TRANSPOWER

Working on your land

Information for landowners and occupiers

JUNE 2026

Your contact

In an EMERGENCY, call 0800 843 474 (0800 THE GRID)

Transpower is the State Owned Enterprise that plans, builds, maintains and operates the National Grid – the high voltage transmission network. We keep New Zealand's energy flowing and support a sustainable energy future through transporting bulk electricity, connecting with others to deliver that electricity, and managing New Zealand's power system 24/7. This can only be achieved by operating openly, honestly and safely with landowners, occupiers and the communities near our assets.

Contents

We are committed to working with landowners affected by our activities, and causing as little disruption as possible to the normal use of your land.

Working together

Most of the transmission lines that make up New Zealand's National Grid are located on, or cross, private land. It is important we work with landowners (and occupiers) who have our assets on their land, to ensure that development and other land uses can co-exist with transmission lines.

This booklet provides you with information on how to work safely with the transmission lines on your land and how we will work with you going forward.

If you are uncertain whether your activity near transmission lines is safe, or you would like further advice, we can help.

When planning to undertake work or develop land near our lines, please contact us as early as possible. We are always happy to talk with you and in most cases we can provide an expert, at no cost, to assist with any queries you may have.

We also have detailed factsheets for more information. These are available from your landowner contact person or on our website transpower.co.nz.

FOR QUERIES

CALL US ON

0508 526 369 (0508 LANDOWNER) or email us at landowner@transpower.co.nz.

Our commitment to landowners

Transpower is the owner and operator of New Zealand's national electricity grid on behalf of all Kiwis. Our transmission lines move electricity from where it is made to where it is needed, enabling local lines companies to connect homes and businesses across the motu to the warmth, comfort and security that electricity provides.

New Zealand's electricity transmission assets traverse the length and breadth of the country, with most transmission lines located on private land. Landowners hosting these assets play a vital role in ensuring a safe and reliable electricity transmission system for all New Zealanders.

Developing effective long-term relationships that are built on mutual trust and respect with the landowners who host our assets is important to us. We know that hosting our assets can have an impact on your use of the land and we are committed to minimising that impact as much as practicable.

We will strive to ensure that you have a consistent Transpower experience, one where we act with honesty, integrity and humility when we are a guest on your land.

We commit to:

- undertaking all our work safely and consistently with good electricity industry and relevant land management practices;
- understanding how you use your land, and how we can minimise or mitigate any impacts on your land use and/or operations;
- proactively informing you of our proposed plans and consulting with you on their impact;
- understanding and listening to your concerns, and working with you to find solutions when undertaking work on your land;
- doing what we say we are going to do and giving you clear reasons if we are unable to do so;
- communicating with you in the way that you prefer;
- minimising any disruption as much as practicable and making good any damage that we cause as a result of our activities while on your land;
- taking all complaints seriously and responding to them in a timely manner; and
- providing you with a dedicated phone line to talk to a member of our team if you have any questions or concerns.

James Kilty, Chief Executive
Transpower

When you are likely to see us

Regular inspections and maintenance

We generally inspect towers and poles once a year. When we do this, we also check whether vegetation is growing too close to the lines. If any work is required following these inspections, we will contact you.

Emergency works

Occasionally we will need to access our assets urgently to repair a fault. While we may require access at short or no notice we will keep you updated as soon as we are able.

More extensive work

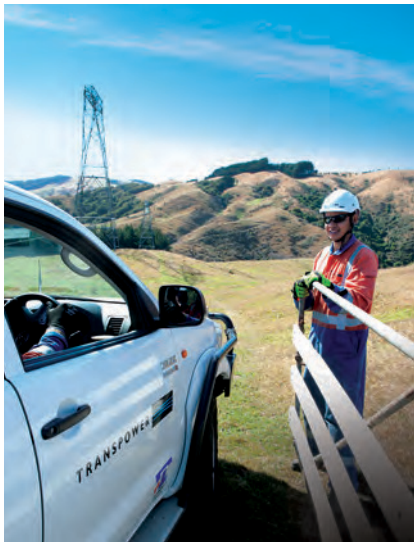
From time to time, we need to do more extensive work as part of maintaining the network, for example, painting our transmission towers. For work like this, we apply for any necessary resource consents from the local council, and we try to plan around what is happening on your property. While we will try to access your property at a time convenient to you, that might not always be possible due to constraints on our transmission network or availability of our crews.

REMEMBER:
For information on the types of maintenance activities we carry out and how we undertake them, visit our website and check our 'Work Overviews'

Who undertakes our work

We use service providers (contractors) to carry out regular line inspections, all maintenance (including access tracks) and vegetation management.

Our staff and service providers carry evidence of their identity at all times. They must also be under the control of a person holding a Warrant of Authority from Transpower. You can ask to see evidence of identity or a Warrant at any time.



Below are some indicative details of the work we may do on your land – the specifics may vary depending on the circumstances of each site.

	Frequency	Approximate time on your land	Number of people	Number and type of vehicles
Patrol	Normally once per year	Less than one hour per structure	1–2	One ute or all terrain vehicle (ATV)
Vegetation management	As required	As required	Varies	Cherry-picker, chipper, light truck, service truck
Access track maintenance	As required	1–2 days on average	1–4	Grader or digger and a small truck
Paint towers	Approximately a 10–20 year cycle	About 2 weeks per tower (dependent on weather)	4–10	Water blaster, water tanker, air compressor, other vehicles
Foundation strengthening	Once every 20–30 years	About 3 days per tower	4	4WDs, a transport truck, a digger, a concrete truck

Locating our assets on your land

When we contact you about work, you can locate where that work will take place on your land using our new interactive map from the website: transpower.co.nz/find-your-place-map.

REMEMBER: Find our assets on your land with the interactive map from the website: **https://data-transpower.opendata.arcgis.com/**

Conduct of staff

When working on your land we will:

- manage all works undertaken on your land in a safe manner, including leaving any machinery, plant, materials or excavations in a safe and secure condition
- leave all gates as found, unless you request otherwise
- take all reasonable precautions and comply with your reasonable requirements, for example minimising disturbance to livestock, crops, and working and living areas
- remove all surplus equipment, material, debris or rubbish from your land when the work has finished (unless you ask for it to remain)
- avoid or mitigate localised contamination, such as debris or spoil entering waterways, ponds etc
- not light fires on your land without your consent
- ensure all potential contaminants such as oils, solvents and paints are contained and any spillage is removed
- not bring dogs or firearms onto your land.

