

# Easement safety and permitted activities



# Purpose

The purpose of this document is to provide landholders, the community and stakeholders (including councils, agencies, businesses and Traditional Owners) with information about permitted activities within the proposed easement for the Western Renewables Link transmission line.

The information in this document, unless otherwise specified, relates to the proposed Western Renewables Link 500kV double circuit transmission line. For information about other potential tower types for the project, please refer to the Transmission towers and conductors fact sheet available [here](#).

For all other existing electricity transmission lines within Victoria, please refer to 'A guide to living with transmission line easements' available on the AusNet website [here](#).



## Landholder

Landholder: the person/s (including an entity e.g., company or trust) entitled to hold title to a parcel/s of land.

## Support for landholders

We acknowledge that the Western Renewables Link project is causing uncertainty and concern for some landholders and communities. There are confidential, independent, free-of-charge services available for those individuals who may be affected by the project.

## Contact:

- Telus Health (formerly Benestar): 1300 360 364.
- Rural Financial Counselling Service (RFCS): 1300 735 578.
- Refer to the [project website](#), [community and landholders page](#) for more support services.

## Acknowledgement of Traditional Owners

AusNet acknowledges the Traditional Owners of the lands on which the proposed Western Renewables Link will operate, and pays respect to their Elders past, present and emerging. We recognise the role of each Registered Aboriginal Party and Traditional Owners in the management, protection, and promotion of cultural heritage, connection to Country, cultural awareness and land access.

We will continue to work in partnership with First Peoples - State Relations Victoria and the recognised Registered Aboriginal Parties of the Barengi Gadjin, Eastern Maar, Djaara (Dja Dja Wurrung), Wadawurrung and Wurundjeri Woi Wurrung Traditional Owners Corporations, to deliver the project.

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# Project overview

The Western Renewables Link is a proposed 190km overhead high-voltage electricity transmission line that will carry renewable energy from wind and solar farms in western Victoria, a key renewable energy zone, to homes and businesses across Victoria and into the National Electricity Market.

AusNet Transmission Group Pty Ltd (AusNet) was selected by the Australian Energy Market Operator (AEMO) to develop, design, construct, operate and maintain the proposed transmission line.

You can find the latest project information on the [project website](#).

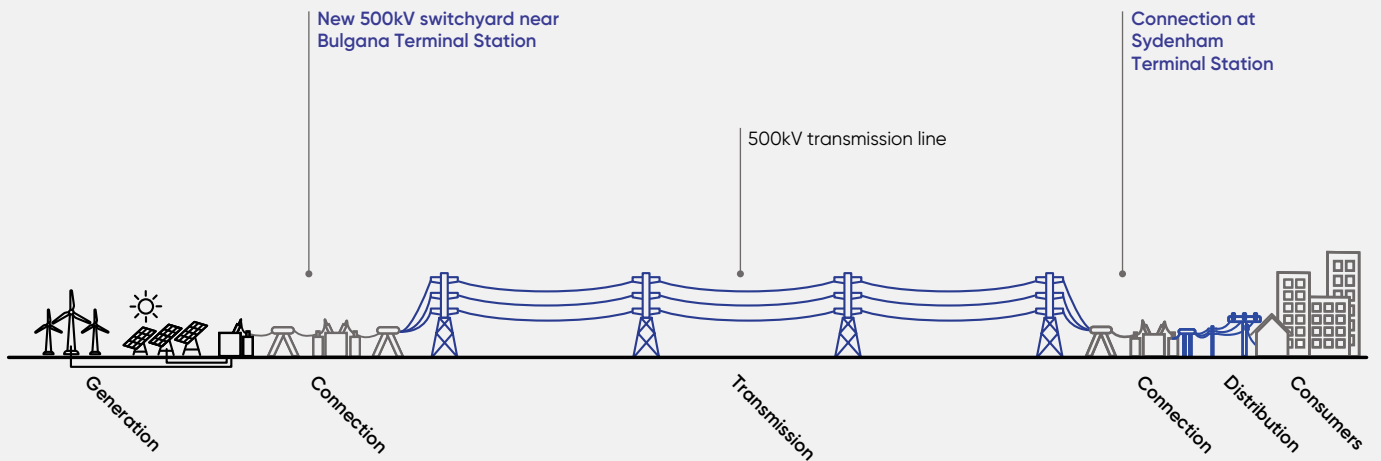
## Project assessment and approvals

The Victorian Minister for Planning has determined that an Environment Effects Statement (EES) is required for the Western Renewables Link project. The Minister will issue an assessment of the project's environmental effects after considering the exhibited EES, public submissions received, and the report of an independent inquiry and assessment committee.

When AusNet believes that it has completed an EES package that adequately addresses the Minister's scoping requirements and comments provided progressively through the technical reference group, it will submit the package to the Minister seeking authorisation to exhibit. AusNet is working toward submission of the EES in the second half of 2024.

Following the completion of the EES process, Victorian and Commonwealth approvals, including a planning scheme amendment, must be obtained.

## Western Renewables Link



Proposed overhead 500kV double circuit transmission line from Bulgana to Sydenham

For illustrative purposes only

# Landholder engagement

## Commitment to landholders

Landholders are key stakeholders in delivering this significant energy transmission project for all Victorians. We are committed to working with you in a respectful, open and responsive way that reflects your role as a key stakeholder.

## Role of your Land Liaison Officer

As a landholder on the proposed Western Renewables Link route, you have a designated Land Liaison Officer who is your primary point of contact for the project. They will provide project information and updates, facilitate the Option for Easement process with you, address any questions and concerns, and consult with you about the project. They will also communicate your views and preferences back to the project team.

Contact details for your Land Liaison Officer can be provided by the project team on 1300 360 795 or via email at [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au).

# Easements

## What is an easement?

An easement is a right held by one person or party to access, occupy and/or use part of the land owned by another person or party, for a particular purpose. The landholder continues to have ownership of and use of the easement land, subject to the easement terms.

An easement is registered on the title of the land to record the easement and ensure it is accurately shown in searches of the land title. When construction is complete, a licensed surveyor will survey the easement to ensure it is accurately recorded. The easement will then be registered on the property title.

## Why is an easement needed?

An easement is needed for the construction and operation of the proposed transmission line, and other related infrastructure, to protect public safety and to provide access to the transmission line for inspections and maintenance.

For safety, some activities are restricted within the easement. In terms of network reliability, the easement enables us to have access to the infrastructure to maintain it and ensure it is operating as it should.

## How wide will the easement be?

Transmission line easements vary in width depending on the operating voltage, design of the towers, relevant design and safety standards, and site-specific conditions. The easement for the Western Renewables Link will range from 70 to 100m wide. See diagram on page 5.

## How will the easement be acquired for this project?

We are aiming to negotiate a voluntary Option for Easement with landholders on the proposed route and all landholders will receive an Option for Easement proposal for their consideration. The statutory acquisition process is governed by the *Land Acquisition and Compensation Act 1986* (Vic) and *Electricity Industry Act 2000* (Vic).

Further information about the voluntary Option for Easement process, compensation and statutory process (compulsory acquisition) is available in the Landholder Guide: Option for Easement process and compensation on the project website, [resources page](#).

# AusNet access to the easement

## Inspections and maintenance

The electricity transmission network is critical infrastructure that enables the supply of electricity throughout Victoria. As part of operating AusNet's transmission networks, we routinely inspect our transmission infrastructure (towers, lines and terminal stations) to ensure it is safe and operating correctly. We periodically inspect transmission lines from the air and at ground level. We also undertake annual pre-summer vegetation maintenance activities as required.

Where a negotiated Option for Easement is in place, any ongoing access by AusNet to your property for routine inspections and maintenance activities will comply with the terms of the easement registered on title in line with the agreed Option for Easement deed. Where a negotiated agreement is not reached, and an easement is compulsorily acquired under the *Electricity Industry Act 2000* (Vic), AusNet will communicate with the landholder regarding any ongoing maintenance and inspection access requirements during that process.

