Farming near transmission infrastructure

VicGrid is working directly with landholders within the proposed VNI West easement to determine the most practical alignment for the new 500 kV transmission line – balancing environmental impact avoidance with property layouts, machinery access, irrigation infrastructure and seasonal operations.

Machinery up to 5 metres high will be able to operate under the new VNI West transmission lines, and taller machinery up to 8.6 metres may be used subject to a safety assessment.

Some activities are subject to height restrictions, or prohibited for safety reasons (such as gun irrigation and aerial spraying).

Responsibilities

Landholders: Maintain the land in the easement, or as agreed with VicGrid.

Transmission Network Service Provider (TNSP): Determines permitted activities within easements, including Energy Safe Victoria requirements. Responsible for managing vegetation within the easement for safety purposes.



Across Victoria, farming and electricity infrastructure have successfully coexisted for decades, with more than 6,500 kilometres of transmission lines already in place.

Farming activities under transmission infrastructure

Landholders and farmers shared their land use practices with VicGrid, informing the below table that outlines various farming activities, restrictions and expected allowances for the VNI West transmission lines. They are to be used as a guide only. Once tower designs for the VNI West project have been finalised, further information will be made available to landholders in relation to the separation distances relevant to a specific property.

Farming Activity	Allowed?	Restrictions
Augers	✓	Based on a minimum 15 metres ground clearance and the No Go Zone guidelines published by Energy Safe Victoria (ESV), vehicles and equipment of up to 5 metres in height may travel and operate without permission. Vehicles and equipment between 5 metres to 8.6 metres in height may be permitted to operate subject to a safety assessment undertaken by the TNSP. The safety assessment is specific for each property, equipment and vehicles used as well as the activities carried out. The assessment may determine whether a permit or spotter is required for this work. In the majority of instances, it is likely only a permit is required.
Excavators	✓	
Headers	✓	
Semi-tippers	✓	
Grain shifting augers	✓	
Boom sprayers	✓	
Seeders	✓	
Harvesters	✓	
Autonomous vehicles	✓	
Centre pivot and lateral moving irrigators	✓	
Rain gun irrigators	✗	Large water spray irrigators (i.e. gun irrigation) are not permitted to operate within the easement due to safety risks and potential damage to electricity infrastructure.
Construction vehicles and equipment	✓	Construction vehicles and equipment may operate under transmission infrastructure subject to height restrictions (as noted above). **Note:** No excavation work is to commence until a permit has been issued to work adjacent to a high voltage electrical apparatus. Stockpiling of excavated material is prohibited.
Aircraft spraying	✗	Manned aircrafts are prohibited within the transmission line easement due to the safety risk and potential damage to electricity infrastructure.
GPS	✓	In most cases, no interference to GPS is expected near transmission lines. However, high-precision systems can sometimes be affected by indirect factors like physical obstructions or signal reflections, particularly close to towers or in certain conditions such as rain. For new GPS setups, the equipment owner should assess and set up the base station to support reliable performance (for example, by selecting an appropriate location and maintaining clear line-of-sight to satellites). For existing GPS systems, VicGrid will work with landholders to understand any GPS-critical locations and, where known, take them into account through the Property Management Plan (PMP). We will also undertake field checks in GPS-critical areas during detailed design and operation to confirm whether any practical impacts occur and identify any required mitigation. If relocation or modification of GPS equipment is needed due to construction or operation of VNI West, compensation will be considered through the Option for Easement (OfE) process.
Broadacre cropping	✓	Ground-growing crop types are allowed without a permit or assessment where root depth change is less than 300mm from the original ground profile depth. Crops must not exceed required clearance heights, 9.1 metres for mature trees, and must not restrict access for inspection, maintenance or vegetation management. Ground-growing crops may be grown within five metres of tower steelwork, with permission from the infrastructure owner, provided tower foundations, drainage and maintenance access are not impacted.

