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# Victoria to New South Wales Interconnector West (VNI West) (NSW)

Preferred Route Report – NSW March 2024



# ACKNOWLEDGEMENT

Transgrid acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country.

Transgrid acknowledges the Wiradjuri, Wamba Wamba, Barapa Barapa and Yorta Yorta people as the Traditional Owners of the lands on which the proposed transmission line has been considered and pays respect to Elders past, present and future. Traditional Owners of these lands have lived in the area for thousands of years and have an enduring custodianship and connection over the land and waterways of this region.



# **Community Summary**

#### Background

VNI West is part of the State and Commonwealth Government plans for Australia's energy transition. It is a new transmission line required to enable cleaner, cheaper renewables to be connected to the electricity grids in NSW and Victoria. The NSW side of VNI West is being delivered by Transgrid. During the public exhibition of Transgrid's Draft Route Report for VNI West in February 2024, stakeholders shared their concerns and ideas about the proposal. This report summarises that feedback (Section 2) and how we have amended the proposed route in response to this feedback (Section 3). Section 5 answers further questions raised in written submissions and community events.

#### Your questions answered

#### How does the community feel about the draft route??

- **Too close to Moulamein** Concerns were raised about how close the route might get to homes and the township of Moulamein. Community members offered suggestions for adapting the draft route, including adjustments based on avoiding the town, meeting individual landowner preferences and keeping the transmission line further away from homes, and connecting the transmission line to the EnergyConnect project (currently under construction to the north).
- **Potential disruption to agriculture** Concerns were raised about the impacts of the proposed transmission line on agricultural activities. Some members of the community believe there is a risk that limits on agricultural production which could lead to a downturn in the local economy.
- Protection of endangered flora and fauna species Requests were made to minimise impacts on important areas of biodiversity, like protected habitats, National Parks and State Forests, and the potential impacts on endangered and critically endangered species, including the Plains Wanderer, the Natural Grasslands of the Murray Valley Plains, the Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains, and the Weeping Myall Woodlands.

#### How has Transgrid responded?

In response to community feedback, we have amended around 35 per cent of the draft route to include:

- Adjustment to the final preferred route to the west and north of the township of Moulamein increasing the minimum distance to around six kilometres to the north, keeping the line further away from homes. This will also increase the distance between the proposed transmission line and Moulamein-Wanganella Road at its western end, avoiding multiple crossings of Billabong Creek. This aims to address community concerns by reducing:
  - Direct visual and amenity impacts associated with the transmission line to Moulamein residents
  - Potential impacts on irrigated agricultural land
  - Impacts of the proposed transmission line on watercourses, including Billabong Creek.

This change does mean we can no longer take advantage of the public land corridors to the north of Moulamein township, which guided the alignment of the earlier draft route. Distance from dwellings will continue to be a key consideration as the route is further refined down to a proposed construction corridor and a final 70-metre easement.

• Modified a section to the west of the Cobb Highway north of Wanganella-Moulamein Road shortening the line and moving further away from a number of residential properties to the south of this roadway.



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#### How will you mitigate impacts to agriculture?

The preferred route avoids some of the previously impacted productive agricultural land. However, some farms will still be impacted by the final preferred route. In these cases, we will work with individual landowners to minimise and manage impacts on their land, where possible. For example, we will try, where possible, to run the final 70-metre transmission line easement directly along fence lines between adjacent cropping paddocks, rather than diagonally across them.

We will work with all those affected to ensure they are fairly compensated for any land value and agricultural production loss via the *Land Acquisition (Just Terms Compensation) Act 1991*, as well as for construction disturbance. In addition to this negotiated compensation, for every kilometre of new transmission line on a property, landowners will receive \$10,000 each year (indexed to CPI) over 20 years under the new NSW Strategic Benefits Payments scheme.

#### How will you minimise impacts to biodiversity?

The final preferred route avoids potential impacts to vegetation within the vicinity of Billabong Creek, east of Moulamein in response to community feedback.

The next step in the route planning process is a comprehensive environmental assessment, including preparation of an Environmental Impact Statement (EIS). As part of the EIS, Transgrid will undertake a biodiversity impact assessment, including detailed field ecology investigations to identify flora / fauna species and plant community types present along the route, including threatened species and communities that need to be avoided.

As Transgrid works towards identifying the final route for the 70-metre easement and the final location of transmission line infrastructure, our aim is to avoid then minimise as many impacts as possible to protected biodiversity, remnant tree stands, waterways and other sensitive ecological areas. Avoiding threatened species such as Plains Wanderer sensitive habitat is a key priority and will be a focus throughout the design refinement phase.

#### Why can't we use the EnergyConnect line and avoid the area?

Some people disagree with the proposed route being in the area at all, noting that the EnergyConnect transmission line is already being developed further north in the region. They suggest that the route could simply run north to connect with EnergyConnect at an alternative point, avoiding the area altogether.

EnergyConnect is a 330kV double-circuit transmission interconnector project, critical to meeting consumer demand in South Australia and NSW.

The project, which is currently under construction will once energised, link Robertstown in South Australia with Wagga Wagga in NSW via the new 'Dinawan' substation being built north of Jerilderie.

The section from the Dinawan 330kV substation east to the Wagga Wagga substation will initially be operated at 330kV but is being provisioned for future operation at 500kV (i.e. built with the infrastructure components required to enable 500kV operating capacity). This 500kV section of EnergyConnect was underwritten by the Federal Government to allow for future proofing of the transmission network. This was considered critical for the development of the South West Renewable Energy Zone and enabling the full benefits of Snowy 2.0.



In July 2022, AEMO and Transgrid published the PADR for VNI West, proposing a preferred option utilising the opportunity created by this future-proofed connection between Dinawan and Wagga Wagga. While the points of network connection in Victoria have since changed, connection to Dinawan and the future-proofed route to Wagga Wagga has remained a constant in the NSW section of the VNI West project.

With construction of the 330kV Dinawan substation and EnergyConnect transmission lines underway, EnergyConnect is too far advanced to be redesigned without significant delays to both projects.

#### What happens next?

Based on a detailed environmental assessment and ongoing consultation with landowners, the route will be narrowed to a proposed construction corridor and, ultimately, a final 70-metre easement. This process will involve:

- Continuing discussions with affected landowners so we understand:
  - How each property is used?
  - Areas of highly productive agricultural land to be avoided, if possible
  - Areas of environmental significance or private conservation initiatives
  - Where on-farm infrastructure is located and how it is used?
  - Areas where an easement could have minimal impact to farming operations
- Environmental field surveys to improve our understanding of specific on-ground conditions.

As we determine the final easement, as much as possible, we will aim to:

- Avoid disrupting agricultural operations
- Avoid existing farm infrastructure and assets, such as existing irrigation systems, rice paddies, sheds and silos, or calving and lambing yards
- Minimise and, where possible, mitigate environmental impact.





# Contents

Community Summary	3
Background	3
Your questions answered	3
Abbreviations	10
1. Introduction	11
1.1. What is VNI West?	11
1.2. Purpose of this report	11
2. What you told us	12
2.1. About the preferred route	12
2.2. Community ideas for changes to the corridor	15
2.3. Other ideas from the community information sessions	15
3. How have we amended the draft preferred route	16
3.1. Overview	16
3.2. Details of amendments to the preferred route	16
3.3. Final preferred route	22
4. How the final route will be chosen	24
4.1. Refined route for environmental assessment	24
4.2. Social Impact Assessment	25
5. Answers to specific questions	26
5.1. Why has this route been chosen when it crosses agricultural land?	26
5.2. Why don't we have a detailed environmental assessment yet?	26
5.3. Why can't we avoid the area altogether and use the EnergyConnect line?	27
5.4. Why can't the transmission lines be put underground?	27
5.5. Why wasn't there more consultation on the recommended preferred route?	28
5.6. Why is there mixed information in the community regarding the NSW/Victorian border crossing location and if it is decided yet?	) 28
5.7. How will the transmission line affect my farming activities?	29
5.8. How will transmission infrastructure maintenance affect my farming activities?	30
5.9. What about aerial operations such as crop spraying?	30
5.10. Can the new transmission line interfere with GPS-based farming equipment?	30
5.11. The project will devalue my property and my business. What about compensation?	31



6. References	43
5.30. Will construction sites be rehabilitated?	
5.29. What measures are in place to protect my land from exposure to chemical and	biological hazards?
5.28. How will soil erosion be managed?	
5.27. What are the potential traffic impacts and are local roads being upgraded?	
5.26. What noise impacts will the project have?	40
5.25. What benefits are available to the impacted communities in the region?	
5.24. The project proposal is causing mental health stress on some members of the Transgrid doing about this?	community. What is 
5.23. What socio-economic impacts will the project have?	
5.22. Can subsurface construction adversely affect groundwater dependant ecosyste	ems? 38
5.21. What about vegetation clearing impacts?	
5.20. What about the impacts to biodiversity and other sensitive areas?	
5.19. What about biosecurity?	
5.18. What about electric and magnetic fields (EMF) and risks to our health?	
5.17. What about public safety near the transmission lines?	
premiums required from hosting the infrastructure on their land?	
5.16. Who is required to hold insurances? How will landowners be compensated for a	additional insurance
How can we manage bushfires on the property with the transmission line present?	34
What about the increased risk of bushfires? Who is liable?	
5 15 What about the Aboriginal beritage impact?	
5 14 Why hasn't flooding risk in the region been further considered and avoided?	
5 13 What will the lighting impacts be on local residents?	32
5.12. What about the visual impact? How will my amenity be impacted?	