## Access tracks

On some properties, access roads and tracks will need to be constructed to build and maintain the proposed transmission line, and to enable emergency access to the transmission line. Access tracks allow vehicles to enter the transmission line easement from public road locations. We are working with landholders on access track locations and design to minimise the impact to their property.

During construction, temporary access tracks are used to transport equipment to the transmission tower sites and temporary construction hardstand areas. Temporary access tracks typically need to be 4 to 6m wide, depending on the terrain. If needed, we will work with you to identify any existing access tracks that can be used or upgraded for this purpose. If there are no suitable existing access tracks, we may need to build a new temporary access track in consultation with you.

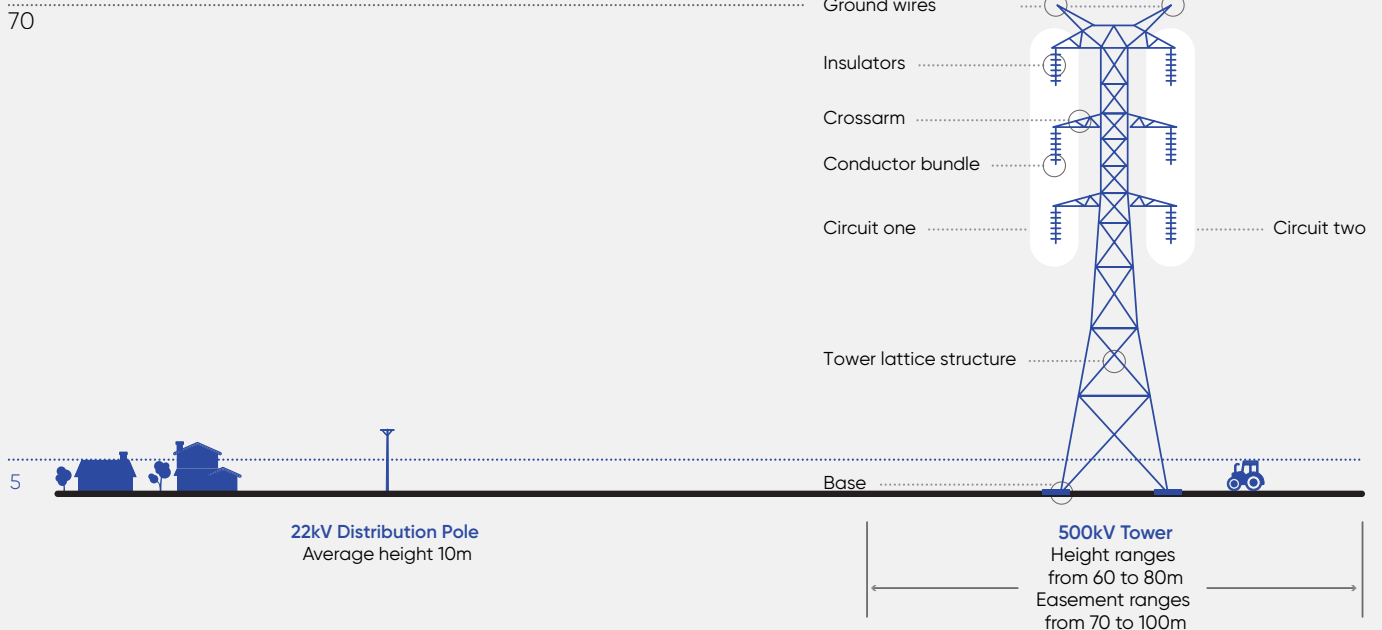
We will reinstate the temporary access tracks area to original condition (or as close as reasonably practicable) after use as required, unless you would prefer the access track to remain permanently. Where a permanent access track is required for operational and maintenance activities, this will be included on the title.

## Landholder use and access to easement

You will continue to have ownership of and use of the easement land, subject to the easement terms. You are responsible for general maintenance of the land within the easement in the same way you are responsible for maintenance of any property owned. You are not responsible for maintaining vegetation in the easement for electrical safety, or for maintaining any electrical or other infrastructure belonging to AusNet.

## Transmission tower height and easement (typical)

Height (metres)



For illustrative purposes only

# Safety clearances

While there are some restrictions on the use of the land within an overhead transmission line easement, there are many activities which will be allowed, or may be permitted after a safety assessment is completed by AusNet.

## Ground clearances

As a result of community feedback, the Western Renewables Link 500kV double circuit overhead transmission line has been designed with a minimum clearance of 15m above the ground. Based on the minimum 15m ground clearance and the No Go Zone published by Energy Safe Victoria (ESV), vehicles and equipment up to 5m height will be allowed to travel and operate under the transmission line without restriction or a permit from AusNet.

In addition, vehicles and equipment between 5 and 8.6m in height will generally be allowed to travel and operate, subject to an AusNet safety assessment prior to operating. Generally, equipment up to 8.6m at its maximum height will not require a spotter. The AusNet safety assessment will determine and advise whether a spotter and/or permit to work will be required for your specific property, vehicles, equipment and operations. The maximum height of vehicles and equipment cannot exceed 8.6m. We will work with you to discuss transmission line clearance concerns, any requirement for spotters based on your equipment and operations, and what can be done to minimise impacts to your property.

## Energy Safe Victoria guidelines

ESV has taken a lead role in establishing a best practice approach for mechanical plant and equipment such as mobile cranes, tipping trucks, concrete pumping machines, scaffolding and elevated work platforms being operated near overhead powerlines.

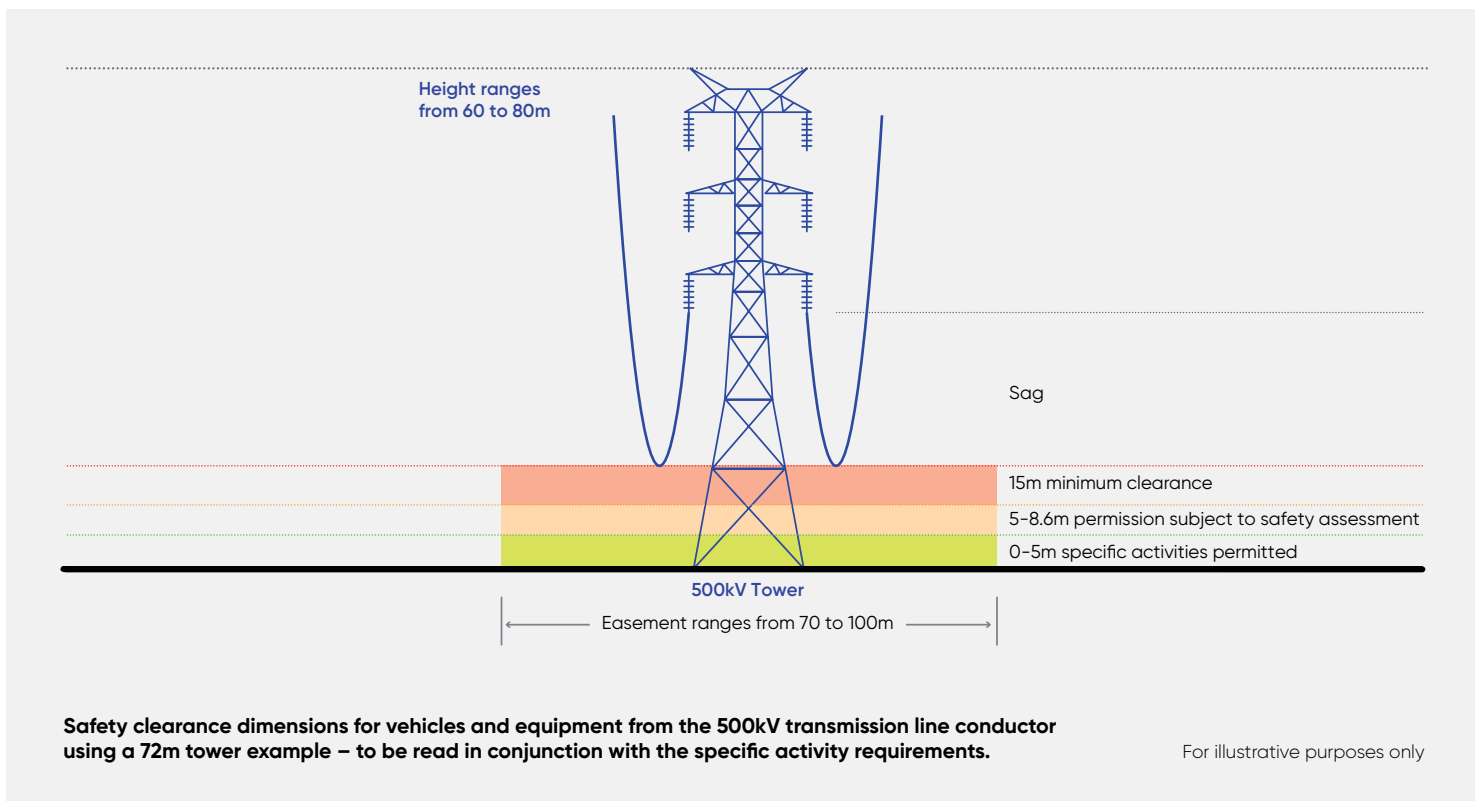
This initiative, known as the 'No Go Zone', involved the development, introduction and communication of a consistent set of rules when working near overhead power lines.