FOR QUERIES

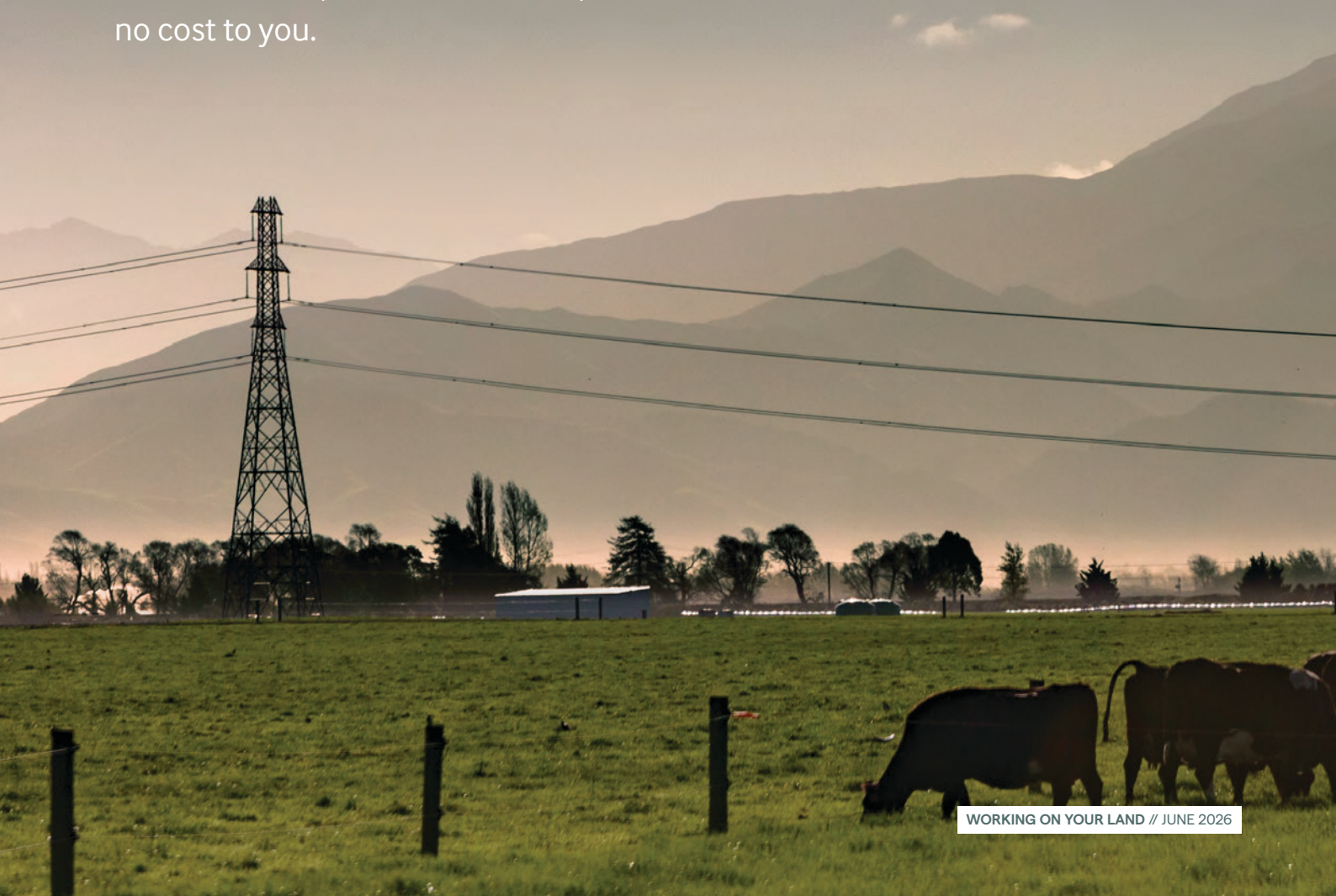
CALL US ON 0508 526 369 (0508 LANDOWNER) or email us at landowner@transpower.co.nz.

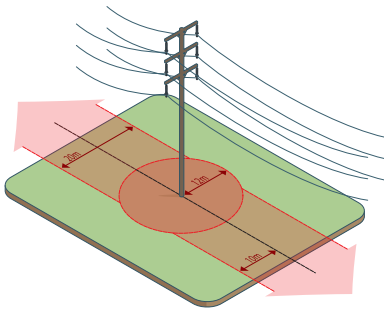
Working safely around transmission lines

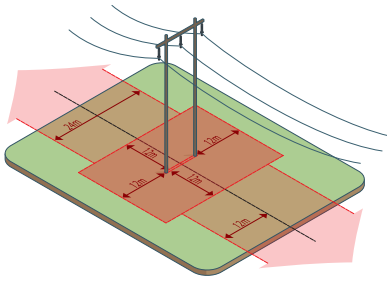
Most of your day-to-day activities should be unaffected by the presence of our transmission lines. For quick reference, we have provided some information in this section on safety and how different land uses may be affected by transmission lines.

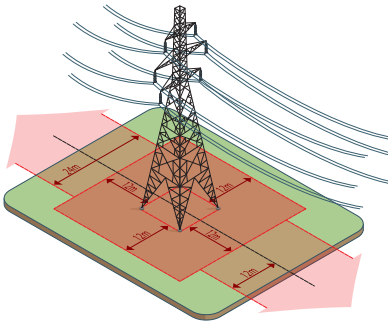
A service provider can visit you to discuss your particular situation, and advise on the potential impact and risks of what you want to do and how to proceed (for example, you may need to obtain engineering advice). If it is feasible, we can help you manage the work to ensure safety around the site, and in most cases, this will be at no cost to you.

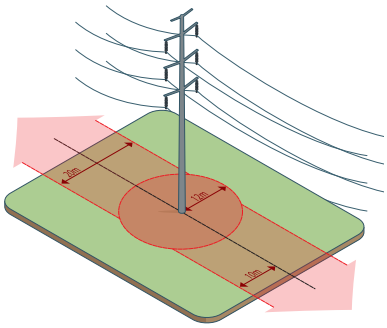
Index to this section:











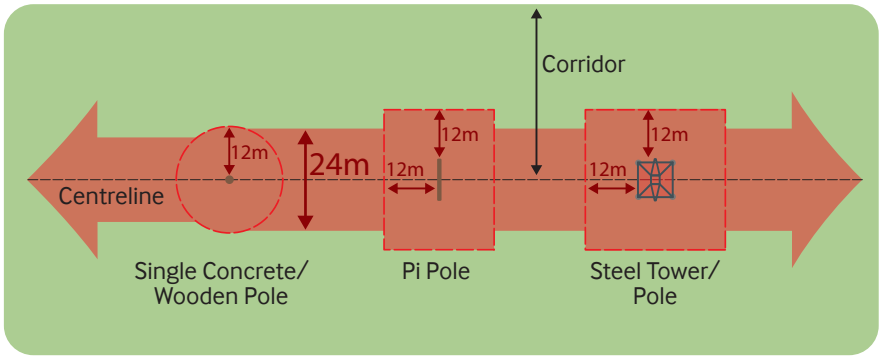
National Grid Yards and Subdivision Corridors

Development near National Grid lines can have unwanted and unintended effects on the lines, and conversely the lines can affect how development takes place. To address these issues, we use a corridor approach to existing and new development.

The National Grid Subdivision Corridor is the area where Transpower needs to be involved in the use and development of land. Over a wide corridor, Transpower is interested in the subdivision of the land, as this is where access to the National Grid line (including the supporting towers or poles) is determined. This is also the extent of the area where electrical effects may be experienced.

Within the National Grid Subdivision Corridor is a National Grid Yard. The National Grid Yard is the area beneath, and immediately next to, National Grid lines and their support structures. Within the yard, incompatible activities (particularly sensitive activities) and land uses need to be set back from National Grid lines as they can compromise the ongoing operation, maintenance, upgrading and development of the National Grid, or the safety of those living or working around it.

Transpower seeks a National Grid Yard that is a minimum 12 metre setback either side of the centreline of a National Grid line, and 12 metres in any any direction from the outer edge of a structure. This is reduced to a 10 metre setback where the line is a single concrete or wooden pole line (although the 12 metre distance from structures is the same). That National Grid Yard is shown in red in the diagram below:



Our approach seeks to keep the National Grid Yard free of buildings and structures and to manage land use and activities that could pose a risk to your safety or to the safe and efficient operation of the National Grid. What can (and can't) be established within the yard depends on where your site is located. Existing activities within the yard can continue as is – this is called existing use rights.

If you wish to establish new buildings or structures, subdivide, or substantially change land uses near transmission lines, please contact us as soon as possible. We are here to help and happy to work with you. Early engagement with us will help avoid costly rework for your project later.