Table A.1 Summary of advertising	
Table A.2 Summary of key stakeholder briefings	46
Table A.3 Schedule of community information sessions and participation at community events	48
Figure ES.1 Final preferred route	4
Figure 2.1 Response themes – Summary	14
Figure 2.2 Response themes – Key issue (alignment theme) breakdown	15
Figure 3.1 Overview of preferred route changes made since exhibition of the Draft Route Report	17
Figure 3.2 Refined route option alignment north of Moulamein	18
Figure 3.3 Refined route option alignment along Wanganella-Moulamein Road	19
Figure 3.4 Expanded route options – Mabins Well Road to Dinawan	20
Figure 3.5 Refined route options – NSW/Victorian border	21
Figure 3.6 Final preferred route	
Figure 4.1 Next steps	24
Figure B.1 Route options considered	50
Figure B.2 Summary of route option evaluation for the assessed routes/options	51
Figure B.3 Draft preferred route	52



# Abbreviations

Project term/ acronym	Definition
AEMO	Australian Energy Market Operator
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
BC Act	Biodiversity Conservation Act (NSW)
CCG	Community Consultative Group
CSSI	Critical State Significant Infrastructure
DPHI	(NSW) Department of Planning, Housing and Infrastructure
EPBC Act	Environmental Protection Biodiversity Conservation Act (Commonwealth)
EIS	environmental impact statement
EMF	electric and magnetic fields
GDE	groundwater dependent ecosystems
HVAC	high voltage alternating current
HVDC	High Voltage Direct Current
kV	kilovolt
ISP	Integrated System Plan
NEM	National Energy Market
NSW	New South Wales
PMP	Property Management Plan
(the) preferred corridor	the Broad corridor (10-20kms wide) identified within which the Project would be located. This corridor was determined as part of the corridor assessment process undertaken prior to the Route Options assessment
(the) preferred route	the refined corridor (approximately 1km) identified within the preferred route within which the project would be located. This corridor was determined as part of the route options assessment phase of the project
(the) Project	NSW component of the broader VNI West
REZ(s)	Renewable Energy Zone(s)
RIT-T	Regulatory Test for Investment for Transmission
TCV	Transmission Company Victoria
TEC	threatened ecological communities
TSR	travelling stock route
VNI West	Victoria to New South Wales Interconnector West – a proposed new high voltage alternating current 500 kilovolt (kV) double-circuit overhead transmission line between Victoria and NSW



### 1. Introduction

Transgrid and Transmission Company Victoria (TCV) are investigating where to develop a new electrical connection between Victoria and NSW, a project called VNI West. Transgrid is responsible for developing the NSW component of VNI West (the Project) in the Riverina Region, which will connect the Dinawan substation north of Jerilderie to a crossing point along the Victoria/NSW border. TCV is developing the Victorian component. Transgrid and TCV are coordinating on the route alignment and a proposed crossing point at the Victoria/NSW border.

#### 1.1. What is VNI West?

VNI West will create a second transmission link between Victoria and NSW to harness clean, low-cost electricity from Renewable Energy Zones (REZ) in both states and improve the reliability and security of electricity supply. This new, high voltage, 500 kilovolt (kV), double-circuit overhead transmission line will connect the Western Renewables Link project (at Bulgana, Victoria) with EnergyConnect (at the Dinawan substation, north of Jerilderie) via a new substation near Kerang.

#### 1.2. Purpose of this report

This Preferred Route Report contains Transgrid's response to community feedback and the ideas put forward in submissions and community information sessions during the public exhibition of the *Draft Route Report* (Transgrid, 2024) covering the NSW scope of VNI West. This report shares:

- A summary of issues raised by community members and other stakeholders regarding the draft preferred route, including feedback, ideas for alternative routes and local knowledge (Chapter 2)
- How Transgrid has amended the draft preferred route in response to community, landowner and stakeholder feedback (Chapter 3), including:
  - Extending the preferred route further to the north to minimise impacts to the Moulamein township
  - Modifying the preferred route further to the north of Wanganella-Moulamein Road (west of Cobb Highway) to shorten line length and move the line further away from residences to the south of this road
  - Expanding the final preferred route at the eastern end of the proposal to allow for flexibility of the final alignment to consider future renewable developments in this area.
- How the preferred route will continue to be refined during the environmental assessment phase of the project (Chapter 4)
- Transgrid's answers to specific questions raised during the consultation period (Chapter 5).

It also includes appendices detailing:

- The extent of community consultation undertaken during the exhibition of the Draft Route Report
- A summary of how the draft preferred route was determined.



# 2. What you told us

#### 2.1. About the preferred route

Local community members and landowners raised concerns around the location of the preferred route, particularly how close it is to homes and the township of Moulamein. People were also concerned about the impact of the recommended preferred route option on agricultural activities, socio-economic wellbeing, visual amenity, existing and potential tourism activity and growth.

Many submissions also provided property-specific commentary on the draft preferred route.

#### Who gave us feedback

We received 48 written submissions, with 46 percent (%) coming from landowners within the corridor, 35% coming from the local community, 4% coming from industry and 15% other. The majority (79%) expressed their opposition to the project, 13% were neutral in their submissions, and 8% expressed support.

In addition, 13 community information and town hall sessions were held in February 2024 and were attended by approximately 190 local landowner and community members, noting that this includes several local landowners who attended multiple events.

#### 2.1.1. Feedback themes

 Proximity to the township of Moulamein – With the draft preferred route located close to the north of Moulamein, people are concerned about the impact the project would have on visual amenity, potential disturbance to tourism in the town, the impact to property values and flow-on effects to the socioeconomic wellbeing of Moulamein and its surrounds.

Many also commented on the potential health and mental wellbeing effects of hosting a transmission line near town.

- Impacts on agriculture Potential impacts of transmission line on agricultural activities. The community believes there is a real risk that limits on agricultural production could lead to a downturn in the local economy. In particular, people are worried about the:
  - Effect on both dryland and irrigated agriculture
  - Reduced land available for cropping and grazing
  - Limits placed on future irrigation system development
  - Limits placed on agricultural operations, such as:
    - > machinery height and safe operational clearances underneath the lines
    - > operational restrictions on machinery, irrigation equipment and aerial spraying
    - > ability to fight fire on their properties
    - > Transgrid's rules for activities allowed within the easement.

Of particular concern is that machinery and stock vehicles frequently used are taller than the required 4.3 metres safety clearance under the lines. If the machinery is not able to be used, this would place a large constraint on agricultural production.

• **Socio-economic impact** – Potential impact to current and potential tourism activities and businesses and the broader socio-economic impact to Moulamein.



- **Visual amenity** The visual impact of overhead transmission lines potentially diminishing the value of rural lands and affect the overall appeal of the region.
- **Consultation** Some landowners and stakeholders are dissatisfied with the consultation process, claiming that Transgrid did not engage with them adequately, fairly, or transparently.
- Endangered flora and fauna species The extent of mapping of habitat for the critically endangered Plains Wanderer was raised as not being sufficiently detailed and not adequately considering the movement of the species prompted by environmental changes.

Community members also raised concerns about the potential impacts on important areas of biodiversity, like protected habitats, National Parks and State Forests, and the potential impacts on endangered and critically endangered species (including, but not limited to, the Plains Wanderer, the Natural Grasslands of the Murray Valley Plains, the Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains, and the Weeping Myall Woodlands).

- **Health and safety** Some community members have concerns that the presence of electric and magnetic fields (EMF) will impact on community health and safety. They are also worried about impact on the mental health of individuals and the collective community.
- **Aboriginal heritage sites** Feedback indicated a strong presence of sites with Aboriginal heritage and artefacts, especially in proximity to watercourses.
- Landholder compensation Landowners want greater clarity about how compensation works and the difference between the Land Acquisition (Just Terms Compensation) Act 1991 and the Strategic Benefits Payment. Some landowners and stakeholders are dissatisfied with the compensation process. People felt they had inadequate information on personal/business taxation in relation to easement acquisition and compensation.





# Key feedback themes

Figure 2.1 Response themes – Summary





Figure 2.2 Response themes - Key issue (alignment theme) breakdown

#### 2.2. Community ideas for changes to the corridor

Community members offered suggestions for adapting the final preferred route to meet local needs, including:

- Various route adjustments so the transmission line is further away from homes or to take into account landholder preferences on specific sites (see Chapter 3)
- Changing the route so it travels north of Moulamein to the transmission line corridor where the new EnergyConnect 330kV line is being constructed (see section 5.3)
- Stopping the route selection process, going back to the corridor phase and finding new options.

#### 2.3. Other ideas from the community information sessions

Transgrid intends to invest in local infrastructure and initiatives that will have a long-term benefit to the community. During community information sessions, several ideas were discussed including:

- Improving mobile telecommunications in the region The region has significant mobile black-spot areas. Mobile access is limited in between the larger towns, and sometimes not available at all in the smaller towns. The community is interested in using tower infrastructure to boost mobile service coverage.
- Improving road surfaces Some of the smaller towns are connected by dirt roads. Upgrading and
  improving these roads to asphalt surfaces would improve connectivity and reduce travel time for local
  residents.
- **Providing additional firefighting resources** The community would benefit from an additional Rural Fire Service (RFS) station and an additional RFS truck.
- Improvements to biodiversity of local river and creek systems Including fish restocking and planting.



### 3. How have we amended the draft preferred route

#### 3.1. Overview

In response to the community concerns outlined in Chapter 2 and feedback from community events and one on one meetings, we have amended the final preferred route in several ways. The changes are to keep the route away from homes, the township of Moulamein and reduce the line length across private property.

Suggestions include:

- Adjust the preferred route to the west and north or the township of Moulamein to increase the minimum distance to around six kilometres to the north of the centre of town, keeping the line away from homes. This will also increase the distance between the proposed transmission line and Moulamein-Wanganella Road at its western end, avoiding multiple crossings of Billabong Creek. This change will reduce the:
  - Direct visual and amenity impacts associated with the transmission line to Moulamein residents
  - Potential for impacts on irrigated agricultural land
  - Potential impacts of the proposed transmission line on watercourses, including the number of proposed crossings the preferred route would require, in particular the potential impacts over Billabong Creek

On the other hand, the change means that the route will no longer be able to take advantage of the public land corridors to the north of Moulamein township, which guided the alignment of the draft route. Distance from dwellings will continue to be a key consideration as the route is further refined down to a proposed construction corridor and a final 70-metre easement.