The No Go Zone rules describe minimum safety requirements that are dependent on the distance between overhead powerlines and the work being performed.

AusNet's safety assessment and permit to work process complies with all ESV requirements and will determine and advise whether a spotter and/or permit to work is required for your specific property, vehicles, equipment and operations.

Further information about working safely with overhead powerlines on farms is available on the [WorkSafe Victoria website](#).

Further information about No Go Zones is available on the [ESV website](#).



Restrictions and clearances contained in this document relate to the proposed Western Renewables Link 500kV double circuit transmission line. For information about other potential tower types for the project, please refer to the Transmission towers and conductors fact sheet available [here](#). For all other existing electricity transmission lines within Victoria, please refer to 'A guide to living with transmission line easements' available on the AusNet website [here](#).

# Safety assessments and permits to work

Certain equipment, activities or land uses in an easement require a safety assessment or permit to work. In each case, a written notice of permission to proceed will be issued following an assessment. Safety assessments and permits to work are provided by AusNet free of charge.

Any vehicles or equipment between 5m and 8.6m will require a safety assessment before use in the easement. Once a landholder's equipment has been assessed and written permission provided, it will not need to be assessed again unless advised as part of the permit conditions.

## Steps to arrange a safety assessment

1. To arrange a safety assessment or permit, contact AusNet by email at [ptw@ausnetservices.com.au](mailto:ptw@ausnetservices.com.au).
2. Complete and return the permit to work form.
3. Applications will be reviewed within 5 business days of receipt.
4. We will undertake a desktop analysis and contact you if we require any further information. Typically, it will take 10 business days to complete a safety assessment or permit application.

You can also contact your Land Liaison Officer to discuss any requirements for activities within the easement and they can coordinate a safety assessment request.

## Before You Dig (formerly Dial Before You Dig)

Before starting work anywhere within the easement that involves digging, earth movement change or excavation of more than 300mm in depth, a Before You Dig Australia (formerly Dial Before You Dig) enquiry must be made.

Visit [www.byda.com.au](http://www.byda.com.au) to lodge an online Before You Dig enquiry.

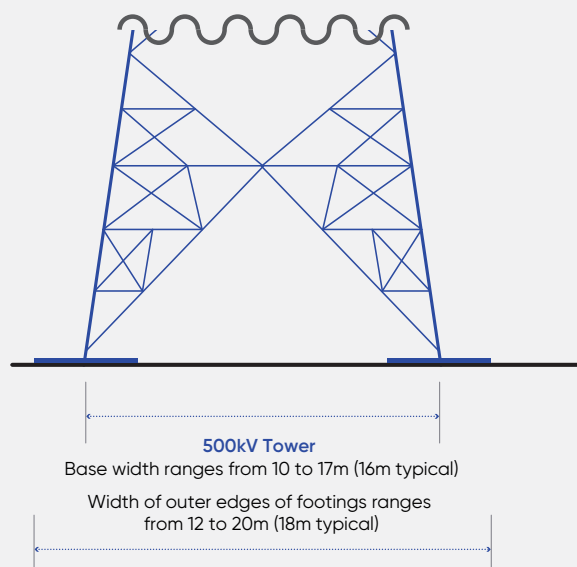
## Guidelines around transmission tower bases and footings

The width of the base of the 500kV double circuit lattice towers proposed for the project will range from about 10 to 17m (16m typical). Four concrete pile footings (or foundations) are required for each transmission tower, which will range from 1.5 to 3m in diameter (1.8m typical) and 4.5 to 25m deep (9m typical depth). The tower base and footing size will vary for different tower locations and soil conditions.

## Guidelines for activities around the transmission tower footings include:

- Ground-growing crop types will be allowed within the easement without an AusNet safety assessment or permit provided the crop is at least 5m away from the base of any tower steelwork and any associated digging or earth movement is no deeper than 300mm.
- Excavation, earth works and related activities up to 300mm in depth will be allowed in the easement without an AusNet safety assessment or permit provided that it is at least 30m from the centre of the tower steelwork. Within 30m of the centre of the tower steelwork, excavation of more than 300mm in depth is not permitted without written authorisation from AusNet.
- Electrically conductive materials, such as metal pipes (including reinforced concrete) and power cables, will not be permitted within 30m of the centre of any tower steelwork.
- A tree-clear area of 30m from the centre of the tower steelwork is generally required at tower sites for line maintenance purposes.
- New water storage dams will not be allowed within 30m of any tower centre. More information on page 9.

## Transmission tower base and footings



For illustrative purposes only

# Farming in the proposed transmission line easement

AusNet currently safely operates 6,500 kilometres of transmission lines across Victoria, which include land uses such as grazing and cropping on or near easements. We recognise the importance of agricultural activities for our nation and state, as well as for communities in the western Victorian region. We are working closely with landholders in the planning and design phase of the proposed project, to understand current and future land uses and minimise impacts to agricultural activities.

Based on the proposed 15m ground clearance for the Western Renewables Link, allowed activities within the easement include grazing and agriculture, market gardens, orchards and horticultural nurseries (excluding buildings), water storage dams (subject to sufficient clearances) and operation of irrigation equipment (with some restrictions).

Further information on specific farming practices can be provided by the project team at [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au) or your Land Liaison Officer.

## Agricultural and farming activities within the proposed Western Renewables Link 500kV transmission line easement

Please contact your Land Liaison Officer for more information if you have questions about activities that are not listed in the below table.

Agricultural and farming activities	Allowed within the proposed WRL 500kV overhead line easement	Conditions / Notes
<b>Aerial crop spraying</b>	No	Aerial crop spraying will not be allowed within 45m of the transmission line conductors (wires). More information on page 13.
<b>Aircraft / aerial vehicles (crewed)</b>	No	With the exception of firefighting aircraft, crewed aircraft (e.g., light planes and helicopters) will not generally be allowed within the transmission line easement due to the safety risk and potential damage to electricity infrastructure. More information on page 13.
<b>Aerial vehicles (uncrewed) / drones</b>	Yes (subject to safety assessment)	Drones may be allowed to operate within the easement (including under the transmission line) subject to a safety assessment and permit from AusNet. More information on page 13.
<b>Fuel reduction and stubble burning</b>	Yes (subject to safety assessment)	Fire activity such as fuel reduction and stubble burning will be allowed within the easement with a permit from AusNet (required year-round). During the Fire Danger Period, fire activity will also require a permit from the CFA. More information about fire permits is available at <a href="http://www.firepermits.vic.gov.au">www.firepermits.vic.gov.au</a>
<b>Buildings and dwellings</b>	No	Buildings and dwellings will not be allowed within the 500kV easement. This includes eaves, awnings, canopies, shelters and sheds.
<b>Cattle yards</b>	Yes (subject to safety assessment)	Cattle yards will be allowed up to 30m from the centre of the tower steelwork with a safety assessment where the cattle fencing and ramps are fixed into the ground (earthed).
<b>Crops and vegetation</b>	Yes	<p>Mature tree and shrub growth of up to 3m in height will be allowed up to 30m from the centre of the tower steelwork. For vegetation above 3m in height, an AusNet safety assessment will be required to ensure that minimum clearances and fuel load densities are maintained. When planting trees and shrubs, they should be scattered or clumped with no more than 10% density of cover over the easement area.</p> <p>Ground-growing crop types will be allowed within the easement without an AusNet safety assessment or permit provided the crop is at least 5m away from the base of any tower steelwork and any associated digging or earth movement is no deeper than 300mm.</p> <p>For earth movement changes greater than 300mm in depth, a Before You Dig Australia enquiry and subsequent safety assessment must be completed.</p>



