September 2026

Preferred route and reference design community summary

Offshore wind energy transmission in Gippsland

VicGrid is developing a shared transmission line to connect 2 gigawatts (GW) of offshore wind energy generated off the Gippsland coast to Victoria's electricity grid.

VicGrid has now released the preferred route and an early version of the project design – known as the reference design. This summary explains how we've refined the draft preferred route into a preferred route, what has changed and why, and the reference design that will be assessed through an Environment Effects Statement (EES).

Your feedback – along with environmental, cultural heritage and technical studies – has helped refine the route. A key outcome is a reduction in the number of private properties directly affected from 24 to 20.

The reference design will guide the project's detailed design, leading to a final easement.

VicGrid

VICTORIA State Government

About the preferred route, easement and reference design

The **preferred route** is about 60 km long and 200 m wide between the Loy Yang Power Station switchyard and a proposed new terminal station in Giffard. It's a defined area for the transmission line that will include a final easement.

A **transmission easement** is an area of land where transmission infrastructure can be built and maintained.

The **reference design** is an early version of the project design. It shows one way the project could be built including towers, indicative easement, access tracks and likely construction activities, so the EES can assess the likely impacts and how they can be avoided, reduced or managed.

The preferred route and indicative easement are essentially where the transmission line could go, while the reference design is what's involved in building it.

The final easement, tower locations and construction methods will be refined during detailed design, which will consider further technical investigations and engagement with landholders and the community.

The **development partner** will work alongside VicGrid on design, procurement and project management, and preparing the project for delivery.

The project footprint has been progressively refined from a study area to a corridor, a draft preferred route, and now a preferred route with an indicative easement and reference design. The preferred route is not the final easement. We'll work with our development partner once appointed to:

- Continue engaging with landholders and the community
- Confirm the final easement (about 70 m wide in most areas and, in some areas, up to 170 m wide)
- Confirm exact tower locations (called micro-siting)
- Negotiate landholder payments
- Design, procure and prepare the project for delivery

Project timeline

2023

- Community engagement
- Options assessment method consultation

2024

- Options assessment report released
- Study area announced
- Landholder and community consultation on study area
- Study area refined to remove Holey Plains State Park and areas near Loy Yang Power Station

2025

- EES scoping requirements released
- Corridor and draft preferred route announced
- Landholder and community consultation on corridor and draft preferred route
- Environmental and technical investigations

2026

- Environmental and technical investigations
- (Now) Confirm the preferred route
- Appoint a development partner

2027–2032

- Exhibit the EES for public review
- Minister for Planning's assessment of the EES
- Finalise detailed design for construction
- Identify a final transmission easement
- Build the new transmission line

How we identified the preferred route

To identify the preferred route, we listened to feedback from landholders, communities, Traditional Owners, asset owners and businesses.

We considered this feedback alongside environmental, cultural heritage and technical factors, guided by our key principles, to find the best possible outcome. In some areas, technical and environmental requirements limited how much we could move the line.

Our guiding principles	Technical and environmental constraints
• Minimise impacts on landholders and communities, including views and amenity, the natural environment and existing and future land use • Respect and protect First Peoples' cultural values and aspirations • Minimise costs for energy consumers where practical, while balancing environmental, social and technical considerations • Reduce overall engineering challenges during construction and avoid clashes with existing infrastructure	• Areas with significant biodiversity values • Visual and amenity impacts • Cultural heritage sites • The number of Basslink crossings required • Separation between Basslink and the new transmission line • The need to minimise changes in the transmission line's direction • Construction challenges such as difficult terrain

What you told us – and what we did in response

We have spoken extensively with landholders in the draft preferred route and the broader community to understand what's important to people, from land use and existing infrastructure to local biodiversity and visual amenity.

Thank you to everyone who shared their valuable local knowledge.

33
community events with 450 attendees

14
online survey responses on Engage Victoria

130+
in-person meetings with landholders

1,100+
downloads of the corridor and draft preferred route summary

Summary of engagement since October 2025.

You told us about:

- Land use and farming practices
- Local plants and animals
- Ground conditions
- Valued places and scenic viewpoints
- Homes, sheds, irrigation systems and other structures
- Water movement, drainage and flooding

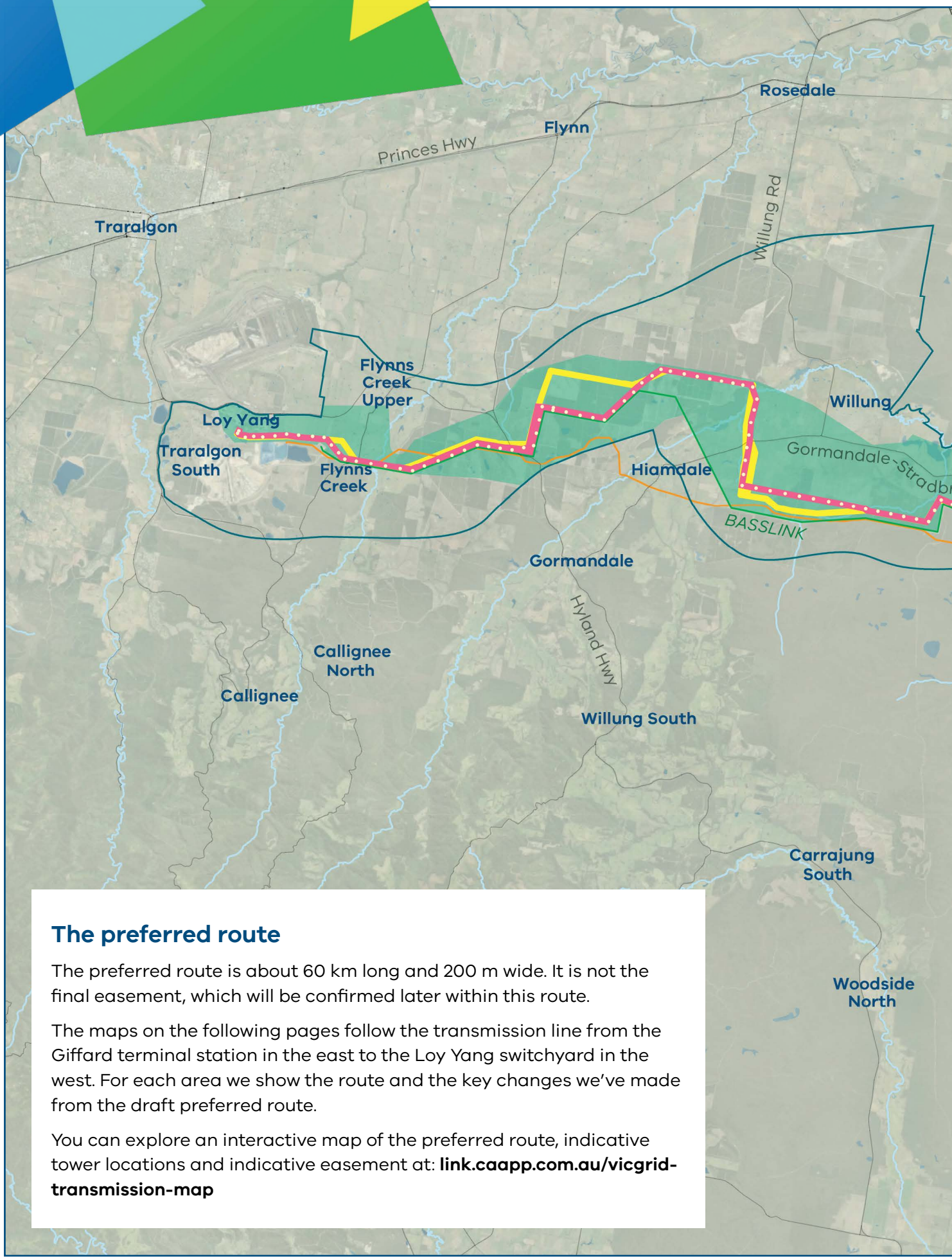
You asked us to:

- Follow or stay close to existing infrastructure where feasible
- Use public land and plantations rather than private land where possible
- Avoid native vegetation, sensitive habitats and protected species
- Reduce impacts on private landholders and farming businesses

What changed as a result:

- Moved the line closer to the existing Basslink electricity interconnector in several areas
- Worked with plantation owners to minimise impacts wherever possible

A key outcome from the refinement process is a reduction in the number of directly impacted private properties from 24 to 20. The following pages show the changes made in each area.

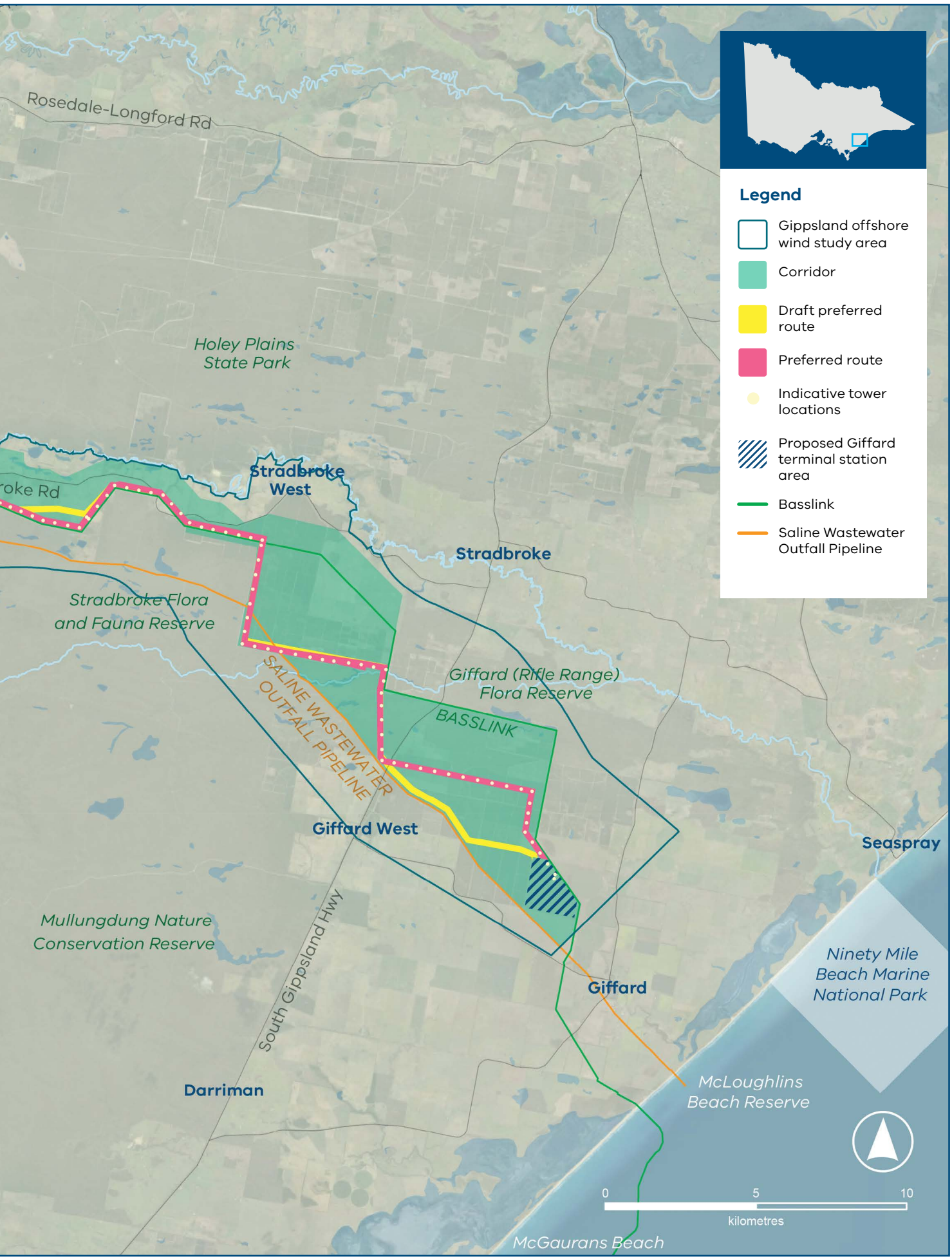


The preferred route

The preferred route is about 60 km long and 200 m wide. It is not the final easement, which will be confirmed later within this route.

The maps on the following pages follow the transmission line from the Giffard terminal station in the east to the Loy Yang switchyard in the west. For each area we show the route and the key changes we've made from the draft preferred route.

You can explore an interactive map of the preferred route, indicative tower locations and indicative easement at: **link.caapp.com.au/vicgrid-transmission-map**


Legend
Gippsland offshore wind study area
Corridor
Draft preferred route
Preferred route
Indicative tower locations
Proposed Giffard terminal station area
Basslink
Saline Wastewater Outfall Pipeline
Rosedale-Longford Rd
Holey Plains State Park
Stradbroke West
Stradbroke
Stradbroke Flora and Fauna Reserve
Giffard (Rifle Range) Flora Reserve
BASSLINK
SALINE WASTEWATER OUTFALL PIPELINE
Giffard West
Seaspray
Mullungdung Nature Conservation Reserve
South Gippsland Hwy
Giffard
Ninety Mile Beach Marine National Park
Darriman
McLoughlins Beach Reserve
0
5
10
kilometres
McGaurans Beach

Giffard to Stradbroke

The new transmission line begins at the proposed terminal station in Giffard.