Farming Activity	Allowed?	Restrictions
Orchards	✓	Orchards permitted within easement subject to relevant height restrictions.
Trees and shrubs	✓	Trees and shrubs up to 3 metres in height are permitted without a safety assessment. Vegetation above 3 metres may require a safety assessment to confirm it meets clearance and bushfire safety requirements. Vegetation must not be allowed to grow above the clearance height for the line (typically 9.1 metres). Guidance on property-specific height limits can be provided by VicGrid.
Livestock	✓	Livestock permitted with no restrictions.
Farm sheds	✓	The easement, under assessment in the Environment Effects Statement (EES), largely avoids farm infrastructure like sheds or dwellings. Domestic garages (non-habitable), carports, silos and garden sheds may be granted a permit from a limited distance onto the easement subject to a number of requirements being met. These include sufficient safety clearance to towers and overhead conductors; height restrictions; construction made largely of non-flammable materials and not attached to a dwelling.
Paddock fencing	✓	Non-metallic fences up to three metres in height are permitted. Metallic fences, or fences incorporating metallic materials must be suitably earthed and sectionalised and are subject to approval. All fixed metallic parts must be earthed and are subject to prior approval.
Drone operation	✓	Drones, including agricultural crop spraying drones, may be allowed within the easement, subject to a safety assessment and permission from the TNSP. For drone operations, proximity to transmission lines may require amended flight paths or operational controls to ensure compliance with Civil Aviation Safety Authority rules and safe operating distances.
Stubble burning	✓	Stubble burning can generally occur outside the Fire Danger Period. Local laws on burn-offs can apply year-round, ensure you check with your local council and register your burn-off. Stubble burning must be controlled and monitored adequately and restrictively.
Aerial firefighting	✓	The Transmission Network Service Provider (TNSP) will work with Emergency Management Victoria and the Country Fire Authority to support aerial firefighting in the vicinity of transmission lines, including sharing relevant information to assist operations or de-energising the line if required. Transmission lines are shown on aeronautical maps and pilots plan for them as part of normal operations. Rules for aircraft operations (including aerial firefighting) are governed by CASA, and aerial water bombing can occur near powerlines. Pilots assess local conditions at the time (such as wind and visibility) and work closely with the relevant fire authority to determine safe operating distances and procedures. For low-level firefighting tasks, pilots conduct reconnaissance of hazards (including powerlines) and continually reassess risk throughout the flight.

Find out more about fighting fires around transmission lines

Consideration of the advent of larger autonomous farming vehicles or the greater use of drones and robotics will be part of the discussions landholders will have with their appointed Landholder Liaison.

Frequently Asked Questions





My machinery is over 5 metres high – how do I get a permit?

You will be able to request a permit by contacting the network operator (TNSP). A TNSP has not yet been selected for VNI West, but as a guide, according to AusNet (the TNSP that owns and maintains existing Victorian transmission line infrastructure), it will take 10 business days to complete a safety assessment or permit application once a simple form is submitted via email. There is no permit cost.



How large will the easement be?

The easement for VNI West is 70 metres wide along most of the route, to allow access for maintenance and for safety control measures. Two locations along the alignment require transposition infrastructure, therefore the easement is wider for these short sections.



How large will the base of the towers be?

The tower bases areas are approximately 15x15 metres to 25x25 metres, and will have smaller concrete pads or piles (some of which may be steel) at the 4 corners to support the legs. There will be an activity exclusion zone around the base of the tower of approximately 5 metres (not fenced, unless agreed through a Property Management Plan).

How will VicGrid mitigate biosecurity risks on my property?

Before accessing land, the VNI West Landholder Liaison will work with landholders to identify all biosecurity requirements for their property, and agree on appropriate management plans. These will be detailed and documented in an access agreement.

Read VicGrid's **Biosecurity Policy** here.

How long will the spans between towers be?

The distance between each tower will be roughly 400 to 500 meters, however this may vary with the terrain. Tower heights are expected to reach 60 to 80 metres tall; this provides clearance for most farming activities beneath and reduces the number of towers required per property.

Will I be compensated if the transmission lines require new machinery or other related costs?

Yes, where there are impacts on farming business practices to be modified, such as remapping of GPS, compensation will be paid and the cost of undertaking this work will be covered by the project. We will work with landholders to minimise the impacts on existing farming and agricultural activities. Your dedicated Landholder Liaison is the best person to discuss compensation for your property and the Option for Easement (OfE) process.

How will farming activity be affected during the construction phase?

Some restrictions on farming activities will apply during the construction phase, with fewer disruptions once construction is completed. Landholders can work with VicGrid to design a Property Management Plan (PMP) specific to the easement on their property. The agreed PMP will specify items like required temporary fencing and other construction impacts. This includes mitigation methods to ensure the broader property can continue to be utilised as usual by landholders. Where there is any productivity or access loss, this impact needs to be considered and factored into the assessment of compensation. The impact will be specific to the property.

Find out more in the VNI West **Building Transmission: Construction Guide for Landholders**.

Can more farming activities occur if the line was built underground?

In the case of underground transmission cables, crops and rooted vegetation are typically not allowed to be planted within the easement area. While an underground easement can be narrower, there are often more restrictions on what you can do above the cables.

Underground transmission typically requires a deep trench during construction, which can cause significant disruption along the full route (including impacts to soils, drainage and environmental values).

During operation, activities that disturb the ground can be restricted to protect the cables and structures such as sheds and dams are not permitted. Maintenance and fault finding for underground cables can also take longer and be more invasive because it may require excavation. For example, a NSW study on the Hume Link project, found undergrounding would triple costs and add five years to construction. A robust assessment of undergrounding VNI West will be undertaken as part of the EES.