Electrical – **Safety**

Working close to overhead powerlines >

This information bulletin provides guidance on the safe operation of cranes, elevating work platforms, other extendible machinery and the erection of scaffolding near overhead powerlines.

Legislation

The Workplace Health and Safety Regulations require that work is not to be performed in proximity (permit zone) to overhead powerlines, unless:

- Safe systems of work are used (which require verification from the Power and Water Authority (PAWA)).
- Workers are trained and competent to perform the work.
- The supply of electricity has been disconnected (if it is not practicable to disconnect the electricity supply, barriers shall be put in place to prevent contact).

For the purpose of this information bulletin, **crane*** includes elevating work platforms and other extendible machinery.

Operation near overhead powerlines

The load, or any part of a crane*, shall not approach closer than the following:

- For distribution lines on poles 2m as shown in Figure 1.
- For transmission lines on towers 6 m as shown in Figure 2.
- Operations above power lines are always in the permit zone and require a permit from PAWA.

Permit from PAWA

When it is necessary to operate **within** the permit zones shown in Figure 1 and 2, permission must first be obtained from PAWA. See “Who to contact”.

Operation when permit is required

Precautions

The following precautions shall be observed by the operator and other persons when working with the crane*:

- Consider all conductors to be live unless it is proven that they have been de-energized and isolated. Documentary evidence of the continuing isolation of the power supply shall be obtained before approaching conductors.

- Provide ground barriers to warn operators. The recommended distance of the barriers from the line of conductors shall be as shown in Figure 1 and 2. Consider the effects of sag, wind and temperature on conductor movement, especially near the centre of large spans.
- Use non-conducting taglines when these are required.
- Do not allow any person, other than the crane operator (two persons for elevating work platforms), to be in contact with any part of the crane* or the load, except with a non-conducting tagline, once the lift has commenced.
- Ensure appropriate earthing systems are fitted to the crane* and are in contact with the ground.
- High visibility bunting may be applied to the conductors by PAWA as an indication of location of the conductors.
- High visibility insulating materials (tiger tails) may allow a reduced approach distance.

Consideration should also be given to the above precautions when operating outside the permit zone.

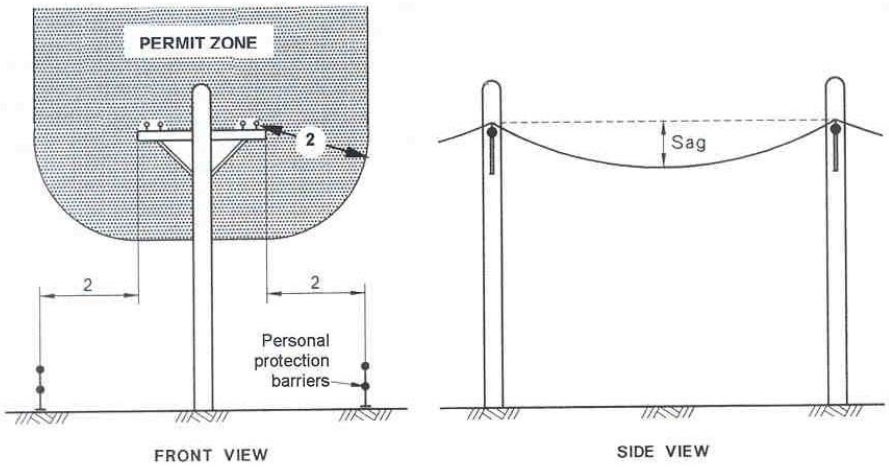
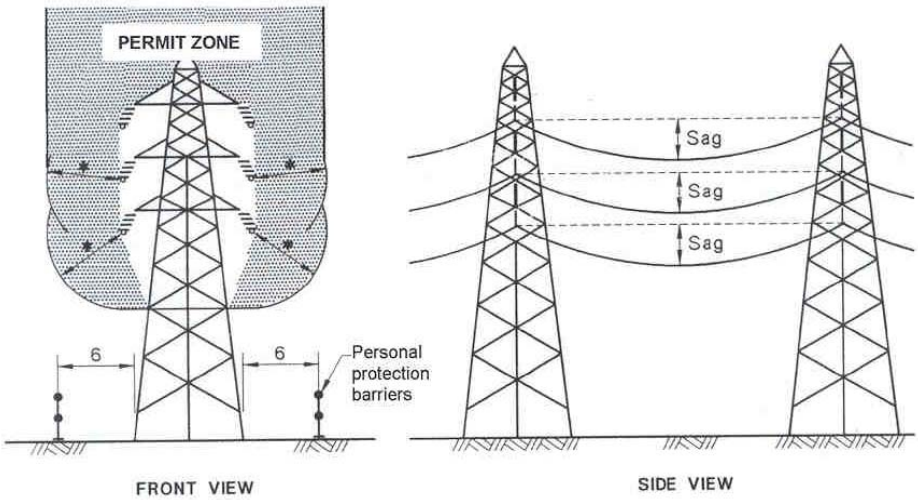


Figure 1: Distribution lines on poles



*** Distance 6 m unless designated otherwise by PAWA**

Figure 2: Transmission lines on towers

Overhead powerline contact

If the crane* or load contacts aerial conductors, NT WorkSafe and PAWA shall be immediately notified of the situation and, until assistance is received, a responsible person shall remain near the crane* to warn of the danger of electric shock. For further information refer to AS 2550.1, Cranes, hoists and winches – Safe use – general requirements, Clause 7.17.2.

Use of scaffolding

- Where scaffolding is to be erected near low voltage powerlines (less than 1000 volts) the clearance must not be less than 4.0 m where any metal scaffolding is used.
- Permission must be obtained from PAWA for any reduction of the clearance prior to the operation of any crane* or the erection of any scaffolding.
- Generally, scaffolding shall not be erected near high voltage powerlines without having the electricity supply disconnected.

Work on live equipment

No person is to perform work on live equipment other than as prescribed by PAWA.

Who to contact

For further advice on approvals to work in proximity to overhead powerlines contact PAWA on:

FREECALL – 1800 245 091 – and ask for the Network Coordinator.

REMEMBER

You don't have to touch a high voltage powerline to receive a fatal shock, just being too close can kill!

NT WorkSafe >

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