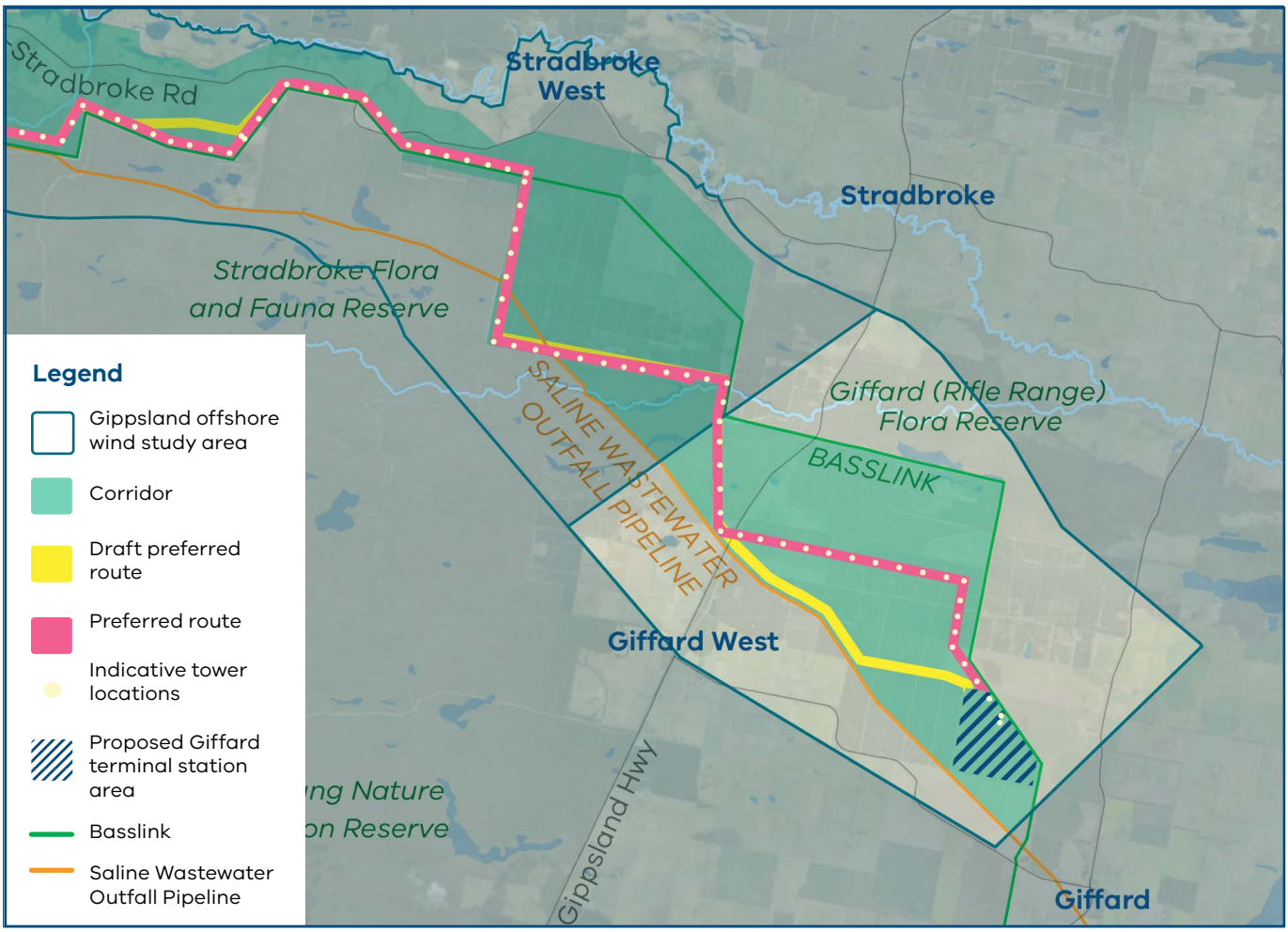
The preferred route leaves the terminal station from the north, aligns with Basslink, then travels west through plantation land and crosses the South Gippsland Highway to avoid nearby homes and reduce vegetation impacts.

Key change

- Refined to align more closely with Basslink, follow existing plantation access roads and avoid dividing forestry land

Proposed Giffard terminal station area

The proposed terminal station in Giffard will receive 2 GW of electricity generated by offshore wind turbines at voltages ranging from 220 kV to 330 kV. It will then increase the voltage to 500 kV before the electricity travels along the transmission line to the Loy Yang Power Station switchyard. Offshore wind energy projects will connect to the terminal station via underground cables. We'll share more information about the proposed terminal station as the project progresses.



Stradbroke to Willung

In this area, the preferred route:

- Aligns with the eastern edge of the Stradbroke Flora and Fauna Reserve to minimise fragmentation of conservation land
- Travels mostly through plantation land
- Crosses then follows the existing Basslink easement near Gormandale-Stradbroke Road

Key change

- Closer alignment with the boundary between forestry land and the reserve to reduce fragmentation

Crossing Basslink

In this section, the new transmission line must cross Basslink. We are working with Basslink's owner and operator on the best crossing method.

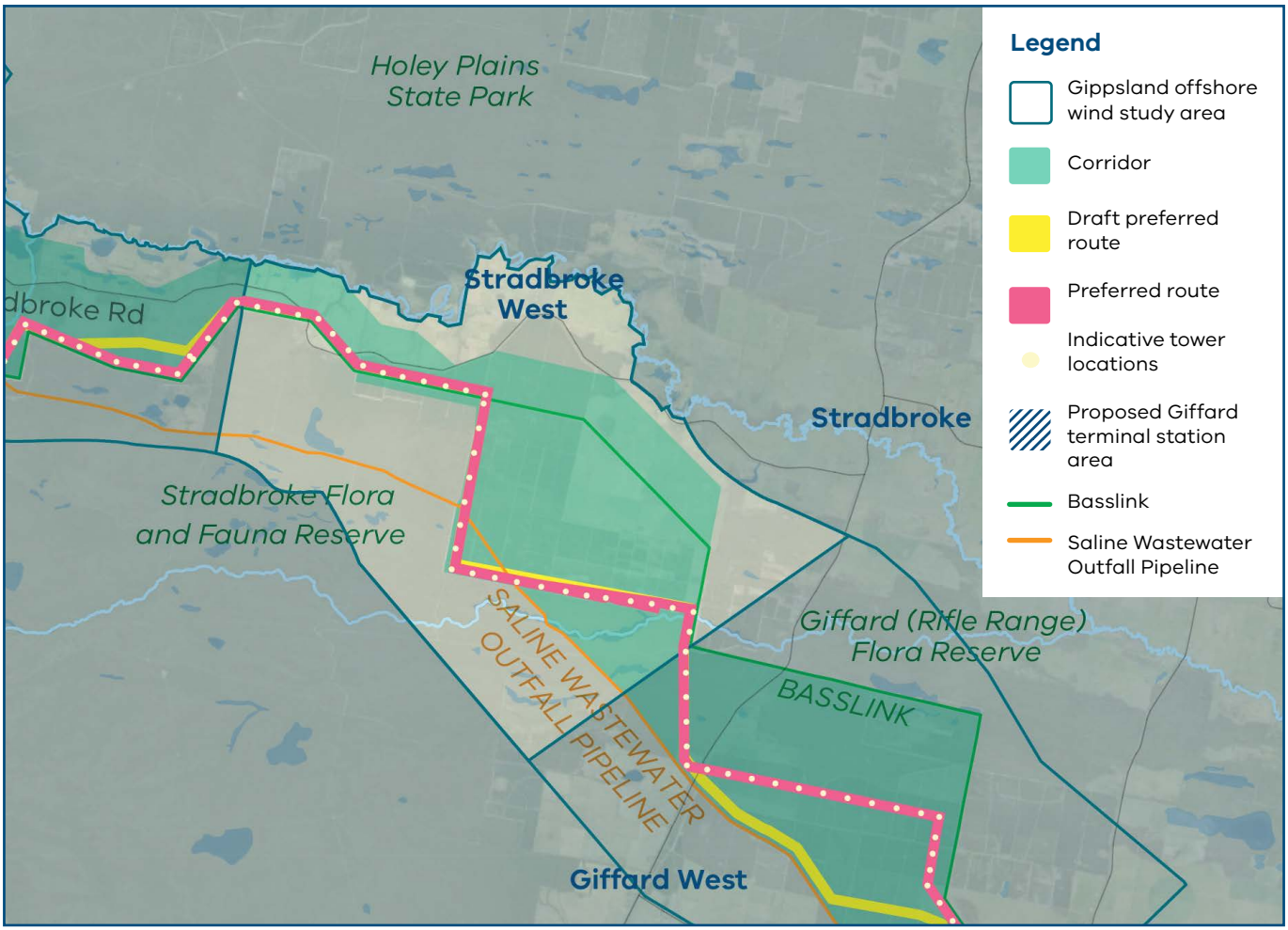
The two options being considered are:

Option 1: Overhead crossing

Two taller towers (up to 83 m) carry our transmission line over Basslink with safe clearance.

Option 2: Underground crossing

A section of Basslink's cables is placed underground beneath our transmission line.



Willung to Hiamdale

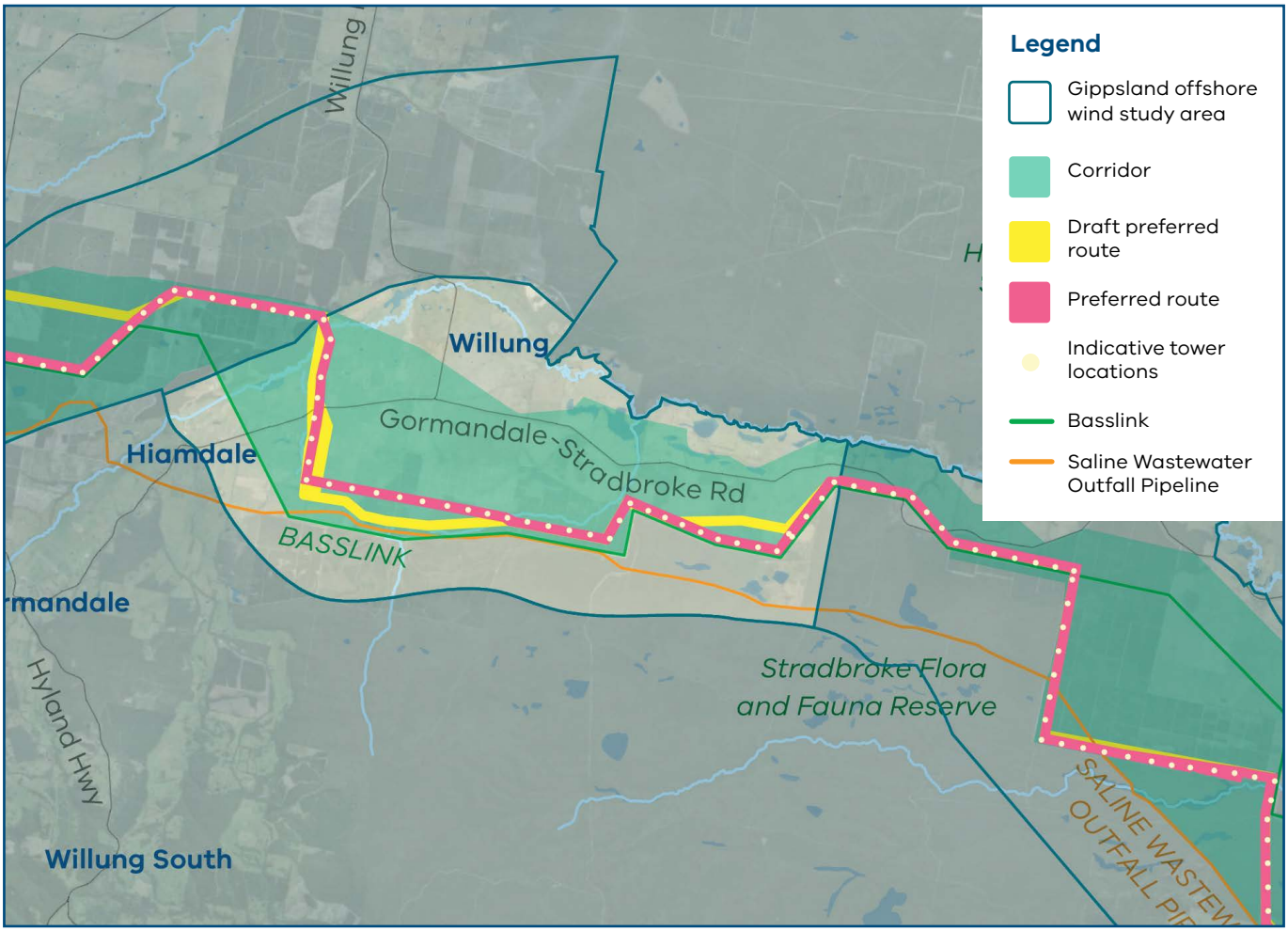
This is the most complex section and has changed the most from the draft preferred route.

The preferred route:

- Mostly follows Basslink and the Saline Wastewater Outfall Pipeline to stay away from homes near Gormandale–Stradbroke Road and Willung
- Crosses Gormandale–Stradbroke Road
- Follows Flemings Road
- Crosses Merriman Creek west of Willung

Key changes

- Aligned closer to Basslink in response to landholder feedback, reducing land use impacts
- Realigned near Bayliss Gully through plantation land to avoid fragmentation
- Shifted west of Flemings Road and south of Gormandale–Stradbroke Road
- Realigned north of Gormandale–Stradbroke Road before Merriman Creek to reduce property fragmentation and land impacts
- Realigned on both sides of Merriman Creek to minimise environmental impacts