Agricultural and farming activities	Allowed within the proposed WRL 500kV overhead line easement	Conditions / Notes
<b>Dams</b>	Yes	New water storage dams will be subject to sufficient clearances of conductors (15m clearance zone) and towers. Entire coverage of easement by dams will not be allowed. Dams will not be able to be located within 30m of the centre of any tower steelwork. Please contact AusNet if you need advice about an appropriate location for a dam within an easement. Where a dam is proposed to be located beyond 30m of a tower centre, the top of the earthworks or embankment must continue to maintain the minimum ground clearance of 15m. You will also need to contact your catchment management authority as separate approvals may be required.
<b>Electric fencing</b>	Yes	Electric fencing will be allowed within the easement. Earth filters may be needed. More information on pages 16 and 17.
<b>Excavation (including digging and earth moving activities)</b>	Yes (subject to safety assessment)	<p>Excavation, earth works and related activities up to 300mm in depth will be allowed in the easement without an AusNet safety assessment or permit provided that it is at least 30m from the centre of the tower steelwork.</p> <p>Excavation, earth works and related activities greater than 300mm in depth may be allowed within the easement provided that it is at least 30m from the centre of the tower steelwork and a Before You Dig Australia enquiry and subsequent safety assessment are completed before starting work.</p> <p>Within 30m of the centre of the tower steelwork, excavation of more than 300mm in depth is not permitted without written authorisation from AusNet.</p>
<b>Fencing</b>	Yes	<p>Non-metallic fencing up to 3m in height will be allowed.</p> <p>Non-electrified, metallic fences, or fences incorporating metallic materials or parts, will need to be suitably earthed and sectionalised, and require AusNet's prior approval. More information on pages 16 and 17.</p>
<b>Global Positioning System (GPS) and Differential GPS (DGPS)</b>	Yes	The flow of electrical energy through the transmission line does not affect GPS signals. There can be a small effect on GPS signals if you are under or right alongside a tower. This is known as multipathing. It is associated with being too close to a steel structure such as a tower, windmill, shed or any other metal structure. The effect is only noticeable within about 3m of the metal object. More information on page 14.
<b>Grain shifting augers</b>	Yes	<p>Grain shifting augers will be allowed to operate up to 5m in height without restriction or an AusNet safety assessment.</p> <p>Grain shifting augers may be allowed to operate over 5m in height, subject to an AusNet safety assessment, which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p>
<b>Harvesters</b>	Yes	<p>Harvesters will be allowed to operate up to 5m in height without restriction or an AusNet safety assessment.</p> <p>Harvesters may be allowed to operate over 5m in height, subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p>
<b>Headers with augers extended</b>	Yes	<p>Headers with augers extended will be allowed to operate up to 5m in height without restriction or an AusNet safety assessment.</p> <p>Headers with augers extended may be allowed to operate over 5m in height, subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p>
<b>Indoor growing facilities</b>	Yes (subject to safety assessment)	Poly tunnels and netting will be allowed up to 5m in height; hothouses may be allowed subject to safety assessment (excluding buildings).
<b>Irrigation – Boom type</b>	Yes (subject to safety assessment)	<p>Boom type irrigation will be allowed up to 5m in height within the easement subject to an AusNet safety assessment, which must be sought prior to operating. Water streams must be directed away from the transmission line infrastructure.</p> <p>The safety assessment will consider the minimum distance the boom type irrigator must be from the transmission line, depending on the spray distance, how the stream of water breaks into droplets, and volume of water sprayed, etc. More information on page 14.</p>

Agricultural and farming activities	Allowed within the proposed WRL 500kV overhead line easement	Conditions / Notes
<b>Irrigation – Centre pivot and lateral moving</b>	Yes	<p>Centre pivot and lateral moving irrigation, including end guns, will be allowed to operate up to 5m in height within the easement without restriction or an AusNet safety assessment. Centre pivot and lateral moving irrigation may be allowed to operate over 5m in height, subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p> <p>Water streams must be directed away from the transmission line infrastructure and should not go higher than the irrigator frame. Irrigators should be earthed with dragging earth wires or chains as required. More information on page 14.</p>
<b>Irrigation – large gun-type</b>	No	Large gun-type irrigators will not be allowed to operate within the easement due to safety risks and potential damage to electricity infrastructure. More information on page 14.
<b>Lifting wet heads from sunken bores</b>	Yes (subject to safety assessment)	Allowed with an AusNet safety assessment.
<b>Livestock</b>	Yes	No conditions.
<b>Loading, unloading and load adjustment of trucks/tippers operating over 5m in height</b>	Yes (subject to safety assessment)	
<b>Market gardens, orchards and horticultural nurseries</b>	Yes	Excluding buildings and subject to relevant height restrictions.
<b>Ploughing</b>	Yes	Ploughing will be allowed up to 5m from the base of the tower steelwork. This safety buffer is in place to ensure machinery does not disturb transmission structure earthing.
<b>Seeders</b>	Yes	<p>Seeders will be allowed to operate up to 5m in height without restriction or an AusNet safety assessment.</p> <p>Seeders may be allowed to operate over 5m in height, subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p>
<b>Solar pumps</b>	Yes (subject to safety assessment)	Solar pumps will be allowed with a safety assessment at least 30m from the centre of the tower steelwork. Earthing will be required.
<b>Stockpiling and storage of materials</b>	No	Stockpiling and storage of materials, including hay and silage, will not be allowed in the easement.
<b>Vehicles and equipment</b>	Yes	<p>Vehicles up to 5m in height will be allowed to travel under the line and operate without an AusNet safety assessment.</p> <p>Vehicles between 5m and 8.6m may be allowed subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p> <p>Parking of sedan and utility types of vehicles will be allowed. Barriers, of an approved design, may be required to protect towers from damage by vehicles. Large articulated vehicles (such as semi-trailers and B-doubles) should avoid parking under the transmission line due to risk of electric charge (induction) building up as a result of insulation of tyres.</p> <p>When touching a large vehicle, you may get a 'shock' similar to an electric fence. Dragging earth wires or chains can help.</p>



Restrictions and clearances contained in this document relate to the proposed Western Renewables Link 500kV double circuit transmission line. For information about other potential tower types for the project, please refer to the Transmission towers and conductors fact sheet available [here](#). For all other existing electricity transmission lines within Victoria, please refer to 'A guide to living with transmission line easements' available on the AusNet website [here](#).

# Living with the proposed transmission line easement

Many activities and land uses remain unaffected by a transmission line easement. The table below outlines restrictions that will generally be in place for specific activities within the easement for the proposed Western Renewables Link 500kV overhead transmission line.

If you are planning a development or work within or near a transmission line easement, please contact AusNet via the details provided on page 17, before starting work.

## General activities within the proposed Western Renewables Link 500kV transmission line easement

Please contact your Land Liaison Officer for more information if you have questions about activities that are not listed in the below table.