For more information on corridors and development around our lines: Download a copy of our Development Guide from our website: transpower.co.nz

email us: transmission.corridor@transpower.co.nz

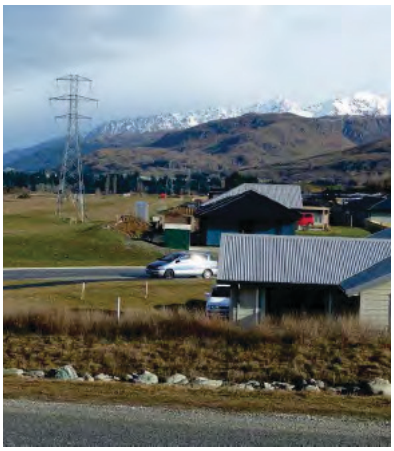
call us: 0508 526 369 (0508 LANDOWNER).

REMEMBER:
WHEN IN DOUBT discuss your plans with Transpower.

Buildings and structures

What's the issue?

Buildings and structures located under, or too close to, transmission lines can pose a risk to your safety and to the National Grid, which is why we use the corridor approach set out at the beginning of the section. It is important that the area inside the National Grid Yard is kept free from building and structures.



In some areas of the country, some development has occurred under our transmission lines prior to rules being in place. In these cases typically, further development will not be allowed if it increases risk to the operation of the National Grid or the safety of the landowner. There will likely be rules in your Council's District Plan, but you may also wish to talk to us first about your plans.

What are the legal requirements?

As well as meeting our corridor requirements, it is important to always comply with the minimum safe separation distances set out in the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP34).

The following tables summarise the safe separation distances required for buildings near lines. These distances increase with the voltage level of the line, and the span length (the distance between two towers or poles):

Minimum safe distances for buildings or structures near 110 kV transmission lines on poles and towers (pylons) without engineering advice

Conductor span	Clearance required beneath conductors	Clearance required to the side of conductors
0–125 m span	7.5 m	9.5 m
126–250 m span	8.5 m	12.5 m
251–375 m span	10 m	21 m
375 m span or greater	Engineering advice required	

Minimum safe distances for buildings or structures near 220 kV transmission lines on poles and towers (pylons) without engineering advice

Conductor span	Clearance required beneath conductors	Clearance required to the side of conductors
0–125 m span	8.5 m	11 m
126–250 m span	10 m	14 m
251–375 m span	11 m	22.5 m
375 m span or greater	Engineering advice required	

Engineering advice is required for ALL span lengths over 375 m and for lines over 220 kV and where support structures are not on equal elevation.

How to tell the voltage of the transmission line

Every tower and pole has a sign on it which clearly states the line voltage, line name and structure number. If the voltage of the line is not 110 kV or 220 kV, please contact your landowner contact person for more information.

How to tell the span length

We can provide this information to you. Please contact us or your local landowner liaison officer.

You can find a copy of NZECP34 on our website: transpower.co.nz

For more information on NZECP34 safe clearances and development around our lines:
download a copy of our Development Guide from our website transpower.co.nz
email us: transmission.corridor@transpower.co.nz
call us: 0508 526 369 (0508 LANDOWNER).

Earth Potential Rise

What's the issue?

In the rare event of a lightning strike or fault on the transmission line, towers or poles may transfer high voltage and dangerous currents into the ground for a very short instant. This is known as 'Earth Potential Rise' (EPR).

The voltages produced by this can potentially be hazardous if someone is standing close to, or touching, the tower or pole. Objects, such as metallic pipes or fences, set into the ground near the tower or pole with the fault may also transfer hazardous voltages to a person who is touching the object at the time of the fault.

There have been no recorded instances in New Zealand of people being hurt by a fault event or lightning strike on our transmission lines. However, Transpower does take safety seriously, and has work underway to provide greater protection with sites that have increased risk. The sort of work includes extending concrete foundations, while encasing steel mesh.

Tower (before) – note steel wire fence through middle of tower.

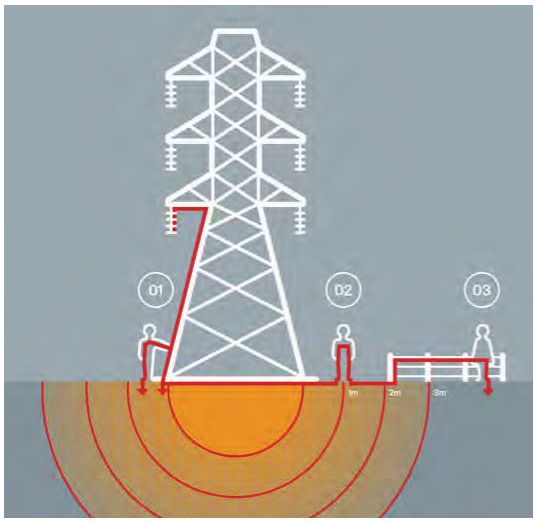
Tower (after) with foundations completed and wooden fence replacement, prior to grass regrowth.

What are the legal requirements?

EPR standards and recommendations are outlined in the Electricity Engineers' Association (EEA) guide, which is recognised as industry best practice in the management of EPR.

What are the key points?

- Transpower has identified sites with greater risk, and has a national programme of safety enhancements underway to mitigate these further.
- Do not connect metallic objects to a transmission tower or pole
- If you have concerns with existing items (fences etc) near our towers or poles, talk to your landowner liaison officer.



Earth Potential Rise scenarios.

01 Touch potential

In the unlikely case of a fault or lightning strike, the current may go down the metal tower or pole and potentially pass through a person who is touching the tower or pole. Whether the current could be harmful depends on a number of things, including how long the fault is, what part of the body is touching the tower or pole, even what type of footwear the person is wearing or what they are standing on.

02 Step Potential

In the unlikely case of a fault or lightning strike, the current may go into the ground and potentially pass through the body if a person is standing or walking near the tower or pole. As with touch potential, the current may not be harmful and would depend on a number of things, for example what the person is standing on and the type of footwear they are wearing.

03 Transferred voltage

This is a rare event where the current from a fault or lightning strike may go through the tower or pole to a nearby metal object set into the ground, such as an iron fence or metal washing line. There are other common backyard items like animal shelters, letter boxes, metal garden sheds, greenhouses and swimming pools that may also have transferred voltage potential. The voltages produced by transferred voltage, like Step and Touch, can be hazardous, particularly when someone is standing close to, or touching the tower or pole.

For a copy of our Earth Potential Rise information sheet, please call us free on 0508 526 369 (0508 LANDOWNER), visit transpower.co.nz

Trees, orchards and vegetation

What's the issue?

Trees that grow close to power lines are a potential threat to public safety, security of supply and a fire risk.

If trees touch high voltage conductors (the wires), or electricity 'jumps' the gap to a tree, then a major electricity discharge may occur. This discharge/flashover can cause trees to ignite and cause serious injury or death to bystanders. Tree or forest fires destroy property and threaten people's and animal's lives.

REMEMBER:

If trees touch high voltage conductors (the wires), or electricity 'jumps' the gap to a tree, then a major electricity discharge may occur to the tree. This discharge/flashover can cause trees to ignite and serious injury or death to bystanders. Tree or forest fires destroy property and threaten people's and animals' lives. Do not plant trees in areas where they could eventually touch or fall across high voltage lines. You must comply with the Electricity (Hazards from Trees) Regulations.

What are the legal requirements?

We are legally required by the Electricity (Hazards from Trees) Regulations 2003 to maintain our lines to minimise any tree-related interruptions to the supply of electricity.

The regulations define a safe setback distance from the lines called the Growth Limit Zone GLZ).