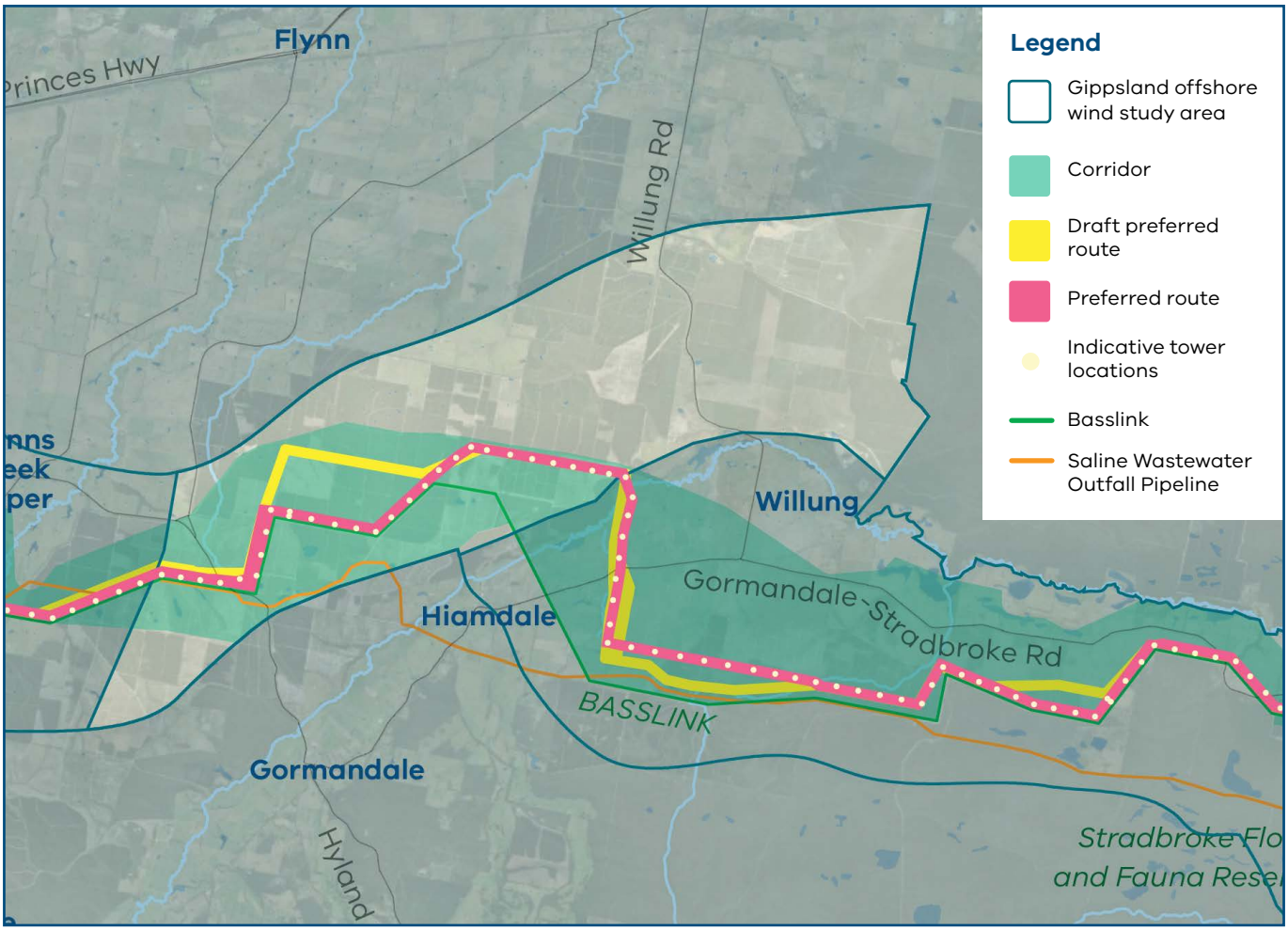


Hiamdale to Flynns Creek

In this section, the preferred route runs entirely through plantation land, mostly following Basslink.

Key changes

- Moved closer to Basslink to avoid fragmenting the plantation land between Basslink and the new transmission line



Flynns Creek to Loy Yang Power Station

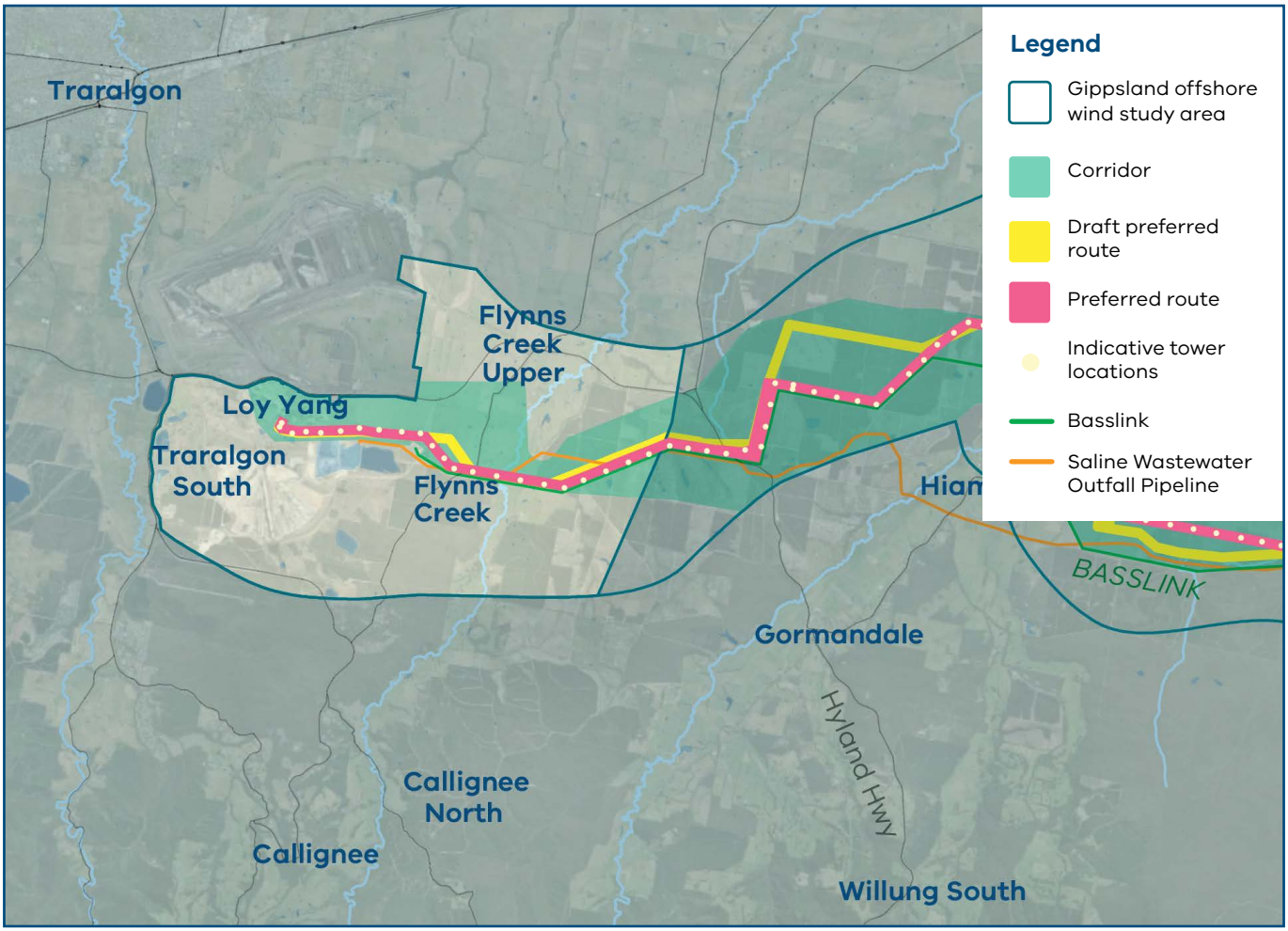
In this section, the preferred route runs north of the existing Basslink line, deviating slightly to avoid the Basslink switchyard, and enters the Loy Yang Power Station switchyard from the north of Basslink.

