

Powering Bass Strait islands

Working near Hydro Tasmania's electrical assets

The information in this document is Hydro Tasmania's **minimum requirements** for when work is to be performed near Hydro Tasmania's electricity network by third parties (persons not working for Hydro Tasmania), such as:

- Councils;
- contractors to third parties;
- other infrastructure owners;
- land owners where Hydro Tasmania's electrical assets cross their property; and
- any other persons who work in the vicinity of Hydro Tasmania's electrical assets as or on behalf of a third party.

For simplicity, councils, contractors to third parties, other infrastructure owners and other third parties working near Hydro Tasmania's electrical assets are referred to as 'contractors' in this document.

This document does not apply to privately-owned electrical assets.

Identification

To ensure the safe operation of its distribution network, Hydro Tasmania should be informed of any activity that may have an impact upon the electricity network.

Contractors should contact Dial Before You Dig (DBYD) on 1100 to determine if Hydro Tasmania has any infrastructure near any planned excavations.

Councils and property owners also own and manage electrical infrastructure. These organisations (or persons) should also be contacted during the work planning phase to determine if they have infrastructure near planned excavations and their requirements.

Notification

In accordance with The Tasmanian Electricity Supply Industry Act 1995, a person who proposes to do work near electrical infrastructure must give the appropriate electricity entity at **least 7 days' notice** of the proposed work if:

1. There is a risk of equipment or a structure coming into dangerous proximity to the electrical conductors; or
2. The work may affect the support for any part of the electricity infrastructure; or
3. The work may interfere with electricity infrastructure in some other way.

The remainder of this document discusses in more detail when notifications are required.

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Notifications of work near Hydro Tasmania's electrical infrastructure should be made by contacting King Island (03) 6462 1814 and Flinders Island on (03) 6359 2068 and should include:

- Location of work with reference to the location of Hydro Tasmania's electrical assets;
- Dates and times when work will start and cease; and
- Contact number of person responsible for site safety.

If the contractor requires assistance from Hydro Tasmania at any time during the contractor's work near Hydro Tasmania electrical assets then they should contact Hydro Tasmania on King Island (03) 6462 1814 and Flinders Island (03) 6359 2068 as early as possible during the planning phase.

Hydro Tasmania will make initial contact within 7 days of notification. However, if modifications to the network are required to accommodate the contractor's work, the scheduling of these modifications will be subject to the availability of Hydro Tasmania personnel and equipment.

To minimise safety risks, if Hydro Tasmania's assistance is required, work should not proceed until the required assistance is provided.

Working near overhead structures

Hydro Tasmania's electricity network uses many overhead structures, including poles, lighting columns and towers.

Hydro Tasmania's timber poles should have a pole identification tag attached to them. An example of a pole identification tag is shown in **Figure 1**. The last two numbers on the tag represent the length and strength rating of the pole.

If the tag is missing then contact Hydro Tasmania for advice before proceeding with any work. When contacting Hydro Tasmania it is important to provide the pole identification number which is a 6 digit number. An example of a pole identification number is shown in **Figure 1A**.

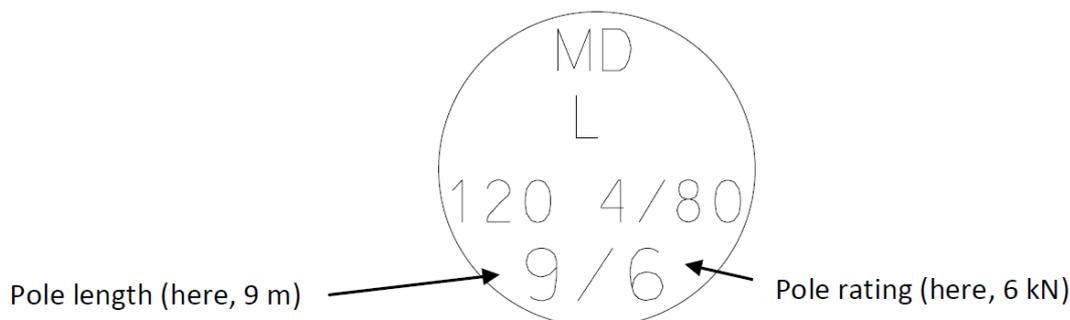


Figure 1: Hydro Tasmania timber pole identification tag

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Figure 1A: Pole identification number

Figure 2 shows acceptable excavation limits when working near Hydro Tasmania’s poles and lighting columns.