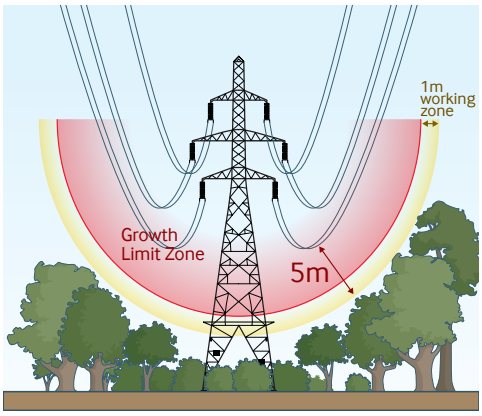
The GLZ is the area that trees must not enter because of electrical safety concerns. This is 4 metres from the conductors (wires) at their lowest position, considering both vertical and horizontal movement.

Where a tree encroaches or may in future encroach on the Growth Limit Zone, our service provider will seek your agreement to fell the tree(s).

If you decide that you wish to keep the trees, you must prevent them from entering the Growth Limit Zone (GLZ).

You should not trim or fell the trees yourself unless advised that it is safe to do so. **Only Transpower's vegetation team are qualified to trim trees within the GLZ.**

If you allow the trees to enter the GLZ then Transpower may issue you with a Cut or Trim Notice, in accordance with the Electricity (Hazards from Trees) Regulations 2003 (the Tree Regulations).



What are the Key Points?

- Trees must be at least 4 metres from the closest part of the conductors under worst case conditions – i.e. movement of conductors in high winds or temperatures. Transpower can measure and map these distances for you.
- Plant trees only where they can grow safely to maturity. Transpower can provide mapping of your property clearly showing the safe planting areas and permissible tree heights

REMEMBER:
You must comply with the Electricity (Hazards from Trees) Regulations 2003.

Forestry

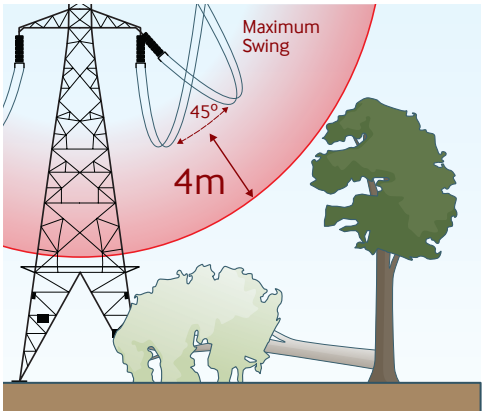
- Harvesting or felling trees within two tree lengths of Transpower lines requires an agreed harvest plan with Transpower.
- Transpower may also need to provide a safety briefing and supervision of the electrical hazards of the operation
- Other forestry works such as track or earthworks that could affect our assets must also be assessed by Transpower
- Talk to us if you're planning forestry planting near our lines – we can help calculate safe and practical planting setback distances. Early planning will avoid the need to fell immature trees and lessen the risk of wind-throw damage and forest fire.

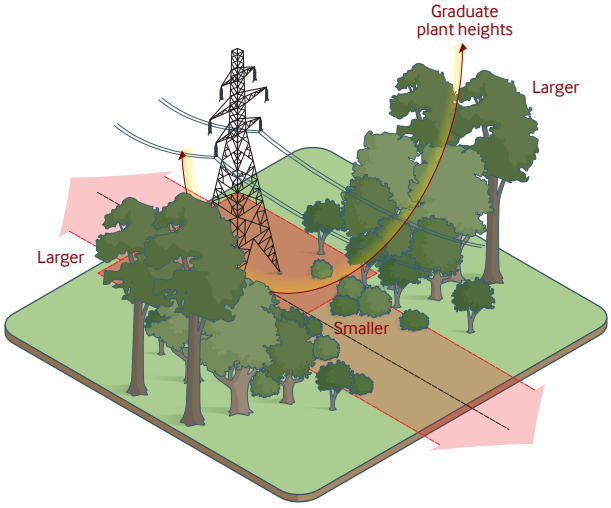
Orchards/Horticulture

You need to plan any orchards around Transpower lines carefully to ensure that:

- Trees and vines can grow safely
- Support structures do not create an electrical hazard
- Staff and mobile plant can safely work around the lines
- Transpower can continue access to operate and maintain the lines

Transpower can provide expert advice on orchard design and layout to ensure your orchard is safe.





For a copy of our trees and transmission lines information sheet, please visit our website transpower.co.nz/landowner-guides, call us on 0508 526 369

REMEMBER: Look up! If there are lines over your site, Transpower may be an affected party and should be consulted.

A warning notice that says **WARNING KEEP CLEAR OF POWER LINES AT ALL TIMES** should be fixed in a conspicuous place in the operator's working position. (NZECP34:5.6)

Mobile plant

What's the issue?

It is important to maintain safe separation distances from transmission lines to ensure:

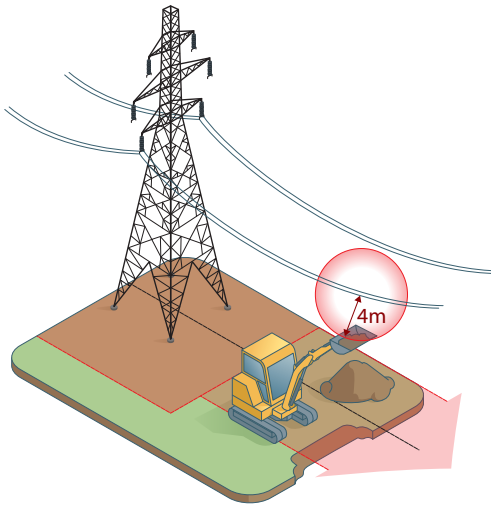
- the safety of operators of mobile plant working near transmission lines
- the safety of the public in the vicinity of the working area
- the reliability of the electricity supply.

What are the legal requirements?

The New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP34) sets out minimum safe electrical separation distance requirements including for persons working near overhead lines and the operation of mobile plant.

What are the key points?

- For persons working near transmission lines, the minimum safe approach distance limits are:
  - **4 metres** for 110 kV lines and below
  - **6 metres** for 220 kV lines and above.
- The distance between any live overhead electric line and any part of any mobile plant or load carried must be **"AT LEAST 4.0 METRES".**
- Where the mobile plant is an elevated working platform (EWP) working near 220 kV transmission lines, a safe separation distance of **6 METRES** must be maintained between the person in the EWP and the line.
- A warning notice must always be clearly displayed in the operator's working position on the mobile plant. This notice should say:



"WARNING, KEEP CLEAR OF POWER LINES AT ALL TIMES"

We have suitable mobile plant warning stickers to remind you of the 6 metre distance – suitable no matter what voltage of transmission line you are working near. Contact us on 0508 LANDOWNER to order copies.

What does it mean for me?

When planning any work activity always:

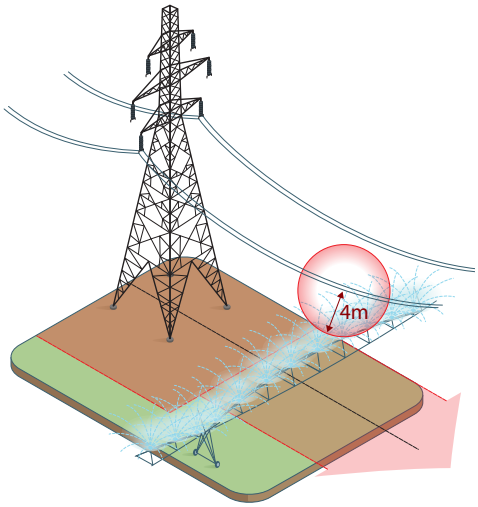
- assess the risks
  - what are the risks of contact with the lines or of flashover?
  - who could be affected and what controls are necessary?
- know your area – consider mapping transmission routes on a map or aerial photograph
- measure machinery to establish its maximum height
- make sure everyone knows what they are doing when working near transmission lines – train your staff and remember your obligations under the Health and Safety at Work Act 2015
- place warning signage in plain sight of mobile plant controls.