General activities	Allowed within the proposed WRL 500kV overhead line easement	Conditions / Notes
<b>Buildings and dwellings</b>	No	Buildings and dwellings will not be allowed within the 500kV easement. This includes eaves, awnings, canopies, shelters and sheds.
<b>Construction (including digging and earth moving activities)</b>	Yes (subject to safety assessment)	Excavation, earth works and related activities up to 300mm in depth will be allowed in the easement without an AusNet safety assessment or permit provided that it is at least 30m from the centre of the tower steelwork.  Excavation, earth works and related activities greater than 300mm in depth may be allowed within the easement provided that it is at least 30m from the centre of the tower steelwork and a Before You Dig Australia enquiry and subsequent safety assessment are completed before starting work.  Within 30m of the centre of the tower steelwork, excavation of more than 300mm in depth is not permitted without written authorisation from AusNet.
<b>Electrically conductive materials</b>	Yes (subject to safety assessment)	Electrically conductive materials such as metal pipes (including reinforced concrete) and power cables may be allowed provided that they are at least 30m from the centre of the tower steelwork and subject to a safety assessment.
<b>Explosives, electrical detonation or storage of explosives</b>	No	You must not use explosives, including fireworks, on the easement. Contact AusNet for more information.
<b>Ground level sporting activities</b>	Yes (subject to safety assessment)	Ground level sporting activities, such as football, cricket, golf, basketball and netball, will be allowed within the easement, subject to special requirements regarding the design of fences, goals and lights. Contact AusNet for more information.
<b>Landscaping and paving</b>	Yes (subject to safety assessment)	A safety assessment will be required for landscaping and paving within the easement for earth movement changes of more than 300mm in height, to ensure sufficient clearances to the conductors and towers are maintained.
<b>Lighting poles</b>	Yes (subject to safety assessment)	Lighting poles will be allowed within the easement, subject to sufficient clearance to the conductors and towers. The power supply must be underground, and the lighting poles must lower to the ground for servicing. Contact AusNet for more information.
<b>Loading, unloading and load adjustment of large trucks.</b>	Yes (subject to safety assessment)	
<b>Metallic structures</b>	Subject to safety assessment	High voltage lines can induce voltage into nearby metallic structures (e.g., fences, water pipes, silos, clotheslines, etc.). Proper earthing is important to avoid electrical discharges (similar to an electric fence 'shock'). Contact AusNet for more information.

General activities	Allowed within the proposed WRL 500kV overhead line easement	Conditions / Notes
<b>Parking of cars and caravans</b>	Yes (short-term only)	While short-term camping will be allowed, camping and long-term parking will not be allowed.
<b>Playground equipment</b>	Subject to safety assessment	Playground equipment up to 1m in height will be allowed. Contact AusNet for more information.
<b>Scaffolding</b>	Subject to safety assessment	Contact AusNet for more information.
<b>Sewerage, drainage and water pipes</b>	Yes	Sewerage, drainage and water pipes constructed of earthenware or plastic materials will be allowed up to 30m from the centre of the tower steelwork.
<b>Stockpiling and storage of materials</b>	No	Stockpiling and storage of materials, including hay and silage, or in industrial-type waste bins and skips, will not be allowed in the easement.
<b>Storage or handling of flammable liquids or gases</b>	No	Planning laws restrict the storage or handling of flammable liquids and gases from bulk delivery vehicles within 60m of the centre line of a transmission line easement.
<b>Storage of materials in industrial type waste bins and skips</b>	No	Storage of materials in industrial type waste bins and skips will not be allowed in the easement.
<b>Swimming pools</b>	No	Swimming pools (above or below ground, including filtration equipment) will not be allowed in the easement.
<b>Tennis courts</b>	Subject to safety assessment	Contact AusNet for more information.
<b>Vehicles and equipment</b>	Yes (subject to safety assessment)	<p>Vehicles up to 5m in height will be allowed to travel under the line and operate without an AusNet safety assessment.</p> <p>Vehicles between 5m and 8.6m may be allowed subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m.</p> <p>Parking of sedan and utility types of vehicles will be allowed. Barriers, of an approved design, may be required to protect towers from damage by vehicles. Large articulated vehicles (such as semi-trailers and B-doubles) should avoid parking under the transmission line due to risk of electric charge (induction) building up as a result of insulation of tyres.</p> <p>When touching a large vehicle, you may get a 'shock' similar to an electric fence. Dragging earth wires or chains can help.</p>
<b>Vegetation</b>	Yes	Mature tree and shrub growth of up to 3m in height will be allowed up to 30m from the centre of the tower steelwork. For vegetation above 3m in height, an AusNet safety assessment will be required to ensure that minimum clearances and fuel load densities are maintained. Planting trees and shrubs should be scattered or clumped with no more than 10% density of cover over the easement area.



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# Additional information

## Aerial operations

Civil aviation regulations restrict crewed aircraft within 45m of any part of the transmission line or infrastructure due to the safety risk and potential damage to electricity infrastructure. However, AusNet works with Emergency Management Victoria and the Country Fire Authority (CFA) to ensure aerial firefighting, including aerial spraying and aerial water bombing, can operate in the vicinity of high voltage transmission lines.

Uncrewed aerial vehicles such as drones may be allowed to operate within the easement (including under the transmission line) subject to a safety assessment and permit from AusNet. AusNet is currently involved in Energy Networks Australia's review of the National Guidelines for Aerial Surveillance of Overhead Electricity Networks, which are used as the baseline for aerial works on Australian electrical networks. We will provide any additional guidance required once the guidelines have been finalised.

We understand that the aerial application of fertiliser and chemicals is an important activity on some cropping and horticulture properties. Ground-based, or drone where allowed, application of fertiliser and chemicals will be required as aerial services will not be allowed in the easement.

Your safety when undertaking aerial operations such as spraying, crop dusting, fertilising or mustering around transmission lines is essential. Please contact your Land Liaison Officer if you have questions or concerns about aerial operations on your property and how to safely achieve maximum crop coverage with your aerial operator. The Civil Aviation Safety Authority (CASA) has requirements for all pilots and drone operators and can provide specific information relating to your aerial operations. For more information, visit [www.casa.gov.au](http://www.casa.gov.au).

## Bushfires and firefighting

We recognise that bushfires are a serious concern in regional Victoria, and landholders and the community have told us that they are concerned the proposed Western Renewables Link may impact firefighting efforts in their area.

Potential impacts to fire risk and firefighting efforts are a critical consideration for the planning and design of the Western Renewables Link and we have been engaging regularly with the relevant authorities, including the CFA, through several forums, including the Technical Reference Group for the Western Renewables Link Environment Effects Statement (EES).

In addition, the EES will provide an in-depth assessment of the potential bushfire impacts of the project including those raised by the community such as the infrastructure starting fires, limiting firefighting efforts (ground-based and aerial), the ability to undertake hazard reduction burns, and preventing escape from a bushfire.

For further information view AusNet Services' [Managing fire risk - electricity transmission network](#) fact sheet and the Energy Safe Victoria information sheet titled [Electricity Transmission Lines – Bushfire Management and Community Safety](#).

## AusNet construction activities

Before construction activities start, we will offer to meet with you, the landholder, to discuss and plan the construction activities to ensure any site or property specific requirements are considered, such as the need for fencing, the removal of livestock, weed spraying and withholding periods.

Your Option for Easement proposal contains a copy of the draft Property Access and Management Plan (PAMP), which sets out the general protocols and management measures that we will implement when accessing any property to undertake construction activities. The protocols and measures outlined in the draft PAMP are the minimum standards you (as a landholder) can expect when construction activities are planned on your property. We will also comply with any additional property-specific access requirements agreed with you to avoid and minimise disruption to your property, operations and lifestyle.

Further information about the construction of overhead transmission towers is available in the Transmission line construction fact sheet on the project website, [resources page](#).



## Crops and harvesting

### Ground-growing crops

Ground-growing crop types will be allowed within the easement without an AusNet safety assessment or permit provided the crop is at least 5m away from the base of any tower steelwork and any associated digging or earth movement is no deeper than 300mm.

