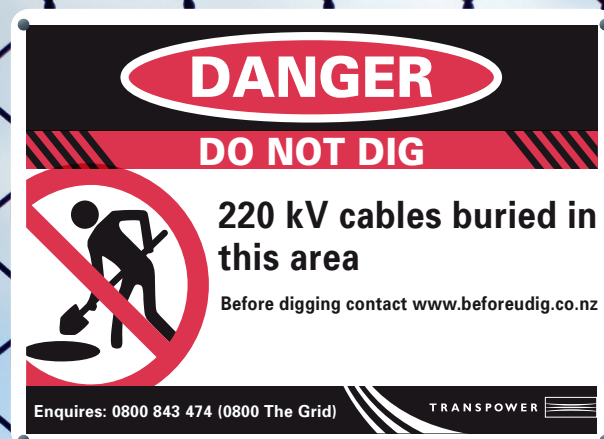


WORKING SAFELY AROUND TRANSPOWER'S UNDERGROUND NETWORKS IN PUBLIC AREAS



Are you planning to work near our underground electricity or communication networks?



For your safety there are a few things you must do **BEFORE YOU DIG.**

Whether digging on private or public property, working around high voltage electricity networks is dangerous.

Above all else, Transpower values the safety of its contractors, customers and the public.

This guide sets out what you must do and who to contact before you start work. It's simple and could save your life.

WHERE TO START?

Firstly, find out if there are any underground electricity cables and associated communication networks running under your proposed site by calling **0800 248 344** or going to **www.beforeudig.co.nz**

This is a quick and easy service which will provide:

- reference maps showing the location of Transpower's underground electricity and/or communications cables – although the maps are free, a charge may apply for urgent requests
- onsite advice and mark outs for work near underground electricity or communications cables.

The sooner you make contact the better, but allow at least:

- **TWO WORKING DAYS** for reference maps
- **TWO WORKING DAYS** for permits to work (more for large projects)
- **FOUR WORKING DAYS** for onsite advice and mark outs

WHAT HAPPENS NEXT?

Once you have received your reference maps you will need to:

- **MARK OUT THE LOCATION** of the underground cables on the worksite **BEFORE BREAKING GROUND.** Maps are a guide only and you should also use appropriate location technology. Transpower provides a free mark out service – see below for more information.
- **HAND DIG TO EXPOSE CABLES** – this method is the safest approach, and less likely to damage the cables. Any damage to a cable should be reported to Transpower immediately.

And remember to watch out for other services coming off a main – such as water pipes or telecom cables that may be in the vicinity of Transpower's cables.

DEPTH OF CABLES AND CABLE DUCTS

Our cables are buried at different depths varying from 400mm to 1500mm. Over time there may have been some changes to the ground cover which will have altered the depth of the cables.

As such we cannot give a guarantee of the exact depth of the cables – so hand digging and using appropriate location technology is very important.

Do not rely on finding buried marker tape as this may have shifted over time, and in some instances may not have been used (warning tape is not a legal requirement).

OUR MARK OUT SERVICES

We provide free electricity mark outs on request. One of our representatives will indicate the location of cables by marking the ground to provide a digging guide.

Please note: Mark outs are a guide only. It is your responsibility to identify hazards within your worksite and you must hand dig to confirm the location of all cables before you start work.

Please allow up to four working days for Transpower to arrange the mark out. All other mark outs for other underground services are your responsibility.

THE DANGERS

If you hit electricity cables there is risk of:

		
ELECTROCUTION	EXPLOSION	FIRE

At the moment of contact, a machine, tool or person is live at the same voltage as the cable. If an electricity cable is cut by an excavator anyone touching the machine could be electrocuted.

Electricity can also travel through the ground causing it to become live.

If you hit a communications cable there is risk of:

- eyesight damage, loss of eyesight from laser light, and injury from broken glass
- interruption of critical communication services
- loss of monitoring or control of a Transpower substation.

WHAT TO DO IN AN EMERGENCY

If you hit an electricity cable:

- Evacuate the area immediately – **EXCEPT** if you are in a machine in which case stay there.
- If you are at risk from another hazard such as fire and must leave the machine, jump well clear. Do not touch the machine and ground at the same time.
- Do not cover up a broken cable or try to fix it yourself.
- Call us immediately on **0800 The Grid (0800 843 474)** or call **111**.

YOUR LEGAL REQUIREMENTS AND RESOURCES:

There are minimum safe work practices when working near electricity networks. To find out more read the Guide for Safety with Underground Services www.osh.govt.nz

There are also laws and regulations specifying safety working practices that must be followed:

- Electricity Act 1992 and amendments
- Health and Safety in Employment Act 1992 and amendments



SAFE DIGGING - REMEMBER

- Get reference maps before you start work.
- If our maps show electricity or communication cables you must locate them before you start.
- The location and depth of the cables may have changed due to earth movements.
- Watch out for other underground services such as water, gas, telecommunications
- Follow the MBIE's Underground Services – Guide for Safety with Underground Services (www.osh.govt.nz).