Key changes

- A short section moved closer to the existing Basslink easement to align more closely with a property boundary – a change made in discussion with local landholders

Loy Yang Power Station switchyard entry point

The line must enter the Loy Yang Power Station switchyard from the north of Basslink because ground conditions south of the power station aren't suitable for the transmission line and the area south hosts existing overhead transmission lines and easements. Two new 500 kV switch bays will be built in the existing switchyard to connect the new transmission line into the grid. A switch bay is a connection point that enables power lines to safely connect to the network.



The reference design

We are using a reference design to assess the project's impacts through the EES, which is a detailed assessment of a project's potential environmental, social, economic and cultural impacts, and how they can be avoided, reduced or managed.

The reference design is not the final construction design – it is an early version of the project design that provides enough detail to assess its potential impacts during construction and operation. It includes an indicative easement within the preferred route, indicative tower locations and likely locations for temporary access tracks and construction areas.

This approach allows the community to see the potential project impacts and mitigation measures, while giving the project flexibility to complete detailed engineering and build the infrastructure in the safest, most efficient way once a development partner is appointed. The detailed design will be developed within the limits set by the EES.

Indicative tower locations and indicative easement

A transmission line is a connected system of towers and conductors. We have identified indicative tower locations and an indicative easement, which will be assessed and shown publicly in the EES.

Indicative tower locations show where we currently expect the towers to be placed, based on the engineering, environmental and cultural heritage information we have so far.

Moving one tower affects the spacing and design of many others, so any change must be considered across the whole route to keep the line safe and operating efficiently.

During detailed design, a tower location could move because of landholder engagement, geotechnical investigations, cultural heritage assessments or other technical studies.

You can explore an interactive map of the preferred route, indicative tower locations and indicative easement at: **link.caapp.com.au/vicgrid-transmission-map**

Designing the transmission line

You can read more about our approach to designing the transmission line on our website in our design approach fact sheet **vicgrid.com.au/offshorewind-transmission-design**

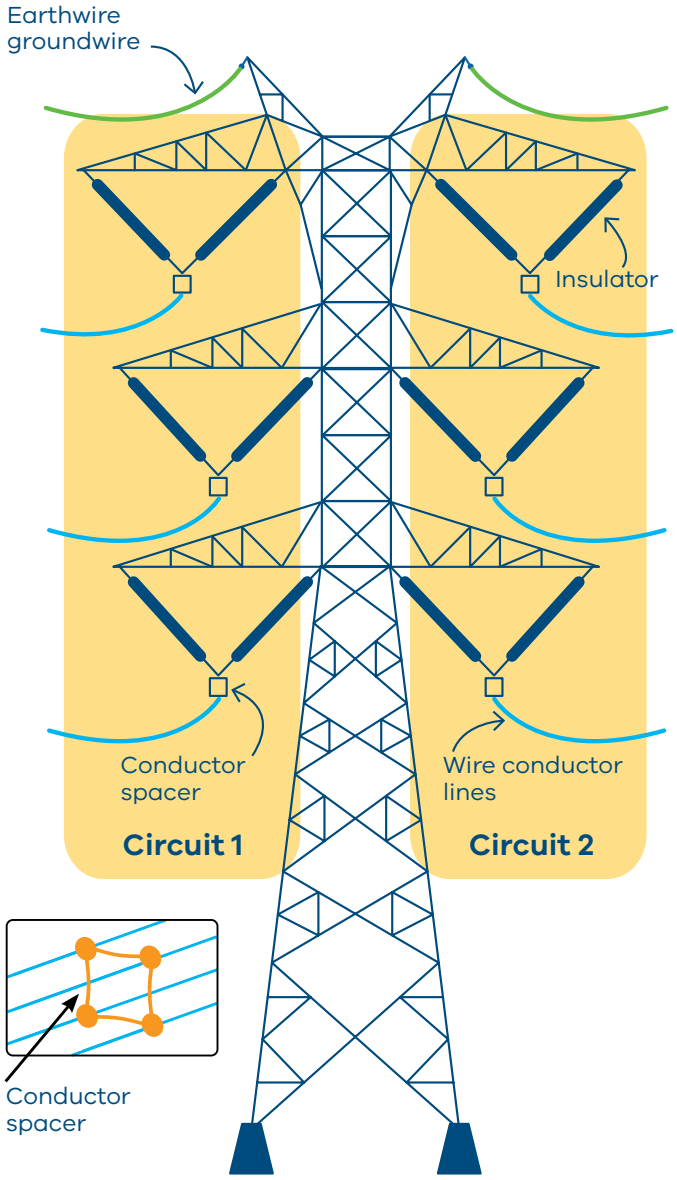
Transmission line towers

What the towers look like

The reference design includes steel lattice towers that support an overhead 500 kV double-circuit transmission line, which means there are two independent electrical circuits on the same tower. Each circuit carries three phases, and each phase uses four sub-conductors, or groups of wires, to move the required power safely.

The towers will typically be:

- 58–83 m tall (about the height of a 15–25 storey building)
- Spaced about 300–500 m apart
- Designed to support two independent electrical circuits on a single tower (known as a double-circuit transmission line)



Tower types

Three tower types will be used along the line to carry the conductors:

- **Suspension towers:** The most common across the transmission line, typically located between tension and angle towers (defined below)
- **Tension towers:** Act as anchor points between spans of the transmission line. These towers are designed to hold the full tension of transmission conductors without moving
- **Angle towers:** Used where the transmission line's alignment changes direction sharply and at the terminal stations. These towers are heavier than the other tower types and require larger foundations

All three tower types look mostly similar.

Tower foundations

Tower foundations are designed to suit the tower type and site conditions. Factors such as soil and rock conditions, slope and drainage influence the final design. The reference design includes indicative foundations for environmental assessment.

Transposition – reducing electrical interference near Basslink

You told us you would prefer the new transmission line to run as close as possible to existing infrastructure like Basslink.

In response, we have moved the transmission line closer to Basslink in several areas.

However, over long parallel distances, the transmission line could create electrical interference with the Basslink line.

To prevent that, the new transmission line needs to be transposed at two locations along the route.