For earth movement changes greater than 300mm in depth, a Before You Dig Australia enquiry and subsequent safety assessment must be completed.

Vehicle and equipment heights must be considered when sowing and harvesting crops. There may also be restrictions on irrigation infrastructure and equipment, crewed aircraft, and movement of specialist machinery depending on heights. Alternative approaches to spraying of fertilisers and chemicals will be needed within the easement.

### Horticulture

Restrictions that may impact horticulture activities in the easement include:

- Use of large-scale agricultural equipment exceeding 8.6m.
- Irrigation infrastructure and some types of irrigation equipment.
- Strategic location of structures such as packing and machinery sheds.

Orchards are permitted within 500kV easements subject to relevant height restrictions.

### Potato farming

The land around Ballarat supports a high-value potato industry that uses large machinery for sowing, cultivating, and harvesting the crop, along with transport, storage and irrigation infrastructure.

Restrictions that may impact potato farming within the easement include:

- Use of large-scale agricultural equipment exceeding 8.6m.
- Irrigation infrastructure and some types of irrigation equipment.
- Aerial operations.
- Strategic location of structures such as machinery sheds.

## Livestock and grazing

Grazing on or near easements is permitted. Restrictions within the easement that may impact livestock and grazing, including wool, lamb and beef activities, include:

- Fencing specifications.
- Dams.
- Strategic location of structures such as hay sheds, stock yards, silos and machinery sheds.

### Irrigation

Large gun-type irrigators will not be allowed to operate within the easement due to safety risks and potential damage to electricity infrastructure.

Centre pivot and lateral moving irrigation, including end guns, will be allowed to operate up to 5m in height within the easement without restriction or an AusNet safety assessment. Centre pivot and lateral moving irrigation may be allowed to operate over 5m in height, subject to an AusNet safety assessment which must be sought prior to operating. Maximum height cannot exceed 8.6m. Water streams must be directed away from the transmission line infrastructure and should not go higher than the irrigator frame.

Transmission lines carry electricity at very high voltages and flashovers can occur without contact being made with the wires (a flashover occurs when electricity jumps across an air gap to create a conductive path to earth). This means it is important to take particular care when moving, assembling or disassembling irrigators. Pipes or long metal parts should be carried horizontally and as low to the ground as is practical when moving them. Ensure your equipment is effectively earthed at all times. Irrigators should be earthed with dragging earth wires or chains as required. Contact AusNet for more information.

To minimise risk when moving and working on irrigation:

- Always know the location of nearby lines and towers when working with irrigation equipment. Take the time to survey your surroundings before moving equipment. Look up and around you: note any transmission lines or towers and maintain your distance according to your safety assessment or permit to work (if required).
- Prevent any chance of entry into the exclusion zones when handling long lengths of pipe – make adjustments well away from the line.
- Adjust nozzles so water jets do not come within the exclusion zones of towers or poles.
- During maintenance or storage, keep irrigators at right angles to the transmission line.
- If irrigators need long-term maintenance, AusNet recommends moving the irrigators away from the area with transmission lines.
- Relocation, assembly or disassembly should be done outside the easement.

We encourage you to discuss your irrigation systems with your Land Liaison Officer so we can assist you with safety assessments and discuss what alternatives may be available if needed.

## Global Positioning System (GPS) and Differential GPS (DGPS)

GPS systems can operate within the easement and the flow of electrical energy through the transmission line does not affect GPS signals. There can be a small effect on GPS signals if you are under or right alongside a transmission tower, known as multipathing. Multipathing is usually only noticeable within about 3m of a metal structure (such as a tower, windmill or shed).

GPS uses radio signals in frequencies (spectrum) reserved for radio navigation services. GPS signals are generally made up of two digital radio frequency sources, one from the collection of satellites and the other from the State-controlled adjustment network via telephone signal. GPS systems utilise communication signals in the L-band, between 1 GHz and 2 GHz. High voltage alternating current (HVAC) overhead transmission lines operate at a very low frequency of 50 hertz. Due to the large difference in operating frequencies, electromagnetic emissions from transmission lines are unlikely to interfere with GPS systems as there is a line of sight to the various satellites or cells used for the location service.

Differential GPS (DGPS) utilises radio frequencies to communicate with the base station in a band that has a higher likelihood of interference from high voltage power lines compared to typical satellite GPS systems, which operate in the 1 to 2 GHz frequency range and are largely immune to power line interference. We are aware of rare instances of DGPS interference from transmission lines for equipment in close proximity (essentially within the easement) to high voltage transmission lines. We are designing the Western Renewables Link to mitigate this interference where possible.

While we are not aware of any current issues with GPS within our transmission line easements, we recognise that new technologies are continually being developed and we will continue to review new research and other information about this matter to inform our guidance.

## Electric and magnetic fields (EMF)

Electric and magnetic fields, commonly known as EMFs, occur wherever electricity is used, distributed, transmitted and generated. They occur in natural and human-made electricity. The effect of EMF on health has been researched since the 1950s, and in recent years by national and international committees.

Leading health authorities worldwide, such as the World Health Organisation, have found no evidence that confirms the existence of any health consequences from exposure to low-level electromagnetic fields, the type emitted from transmission lines.

The World Health Organisation (WHO) has advised that:

*"...current evidence does not confirm the existence of any health consequence from exposure to low level electromagnetic fields."*

In Australia, ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) advises:

*"The scientific evidence does not establish that exposure to ELF EMF found around the home, the office or near powerlines and other electrical sources is a hazard to human health. ARPANSA maintains continual oversight of emerging research into the potential health effects of the EMF exposure from powerlines and other electrical sources in order to provide accurate and up-to-date advice."*

While the general conclusions haven't established a relationship between magnetic fields and adverse health effects, we:

- Operate our transmission system prudently, with Australian health guidelines front of mind.
- Closely monitor high quality scientific research.
- Seek community views when locating new facilities.

In addition, we follow recommendations from Energy Networks Australia, the peak industry association for energy networks.

More information is available in the electric and magnetic fields webinar on the project website, [resources page](#). You can also find out more about electric and magnetic fields at the [Energy Networks Australia](#) site.

## Insurance

Insurance rates should generally be unaffected by the presence of a transmission line on a property. Specific insurance rates/terms will depend on your individual circumstances and coverage requirements (among other things). For specific advice, you should consult your broker/insurer.



## Fencing

### Posts and fencing

Fences made entirely from wood (e.g., wooden posts with wooden slats) are non-conductive and do not need to follow the advice outlined below.

Fences with metal components (such as metal wire or metal posts) near a transmission line can be an electrical safety hazard if not installed correctly. This is due to the transmission line inducing or transferring voltages onto the metal fence. Induced voltages can occur if a metal fence is constructed nearby and parallel to the transmission line. Transferred voltages can also occur if a metal fence is built too close to a transmission tower or pole. Transmission lines carry electricity at very high voltages and flashovers can occur without contact being made with the wires (a flashover occurs when electricity jumps across an air gap to create a conductive path to earth).

Metal fences can cross perpendicular under a transmission line but should be at least 30 metres from a transmission tower or pole. Metal fences must also be earthed. Similarly, metal fences running parallel to a transmission line should also be at least 30 metres away horizontally from the tower centre. If it is not possible to remain 30 metres away, the parallel fence must be periodically earthed depending on the distance it follows the transmission line.

### Non-electric or farm type fences

Wire fences supported on wooden or concrete posts running alongside a transmission line require earthing, as shown in the below image.

If the fence is within 30m of the centre of the transmission line easement and exceeds 250m in length, earthing is required. Further earths will be required every 100m for fences more than 100m long.

If the fence is between 30m and 50m from the centre of the transmission line easement and exceeds 250m in length, earthing is required. Further earths will be required every 500m for fences longer than 500m.

Fences more than 50m from the centre of the transmission line easement do not require earths.

### Gates in non-electric fences or farm type fences

If a fence, which is within 30m of the centre of the transmission line easement and requires earthing, includes any gates on wooden or concrete posts, these will require earthing, as shown in the below image.

