TasNetworks | Powering a Bright Future

Working near low voltage overhead insulated services

Purpose

These rules provide guidance for work near low voltage overhead insulated service lines owned by TasNetworks.

What is a low voltage overhead service line?

A low voltage overhead service line is the wire that supplies power to homes and buildings.

Figure 1 shows the low voltage overhead service line connected to the home from the overhead electricity distributors (power poles you see in the street).

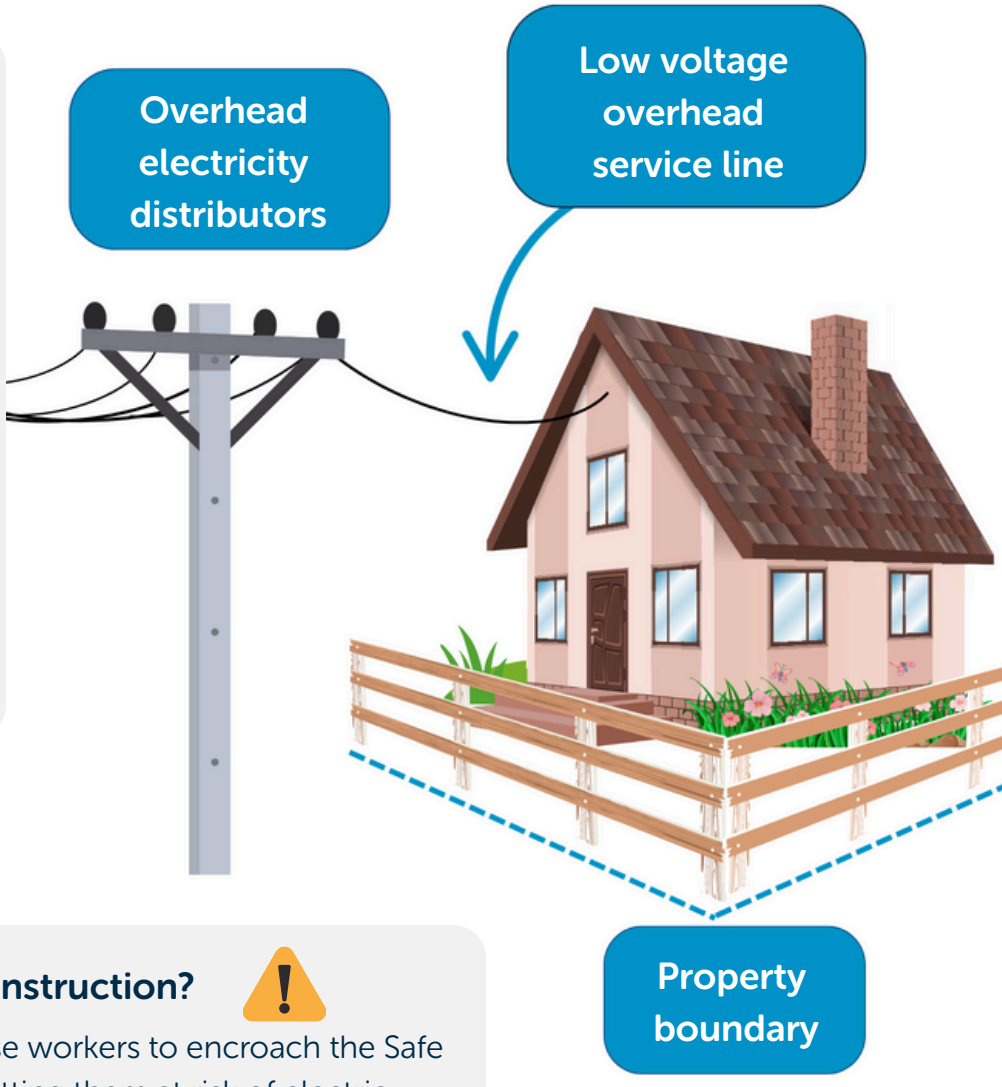


Figure 1

What is the risk during construction?

Construction activity may cause workers to encroach the Safe Approach Distances (SADs), putting them at risk of electric shock.

By implementing the guidelines in this document, you can protect workers from danger and prevent mechanical damage to the service wire.

The one-metre rule

Any worker must maintain a Safe Approach Distance (SAD) of one metre (1m) from overhead low voltage service lines.

Note: there are separate SADs and requirements for overhead distribution lines. These can be found on the TasNetworks website.

The one-metre distance from a low voltage overhead service line applies to any worker OR tool (see Figure 2).