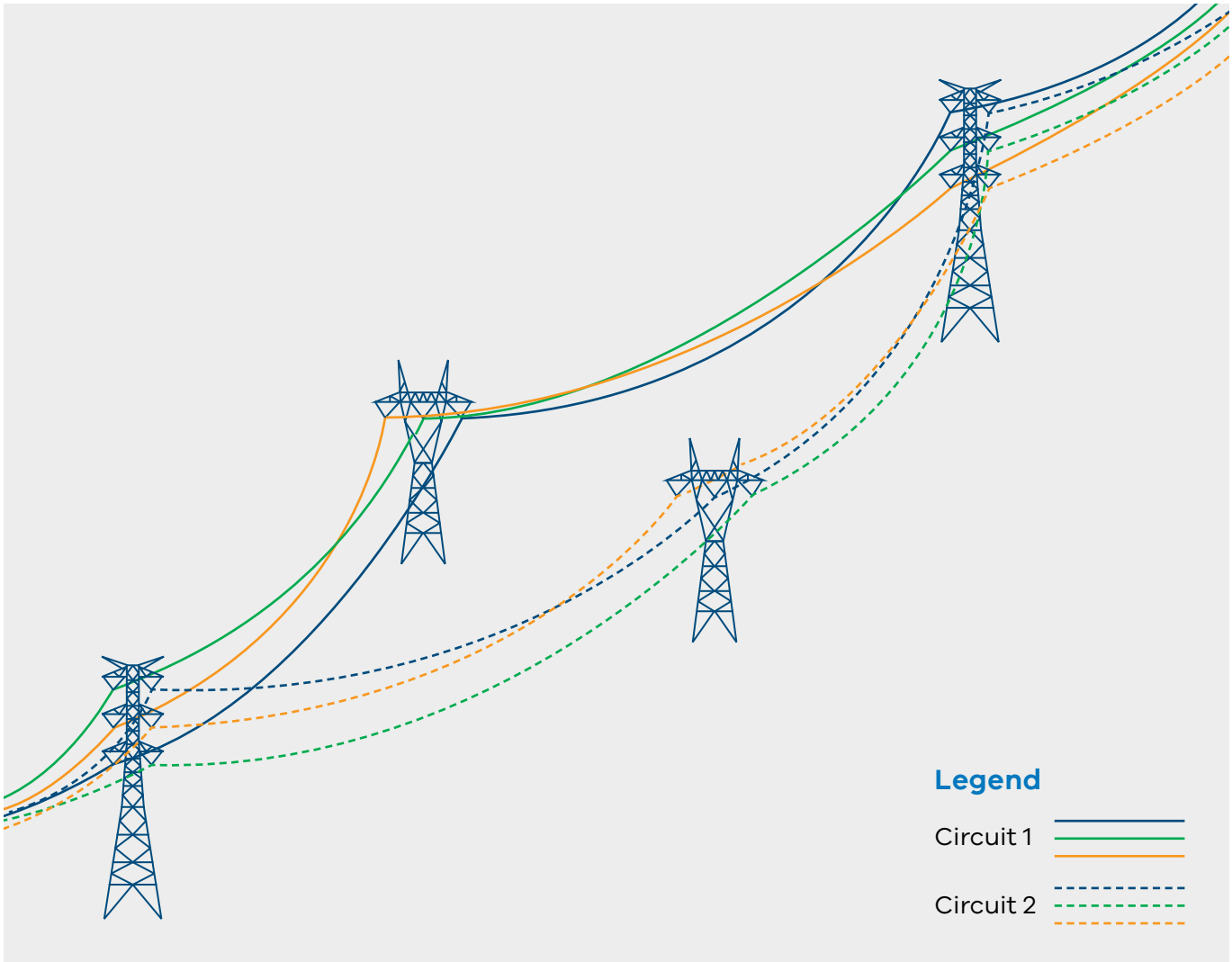
For this project, transposition involves using two towers side by side to change the positions of the three phases and reduce electrical interference.

Because of this, the easement at the two transposition locations will be up to 170 m wide – compared with about 70 m elsewhere.

The two locations are near **Willung South** and **Gormandale**, so they are evenly spaced along the line.

The final locations and design will be determined during detailed design, in consultation with landholders and Basslink's operator.

Example of easement widening to reduce electrical interference with Basslink (transposition)



How the project will be built

The reference design identifies the construction activities that are likely to be needed to build the transmission line.

Construction will be delivered in stages including preparation, site establishment, construction and post-construction.

Final construction methods depend on further information from landholders, environmental and technical studies – including geotechnical conditions, groundwater, cultural heritage and environmental values – at and around each tower location, and ongoing design development and construction planning.

Once a development partner is appointed (targeted for late 2026) we will work with them to undertake further engineering, technical investigations and landholder engagement. This work will inform the final design. All relevant approvals will be in place before construction starts.

Building the transmission line involves much more than installing towers and conductors. The table on the next page outlines the main construction stages and key activities expected to take place at each stage.

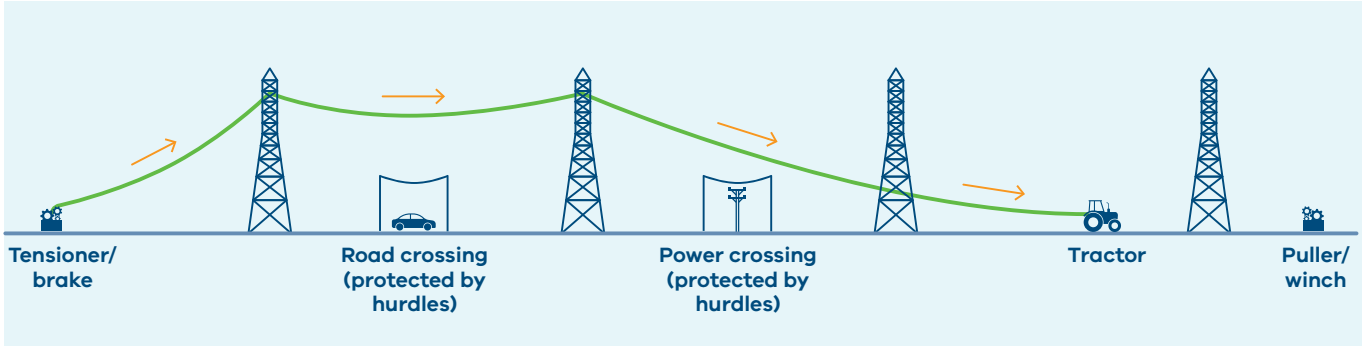
Construction stage	Key activities
1. Preparation and site establishment	
Access	Work with landholders under agreed terms to develop safe access to the easement, tower locations and construction areas.
Utility relocation	Identify and protect or relocate utilities such as high-voltage transmission lines, water pipelines, electricity distribution lines and communication cables.
Road access	Upgrade roads and establish access tracks as needed to safely accommodate construction traffic.
Site preparation	Remove vegetation (only where required), develop access tracks and install temporary fencing as needed.
Laydown areas	Build construction laydown areas for machinery, equipment and material storage, and hard stand areas (gravel or concrete areas) at each tower site for safe tower assembly.
Construction compound and worker accommodation	Build construction compounds and worker accommodation for the workforce required to build the transmission line.
2. Construction	
Earthing	Excavation works to install the tower earthing system. The earthing system is designed for electrical fault currents to safely flow into the ground.
Tower foundation works	Each transmission tower is installed on foundations, located under each tower leg, built with concrete.
Tower assembly and installation	Using a crane, parts of the transmission towers are lifted into position and bolted into place. Once fully assembled, the earthing system is connected and tested. Tower assembly and installation will be carried out concurrently at multiple sites.
Line stringing	Insulators and pulleys guide the conductors, which could be winched into place between towers using either ground-based equipment, helicopters or drones. Conductors are then clipped into insulators.
3. Post-construction	
Commissioning	Safety checks and electricity network testing are carried out to ensure the system is ready for operation.
Reinstatement	Temporary construction impacts such as access tracks and hard stands are rehabilitated, and temporary fencing is removed.