- Modify a section of the alignment to the west of the Cobb Highway north of Wanganella-Moulamein Road to shorten line length and move the route further away from a number of residences to the south of this roadway
- Expand the final preferred route option at the eastern end of the proposal to give the final alignment the flexibility to consider future renewable developments in this area.
- Refine the area of investigation for the NSW/Victorian border crossing.

#### 3.2. Details of amendments to the preferred route

The following sections explain the key changes made to the draft preferred route (see Figure 3.1).





#### 3.2.1. Moulamein realignment

The draft preferred route traversed to the west and north of the township of Moulamein largely following public land corridors and, at its closest point, was around 1.8 kilometres from the main town centre.

#### Proposed changes

- A new alignment extending further along Pike Pike Lane and traversing around six kilometres (to the southern edge of a widened two-kilometre buffer), to the north of the township and connecting back to the draft preferred route around 25 kilometres east of Maude Road (see Figure 3.2)
- The revised route option alignment would provide a wider corridor 'bubble' to the immediate north of the Moulamein township (up to around 2.8 kilometres at its widest point) to provide greater flexibility in where the final 70-metre transmission line easement should be located, taking into account ongoing landholder consultation.



Figure 3.2 Refined route option alignment north of Moulamein

- Engineering and environment Reduces the number of water course crossings, avoiding impacts to Billabong Creek and Moores Creek.
- Socio-Economic and community The final preferred route is now located further to the north of the Moulamein township and away from the Moulamein airfield. The preferred route also directly impacts fewer landholders
- Agriculture The revised route reduces the overall impacts on irrigated and other intensive agricultural lands however it does increase the impact to grazing land.



#### 3.2.2. Cobb Highway (west) realignment

The draft preferred route was generally parallel to Wanganella-Moulamein Road from Maude Road to the Cobb Highway. Offset distances between the route and Wanganella-Moulamein Road were between around 500 metres to three kilometres.

#### **Proposed changes**

• To shorten the overall line length and shift the route further away from residences to the south of Wanganella-Moulamein Road, we have moved the final preferred route further to the north. At its greatest point of difference, the preferred route would be located around two kilometres further north than the draft preferred route (see Figure 3.3).



Figure 3.3 Refined route option alignment along Wanganella-Moulamein Road

- Engineering Provides a slightly shorter overall length (by around 400 metres) and, with the proposed change to the alignment north of Moulamein (see section 3.2.1), may remove the need for one reduced angle / strain tower.
- *Environmental* Has a similar level of overall impact (subject to ongoing ecology and heritage surveys), with the slightly shorter length potentially resulting in a slightly reduced overall impact.
- Community Moves the proposed transmission line further away from a cluster of residential houses south of Wanganella-Moulamein Road



#### 3.2.3. Mabins Well Road to Dinawan expansion

The recommended preferred route option was a one-kilometre-wide path between the intersection of Mabins Well Road and Carrathool Road and the proposed Dinawan 500kV substation, generally following Mabins Well Road and the EnergyConnect alignment (currently under construction).

#### Proposed changes

• Widen the recommended preferred route option to the south by up to around three kilometres (see Figure 3.4).



Figure 3.4 Expanded route options – Mabins Well Road to Dinawan

- Engineering Provides flexibility in determining the final preferred route alignment within the Dinawan Energy Hub and co-location of approved / proposed wind farm developments in the Dinawan Energy Hub.
- *Environmental* Allows for greater flexibility in avoiding potential environmental constraints, including the critically endangered Plains Wanderer.
- Community Responds to feedback from Renewable Energy Developers regarding existing landowner agreements for wind turbine locations.



#### 3.2.4. Consolidated NSW/Victoria border crossing area of investigation

The recommended preferred route included an alignment that provided a possible connection area between the NSW and Victorian elements of the VNI West project. The recommended preferred route noted that the final border crossing location was subject to ongoing consultation and agreement with TCV to ensure alignment and consistency with the Victorian component of the project.

#### Proposed changes

- A narrower and refined possible connection area between the NSW and Victorian elements of the project, consistent with the eastern and western extents of the current Victorian corridor (see Figure 3.5)
- Revised border area restricting the recommended preferred route to the NSW side of the border.



Figure 3.5 Refined route options - NSW/Victorian border

- Engineering Responds to collaborative efforts with TCV to create consistency between the western and eastern parts of the border area under consideration for the preferred crossing location
- Community Responds to local preferences to evaluate all potential options for the NSW/Victorian border crossing.



#### 3.3. Final preferred route

Based on technical, environmental, and social and community constraints, as well as input from community members, landowners and stakeholders gathered during the public exhibition of the *Draft Route Report*, a final preferred route (approximately 1km width) has been identified.

The final preferred route is shown in Figure 3.6.



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# 4. How the final route will be chosen

Based on a detailed environmental assessment and ongoing consultation with landowners, the final preferred route will be narrowed to a refined construction footprint, and, ultimately, a final 70-metre operational transmission line easement. This area will be subject to an environmental impact assessment and approval by NSW and Commonwealth governments.



#### 4.1. Refined route for environmental assessment

We will continue to seek input from landowners, community members and other stakeholders through:

- Seeking access to potentially impacted lands to enable environmental surveys to be completed. These surveys will allow for improved understanding of the on-ground conditions
- Continuing discussions with potentially affected landowners to further identify:
  - How each property is used
  - Areas of highly productive agricultural land that should be avoided, if possible
  - Areas of environmental significance or where private conservation initiatives exist
  - Where on-farm infrastructure is located and how it is used
  - Areas where there may be minimal impact to farming operations that could potentially support a transmission easement
  - Consideration of other infrastructure, existing transmission lines, proposed locations of energy hub infrastructure, e.g. wind turbines
- Continuing discussions and engagement with stakeholders, including regulators, to further understand their requirements, especially in relation to environmental impact minimisation and required safeguards.

This will enable us to determine a final easement that will:

- Reduce potential fragmentation or severance of agricultural land to avoid disrupting agricultural operations
- Avoid wherever possible existing farm infrastructure and assets that would be adversely affected by a transmission line easement, such as areas with existing irrigation systems, rice paddies, sheds and silos, or calving and lambing yards
- Minimise environmental impact.



#### 4.2. Social Impact Assessment

The EIS requires Transgrid to consider a number of environmental impacts including:

- Environmental
- Economic
- Social impacts of the project.

A Social Impact Assessment will be conducted as part of the EIS, looking at many of the areas of concern raised in community feedback, such as potential loss of income, employment and tourism opportunities. It will also consider less tangible impacts that can accompany large-scale developments and the potential changes to local economic conditions. This would include issues such as:

- How the local labour and supply markets respond to opportunities created by the project and what this means for existing industries
- How the local housing and accommodation supply responds to an influx of labour and how accommodation camps can be used to offset adverse impacts
- How to prepare local communities to participate in major project opportunities in a sustainable way
- How to provide enduring community benefits through skills development, education and training, and investment in local infrastructure.



### 5. Answers to specific questions

#### 5.1. Why has this route been chosen when it crosses agricultural land?

In developing the preferred route and minimising impact to agricultural production, we have had to balance four important priorities:

- *Technical* and regulatory The regulatory framework requires Transgrid to develop the most prudent and efficient option to minimise the impact of the price on consumers. This means finding a reasonably direct route while avoiding challenging technical conditions, unnecessarily long routes, or using complex and expensive engineering solutions, wherever possible
- *Environment* To protect important areas of biodiversity, like wetlands, protected habitats, national parks and state forests
- *Community* To minimise potential impacts to the community, including allowing for distance from homes and towns
- Aboriginal heritage To protect and preserve known and potential Aboriginal cultural heritage sites and areas of Aboriginal significance.

The preferred route avoids some of the previously impacted productive agricultural land. However, some farms will still be impacted. In these cases, we will where possible, work with individual landowners to minimise and manage impacts on their land. For example, where possible, we will try to run the final 70-metre-wide easement directly along fence lines between adjacent cropping paddocks, rather than diagonally across them. Even so, in some cases, construction and operation of the new line is likely to impact agricultural production. Where this impact to business and operations occurs, the compensation would be designed to alleviate this potential loss.

We will work with those affected to ensure they are fairly compensated for the easement, as well as for construction disturbance, via the Land Acquisition (Just Terms Compensation) Act 1991.

In addition to this negotiated compensation, for every kilometre of the new transmission line on the property, landowners will receive \$10,000 each year (indexed to CPI) over 20 years under the new NSW Strategic Benefits Payments scheme (see section 5.11).

#### 5.2. Why don't we have a detailed environmental assessment yet?

The next step in the route (and eventual easement) planning process is a comprehensive environmental assessment, including preparation of a detailed Environmental Impact Statement (EIS). Many of the environmental and social impact queries raised by the community, are required areas of examination in the Secretary's Environmental Assessment Requirements (SEARS) that outline the assessments/studies and surveys required to be completed in the EIS. As part of this EIS assessment process Transgrid will consider appropriate mitigations to address the likely impacts identified and continue to work with landowners and planning authorities to finalise these mitigation measures and refine the design of the final easement.

The EIS process gives the community a formal opportunity to have their say on the VNI West project before a final determination is made. We will continue to engage with community in the lead up to the EIS to ensure there is an understanding of the project to make an informed submission. Land use and property impacts, including a specialist agricultural impact assessment that will consider feedback from landowners impacted by the project, will also be considered as part of the EIS.



#### 5.3. Why can't we avoid the area altogether and use the EnergyConnect line?

Some people disagree with the proposed route being in the area at all, noting that the EnergyConnect transmission line is already being developed further north in the region. They suggest that the route could simply run north to connect with EnergyConnect at an alternative point, avoiding the area altogether.

