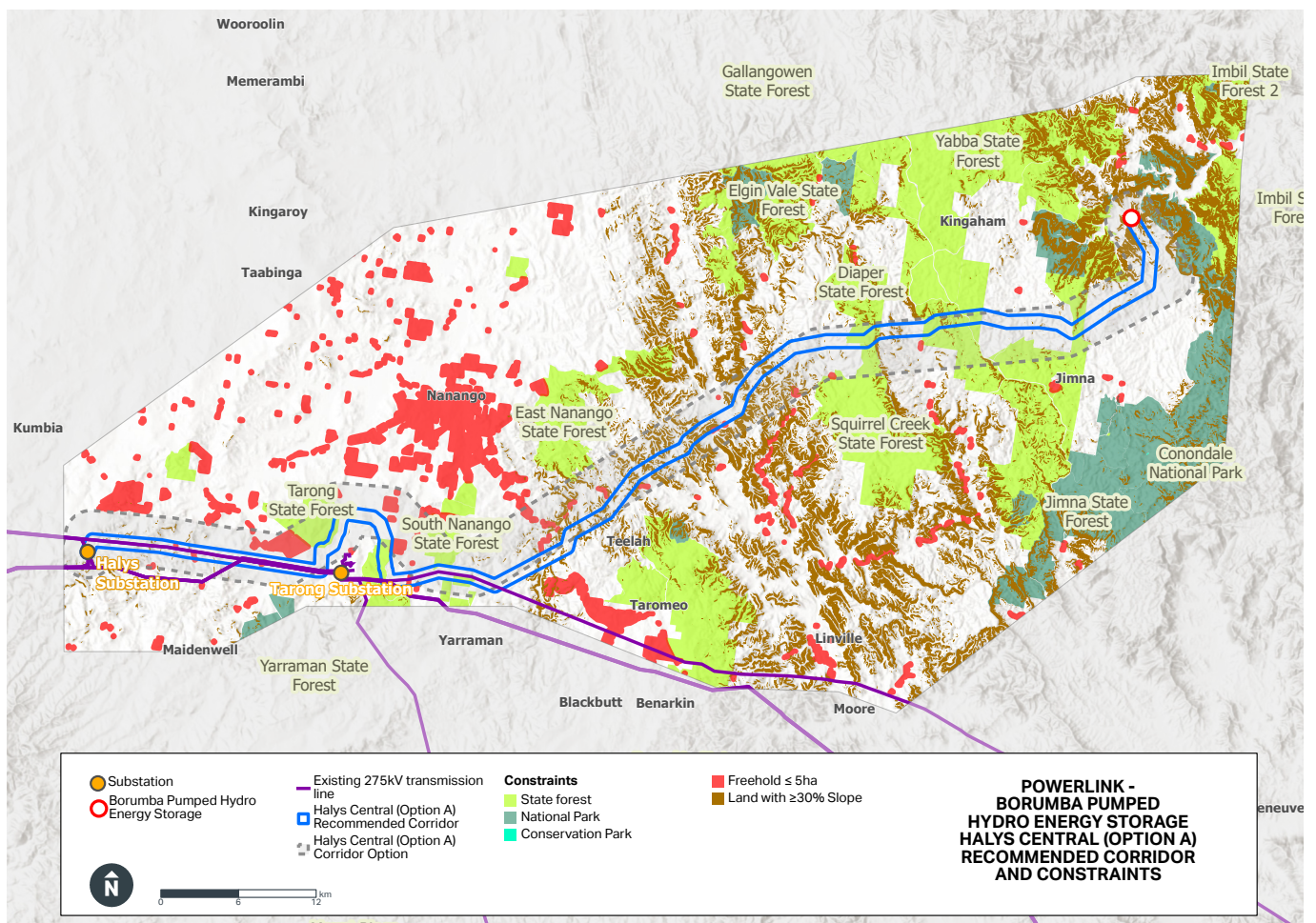
To summarise, the Halys Central (Option A) corridor:

- impacts on a lower number of properties, strategic cropping and intensive land use (such as feedlot etc)
- has the least overall impact on environmental criteria, including essential habitat, with higher impacts on National Parks able to be avoided through refinement to a 1km corridor
- is the shortest corridor length, with the opportunity to co-locate with existing transmission lines.

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

Halys Central (Option A) 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 Halys Central (Option A) corridor for further investigation and feedback. This is outlined in blue below.



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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
Co-locate with existing infrastructure	✓	Infrastructure will be co-located between Halys Substation and Tarong Power Station
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
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

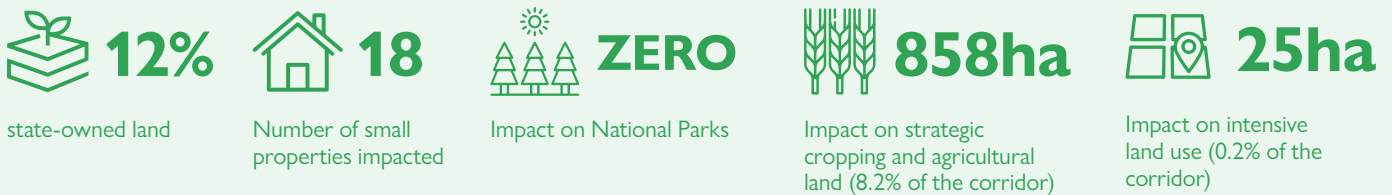
We listened to feedback and minimised the impact on the number of landholders, particularly smaller land parcels in the area. We have also avoided important infrastructure, community facilities, and townships.

We have sought to reduce the impact on agriculture, intensive land usage, and cropping fields, based on the input provided from those landholders.

We have also made sure to take into account the ecology, flora and fauna in the area. We chose routes that prevent or considerably reduce the impact on endangered and threatened regional ecosystems, critical habitat, protected plants and wetlands.

We chose to co-locate with existing transmission lines between Tarong Power Station and Halys Substation, while avoiding co-locating with transmission lines that are close to rural communities like Linville, Benarkin and Taromeo.

Below is a short overview of the Halys Central (Option A) 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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