For a copy of our mobile plant information sheet, please call us free on 0508 526 369 (0508 LANDOWNER), visit transpower.co.nz or email us at landowner@transpower.co.nz.

Irrigators

What's the issue?

The main risk associated with the installation and operation of irrigators near transmission lines is electric shock. If you are planning to install an irrigator in proximity to a transmission line please contact us or your local landowner liaison officer for advice. It is very important for you to know how to install and operate irrigator equipment safely around transmission lines.



What are the legal requirements?

The installation and operation of irrigator equipment must comply with NZECP34. This sets out minimum safe electrical separation distances, including for people working near overhead transmission lines and the operation of mobile plant such as irrigator equipment.

What are the key points?

- Irrigator equipment including any solid jets of water must be setback a minimum of **4 METRES** from transmission line conductors. However, Transpower recommends that you maintain **6 METRES** clearance given the difficulties in estimating distances.
- Keep irrigation structures (eg pump houses etc) well clear of towers or poles. Any permanent buildings and structures must be setback at least **12 METRES** from any tower and **8 METRES** from any pole
- Any excavations (eg for pivot irrigator foundations and pump houses), must not exceed:
  - 300 mm in depth within 6 metres of any tower
  - 3 metres in depth between 6 and 12 metres of any tower
  - 300 mm depth within 2.2 metres of any pole structure or stay wire
  - 750 mm depth between 2.2 and 5 metres of any pole structure or stay wire.

Configuration and earthing considerations

In addition to maintaining mandatory clearance requirements, it is also important to minimise the risk of minor electric shock or damage to your equipment by correctly earthing and configuring your equipment in relation to the transmission line. Having adequate earthing will reduce the potential for minor electric shocks (like those you might experience exiting a car).

Other points to consider:

- Adjust nozzles so water jets do not hit the conductors or towers/poles – direct spraying could cause a flashover and corrode the tower structure.
- Always know the location of nearby lines and towers when working with irrigator equipment, and take some time to survey your surroundings before moving equipment.
- Prevent any chance of inadvertent contact with the conductors when handling long lengths of pipe – make adjustments well away from the line.
- During relocation, assembly or disassembly, take care so that pipes or long metal parts are carried in a horizontal position, especially around transmission lines.
- Where practical, long irrigator systems should be operated at right angles to the transmission line.
- During maintenance or storage, keep irrigators at right angles to the transmission line and earth each end to minimise induced voltage.

For a copy of our Irrigators and transmission lines information sheet, please call us free on 0508 526 369 (0508 LANDOWNER), visit transpower.co.nz or email us at landowner@transpower.co.nz

REMEMBER:
VISIT beforeudig.co.nz or call 0800 248 344 to find out what cables are on your property before you do any digging.

Excavating

What's the issue?

Excavating too close to towers and poles can make them unstable. If you are excavating near transmission lines and towers or poles, please consult with us.

What are the legal requirements?

NZECP34 controls how close you can excavate near towers or poles – including normal farm operations:

For all towers and steel monopoles, excavations must not be greater than:

- 300 mm depth within 6 metres of the edge of a tower (or monopole) and
- 3 metres depth between 6 and 12 metres from the edge of a tower (or monopole).

For all other poles, excavation must not be greater than:

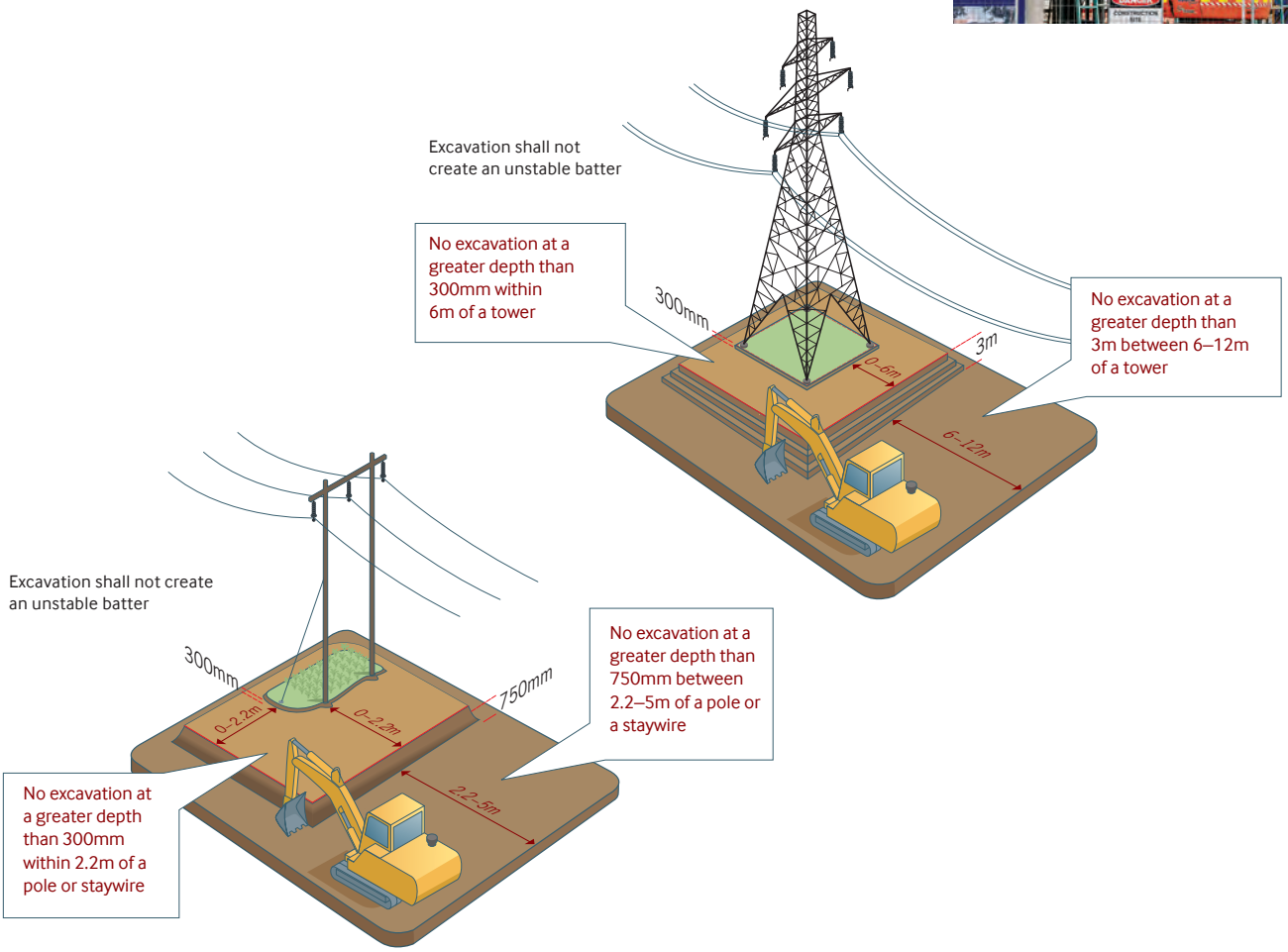
- 300 mm depth within 2.2 metres of the edge of a pole structure or stay wire and
- 750 mm depth between 2.2 metres and 5 metres from the edge of a pole structure or stay wire.