### Fences on steel posts near towers

Fences and gates supported on steel posts do not require any additional earthing. However, fences or gates within 30m of a transmission line tower, 'egg' type insulations will need to be installed at locations 30m from a tower as shown in the below image.

### Electric fence wire as part of farm type fence or on separate posts

Most electric fence wire/s will be unaffected by the transmission line easement. Electric fence wire/s, where running along the transmission line at an angle of up to 45 degrees, will need to be installed with special filter units (provided and fitted free of charge by AusNet after construction if needed).

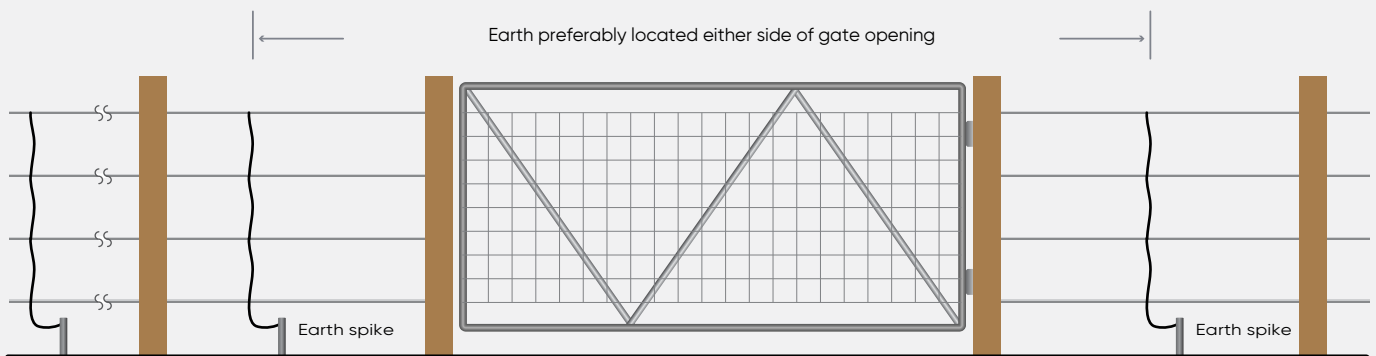
The filter unit will allow the normal operation of the wire as an electric fence but acts as an earth when the fence controller has been switched off or disconnected.

The number of filters needed will depend on the length and distance of the fence from the transmission line. Support with location and installation will be provided with the filter units.

Any non-electric fence wires running with the electric fence wire will need to be earthed. Filter units cannot be fitted and earthed within 30m of the transmission line towers. Electric fence wires within 30m of the transmission line towers will be relocated or replaced as needed.

You can contact your Land Liaison Officer for further information on specific fencing requirements for your situation.

## Gates in non-electric fences or farm type fences



For illustrative purposes only



### Proposed development on the easement

Prior approval from AusNet is required for any proposed alterations to approved developments on the easement to maintain the initial high safety standards. A building permit from your local council is not sufficient authority. You must submit your plans for proposed development on an easement to AusNet before you start work on the site. This includes plans for installation of additional lighting, underground services, and to operate construction equipment, or to detonate explosives in the vicinity of an easement.

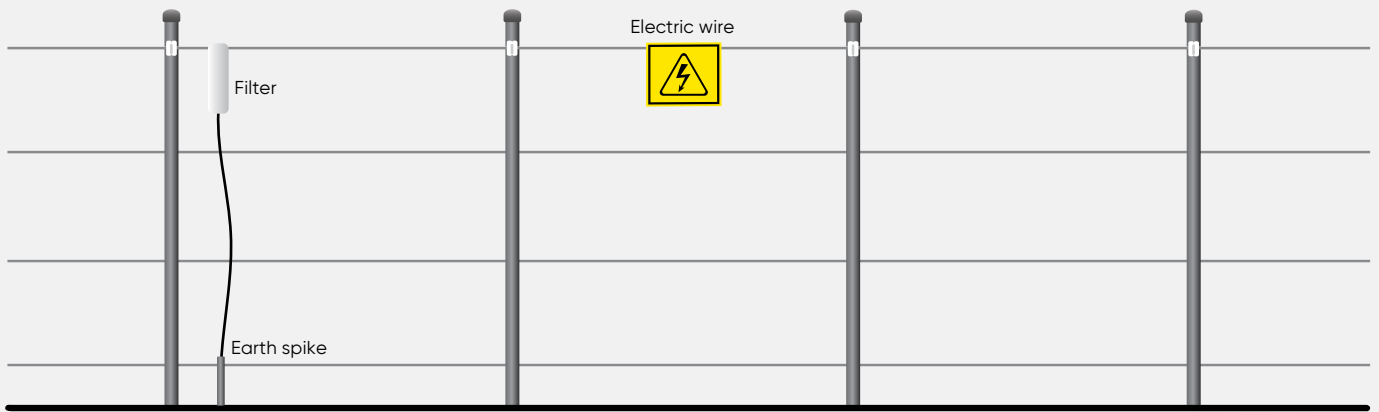
To contact AusNet about any proposed developments on an easement, complete the Application for approval (or general enquiry regarding) structures, building, or other use or activity on an electricity transmission easement application form, available on our [website](#).

Send completed application and plan(s) to:

AusNet Services  
Asset Management  
Survey and Easements  
Locked Bag 14051  
Melbourne City Mail Centre VIC 8001

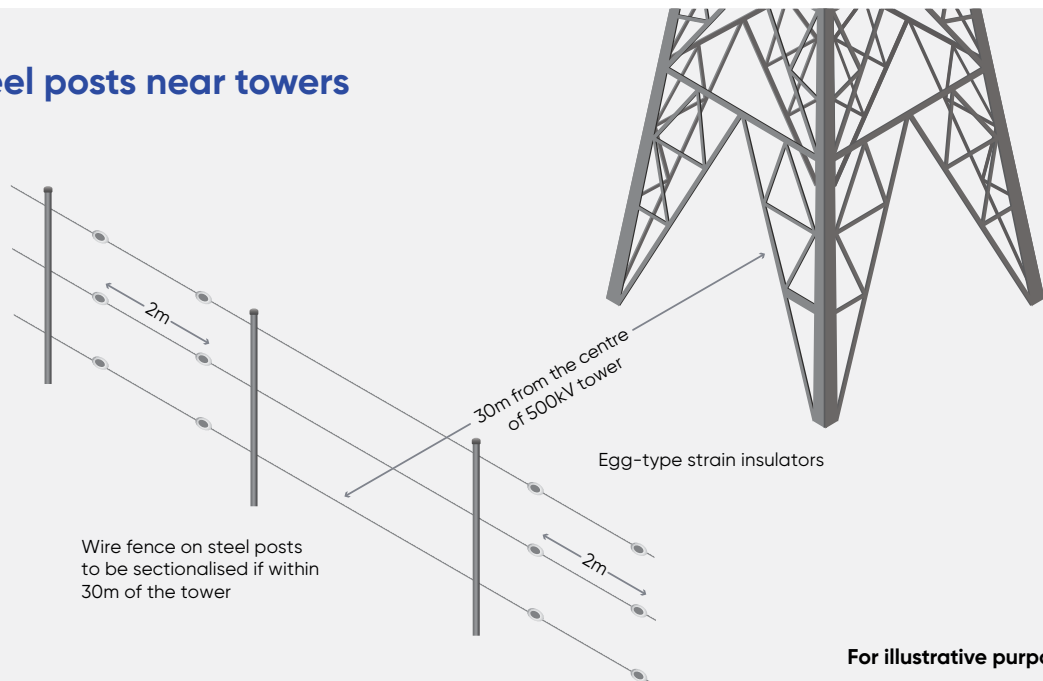
Or email to [ptw@ausnetservices.com.au](mailto:ptw@ausnetservices.com.au).

### Electric fence wire



For illustrative purposes only

### Fences on steel posts near towers



For illustrative purposes only

# Underground transmission line easements

We recognise that the community is interested in underground transmission lines and how they may operate. While the project has been proposed as an overhead transmission line, we have investigated the feasibility of full and partial undergrounding as part of the Environment Effects Statement investigations.