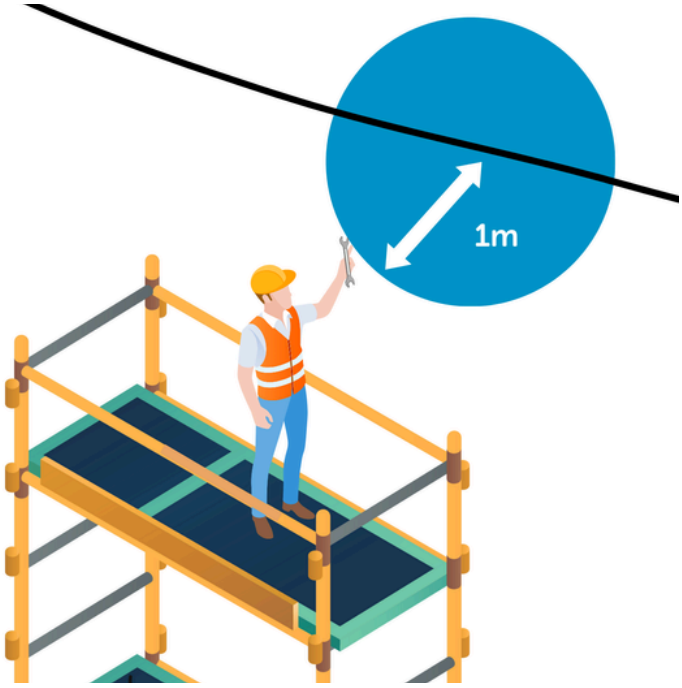


Figure 2

What if the one-metre SAD cannot be maintained?

In situations where the one-metre SAD cannot be maintained, there are a number of other options to keep workers safe. These include:

- Isolation of the installation via an Electrical Work Request (EWR), completed by an electrical contractor. This can be located on the TasNetworks connections portal.
- Temporary removal of the service line while work is performed. This is also done via an EWR.
- The application of additional insulation to protect against accidental contact.
- Note: Additional insulation is a line & point-of-attachment covering complying with AS 4202. The insulated coverings provide temporary electrical insulation, mechanical protection and visual warning of overhead electric lines.

Figure 3 shows a 'tiger tail' - a common type of line insulation used.

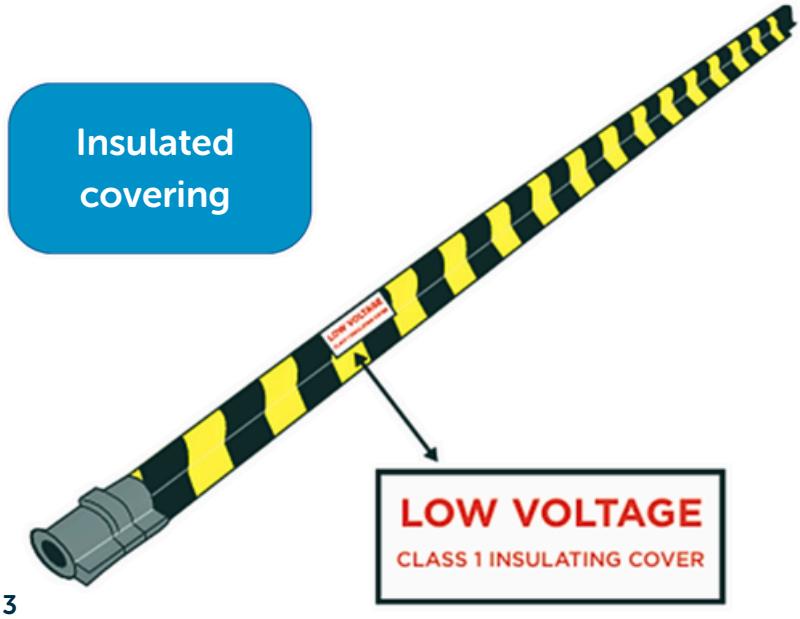


Figure 3

Image credit: Worksafe New Zealand via Creative Commons License Non-Commercial 3.0 New Zealand

SADs for insulated service lines

The Safe Approach Distance (SAD) from an insulated service line is 'no contact'.

This means workers or tools may come as close as they need to, but are not allowed to make contact with the insulated line.

Insulated service lines must not be contacted and must maintain their sway and sag capacity. This is assessed by our service provider.

Figure 4: Where SADs cannot be maintained, insulated coverings like tiger tails can be used to protect against accidental contact.

Figure 5: Workers or tools may come as close as they need to the insulated line but are not allowed to make contact.

Hoarding for high traffic areas

There may be a need to install hoarding to protect workers from coming into contact with the service or any mechanical damage to the line. This shall apply to high traffic areas or when the service would be stepped over or under.