In all cases, it is also important not to create an unstable batter - for example: a 3 metre vertical earth cut without retaining or other means of controlling stability (eg terracing or sloping) would not meet the requirements.

The images below illustrate the requirements.

REMEMBER:

Any part of any mobile plant or load being carried must be at least 4 metres from transmission lines at all times.



REMEMBER:

- **Although the possibility of danger is small, if lightning or an electrical flashover hits a pole or tower, high currents and voltages could be passed along any wires connected to the structure, risking serious injury.**

- **Contact us or your local landowner liaison officer about making fences, steel pipes and electrical cables safe on your land.**

Building and repairing access ways

You can build and repair roads, tracks, driveways and paths right up to a tower or pole, provided this does not involve excavating more than the depths listed above, or depositing material around those structures.

Fencing activities

What's the issue?

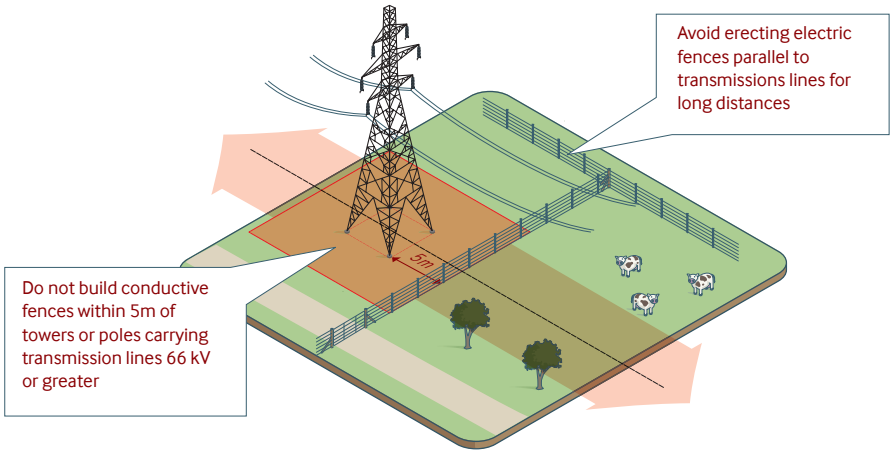
In general, fencing activities may continue unaffected under transmission lines. However, particular care should be taken with:

- straining fences under or near our lines
- conductive fences too close to or parallel to our lines
- using post-rammers under or near our lines.

What are the key points?

- **Take great care** straining fences under or near transmission lines, to ensure they cannot flick up into contact with, or near, the conductors.
- **Do not build** conductive fences within 5 metres of towers or poles carrying transmission lines 66 kV or greater.
- **Do not attach** conductive fences (i.e. metal), or metallic objects such as clothes lines, to towers or poles. Although the possibility of danger is small, if lightning or an electrical flashover hits a pole or tower, high currents and voltages could be passed along any wires connected to the structure, risking serious injury.
- **Take great care** when moving temporary break fences near transmission lines.
- **Avoid erecting** conductive fences parallel to transmission lines for long distances, or ensure the fence is well-earthed.

We can advise on ways to fence near transmission lines such as including section breaks or aligning fences at an appropriate angle to the lines.



Steel pipes and electrical cables

What's the issue?

Steel pipes and electrical cables near towers and poles may transfer high voltage and dangerous currents in the event of a fault on the transmission line. *Refer to Earth Potential Rise section page 9.*

What are the key points?

- Contact us or your local landowner liaison officer about making steel pipes and electrical cables safe on your land.
- Visit beforeudig.co.nz or call 0800 248 344 to find out what cables are on your property before you do any digging.

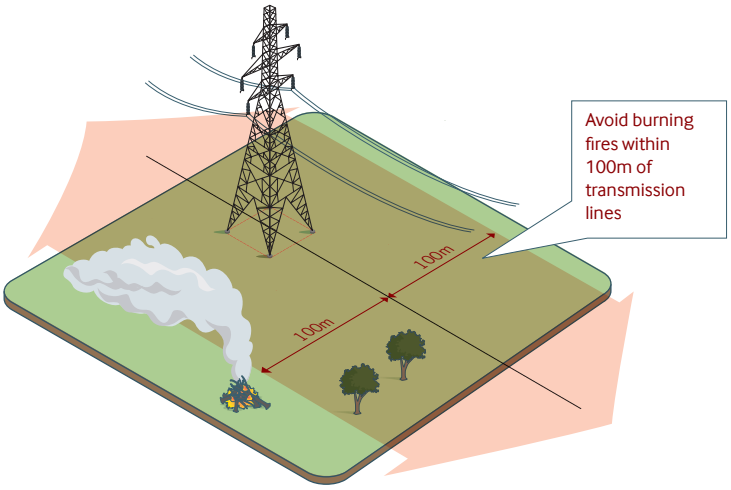
Fires and burn-offs

What's the issue?

Fires and burn-offs near transmission lines can increase risks to you and your property and cause significant harm to the lines.

What are the key points?

- Avoid burning fires within 100 metres of transmission lines, and in all cases seek to avoid situations where the smoke blows towards the lines.
- If you wish to light fires or burn off vegetation near transmission lines, please contact us (details at the end of this section). We are happy to send out a service provider to assess the situation and any potential risk.



REMEMBER:

- **Visit beforeudig.co.nz or call 0800 248 344 to find out what cables are on your property before you do any digging.**
- **Any part of any mobile plant or load being carried must be at least 4 metres from transmission lines at all times.**

Storage under lines and hazardous materials

What's the issue?

Because storage under our lines will likely lead to more intensive activity (like use of mobile equipment), we recommend you do not store material under them.

What are the key points?

If you have to store material under our lines, then:

- the material must not be conductive (metal)
- the material must not be hazardous (explosives, large quantities of flammable liquids such as petrol and storage tanks for combustible gases)
- the height of the material must not come close to the conductors
- machinery used to move the material must keep **4 metres** away from the conductors at all times
- the material must not prevent access to the transmission line and its support structures
- please contact us for the required safe clearances to the lines.

REMEMBER:
WHEN IN DOUBT Discuss your proposals with Transpower.

Blasting

What's the issue?

Blasting near our lines can cause excessive dust and debris on the conductors, as well as potentially impact on the integrity of supporting structures if too close.

What are the key points?

If you wish to carry out blasting activities within one kilometre of a transmission line, please contact us (details at the end of this section). We will send out a service provider to assess the situation and any potential risk.

Drains, dams and reservoirs

What's the issue?

While drains may be acceptable around our towers and poles (provided excavation requirements are met), constructing reservoirs and dams around towers and poles compromises their structural integrity, while also creating risks of high voltage electricity being conducted to the ground or through water.

What are the key points?

- You will most likely need a resource consent if you wish to construct a dam or reservoir near a transmission line, and you would be well advised to check with your local council.
- Contact us as soon as possible to discuss your plans. We will discuss and work through the possible options with you.

Using aircraft on your land

What's the issue?

Transmission lines and support structures can be challenging to navigate around with fixed-wing or helicopter aircraft. Without adequate notice of positions and routes, there is an increased risk of aircraft impact on conductors or supporting structure causing death, serious injury and/or significant property damage.

What are the key points?

- If you use aircraft, including helicopters, on your land you should clearly inform the pilot of the exact positions and routes of transmission lines and all other aerial lines and wires on your property. Prepare a simple map for the pilot showing these locations.
- We may be able to provide you with an aerial photo showing your land and our transmission lines. Call us to obtain one (details at the bottom of the page). Alternatively you may wish to check the interactive map on our website: transpower.co.nz/find-my-place-map
- Keep any unmanned aerial vehicles (drones) well away from Transpower's assets and observe Civil Aviation Rules at all times.
- Where possible:
  - plan land use to avoid the need to have aircraft come close to a transmission line
  - arrange flight runs parallel to transmission lines rather than across them; and cross the line at a tower rather than mid-span.