EnergyConnect is a 330kV double-circuit transmission interconnector project, critical to meeting consumer demand in South Australia and NSW.

The project, which is currently under construction, will once energised, link Robertstown in South Australia with Wagga Wagga in NSW via the new 'Dinawan' substation being built north of Jerilderie.

The section from the Dinawan 330kV substation east to the Wagga Wagga substation will initially be operated at 330kV but is being provisioned for future operation at 500kV (i.e. built with the infrastructure components required to enable 500kV operating capacity). This 500kV section of EnergyConnect was underwritten by the Federal Government to allow for future proofing of the transmission network. This was considered critical for the development of the South West Renewable Energy Zone and enabling the full benefits of Snowy 2.0.

In July 2022, AEMO and Transgrid published the PADR for VNI West, proposing a preferred option utilising the opportunity created by this future-proofed connection between Dinawan and Wagga Wagga. While the points of network connection in Victoria have since changed, connection to Dinawan and the future-proofed route to Wagga Wagga has remained a constant in the NSW section of the VNI West project.

With construction of the 330kV Dinawan substation and EnergyConnect transmission lines underway, EnergyConnect is too far advanced to be redesigned without significant delays to both projects.

#### 5.4. Why can't the transmission lines be put underground?

A number of community members believe that the selected route should be installed as an underground transmission line. While the installation of High Voltage Direct Current (HVDC) underground cables is becoming more widespread globally in cities, over long distances energy companies do not put high voltage alternating current (HVAC) cables underground for a range of reasons including:

- The cost of undergrounding is typically several times more expensive than for an overhead transmission line
- Over long distances, underground HVAC cables lose power and require additional, large above-ground facilities called 'reactive compensation' sites installed roughly every 30 to 50 kilometres
- Underground HVAC cables are installed in wide trenches, typically filled with a thermally rated concrete to keep the cable temperatures stable. This results in extensive environmental impact and soil disturbance. Large, excavated pits are also required around every 500 to 1,000 metres where sections of cable are joined together
- Cultivation above underground cables is limited to low rooted crops resulting in more restrictive easement conditions and a greater agricultural impact when crossing private land
- Repairing underground cables is typically more challenging and time consuming than for overhead lines, decreasing power reliability for energy consumers.



Transgrid acknowledges that both overhead and underground transmission systems have a range of impacts for local communities. Whilst there is greater visual impact with overhead lines, undergrounding causes a greater negative impact for the environment, for farmers and for communities. It also results in a much larger cost to energy consumers.

Transgrid has prepared a factsheet titled '<u>Undergrounding – Information for landowners and communities</u>' which outlines how we consider the feasibility of overhead and underground options when planning transmission infrastructure, some of the frequently asked questions and explains the technical reasons why it is a challenge to install high voltage transmission lines underground.

#### 5.5. Why wasn't there more consultation on the recommended preferred route?

Some landowners and community members felt they did not receive enough information, indicated receiving it too late with not enough time to respond – or missed out on the direct consultation. Transgrid understands this process can be stressful for landowners. Transgrid has endeavoured to promote its consultation process to both the broader community and those who may be directly affected by the project.

A summary of our communications campaign from December 2023 through to March 2024 regarding the *Draft Route Report* is noted in Appendix A. This included: individual letters sent to directly impacted landowners and followed up with phone calls; direct emails sent to the VNI West project subscriber list; advertising in local newspapers and information on the project website regarding the *Draft Route Report* being published and the community information session schedule.

We welcomed approximately 190 people at the community information sessions throughout February, however we understand that some people may feel the February timeframe was insufficient to allow for greater participation. We encourage community members to continue reaching out to the project team directly to seek further information:

- Email vniw@transgrid.com.au
- Website transgrid.com.au/vniw
- Phone 1800 955 588.

Extensive community engagement will continue into the environmental assessment phase. If your property is impacted by the project, our landholder relations team will be in touch to work through your concerns and issues in detail as the project develops and a 70-metre easement is identified.

# 5.6. Why is there mixed information in the community regarding the NSW/Victorian border crossing location and if it is decided yet?

The final crossing point for the project at the border between NSW and Victoria has yet to be determined. This is due to each state having different planning laws. In Victoria, the Environmental Effects Statement (EES) process requires government agency consultation to be completed before a proposed route can be confirmed. Transgrid is working closely with TCV, which is planning the Victorian section of VNI West, to decide on the actual location.

More information will follow as work on this section progresses.



#### 5.7. How will the transmission line affect my farming activities?

A number of landowners and farming operators have raised concerns regarding their ability to continue farming activities once the transmission line is constructed. Specific concerns include the impact of:

- Restrictions on irrigated agriculture (including rice and other crops), dryland cropping and other farming disruptions (such as impacts to levees and future areas of agriculture)
- Clearance restrictions
- Access constraints and concerns regarding impacts to local roadways due to prolonged heavy traffic during construction
- Restrictions on infrastructure and technical development of modern farming methods
- Restrictions on cropping-related aircraft activity
- The use of drones
- GPS interference.

During construction, there will be impacts along the easement, access roads and construction camps. Prior to construction, detailed Property Management Plans will be developed to manage the impacts on properties.

During operation, farming activities such as grazing and cropping can continue under transmission lines as long as machinery is not more than 4.3 metres high. Planting or cultivation of trees and shrubs can also continue, outside the exclusion zone around the base of the tower, provided the mature plant is less than four metres in height. Machinery and heavy equipment up to 4.3 metres tall can be used within the easement area. Where machinery exceeds this height, landowners will need to work with Transgrid to assess whether it can be safely operated within the easement. These assessments are done on a case-by-case basis.

However, irrigation, aerial spraying and fuel storage are not permitted within the easement. For most activities, including livestock grazing and movement, existing operations will be able to be maintained (see Transgrid's <u>Easement guidelines</u> for details of all agricultural activities that can and cannot be undertaken within Transgrid easements).

We will continue to work with impacted landowners to understand their current and future operations, how they will be affected by an easement and transmission line, how those impacts can be minimised, and what activities may continue with an easement in place.

We will also work closely with landowners to develop property-specific Property Management Plans (PMP) that we and our contractors must comply with. These plans outline the landowner's specific requirements for notice and access, agreed operating hours, stock relocation, service relocation, dust and noise management, weed and pest management, fencing (temporary and otherwise) and site rehabilitation.

For information about aerial operations/drones usage see section 5.9 and section 5.10 for information regarding potential for GPS interference.



#### 5.8. How will transmission infrastructure maintenance affect my farming activities?

Once operational, access required for maintenance will follow agreed conditions of entry, with notification for access in advance of any visit or required maintenance (except in emergency scenarios or when landholders can't be contacted).

Transgrid periodically inspects and maintains transmission tower structures and carries out vegetation maintenance to prevent it from interfering with power lines. We will try to coordinate these activities around farm activities to minimise their impact.

See Transgrid's <u>Easement guidelines</u> for information about the agricultural activities permitted on easements.

#### 5.9. What about aerial operations such as crop spraying?

Some landowners are concerned that the proposed transmission line would restrict the use of aircraft for a range of purposes, including spraying crops for pest maintenance, fertilising, seed sowing and other activities such as firefighting operations or local aircraft businesses. They note that manned aircraft or drones may not be flown within 60 metres of any transmission line or tower.

A review undertaken for the *Draft Route Report* identified around 15 private runways or non-certified airstrips that are likely to be typically used for agriculture or recreation (such as the Conargo gliding tow strip). Ongoing community consultation has also identified additional airstrips within this region.

Transgrid is working with landowners to understand the nature of aerial operations on affected properties and how route design can allow aerial operations to continue, where possible.

The EIS that will be prepared for the project will include an Aviation Impact Study to identify and assess impacts to all certified aerodromes and all identified non-certified airstrips within around 30 nautical miles (around 55 kilometres) and three nautical miles (around 5.5 kilometres) of the preferred route respectively.

#### 5.10. Can the new transmission line interfere with GPS-based farming equipment?

Transgrid's transmission lines are required to comply with Australian Standard 2344 (AS 2344), which sets out limits for electromagnetic interference from overhead powerlines and high voltage equipment.

We recently completed a series of studies to assess the potential for similar transmission lines to interfere with farm equipment. The studies identified that the potential for interference from the transmission line is only likely to affect VHF receiving antennas within about 50 metres of the transmission line. For properties close to existing base stations, the VHF signal would be so strong that it would not be subject to interference from the transmission line.

Once the final transmission line alignment has been determined, the EIS process will further consider potential GPS impacts of the final proposed transmission line alignment. We will work with landowners to identify local solutions in areas of weak VHF signal where potential GPS signal interference could occur.



#### 5.11. The project will devalue my property and my business. What about compensation?

Affected landowners will be offered two forms of compensation:

A one-off 'make whole' payment to compensate for the loss of the easement (land value and loss of production) as well as for construction disturbance. This will be negotiated with individual landowners under the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)* (Just Terms Act). Under section 10A of the Just Terms Act, Transgrid must negotiate compensation based on an independent market valuation for the easement, reasonably incurred legal and valuation fees as well as any decrease in the market value of the remaining portion(s) of the property after acquisition – as assessed by a qualified, licensed and experienced valuer. Landowners can also get their own valuation advice to advise on compensation. In most cases, landowners reach an agreement with Transgrid.

Part of the compensation assessment includes allowances for disturbance. This can include lost productivity, reduced enjoyment and restrictions on access to land during construction and can be included in the easement negotiation and acquisition process.

 Ongoing annual payments under the NSW Strategic Benefits Payments scheme. For every kilometre of the new transmission line easement, the property owner will be paid \$10,000 per annum (indexed to CPI) over 20 years.

The Strategic Benefits Payment scheme is in addition to compensation under the Just Terms Act.