ABOUT US

Transpower is the state-owned enterprise that owns and operates the National Grid that carries electricity around New Zealand.

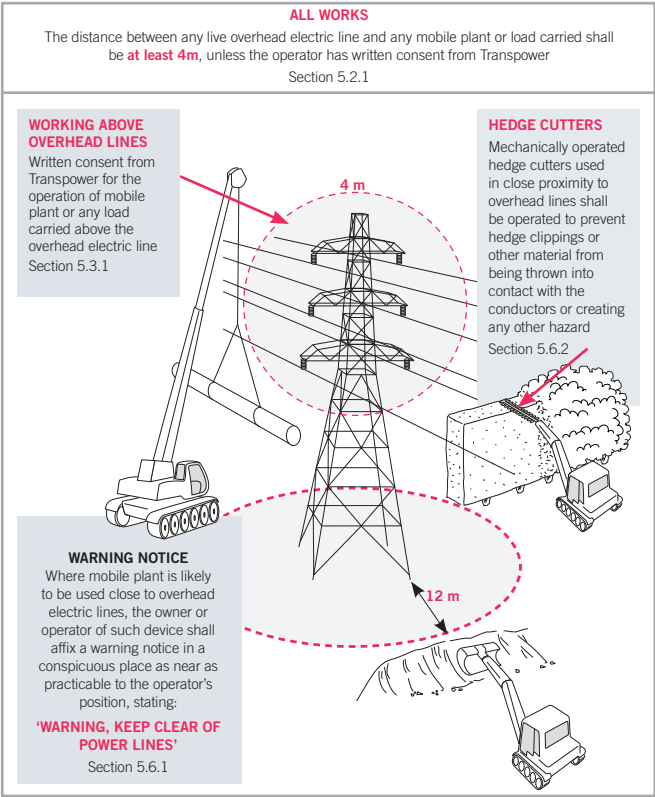
For more information about Transpower visit www.transpower.co.nz

Disclaimer

Transpower does not accept any liability for any information contained in this document.

MAY 2013

Minimum Safe Distances for the Operation of Mobile Plant near Transpower Conductors (wires)



Notes

- This diagram is for quick reference only. Please refer to Section 5 for the NZECP:34 2001 for complete minimum safe distance requirements.
- Mobile Plant includes cranes, loaders, excavators, drilling or pile driving equipment or other similar device.
- The provisions of Section 5 do not apply to live line work or to any conductor forming part of the mobile plant or any collector wire, insulated cable, or flexible cord used for the purpose of supplying electricity to the mobile plant (section 5.1.1) or while mobile plant is in transit on a road and the relevant requirements of the Traffic Regulations 1976 are observed (section 5.1.4).

PLANT AND POWER LINES

THE REQUIREMENTS WHEN OPERATING PLANT IN THE VICINITY OF TRANSPOWER NEW ZEALAND POWER LINES.

Keeping the energy flowing



TRANSPOWER



Call us toll free on

0508 526 369

For advice on working near Transpower NZ transmission lines.

TRANSPOWER



Keeping the energy flowing

ABOUT TRANSPOWER

Transpower is the state-owned enterprise that owns and operates the National Grid – or high voltage transmission network – that carries electricity around New Zealand. Transpower’s network is made up of 12,000km of high-voltage transmission lines and more than 170 substations and switchyards.

This brochure provides important information to ensure the safe use of machinery plant and vehicles near overhead powerlines. Control of the distances that can be worked in around Transpower’s overhead transmission lines is required to ensure:

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

REMEMBER

LOOK UP

Before you Dig, Cross or Lift.

Keeping the energy flowing

Rules and Regulations

Electrical Safe Distances are set out in Electrical Code of Practice 34 (NZECP 34:2001).

The sections of ECP34 that relate to the operation of plant are as set out below.

1. The distance between any live overhead electric line and any part of any mobile plant or load carried shall be **“AT LEAST 4.0 METRES”** unless the operator has received written consent from Transpower allowing a reduced distance. Clearance to loads in transit on public roads are governed by the Traffic Regulations 1976.
2. Written consent is required from Transpower to excavate closer than the distances as set out in figures 1 and 2 of ECP 34.
3. No work shall be carried out above Transpower transmission lines without written consent. Helicopter operations are governed by the Civil Aviation Rules.
4. A warning notice is to be fixed in a conspicuous place in the operator’s working position. The notice should say:

“WARNING, KEEP CLEAR OF POWER LINES”

Approval of reduced safe distances

Transpower may consent to reducing the following distances, in some circumstances.

1. Distance to live conductors

Any reduction of the Minimum Approach Distance will require an engineering assessment prior to the work, and if permitted, must be carried out by an electrically competent person. The extent of reduction is dependant on the line voltage and configuration.

2. Excavation distances

Any reduction of the excavation distances as set out in NZECP 34 will require an engineering assessment prior to the works being carried out.

Notes:

*The cost of any engineering assessment will be borne by the requester.
Building within Transmission corridors is governed by Transpower’s Corridor Management Policy – refer to separate brochure.*