For further information related to the above issues, please call us free on 0508 526 369 (0508 LANDOWNER) or email us at landowner@transpower.co.nz.

What you should do if you notice damage to towers, poles and conductors

We place great importance on ensuring public safety around transmission lines and substations. Although high voltage electricity is hazardous, as long as lines, towers, and substations are treated with caution, they are not dangerous to the public.

However, please call us urgently on our 24-hour emergency phone **0800 843 474 (0800 THE GRID)** if you notice any of the following:

- anything unusual on towers, poles, conductors (wires) or other Transpower structures on your land
- any significant damage such as a broken conductor
- a flashover (a bright flash and loud bang) or
- a fire under the line.

Electric and magnetic fields and interference

Electric and magnetic fields (EMF)

Electricity transmission, just like many household electrical appliances, produces electric and magnetic fields.

Transpower complies with the health protection guidelines set by the New Zealand Ministry of Health.

- We recognise that some people have concerns about the perceived health effects of EMF exposure from transmission lines. We take those concerns seriously and in response have developed a commitment to the management of electric and magnetic fields. See our commitment at transpower.co.nz/commitments.
- You can request that we measure electric and magnetic fields around our lines if you have any concerns about the levels. Note that this service is not provided to houses being bought or sold.

For more information, or for copies of our EMF factsheets, please call us free on 0508 526 369 (0508 LANDOWNER) or visit transpower.co.nz/emf.

Noise from transmission lines

If you live very close to a transmission line, you may occasionally hear some noise coming from the line. In calm, dry conditions there is normally no noise. However, during damp, foggy or windy weather, normal sounds can include:

- a gentle buzzing from damp or salt-polluted insulators and some small, intermittent surface arcing (flashes of light), which occur while wet or dirty insulators dry out
- a gentle humming wind noise from conductors and/or tower steelwork, especially during very windy periods.

If you have any concerns about the level of noise, please contact us on 0508 526 369 (0508 LANDOWNER).

Radio and television interference

A nearby transmission line can sometimes interfere with radio and television reception. This will generally occur only when your equipment is close to the line (i.e. within 100 m or so) and is tuned to a remote station with weak signal strength. On rare occasions interference can also be the result of something loose or damaged on the transmission line.

If you think you are experiencing interference from a transmission line, please contact your service provider or the radio spectrum management service at the Ministry of Economic Development. We will remedy any problems caused by interference from a Transpower transmission line to the Ministry of Economic Development inspector's satisfaction. Radio Spectrum Management investigates interference matters and they can be contacted by email at info@rsm.govt.nz.

Our rights and obligations

What is the legal situation governing Transpower assets on private land?

The transmission lines that make up the bulk of the National Grid were generally established under various versions of the Public Works Act, however in 1988 new provisions came into effect.

- For lines built before 1 January 1988, Transpower has statutory rights to the continued ownership and operation of those lines – including rights to inspect, operate and maintain lines. These rights are contained in the Electricity Act 1992 and they do not generally appear on the certificates of title for land.
- For lines built after 1 January 1988, Transpower has negotiated easements with landowners. These easements are registered on the certificate of title for the land. Easements travel with the land, so any subsequent owners are bound by the terms of the agreement.

You can seek reasonable conditions to our entry

You can seek reasonable conditions about when and how we access your land. However, entry may not be delayed by more than 15 working days. Note that under the Electricity Act 1992, you cannot require payment as a condition of entry.

Transpower access tracks

We may access our transmission lines and supporting structures on your land and we will maintain any access tracks needed to our required standards. You are entitled to use these access tracks, but you are responsible for ensuring they are fit for your intended purpose. If tracks need to be upgraded for your purposes, you are responsible for the upgrade.

Can others use transmission line access tracks?

From time-to-time, third parties ask us for permission to use our transmission line access tracks. As we generally don't own the land on which the access tracks have been built, we refer any requests to the individual landowner or occupier involved.

What other statutes or regulations apply to transmission lines?

Other important statutes that affect Transpower on a day-to-day basis include the Health and Safety at Work Act 2015, the Resource Management Act 1991, and regulations under the Electricity Act 1992 relating to:

- vegetation near transmission lines
- safe distances to transmission lines.

Who is responsible for the health and safety of our staff and service providers on your land?

We are responsible for the health and safety of our staff or our service providers on your land. However, you need to advise us of any significant potential hazards that you are aware of.

For more information please call us free on 0508 526 369 (0508 LANDOWNER) or visit business.govt.nz/worksafe.

What are our public safety responsibilities?

We are required to maintain a Public Safety Management System (PSMS) which is used to prevent harm to people and property.

To meet this requirement, we maintain our PSMS in accordance with the New Zealand Standard (NZS 7901:2008). Our PSMS is externally audited by an accredited auditor at regular intervals and is an important part of our drive to continuously improve safety.

For more information, please call us on 0508 526 369 (0508 LANDOWNER).

What are the arrangements for entering your land if we need to inspect transmission lines?

If we need to enter your land to inspect our assets, we will give you reasonable notice. In most cases we will try and plan with you and if you like, we can give you 10 working days written notice.

Sometimes we need to use a helicopter for inspection. If we do, we will:

- publish a public notice with flight times in the local newspaper
- try to minimise disturbance and notify landowners where possible
- give you proper notice if we need to land on your property during the flight.

What happens if we need to enter your land in an emergency?

An emergency is where we need to enter your land because:

- there may be an issue with the transmission line that endangers life or property, or
- we need to maintain continuity and safety of the electricity supply.

In an emergency, we will do our best to notify you by telephone before entry. In some cases this may not be possible. In these cases, we will notify you as soon as we can, but no later than five days after entry. If you are not present at the time of entry, we will wherever practical leave a card to advise.

What are the arrangements for entering your land to maintain or upgrade our assets?

For maintenance and upgrade works (for example vegetation management, changing insulators or other repair work) we will try and plan with you and give you at least 10 working days written notice (unless other agreement in place), setting out:

- the location, date and time of entry
- the reason for and the nature of work to be undertaken
- how long we expect to be on your land (and whether we will need to enter your land multiple times).

Some maintenance work may involve the use of helicopters. Where this is required we will try to minimise disturbance and notify landowners.

If a transmission line on your land is covered by an easement that we have negotiated with you or a previous owner, then the access terms for maintenance, upgrade or other activities will be determined by that agreement, not the Electricity Act.

What is meant by maintenance or upgrade works?

The Electricity Act 1992 defines maintenance as:

- any repairs and other activities for the purpose of maintaining or that have the effect of maintaining the transmission line
- carrying out any replacement or upgrade of transmission works as long as the land will not be injuriously affected as a result of the upgrade or replacement.

For more information on injurious affect please call us free on 0508 526 369 (0508 LANDOWNER)
or visit transpower.co.nz/landowner-guidance (search: injurious affect).

What happens if we damage your property?

We will take every step practicable to not cause any damage in carrying out our normal business. However, sometimes damage is unavoidable. Where we do cause damage, we will:

- notify you as soon as possible
- make good any damage, or if this is not possible, we will compensate you for the effect of the damage.

Where appropriate (e.g. for substantial works), we will document the 'before' condition of the affected land (including photographs) in a written agreement with you.

What happens if we introduce noxious weeds to your land?

If we have introduced noxious weeds on your land, we will:

- include control of these weeds as part of our routine maintenance for a 12 month period, from the completion of the work
- contribute to the cost of spraying where appropriate.