See Transgrid's <u>Landowner easement and compensation guide</u> for further information on the compensation process.

#### 5.12. What about the visual impact? How will my amenity be impacted?

People are concerned that the visual impact of overhead transmission lines would diminish the value of rural lands and affect the overall appeal of the region.

As we continue to refine the project design down to a proposed construction footprint, and ultimately, a 70-metre transmission line easement, we will try to reduce the visual disruption of the project as far as possible, considering all other factors. In particular, we will aim to minimise visual impacts to private residences near the transmission lines by spacing out transmission line structures wherever possible – and adhering, where possible, to industry guidance for a minimum distance of 300 metres between a dwelling and the transmission line.

The EIS that will be prepared in the next phase of the project will also include a detailed landscape character and visual impact assessment. This assessment will consider the potential visual impacts of the project from both public and private properties and will be undertaken in accordance with Department of Planning, Housing and Infrastructure's (DPHI) current draft visual impact assessment guidelines for transmission line infrastructure (available on the <u>DPHI website</u>). To reduce disruption to views on private property, the potential for screening would be also be identified within the EIS.

The supporting landscape and visual impact assessment will also be further refined during detailed design in consultation with each impacted landowner.



#### 5.13. What will the lighting impacts be on local residents?

Night-time impacts during operation would be negligible as there is no lighting proposed along the transmission line easement.

Operational lighting would be required to operate the expanded substation for site security and for the safety of operational personnel operating and maintaining the substation equipment. While some security lighting would occur at the Dinawan 500kV substation, this would be a large distance from sensitive environments, minimising potential impacts.

#### 5.14. Why hasn't flooding risk in the region been further considered and avoided?

Transgrid acknowledges that community members have criticised the mapped flood-prone lands presented in the *Draft Route Report*, especially in the areas between the Victoria/NSW border and Moulamein and that it did not reflect the extent of flooding in late 2022.

Flood information for the region is fragmented across different organisations (Murray Darling Basin Authority, local councils, and WaterNSW) and doesn't take into account some recent flooding events (such as in 2022).

A detailed flood study for the route is currently being undertaken so that the project team can have up-todate, granular data to guide the project development process. The results of the study will inform the final route alignment and detailed design process as well as the structural specifications for transmission towers to safeguard against flooding to the network. The results of the flood study will also inform the EIS process and help to determine construction methodologies, control measures, and operational and maintenance considerations.

Across Transgrid's network, some sections of infrastructure are subject to flooding and restricted access at times of flood.

#### 5.15. What about the Aboriginal heritage impact?

Some submissions contended that developing a transmission line within the preferred route would cause damage to Aboriginal heritage values.

Transgrid is aware that sections of the preferred route have cultural heritage values, with a high number of cultural sites reported to be located throughout some parts of the landscape. A number of the areas along the preferred route include undisturbed areas around creeks and waterways that would likely have a high potential for impact to undiscovered sites.

The process for mitigating risks to Aboriginal heritage has begun with the preparation of an initial predictive model, which is being used to guide the route development process by outlining areas which have higher or lower probability of potentially having cultural significance due to their locality, topography, proximity to watercourses etc. Areas of potential cultural significance along the route will be further investigated, including those which have been identified in community feedback. This will all be considered as part of the Aboriginal Cultural Heritage Assessment undertaken as part of the EIS process.



The Aboriginal Cultural Heritage Assessment will include a detailed walkover of the proposed construction footprint and proposed operational easement by representatives from the relevant local Aboriginal groups and specialist heritage advisors. These field investigations will be used to further refine the proposed locations of the transmission line infrastructure with the aim of avoiding areas of identified heritage wherever possible.

The assessment will also identify mitigation measures and controls which will be implemented during construction to further minimise the potential for impacts. This may include salvaging items prior to construction commencement where they cannot be avoided and are able to be salvaged.

Finally, the engineering design of the project will prioritise:

- · Minimising the amount of alignment that impacts previously undisturbed areas
- Minimising waterway crossings and considering easement and the tower setbacks from creeks
- Identifying construction elements such as access tracks that avoid the need for further temporary clearing (such as using existing access tracks where possible).

#### What about the increased risk of bushfires? Who is liable?

Transgrid has a Bushfire Risk Management Plan (BRMP) in place which outlines our proactive management of bushfire risks both to and from electricity network assets. These practices are mature, meet the safety expectations of the community and demonstrate Transgrid's commitment to reducing the risk of bushfire ignitions and potential impacts to surrounding communities and environmental areas. More information is available on our website.

Transgrid holds insurance policies to cover the risks of operating a transmission network. This includes cover for fires that are started by our network and result in third party property damage and/or bodily injury. In other words, Transgrid will be legally liable for any loss or damage to third parties for which it is found to be legally responsible.

As part of the corridor selection process for VNI West, Transgrid has assessed lightning and bushfire risks. These assessments considered inputs such as slope and aspect, vegetation (including type and fuel load) and weather. Under the requirements of the NSW *Electricity Supply Act* and Electricity Supply (Safety and Network Management) Regulation, Transgrid is required to design, construct, operate and decommission its electricity network in a manner which supports the:

- Safety of members of the public
- Safety of persons working on its network
- Protection of property
- Management of safety risks arising from the protection of the environment
- Management of safety risks arising from the loss of electricity supply.

From a technical perspective, the final transmission line, when constructed, will be installed with two earth wires to protect the asset against lightning strike and safely transfer lightning surge to the ground, reducing the potential for a lightning-induced risk creating a bushfire associated with the transmission lines. We also operate a rigorous network wide annual bushfire preparedness program, involving a combination of aerial survey, on-ground inspections and extensive vegetation management.



Transgrid will continue to consider avoiding high-risk areas, such as mapped bushfire prone land as far as practicable, noting most of the eastern half of the whole preferred route is mapped as Category 3 (Grassland) risk. In addition, the final design of the proposed transmission line would look to mitigate the risk of bushfire impacts from, or to, the new infrastructure as far as practicable, through detailed mitigation measures in how the final design will be designed, operated and maintained. These measures may include requirements to undertake periodic fuel load reduction, manage asset protection zones and regularly inspect infrastructure. These measures, along with any other required measures, would be identified in a Bushfire Risk Assessment as part of the EIS.

#### How can we manage bushfires on the property with the transmission line present?

As well as general community concerns about the increased risk of bushfires, landowners are worried that they (and local fire brigades) will not be able to manage bush or grass fires burning near transmission lines. Someone asked whether a power line that is keeping the lights on in Victoria will be turned off for a local fire.

Transgrid manages bushfires near transmission lines in line within the requirements of the Electricity Networks of Australia National Guidelines on Electrical Safety for Emergency Personnel (ENA DOC 008-2006). This guideline provides important safety information for emergency services when firefighting and bushfire prevention activities and includes the following advice:

- Do not spray water on or near wires or insulators from ground or air
- Wait for fire to burn clear of the cleared areas beneath lines before commencing a mop up operation
- At all times keep personnel and vehicles a minimum of 25 metres clear of either a head fire, or a flank fire burning under or within 25 metres of the powerlines
- When near or underneath powerlines undertaking mop-up activities maintain at least 25 metres to the fire edge. Mop-up may include the knockdown of low (less than 2 metres high) isolated flames/spots/ smouldering logs, which are not producing a convection column or heavy smoke plume. In such cases:
  - Never direct the hose stream into the power line
  - Never direct the hose stream into a smoke plume that is near (less than 25 metres from) or reaching power lines. Keep stream no higher than a person's head height
  - Never direct the hose stream at a burning bush or tree (more than head height) in a power line easement
  - Bushes and trees burning in power line easements present a real threat of creating a flashover to earth from wires keep at least 25 metres clear
  - When crossing power line easements, ensure there is adequate clearance between the highest point of the vehicle (including aerials) and the power lines, avoiding areas with tall vegetation under lines
  - Do not enter substations and await the arrival of Transgrid personnel.

In addition to the guideline, Transgrid specific safety information for emergency services when fighting bushfires includes:

 Any firefighting or fuel reduction activities to be carried out in the vicinity of Transgrid powerlines shall be in consultation with Transgrid. Where fire control activities are still considered necessary from the cleared areas under lines, early advice to Transgrid will allow an assessment of risks associated with de-energising the line.



- Emergency services may 'water bomb' on/around transmission lines however we ask these service to keep Transgrid informed of these activities as they may impact the longer-term performance of the network
- Machinery shall be limited to 4.3m in height when on an easement.

Transgrid maintains engagement with the Rural Fire Service via:

- Bushfire Management Committees Our staff attend meetings regarding transmission electricity infrastructure
- Agency Coordination Liaison with government agencies responsible for emergency response for energy and utility services
- Disconnection/Safe Access Our operators coordinate RFS electricity disconnection requests during emergencies
- Liaison Officers Our staff are deployed to act as Liaison Officers during bushfires. They coordinate information and assist Transgrid field staff arrange access
- RFS ICON We utilise RFS ICON to provide real-time awareness of threats and access to local emergency centres.

See Transgrid's <u>Managing Bushfire Risk Fact Sheet</u> for more details about how to manage bushfires on properties with the transmission lines.

# 5.16. Who is required to hold insurances? How will landowners be compensated for additional insurance premiums required from hosting the infrastructure on their land?

Transgrid holds insurance policies to cover the risks of operating a transmission network. This includes cover for fires that are started by our network and result in third party property damage and / or bodily injury. In other words, Transgrid will be legally liable for any loss or damage to third parties for which it is found to be legally responsible.

During the process to assess landholder compensation, Transgrid reviews insurance requirements and, if appropriate, includes additional insurance premium costs as part of the compensation package.

#### 5.17. What about public safety near the transmission lines?

Transgrid will work with all affected landowners to ensure they clearly understand what operations can occur near the transmission lines when they are built. Exclusion zones are used to provide a safe clearance area around Transgrid transmission lines and structures to protect public safety and the network.