Figure 6 (below) shows an example of how hoarding is used for extra protection in high traffic areas.

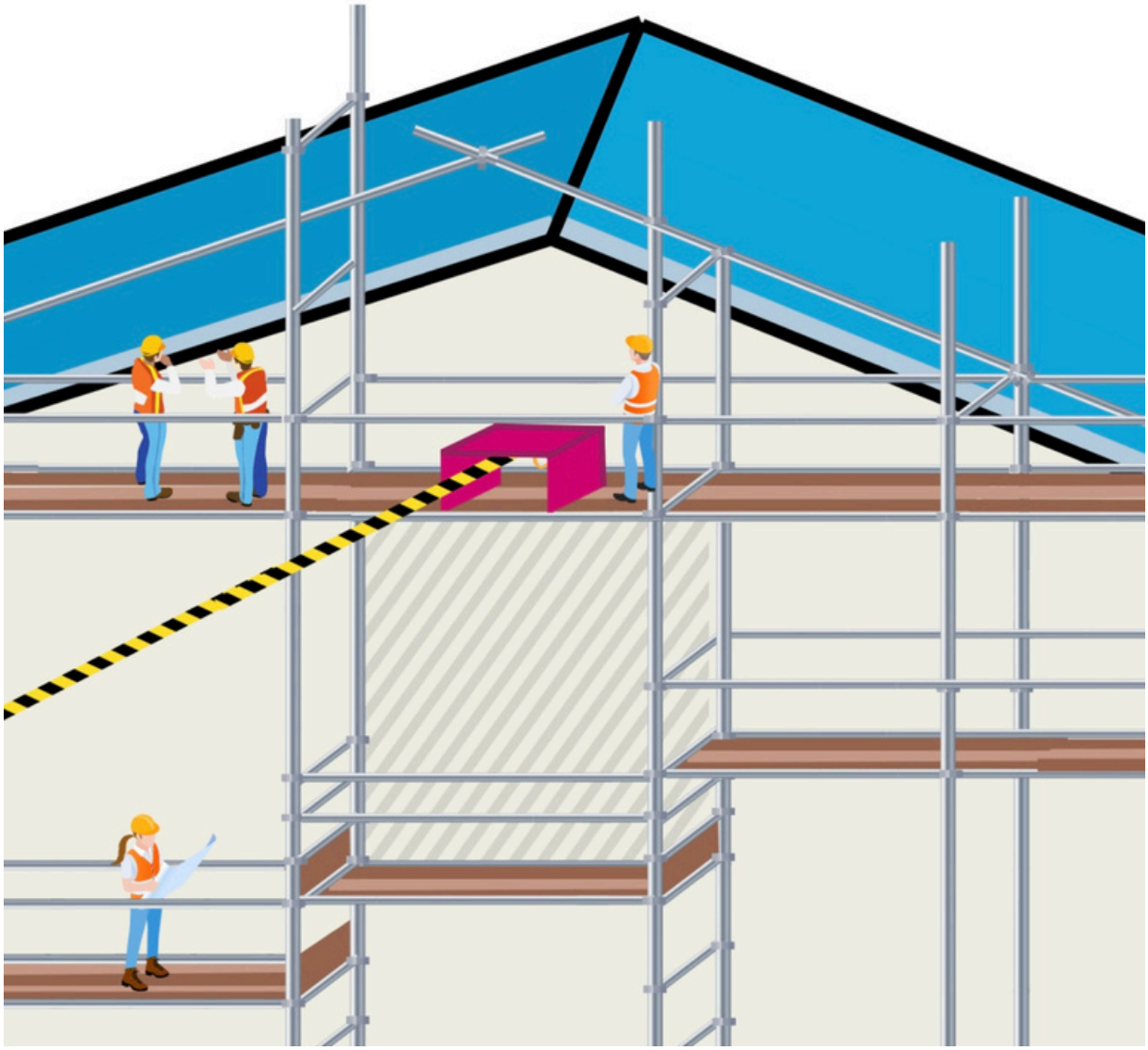


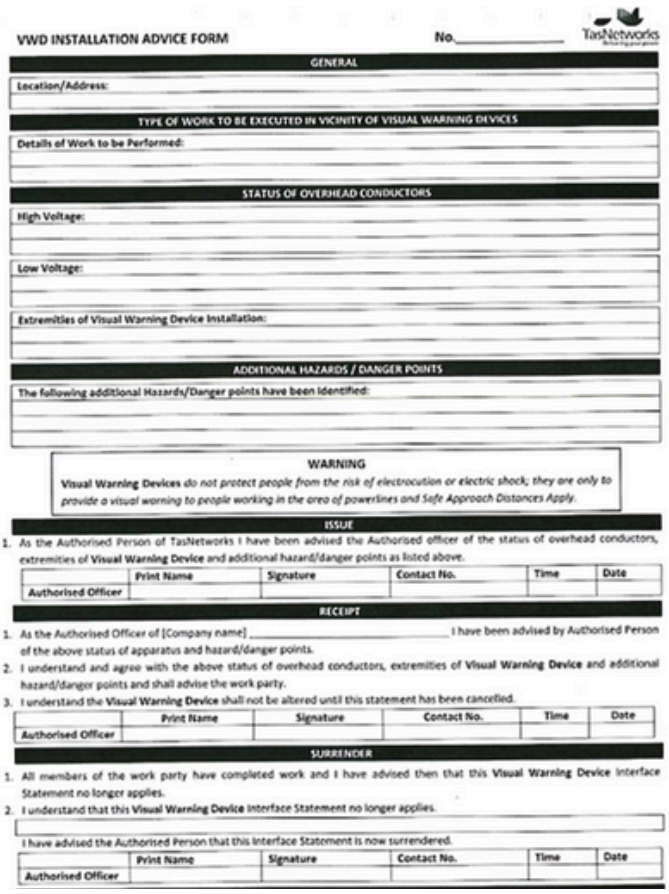
Figure 6: Hoarding boards erected around the insulated service stop workers from coming into contact with it.

Visual Warning Device form (VWD)

Our service provider will issue the requestor with a Visual Warning Device form (VWD). This will describe the site conditions and requirements.

The VWD form will need to be made available on request from WorkSafe Tasmania or a TasNetworks representative.

Example of a Visual Warning Device (VWD) form issued by TasNetworks



VWD INSTALLATION ADVICE FORM No._____ TasNetworks

GENERAL

Location/Address:

TYPE OF WORK TO BE EXECUTED IN VICINITY OF VISUAL WARNING DEVICES

Details of Work to be Performed:

STATUS OF OVERHEAD CONDUCTORS

High Voltage:

Low Voltage:

Extremities of Visual Warning Device Installation:

ADDITIONAL HAZARDS / DANGER POINTS

The following additional Hazards/Danger points have been identified:

WARNING

Visual Warning Devices *do not protect people from the risk of electrocution or electric shock; they are only to provide a visual warning to people working in the area of powerlines and Safe Approach Distances Apply.*

ISSUE

1. As the Authorised Person of TasNetworks I have been advised the Authorised officer of the status of overhead conductors, extremities of **Visual Warning Device** and additional hazard/danger points as listed above.

	Print Name	Signature	Contact No.	Time	Date
Authorised Officer					

RECEIPT

1. As the Authorised Officer of [Company name] _____ I have been advised by Authorised Person of the above status of apparatus and hazard/danger points.
2. I understand and agree with the above status of overhead conductors, extremities of **Visual Warning Device** and additional hazard/danger points and shall advise the work party.