The information provided on activities permitted, or not, in conjunction with underground transmission infrastructure is based on general guidance for underground assets published by Energy Safe Victoria, and industry practices.

There are restrictions on the use of the land within an easement for underground transmission cables. There are also many permitted activities which may be included in the easement terms. Permitted uses may include grazing, operation of irrigation equipment (with some restrictions) and aerial crop spraying. Cropping, horticulture including potato farming, market gardens, orchards and dams will not be permitted within an underground cable easement.

Additional restrictions also apply to an underground transmission line easement to mitigate the risk of a person contacting an energised line and to protect the cables from damage. When cables are damaged by metal objects including fencing stakes or any digging tool, there is a risk of electric shock that can cause serious injury and/or death.

More information about underground construction in relation to the Western Renewables Link project is provided in the Underground Construction Summary fact sheet available on the project website, [resources page](#).



### How wide are underground transmission line easements?

Underground transmission electricity cable easements vary in width depending on the operating voltage, design and safety standards of the cable network and site-specific conditions. Underground transmission electricity cables are usually buried about 1.5m deep. An underground 500kV transmission line comparable with the proposed Western Renewables Link design, would have an easement width of approximately 30 to 35m.

### Activities within a 500kV underground transmission line easement comparable with the proposed Western Renewables Link design.

Agricultural and farming activities	Permitted (underground)	Conditions / Notes
<b>Aerial crop spraying</b>	Yes	This includes light planes and helicopters, and uncrewed aerial vehicles (e.g., drones). No conditions.
<b>Crops and vegetation</b>	No	All vegetation will be cleared in the underground construction area along the length of the route, except where trenchless construction methods are used. Underground cables can be buried deeper to allow cropping, although deeper burial increases cost due to reduced thermal efficiency.
<b>Dams</b>	No	Dams are not allowed within an underground easement.
<b>Excavation (including digging, earth moving activities and landscaping)</b>	Yes	This is assumed to only be likely to be required for running other utilities and services where there may be a need for coordination in relation to the transmission easement. No excavation work may commence until AusNet has responded to your Before You Dig enquiry.
<b>Fencing</b>	Yes	No driving fence posts in the ground within an underground cable easement.
<b>GPS</b>	Yes	The flow of electrical energy through underground transmission lines does not affect GPS signals.
<b>Grazing of livestock</b>	Yes	Grazing of livestock is permitted on the easement. Vehicles and operating related equipment subject to ESV guidelines.
<b>Headers with augers extended</b>	Yes	Subject to ESV guidelines. Equipment can traverse the easement. Restrictions on heavy machinery and equipment.
<b>Irrigation – Centre pivot and lateral moving</b>	Yes	Subject to ESV guidelines. Equipment can traverse across the easement. Restrictions on heavy machinery and equipment.
<b>Irrigation - Large gun-type</b>	Yes	Subject to ESV guidelines. Restrictions on heavy machinery and equipment.
<b>Sheds and dwellings</b>	No	Sheds and dwellings are not permitted within an underground cable easement.
<b>Vehicles</b>	Yes	Subject to ESV guidelines. Equipment can traverse the easement with restrictions on heavy machinery and equipment. Operation of taller equipment and vehicles permitted.



Restrictions and clearances contained in this document relate to the proposed Western Renewables Link 500kV double circuit transmission line. For information about other potential tower types for the project, please refer to the Transmission towers and conductors fact sheet available [here](#). For all other existing electricity transmission lines within Victoria, please refer to 'A guide to living with transmission line easements' available on the AusNet website [here](#).






## Questions

We recognise that the requirements of each property and landholder are unique. This guide provides general information for landholders about easement safety and permitted activities in the easement for the proposed Western Renewables Link.

Contact details for your Land Liaison Officer can be provided by the project team on 1300 360 795 or via email [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au).

## Western Renewables Link

 [www.westernrenewableslink.com.au](http://www.westernrenewableslink.com.au)  
 1300 360 795  
 [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au)

Ballarat PO Box  
PO Box 638, Ballarat VIC 3353

## Information straight to your inbox

Sign up for information straight to your inbox at the project website [www.westernrenewableslink.com.au](http://www.westernrenewableslink.com.au).

## Feedback

You can provide feedback on this document via our website [www.westernrenewableslink.com.au](http://www.westernrenewableslink.com.au) or by calling 1300 360 795 or by emailing [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au).

## Translation and interpretation services




If you need an interpreter, please call 13 14 50.

If you are deaf and/or find hearing or speaking with people on the phone difficult, please contact the National Relay Service on voice relay number 1300 555 727, TTY number 133 677 or SMS relay number 0423 677 767.

The information in this document is for reference only – it is not designed to be, nor should it be regarded, as professional or legal advice. You should seek appropriate independent professional and/or legal advice where appropriate and before making any decisions based on material in this document. The information is an overview (in summary form) and does not purport to be complete. This document, and the information in this document, will not form the basis of any contract or commitment. AusNet Services does not guarantee or warrant the accuracy, completeness, or currency of the information provided and AusNet Services, its directors, officers, employees, agents and advisers disclaim all liability and responsibility (including for negligence) for any direct or indirect loss or damage which may be suffered by any recipient through use or reliance on anything contained in or omitted from this document.

## Complaints

If you have a query, a compliment or a complaint, you can let us know by using the online enquiry form on [www.westernrenewableslink.com.au](http://www.westernrenewableslink.com.au). Or you can let us know by:

 1300 360 795  
 [info@westernrenewableslink.com.au](mailto:info@westernrenewableslink.com.au)  
 PO Box 638, Ballarat VIC 3353

You can also lodge a complaint or provide feedback directly to your Land Liaison Officer.

Complaint handling steps:

1. You can lodge a complaint with AusNet as outlined above.
2. We will acknowledge receipt of a complaint within two working days.
3. We aim to resolve the complaint within ten working days.
4. Where we cannot reach a resolution within ten working days, we will keep you informed of the progress being made with handling the complaint and provide a revised timeframe for resolving the complaint.
5. At any time, you may request to have your complaint escalated to the senior management team.

If your complaint or question relates to the RIT-T process, you can raise it with AEMO by emailing [WestVicRITT@aemo.com.au](mailto:WestVicRITT@aemo.com.au).

If your complaint or question relates to the Environment Effects Statement process, you can raise it with the Department of Transport and Planning by emailing [environment.assessment@delwp.vic.gov.au](mailto:environment.assessment@delwp.vic.gov.au).

If your complaint cannot be resolved, you can escalate your complaint to the Energy and Water Ombudsman Victoria.

## Other sources of information

**Australian Energy Infrastructure Commissioner** ([www.aeic.gov.au](http://www.aeic.gov.au)) including information about how to make a complaint, best industry practice and resources for landholders.

**Australian Energy Market Operator** ([www.aemo.com.au](http://www.aemo.com.au)) including information on the Regulatory Investment Test for Transmission (RIT-T) process for this project.

**Energy and Water Ombudsman Victoria** ([www.ewov.com.au](http://www.ewov.com.au)) including information about complaints and dispute resolution.

**Energy Safe Victoria** ([www.esv.vic.gov.au](http://www.esv.vic.gov.au)) including information about the safe design and operation of high voltage transmission networks in Victoria.

**Environment Effects Statement Process in Victoria** ([www.planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria](http://www.planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria)) including information about the environment assessment process managed by the Department of Transport and Planning.

**Essential Services Commission** ([www.esc.vic.gov.au](http://www.esc.vic.gov.au)) including information about the regulation of transmission licenses in Victoria and the Electricity Transmission Company Land Access Statement of Expectations.

**Valuer General of Victoria** ([www.land.vic.gov.au/valuations/first-time-here/about-valuer-general-victoria](http://www.land.vic.gov.au/valuations/first-time-here/about-valuer-general-victoria)) including general information about how land is valued in Victoria.