Many activities are permitted within Transgrid easements without requiring consent, such as cropping and grazing, operation of mobile plant, equipment, machinery and irrigation (up to 4.3 metres in height), and planting and cultivating trees (growth up to 4 metres in height). See Transgrid's <u>Easement Guidelines</u>: <u>Living and Working with electricity transmission lines</u> to understand what activities can be safely undertaken within an easement.



#### 5.18. What about electric and magnetic fields (EMF) and risks to our health?

Transgrid considers EMF closely when designing projects such as VNI West. A higher voltage does not necessarily mean a higher magnetic field. Low voltage power lines can have higher magnetic fields than high voltage transmission lines. For double circuit lines it is possible to arrange the phases to maximise the field cancellation, reducing EMF away from the transmission line. This means that, outside of the easement, EMF are likely to be similar to existing background levels.

Internationally, almost 3,000 studies have been carried out into EMFs. Leading health bodies such as the World Health Organisation, the US National Institute of Environmental and Health Sciences and the UK National Radiological Protection Board have evaluated the research to assess the likelihood of health effects associated with exposure to EMFs.

In Australia, the <u>Australian Radiation Protection and Nuclear Safety Agency</u> (ARPANSA) has advised that 'The scientific evidence does not establish that exposure to the electric and magnetic fields found around the home, the office or near powerlines causes health effects...There is no established evidence that the exposure to magnetic fields from powerlines, substations, transformers or other electrical sources, regardless of the proximity, causes any health effects.'

The World Health Organisation has advised that: *…current evidence does not confirm the existence of any health consequence from exposure to low level electromagnetic fields.*'

Transgrid plans and operates its transmission network under National Guidelines managed by the ARPANSA. Transgrid adopts a precautionary approach to the management of electric and magnetic fields by:

- Taking electric and magnetic fields into account in the design and location of new facilities
- Closely monitoring ongoing research and reviews by scientific panels and international policy developments
- Regularly reviewing our policies and practices in light of the latest scientific information
- Measuring field strengths in and around our own installations and other places where appropriate
- Providing up-to-date information to interested people on request. Our <u>EMF fact sheet</u> provides general information on electric and magnetic fields in relation to our network as well as resources for further information.

EMF modelling will be included in the project's EIS. The modelling will indicate the degree of EMF at various distances, with all levels to be within the guidance set by ARPANSA.

#### 5.19. What about biosecurity?

Some community members are concerned that the construction and maintenance of the proposed transmission line would result in disease, pests and weeds being introduced onto local properties.

Transgrid has biosecurity responsibilities under the NSW *Biosecurity Act 2015* and the associated Biosecurity Regulation 2017. We use a range of biosecurity measures and protocols as part of our standard operations to minimise the risk of off-site transport or spread of disease, pests or weeds when working on easements across NSW.



Where Transgrid needs to gain access to properties as part of future phases of the project, including initial environmental surveys and construction, we will work with property owners to ensure appropriate biosecurity controls minimise the risk of off-site transport or spread of disease, pests or weeds. These controls typically include:

- Contacting landowners prior to accessing properties (to ensure no recent specific property restrictions/biodiversity requirements apply)
- Inspecting and cleaning vehicles, machinery and personnel equipment before moving it on and off construction work areas or between properties (or in line with any specific landowner requirements identified in a PMP)
- Minimising movements across adjoining farmland including trip numbers and locations
- A 'come clean-go clean' policy and would adhere to any property-specific biosecurity plans before entering a property.

#### 5.20. What about the impacts to biodiversity and other sensitive areas?

People are concerned about general flora and fauna impacts, native vegetation and remnant tree stand loss, specific impacts to lignum swamp areas around Merran Creek and impacts to sensitive breeding areas of the Plains Wanderer. A series of the submissions identified the potential impacts of the proposal on the Lignum and Indigo bush, lowlands on the south side of the Billabong Creek. One submission noted potential impacts to different flora species that are considered to be present within the area proposed for the project, in particular within the area identified as the 'Old Man Plain'.

As part of the EIS, Transgrid will undertake a biodiversity impact assessment to evaluate the potential impacts to biodiversity from construction and operation of the project. The assessment will include detailed field ecology investigations to identify flora and fauna species and plant community types that are present along the proposed route, including any potential threatened species and communities that need to be avoided.

The field survey data gathered will help Transgrid identify the final construction footprint and, ultimately, the 70-metre-wide easement for the final location of transmission line infrastructure. The aim is to avoid or minimise as many impacts as possible to protected biodiversity matters, remnant tree stands, waterways or other sensitive ecological areas. Avoiding the Plains Wanderer sensitive habitat is a key priority and will be a focus throughout the design refinement phase. As described in section 3.2, the preferred route avoids potential impacts to vegetation within the vicinity of Billabong Creek, east of Moulamein in response to community feedback.

The biodiversity impact assessment will be completed in accordance with relevant legislative and regulatory requirements including the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), the NSW *Biodiversity Conservation Act 2016* and the Biodiversity Assessment Method (BAM) 2020. Under the BAM, the project must avoid or minimise direct, indirect and prescribed impacts on biodiversity values. Any remaining impacts on biodiversity values would be addressed by the project's biodiversity offset obligation.



#### 5.21. What about vegetation clearing impacts?

Not all vegetation within the preferred easement would need to be removed to accommodate the final transmission line. Depending on the final easement alignment and vegetation types impacted, only partial clearing of some vegetation species may be required where it meets Transgrid's Vegetation Management Guidelines and any requirements from planning authorities. These will be outlined in the project's EIS. We will also seek to reduce the amount of centreline vegetation clearance required during line stringing and investigate the use of aerial stringing of the transmission lines across sensitive environmental areas (where this is considered to be practical and feasible) which may assist in minimising required clearing.

During construction, some additional areas may be required outside the 70-metre easement. Wherever possible, construction pads, compounds and accommodation sites would be located in areas where vegetation clearing is not required or can be avoided.

# 5.22. Can subsurface construction adversely affect groundwater dependant ecosystems?

Groundwater dependent ecosystems (GDEs) rely on the surface or subsurface presence of groundwater for survival or as a supplementary source of water. Terrestrial GDEs likely to occur within the final preferred route are river base flows, floodplains and riparian vegetation associated with existing waterways. Aquatic GDEs may also be present where the proposed transmission line crosses existing watercourses.

Experience suggests that, while constructing the transmission line structures may require piling works up to around 16 metres deep, they would only impact a relatively small surface area, which is unlikely to restrict groundwater flows or alter groundwater quality.

To make sure this is the case, a groundwater assessment would be included in the EIS to identify potential risks to groundwater, GDEs and other groundwater users during construction and operation of the project. The assessment would involve a desktop review of existing and available geological and hydrogeological information and features, including groundwater levels, groundwater flow directions, groundwater quality and the potential impacts of changes to these on GDEs. The review would include geological maps, the Bureau of Meteorology Australian Groundwater Explorer, the Bureau of Meteorology GDE Atlas, and data/reports from studies in the final preferred route.

Based on this assessment, we will take appropriate avoidance, mitigation and management measures to minimise potential inflows and their impacts to the groundwater regime and users.

#### 5.23. What socio-economic impacts will the project have?

The preferred route has been moved north of the township of Moulamein in response to community concerns about its impact on town residents and visitors (see section 3.2.1). Despite this, the project will still have some socio-economic impacts, including impacts from loss of productive land, potential impacts that the visual presence of a transmission line may have on tourism activity, and a lack of local economic benefits to the area.

As part of the EIS, a Social Impact Assessment will be prepared to evaluate social and economic impacts including potential changes to way of life, community, accessibility, culture, health and wellbeing and tourism during the construction and operation of the project. The assessment will recommend management and mitigation measures to minimise these impacts.



An economic impact assessment will also be carried out on the project area, including the impacted local government areas that would consider both the local and regional economic effects the construction and operation of the proposed transmission line would have (such as increase construction workers in the local area or use of local materials, and broader economic impacts of the projects' operation).

# 5.24. The project proposal is causing mental health stress on some members of the community. What is Transgrid doing about this?

We recognise our transmission projects may have increased the level of stress and anxiety experienced by landowners and have engaged Assure Programs, an independent, confidential counselling service, to provide free, short-term support to anyone who feels they need assistance or simply wants to talk. If you are a landowner and would like confidential support and counselling, we encourage you to book a free appointment by calling Assure on 1800 808 374, or request an <u>appointment online</u>.

When you call Assure, please let the team know that you are from Transgrid and the business unit is 'Landowners'. This will ensure you are able to get the support you need. You are not expected to provide the reason – this is a conversation saved for your session with the psychologist.

In addition, the NSW Centre for Property Acquisition has free support and counselling services available to any landowners affected by an acquisition. For more information, call 1300 029 146 or visit their website.

#### 5.25. What benefits are available to the impacted communities in the region?

We intend to invest in the local community so that the VNI West project leaves lasting benefits. During community consultation sessions, several ideas for this investment were discussed including:

- Improving mobile telecommunications in the region The region has significant mobile black-spot areas. Mobile access is limited in between the larger towns, and sometimes not available at all in the smaller towns. The community is interested in using tower infrastructure to boost mobile service coverage.
- Improving road surfaces Some of the smaller towns are connected by dirt roads. Upgrading and
  improving these roads to asphalt surfaces would improve connectivity and reduce travel time for local
  residents.
- **Providing additional firefighting resources** The community would benefit from an additional RFS station and an additional RFS truck.

Transgrid will continue to work with the community to determine the viability of the ideas developed to date and to identify other investment opportunities.

Additionally, delivery will bring about the opportunity to explore new income streams and supply chain opportunities, local employment, support for local tourism and hospitality and accommodation as well as training and development.