Stringing the conductors

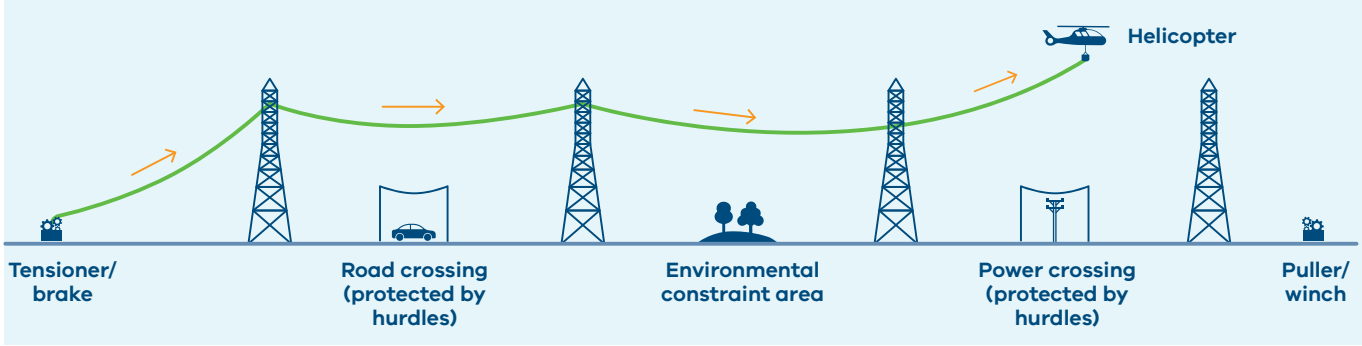
Once the towers are installed, the transmission conductors (wires) are installed between them. This process is known as line stringing. The method used will depend on the terrain, site access, environmental considerations and construction planning.

There are multiple ways that stringing could be done for the transmission line:

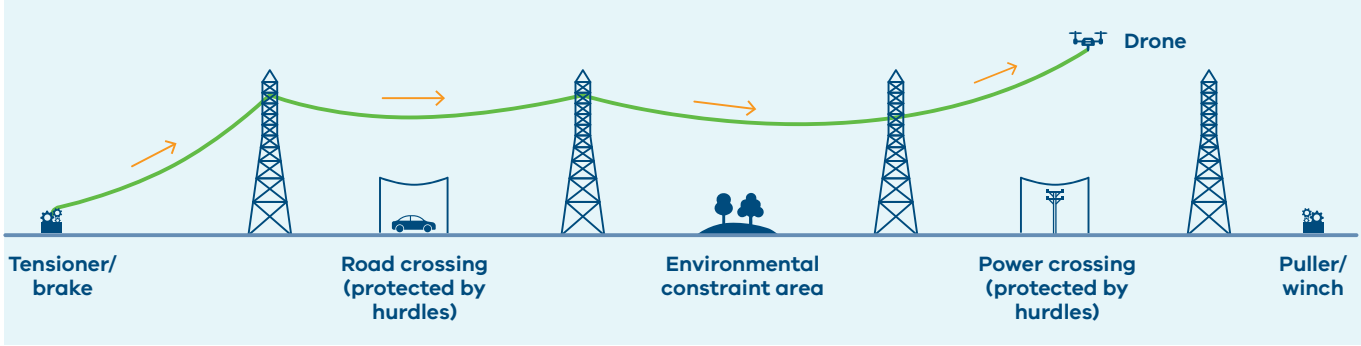
Tension (ground-based) stringing: The most common method, using winches and tensioners where ground access is available.



Helicopter stringing: Used in open or rugged country where ground access is difficult.



Drone stringing: Used for short spans or where helicopters can't operate.



To safely install the wires, temporary stringing pads are established at intervals along the transmission line to provide safe, level work areas for pulling, tensioning and installing the conductors.

Construction impacts

The EES assesses the potential impacts of building the transmission line, including both temporary and permanent works and how to avoid, reduce or manage these impacts.

These impacts could include clearing vegetation, building access tracks, upgrading roads, establishing temporary work areas, and increased workforce, traffic, noise and dust during construction.

Most construction impacts are temporary and occur during the construction period. They will mostly occur within or close to the preferred route, however some temporary facilities – such as laydown areas or worker accommodation – may sit outside the route.

Permanent infrastructure includes the transmission line easement, towers, some access tracks and proposed terminal station near Giffard.

Traffic and road impacts

Building the transmission line will increase traffic on local roads. Some roads and intersections may need to be upgraded to safely accommodate construction vehicles and provide access to construction areas.

The EES will assess the likely road access and traffic management approach based on the reference design. This is not the final construction traffic plan.

When developing the road access and traffic management approach, we will balance environmental and cultural heritage values (including roadside vegetation), community feedback, impacts on residents and road users, and the need for safe and efficient construction.

We aim to avoid or reduce impacts through measures such as refining designs, considering alternative traffic management approaches, and reducing the extent of works required.

You can read more about the traffic and transport assessment on our **vicgrid.com.au/ees-traffic-assessments**

What's next

Appointing a development partner

We expect to appoint a development partner in late 2026.

Together, we will turn the reference design into a detailed design, negotiate the easement and payments with landholders, and prepare the project for delivery.

We will work closely to ensure existing commitments to landholders and communities are upheld, feedback continues to inform the project, and clear updates are provided as the project progresses.

Detailed design

In 2027, we will refine the reference design into a detailed design, finalise the easement and confirm exact tower locations. Changes may include:

- Adjustments to the easement and the location, height and design of towers
- Refinement to access tracks, temporary laydown areas and worker accommodation facilities

Where refinements affect private land, we will keep engaging directly with the landholders involved.

EES public exhibition

The EES technical studies are underway. The next major milestone is public exhibition of the EES, expected in 2027.

During the exhibition period, the EES will be available online and at nominated public locations for a minimum of 30 business days. Community information sessions will also be held. Anyone can make a written submission during the exhibition period.

The EES will explain the reference design including indicative tower locations, indicative easement and construction impacts such as access tracks, road upgrades, laydown areas and stringing pads. It will also detail the potential environmental, social, economic and cultural impacts of the project, how these impacts can be avoided, reduced or managed and how your feedback has been considered in shaping the project so far.

You can read more about the EES process and studies on our website.

vicgrid.com.au/offshorewind-planning

Working with landholders and the community

Since early 2023, we have been speaking with landholders and the wider Gippsland community about the new transmission line, and that input has informed how we have planned and refined the project.

We will keep working with you as the project progresses.

Ongoing conversations with landholders in and near the preferred route
We are continuing to talk with landholders about the preferred route, reference design, indicative tower locations and indicative easement.

Feedback from these discussions will not change the reference design being assessed in the Environment Effects Statement process. However, it will help inform the detailed design, which will lead to a final transmission easement.

Benefit sharing
We recognise that living near major transmission infrastructure can affect you, even if it isn't on your land.

Under VicGrid's benefit sharing framework, landholders who host new major transmission infrastructure and their near neighbours be eligible for payments or other contributions.

You can read more about landholder payments and community benefits on our website. **vicgrid.com.au/community/community-benefits**

Stay involved

Read more about the EES process and studies:
vicgrid.com.au/offshorewind-planning

Questions about your property or the route:

1800 418 341

enquiries@vicgrid.com.au

Subscribe for project updates:
ems.gs/3Sas0cGfRaA

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