Glossary

CIRCUIT (transmission circuit) Each transmission line typically carries one or two transmission circuits. Each circuit comprises a set of three conductors or phases, coded red, yellow and blue (R Y B). Each circuit is an electrical connection between two substations, and each circuit can be independently switched in or out of service. Each circuit is separately named and labelled on each structure by a yellow and black Circuit Phase Identification (CPI) sign.

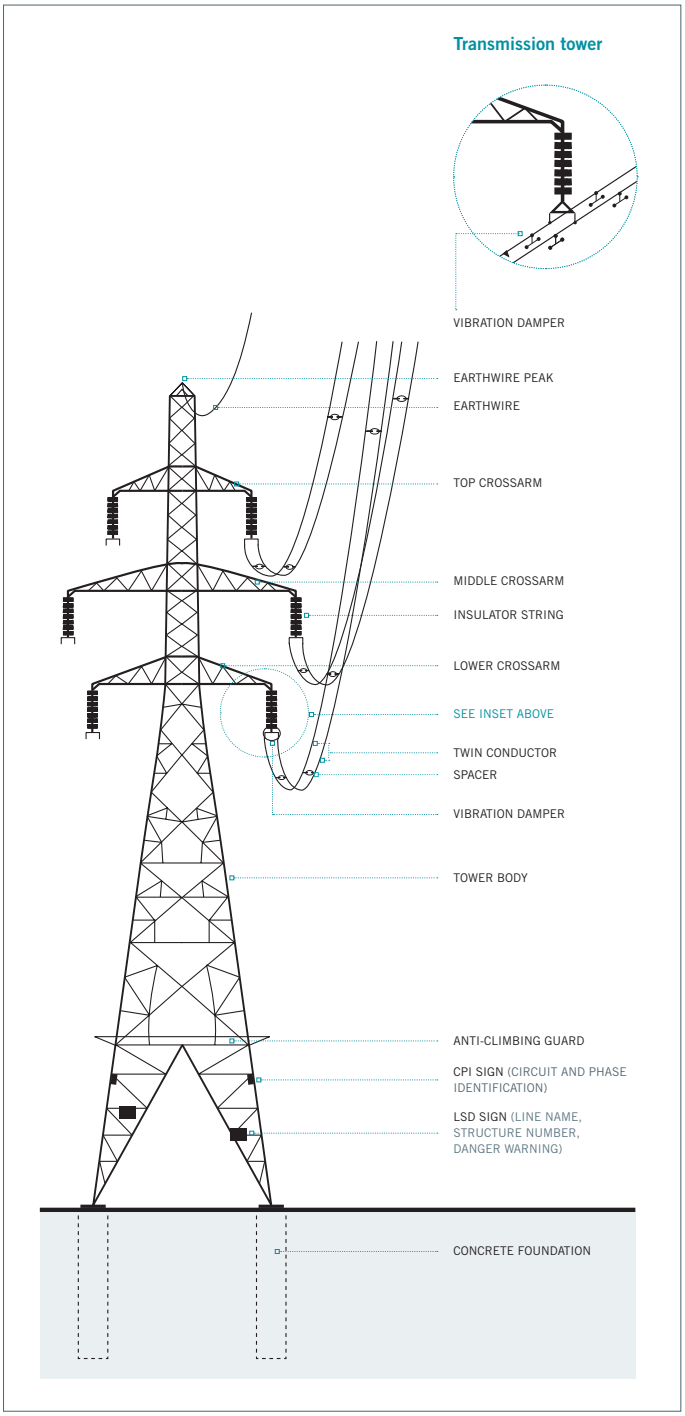
CONDUCTORS (wire) The conductors are the wires that carry electricity along the transmission line and are made of copper, steel-reinforced aluminium or all aluminium.

FLASHOVER A momentary, but major, electric arc accompanied by a brilliant flash and a loud bang. Flashovers can occur between two conductors, across an insulator string or between a conductor and an object under the line, such as a tree, mobile plant or even smoke. Note that flashovers are extremely rare.

INSULATORS (Insulator string) Insulators are used to connect the conductor to the pole or tower while preventing electricity 'leaking' from the conductors into the structure and from there to the ground. Older insulators are made of glass or porcelain. New insulators are made of fibreglass or rubber.

POLES AND TOWERS Support structures that have crossarms to hold the conductors clear of the ground. These structures and their foundations are designed to be strong enough to safely carry the weight of the conductors and withstand storms or wind.

TRANSMISSION LINE A line of poles or towers carrying high voltage transmission circuits between two substations. Transmission lines normally consist of either three conductors (these make up a single electrical circuit) or six conductors (forming two circuits, or a double circuit).



How to contact us

We value your feedback

We are committed to minimising any disruption to you from having Transpower assets on your land and we are pleased to provide information and assist you at any time.

The conduct of our staff and service providers on your property is very important to us. We are interested in receiving any feedback that you have about our service, both positive and negative. You can fill out our 'contact us' form on the website transpower.co.nz/contact or request a feedback form by calling us on 0508 526 369 (0508 LANDOWNER).

FOR QUERIES

CALL US ON 0508 526 369 (0508 LANDOWNER) or email us at landowner@transpower.co.nz.

Dispute Resolution Process

We take complaints very seriously and will respond in a timely manner using the company's free internal complaints process.

- In the first instance, any complaints relating to our transmission lines or activities on your property should be addressed directly to the Transpower service provider in your area. If you do not know who the service provider is, call Transpower on the above number or check the complaints page of our website.
- We are committed to ensuring that we address your complaint. We will acknowledge your complaint within two days of receiving it and respond within seven days. If we cannot resolve your complaint within 20 working days (or up to 40 working days where we have notified you with good reason to extend the timeframe for resolution), you may be able to refer the issue to the Utilities Disputes Ltd (UDL). There are situations where you may go to the Energy Complaints Scheme before 20 working days have passed. Transpower can ask the Commissioner for more time to investigate your complaint.
- For more information on our complaints process go to transpower.co.nz/complaints.

Transpower is a member of UDL Scheme and Utilities Disputes Ltd. The Energy Complaints Scheme is an independent service that will facilitate resolution of certain complaints, free of charge, if resolution has not been achieved through Transpower's internal complaints process.

The UDL contact details are as follows:

UTILITIES DISPUTES
TAUTOHETOHE WHAIPAINGA

Website: utilitiesdisputes.co.nz
Email: info@utlitiesdisputes.co.nz
Address: PO Box 5875
Freepost 192682
Lambton Quay
Wellington 6145
Phone: 0800 22 33 40

For Emergencies

0800 843 474 (0800 THE GRID)

Safety checklist

- **TREAT** all transmission lines as live at all times
- **NEVER** climb electric transmission line poles or towers
- **DO NOT** enter substations or climb fences that surround substations
- **DO NOT** touch or go near a fallen conductor
- **DO NOT** connect metallic objects such as fence wires or washing lines to transmission poles or towers
- **DO NOT** touch or go near any structure when an electrical storm is present in the area
- **DO NOT** fly kites, model aeroplanes or unmanned aerial vehicles (drones) near lines
- **DO NOT** light fires under or near lines (except in special circumstances and with our permission)
- **USE EXTREME CARE** when handling long metal objects such as, fencing wire, pipes or operating mobile plant including irrigators close to transmission lines
- **PLAN** – Always assess the risk of contact or flashover for all activities around transmission lines and put in place safety measures before commencing
- **PILOTS** – Always be aware of transmission lines and other overhead wires when using helicopters, aerial topdressing aircraft, microlites and hot air balloons.

TRANSPOWER.CO.NZ