#### 5.26. What noise impacts will the project have?

During operation, the transmission lines may generate some noise associated with accumulation of pollution and/or water droplets on the conductor surface of the transmission lines, which can result in corona discharge noise. This corona discharge noise is more prominent during wet weather (rain, mist or fog) and often sounds like a 'crackling noise'.

Audible impacts of the project on the surrounding environment and required mitigation strategies would be assessed in a noise and vibration impact assessment to be included in the EIS. The assessment would be conducted in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) for construction and the NSW Environment Protection Authority's *Noise Policy for Industry* (EPA, 2017) for operation. Assessment of audible noise from transmission lines will be completed to determine potential impacts on residences. These impacts will be considered during detailed design when the transmission line route is finalised and confirmed with noise monitoring once the transmission lines are operational.

Mitigation for confirmed operational impacts will be identified, where they can be feasibly implemented, as part of the noise and vibration impact assessment.

#### 5.27. What are the potential traffic impacts and are local roads being upgraded?

The preferred route area includes several major roads and a large number of local and private rural roads with varying speed limits. Construction traffic associated with the project would include heavy (including over-size and non-standard loads) and light vehicles, increasing local and regional traffic. Estimates of truck and vehicle movements depend on the construction methodology and staging plans and will be described as part of the EIS.

There may also be some temporary disruptions to traffic movements along roads within the preferred route and surrounds during the stringing works where these occur above road corridors.

Construction and operational impacts will be presented in a traffic and transport impact assessment prepared as part of the EIS. The assessment will determine the existing condition and suitability of potential haulage routes for transportation of heavy and/or oversized equipment.

Where possible, we will use existing roads and tracks, but we may need to upgrade some of them or build new access tracks to some transmission tower sites. The extent of road upgrades will be identified in the EIS.

#### 5.28. How will soil erosion be managed?

The final preferred route contains a range of geotechnical and soil conditions and has been selected to minimise the amount of waterway crossings to reduce potential impacts related to erosion and sedimentation.

As part of further engineering design, when the route is narrowed to a 70-metre easement, we will prioritise minimising waterway crossings and consider easement and tower setbacks from creeks as well as other areas of erodible geological conditions.



Soil disturbance activities during construction of the project may still lead to erosion and sediment transfer offsite, which may result in potential sedimentation of surrounding land and waterways. The EIS would consider the potential impacts of soil erosion to water features and site run-off during construction and in the operational phase. site-specific Erosion and Sediment Control Plans will be developed by a Certified Professional in Erosion and Sediment Control (CPESC) for the project construction phase and will address areas identified as high risk i.e. adjoining waterways.

The EIS will also consider the projects' operational impacts related to managing and maintaining access tracks. The assessment would identify management and mitigation measures, including measures to manage the risk of contamination, soil erosion and sedimentation as well as any monitoring requirements.

# 5.29. What measures are in place to protect my land from exposure to chemical and biological hazards?

During construction, various hazardous materials and chemicals may be used and/or stored on site. Typically, hazardous materials and chemicals used during construction would include:

- Acetylene
- Adhesives, glues, epoxies
- Concrete and other mortar products
- Contact cleaners
- Cold-galvanising spray
- Fuels, oils and lubricants (such as diesel, unleaded petrol, thinners)
- Paints and other paint markers.

The main construction compounds and other ancillary construction sites would be sited and arranged so that hazardous materials are stored appropriately and at a suitable distance from any nearby sensitive environments or accommodation elements. Environmental and OHS hazards and risks associated with the on-site storage and use of chemicals, fuels and materials would be managed through standard mitigation measures developed as part of the Construction OHS and Environmental Management Plans. Storage of dangerous goods and hazardous substances would be in accordance with the supplier's instructions, and would comply with applicable legislation, guidelines and Australian Standards.

During operation, hazardous materials and chemicals maintained on site at the expanded Dinawan 500kV substation might include small amounts of:

- Insulating oil
- Weed control chemicals (using approved herbicides compatible with agricultural practices)
- Unleaded fuel.

In the operational phase the substation would include a separate drainage system to capture oil spills. If this happens, the spill would be contained, pumped and disposed of at a licensed facility in accordance with Transgrid's ongoing operational requirements/plans.



#### 5.30. Will construction sites be rehabilitated?

Construction sites will be rehabilitated progressively as building work is completed (wherever possible, or in accordance with the final PMP agreed to with the landowner). Transgrid and our contractors will:

- Demobilise construction compounds and the worker accommodation camps
- Remove materials, waste and redundant structures not required during operation
- Remove temporary fencing and environmental controls
- Restore disturbed areas to their previous condition as far as practicable, in accordance with required guidelines, planning approval requirements and in agreement with landowners
- Re-landscape some areas, where needed, including replacing topsoil and establishing grass or suitable vegetation
- Replacing fences, gates and other property infrastructure.

Construction areas that do not include permanent infrastructure would be rehabilitated as soon as is practical, consistent with the existing surrounding landscape and any operational maintenance requirements.

Rehabilitation will be carried out in consultation with the relevant council, planning authorities and affected landowner(s).



# 6. References

Transgrid, 2023. Victoria to NSW Interconnector West Preferred Corridor Report – NSW October 2023

Transgrid, 2024. Victoria to NSW Interconnector West Draft Route Report – NSW February 2024



## Appendix A How we consulted on the draft preferred route option

#### Overview

Our community project and engagement teams talked with landowners and residents across the broad preferred corridor and along the proposed route alignments. Early community engagement ensures that people living or working near these corridors are kept informed at all stages of the planning process and have an opportunity to have their say.

#### Landholder letters

Letters were sent to landowners whose property was identified within the draft preferred route on 29 January 2024. This letter provided information on about the draft route report, where they could find more information and outlined the next steps in the route identification process.

#### Advertising

A large-scale print advertising campaign was undertaken in December 2023 to February 2024:

- A 'Save the date' style advertisement (published 18 to 22 December 2023) to advise of Transgrid's plan to carry out engagement activity in February 2024.
- A 'schedule release' advertisement (published 15 to 26 January 2024) to advise of the specific dates of Transgrid's engagement
- A 'Draft Route Report published' advertisement (published 29 January to 9 February 2024) to call for feedback on the Draft Route Report, and to promote Transgrid's engagement schedule.

A summary of the advertising undertaken is presented in Table A.1.

Туре	Dates	Channel	<b>Reach/circulation</b>
Print media advertising	Thursday 21 December 2023 Thursday 25 January 2024 Thursday 1 February 2024	The Land	112,512
	Tuesday 19 December 2023 Friday 22 December 2023 Tuesday 16 January 2024 Friday 19 January 2024 Tuesday 23 January 2024 Friday 26 January 2024 Tuesday 30 January 2024 Friday 2 February 2024 Tuesday 6 February 2024 Friday 9 February 2024	Deniliquin Pastoral Times	2,441

#### Table A.1 Summary of advertising



Туре	Dates	Channel	<b>Reach/circulation</b>
	Wednesday 20 December 2023 Wednesday 17 January 2024 Wednesday 24 January 2024 Wednesday 31 January 2024 Wednesday 7 February 2024	Finley Southern Riverina News	1,497
	Thursday 21 December 2023 Thursday 18 January 2024 Thursday 25 January 2024 Thursday 1 February 2024 Thursday 8 February 2024	The Koondrook Barham Bridge	1,200
	Tuesday 19 December 2023 Friday 22 December 2023 Tuesday 16 January 2024 Friday 19 January 2024 Tuesday 23 January 2024 Friday 26 January 2024 Tuesday 30 January 2024 Friday 2 February 2024 Tuesday 6 February 2024 Friday 9 February 2024	The Swan Hill Guardian	2,995
	<ol> <li>Wednesday 20 December</li> <li>Wednesday 17 January 2024</li> <li>Wednesday 24 January 2024</li> <li>Wednesday 31 January 2024</li> <li>Wednesday 7 February 2024</li> </ol>	The Hay Riverine Grazier	1,000
Digital advertising	15 January 2024	Email: Community engagement schedule for February 2024	298 email recipients
	29 January 2024	Email: Call for feedback on Draft Route Report	298 email recipients
	1 March 2024	Email: Last reminder on call for feedback on Draft Route Report	307 email recipients
	15 January – 4 March 2024	Website: 15 January: Community engagement schedule 29 January: Draft Route Report published	4,723 website visits 2,839 unique users
	30 January – 7 February 2024	Facebook: Promotion of information session schedule	Reach: 19,542 Ad Clicks: 1,427
	29 January 2024	LinkedIn: Promotion of Draft Route Report and call for feedback	Reach: 42,314 followers



#### **Key Stakeholder Briefings**

Briefings and project updates were provided to key stakeholders outlined in Table A.2.