3. I understand the **Visual Warning Device** shall not be altered until this statement has been cancelled.

	Print Name	Signature	Contact No.	Time	Date
Authorised Officer					

SURRENDER

1. All members of the work party have completed work and I have advised them that this **Visual Warning Device** Interface Statement no longer applies.
2. I understand that this **Visual Warning Device** Interface Statement no longer applies.

I have advised the Authorised Person that this Interface Statement is now surrendered.

	Print Name	Signature	Contact No.	Time	Date
Authorised Officer					

Risk assessments

When conditions on site change e.g. additional scaffolding is installed or ground clearances change, then a risk assessment will need to be completed to ensure you meet the SADs and protection requirements.

It is important our service provider understands what work is being completed so they can address the risk adequately, if conditions change.

Any non-compliance must be reported to TasNetworks on:

132 004

Work this guide applies to (but is not limited to)

- Painting
- Building maintenance
- Roofing and guttering work
- Erecting & dismantling scaffolding
- Construction work
- House washing/water blasting
- Any work using mobile plant or height access equipment. Eg:
  - Scaffolding
  - Ladder
  - Cherry picker
  - Equipment fitted with jib or boom, such as crane
  - Scissor lift or other mobile elevating platform
- Other (non-electrical) work where workers may come into contact with low voltage overhead electric service line.

Work this guide does not apply to

- Work on vegetation (for example tree trimming, pruning and removal).
- Work near high voltage overhead electric lines.
- Work near electricity distribution lines.

Note: Seek permission from TasNetworks before carrying out work near high voltage overhead electric lines or any overhead lines owned by TasNetworks.