Table A.2 Summary	of key	stakeholder	briefings
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Date	Stakeholders	Topics
30 January 2024	Coleambally Irrigation Co-operative Ltd	<ul> <li>Draft Route Report</li> <li>Water supply for construction</li> <li>Construction legacy to improve infrastructure for Rural Fire Service</li> </ul>
30 January 2024	Federal Member for Farrer, Sussan Ley MP	<ul> <li>Draft Route Report</li> <li>Route selection process and consultation</li> </ul>
30 January 2024	Federal Senator Perin Davey	<ul><li>Draft Route Report</li><li>Route selection process and consultation</li></ul>
31 January 2024	Edward River Council Murray River Council Murrumbidgee Council <i>via Community Consultative Group</i> (CCG)	<ul> <li>Route selection process and Draft Route Report</li> <li>Route selection consultation</li> <li>Community investments and benefits</li> </ul>
31 January 2024	<ul> <li>Community Consultative Group (CCG) meeting</li> <li>Leon Atkinson, Cummaragunja LALC – Apology</li> <li>Donald Bull, Landholder – Attended</li> <li>Sarah Ryan, Murray River Council – Attended</li> <li>Michael Chalmers, Ricegrowers Association – Apology</li> <li>Trevor Clark/Bob Crawford, Yanco Creek and Tributaries Advisory Council – Attended</li> <li>David Crew, Yarkuwa Indigenous Knowledge Centre – Attended</li> <li>Mark Dalzell, Edward River Council – Attended</li> <li>Rose Dunn, Deniliquin LALC – Apology</li> <li>Alison Glenn, Bunnaloo branch, NSW Farmers - Attended</li> <li>John Kerr, Moama LALC – Apology</li> <li>Mick Lalor, NSW NPWS – Attended</li> </ul>	



Date	Stakeholders	Topics
	<ul> <li>Bruce Rollinson, Landholder – Attended</li> <li>Shannon Sampson, Community member – Apology</li> <li>Peter O'Shannassy, Murray Local Land Services – Attended</li> <li>Gary Stoll, Murrumbidgee Council - Apology</li> </ul>	
2 February 2024	Energy Corporation of NSW	<ul> <li>Update on preferred route</li> <li>Timing and coordination of VNI West</li> <li>Understanding Energy Corporation of NSW's oversight of the Renewable Energy Access Scheme</li> </ul>
8 February 2024	Helen Dalton MP	<ul> <li>Route selection process and Draft Route Report</li> <li>Route selection consultation</li> </ul>
8 February 2024	NSW Farmers	<ul> <li>Project overview</li> <li>Route selection process and Draft Route Report</li> <li>Route selection consultation</li> <li>Landowner engagement</li> </ul>
15 February 2024	(NSW) Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) – Biodiversity, Conservation and Science (BCS)	<ul> <li>Project overview</li> <li>Project development to date (route selection process)</li> <li>Approach to environmental assessment – biodiversity matters</li> <li>Ongoing consultation with BCS, (NSW) DCCEEW.</li> </ul>
15 February 2024	NSW DCCEEW – Heritage (Heritage NSW)	<ul> <li>Project overview</li> <li>Project development to date (route selection process)</li> <li>Approach to Aboriginal heritage assessment</li> <li>Land access status</li> <li>Ongoing consultation with Heritage NSW</li> </ul>
15 February 2024	Virya Energy	<ul> <li>Update on preferred route</li> <li>Update on Virya Energy project development</li> <li>Timing and coordination of project delivery</li> </ul>



Date	Stakeholders	Topics
15 February 2024	Shane Flack (Aerial Agricultural Pilot, Jerilderie)	<ul> <li>Discussion on aerial agricultural application and how pilots work around transmission lines</li> </ul>
16 February 2024	(Commonwealth) Department of Climate Change, Energy, the Environment and Water (Commonwealth DCCEEW)	<ul> <li>Project overview</li> <li>Project development to date (route selection process)</li> <li>Approach to environmental assessment <ul> <li>Commonwealth EPBC matters</li> </ul> </li> <li>Land access status</li> <li>Ongoing consultation with <ul> <li>(Commonwealth) DCCEEW</li> </ul> </li> </ul>
16 February 2024	RES Group	<ul> <li>Update on preferred route</li> <li>Timing and coordination of project delivery</li> <li>Opportunities for coordinating easements back to Dinawan</li> </ul>
24 February 2024	Barapa Barapa & Wamba Wemba Traditional Owners	<ul> <li>Project overview</li> <li>EIS Timeline</li> <li>Aboriginal Cultural Heritage Assessment</li> </ul>
04 March 2024	Moama Local Aboriginal Land Council	<ul> <li>Project overview</li> <li>Project development to date (route selection process)</li> </ul>
05 March 2024	Spark Renewables	<ul> <li>Update on preferred route</li> <li>Update on Spark Renewables project development</li> <li>Timing and coordination of project delivery</li> </ul>

#### **Community information sessions**

Transgrid held three Town Hall presentations, 10 community information sessions and attended two community events over a five-week period (29 January 2024 to 4 March 2024). Details of these events are captured Table A.3below.

Table A.3 Schedule of community information sessions and participation at community events

Date	Format	Location	Attendance
7 February 2024	Town hall session	Moulamein	110
8 February 2024	Town hall session	Deniliquin	12
9 February 2024	Town hall session	Jerilderie	10
13 February 2024	Community drop-in	Deniliquin	1
13 February 2024	Community drop-in	Barham	1



Date	Format	Location	Attendance
14 February 2024	Community drop-in	Moulamein	5
14 February 2024	Community drop-in	Conargo	5
15 February 2024	Community drop-in	Jerilderie	3
15 February 2024	Community drop-in	Wanganella	16
27 February 2024	Community drop-in	Barham	4
28 February 2024	Community drop-in	Moulamein	8
29 February 2024	Community drop-in	Conargo	0
29 February 2024	Community drop-in	Wanganella	5
1-2 March 2024	Community event	Deniliquin Show	Not captured
2 March 2024	Community event	Jerilderie Fun Fair	Not captured

#### Other consultation activities

#### Fact Sheets and guides

A range of fact sheets has been produced on topics related to the project and made available to landowners, and the community via the website. These include:

- Project overview factsheet
- <u>VNI West Route Development fact sheet</u>
- VNI West Land access fact sheet
- VNI West Ecology fact sheet
- <u>VNI West Cultural Heritage fact sheet</u>
- Managing Bushfire fact sheet
- Undergrounding fact sheet
- <u>VNI West fact sheet February 2024.</u>

In addition, the <u>Landowner easement and compensation guide</u> and <u>Easement guidelines</u> were made available.

#### **Interactive Map**

An <u>interactive map</u> was developed and used as tool to elicit and illustrate information with landowners and the community. This map showed publicly available information in the categories of:

- The draft preferred route option and where it sat within the preferred corridor
- Technical considerations: including known airstrips (licensed and private), known renewable infrastructure, mapped flood prone land and mapped bushfire prone land (Category 1)
- Environmental considerations: including threatened ecological communities, National Parks and State Forests, and Ramsar and other wetland areas
- Social considerations: including built up areas, mapped irrigated cropping, and heritage sites
- Existing infrastructure including other powerlines within the region
- Other contextual information such as local government boundaries, REZ locations major roads and towns and existing energy infrastructure.

The map was also used to support conversations held at the community information sessions.



# Appendix B How was the draft preferred route identified?

The following sections provide an overview of how the draft preferred route was identified. Further detail is provided in the *Draft Route Report* (Transgrid, 2024).

#### Identification of route options

Between October 2023 and January 2023, Transgrid assessed the technical, environmental and community and social constraints and opportunities identified within the preferred corridor for the project (as identified in the *Preferred Corridor Report* (Transgrid 2023)).

Four route options were identified for detailed consideration within the preferred corridor for the Project. The route options took into consideration the Project needs, objectives and technical requirements of the Project and initial community and stakeholder feedback and engagement gathered during this period.

The four feasible route options developed are shown in Figure B.1.



Figure B.1 Route options considered



These route options were presented in the Draft Route Report. These route options were developed through:

- Mapping high and moderate potential impact constraints. Specifically, the preferred corridor has a number of areas the route should seek to avoid, including:
  - the built-up urban areas of Moulamein and Wanganella
  - important ecological habitats, land with high agricultural value
  - flood-prone land or challenging geological conditions
  - alluvial channel deposits or softer soils
- Using desktop analysis to identify best-fit alignments that meet high-level engineering requirements, like maintaining long sections with minimal turning points
- Considering the technical, environmental and social and community impacts of each route option
- Considering feedback on various constraints and opportunities from the community and stakeholders.

The preferred route was selected based on a range of technical, environmental and community criteria and using a weighted scoring system to assess the options (Figure B.2).

	Route A	Route B	Route C	Route D
Assessment criteria	Score	Score	Score	Score
TECHNICAL CONSIDERATIONS	1	11	15	12
Land use	5	5	5	5
Engineering	-9	-4	-8	-11
Land use/land tenure	5	5	5	5
Bushfire	0	0	3	3
Opportunities	0	5	10	10
ENVIRONMENT CONSIDERATIONS	11	7	20	20
Ecology	-3	-11	-8	-8
Heritage	8	13	10	10
Land use / land tenure	3	3	3	3
Hydrology and groundwater	-1	-2	0	0
Soil and contamination	4	4	5	5
Opportunities	0	0	10	10
SOCIAL AND COMMUNITY CONSIDERATIONS	-9	-1	5	2
Land use	-9	-1	5	2
Visual landscape and amenity	0	0	0	0
Opportunities	0	0	0	0
Total score	3	17	40	34

Note: A higher score equates to an improved corridor outcome, with the highest score indicating the recommended preferred route

Figure B.2 Summary of route option evaluation for the assessed routes/options.

Route C, the recommended preferred route (see Figure B.3), led across all three criteria because it offered:

#### 1. A good technical outcome as it:

- a. Had a comparable route length to the other options considered
- b. Allowed for the straightest alignment compared to the other route options, improving visibility and reducing construction and maintenance costs



c. Provided the greatest opportunity to co-locate the new transmission line with existing infrastructure assets, like railway corridors and roads minimising the need for building extensive new access tracks and maximising land use efficiency.

#### 2. A balanced environmental solution as it:

- a. Was further away from sensitive ecological environments, such as the wetlands associated with the Werai State Forest and other areas of the Edward-Wakool River Catchment
- b. Avoided large patches of protected Plains Wanderer primary habitat and, with a further refined easement route, would allow for easement options to be identified that would maximise avoidance of this critical habitat
- c. Had fewer potential impacts to existing waterways
- d. Reduced impacts on known (previously identified) Aboriginal sites (although other sites would likely be identified within this route option as part of ongoing heritage investigations)
- e. Minimised impacts to existing agricultural and irrigated cropping lands by following infrastructure corridors, travelling stock routes and existing property fence lines to a greater degree than other route options.

#### 3. An effective social and community outcome as it:

- a. Was in proximity to the least number of houses along the length of the route
- b. Impacted the lowest amount of mapped irrigated cropping land compared to other route options.



Figure B.3 Draft preferred route