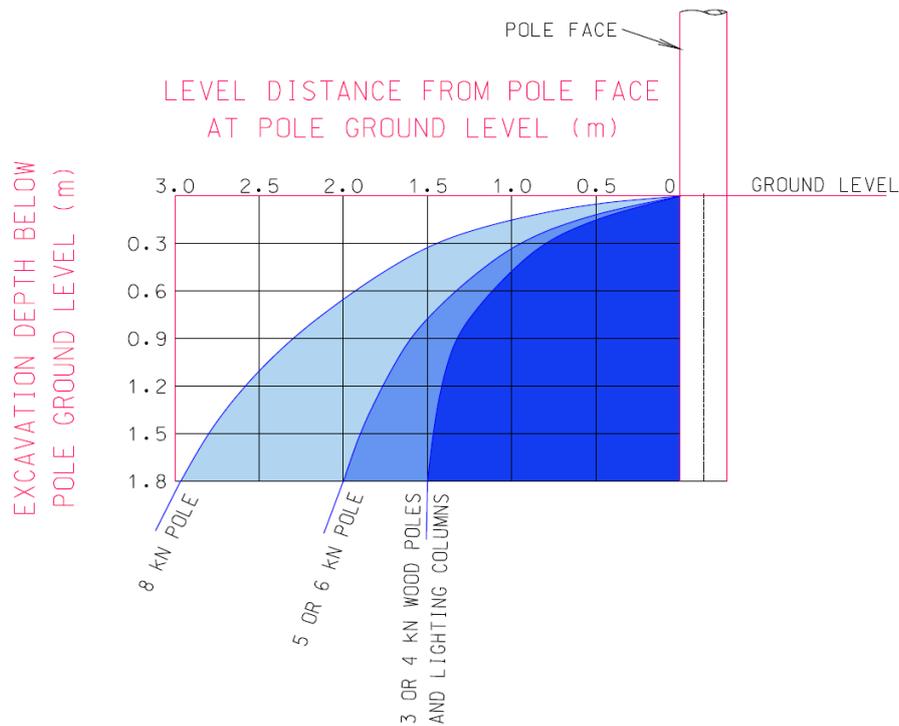


Figure 2: Temporary excavation limits when working near Hydro Tasmania’s power poles

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Figure 2 applies to Hydro Tasmania's timber poles and lighting columns with a length between 9 meters and 12 meters, strength of 3 kN to 8 kN and assumes that the excavation is open for no more than one week. (Information on identifying the length and strength of poles from the pole tag is given above).

If the pole is made from a material other than timber then:

- If the pole is 125 mm rectangular hollow section (RHS), it should be treated like a 4 kN timber pole when using Figure 2.
- Any other pole type should be treated like an 8 kN timber pole when using Figure 2.

If excavations are located outside of the limit curves in Figure 2 or do not exceed 300 mm in depth then work may proceed without notifying Hydro Tasmania.

If the excavation falls within the limit curves (the shaded area) in Figure 2 and exceeds 300 mm in depth this will affect electrical infrastructure and the contractor shall obtain written advice from a suitably qualified and experienced engineer detailing:

1. How the pole is to be kept safe during the excavation; and
2. how the ground around the structure should be reinstated.

A copy of the engineer's advice along with the name, qualifications and contact details of the advising engineer shall to be emailed to BSImailbox@hydro.com.au at least 7 days in advance of the commencement of works.

The contractor must ensure the advising engineer's advice is fully implemented.

If the engineering advice requires that the pole be physically supported then this should be undertaken by Hydro Tasmania.

Working near overhead power lines and poles

Contractors **cannot work within 3 meters each side of or above overhead power lines** (known as the 'No Go Zone') unless they have notified Hydro Tasmania by contacting King Island (03) 6462 1814 and Flinders Island on (03) 6359 2068 at least 7 days prior to the commencement of the works and received written authorisation for the work.

The notification must provide details of the proposed work and the location.

Hydro Tasmania will provide a response as to whether the work can be undertaken and any requirements that must be adhered to when undertaking the work.

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Without prior written authorisation from Hydro Tasmania the contractor is not authorised to undertake the proposed work. Failure to comply with this requirement can lead to prosecution under the Electrical Supply Industry Act.



Figure 3: Working near overhead power lines

If work is planned between 3.0 meters and 6.4 meters of overhead power lines or directly below overhead power lines contractors must conduct a risk assessment and appoint a **Safety Observer** if required as an outcome of the risk assessment.

The **Safety Observer** must:

- Be a competent person and should have successfully completed a relevant training course carried out by a registered training organisation;
- position themselves where they can have an unobstructed view of the work being performed and the potential hazards;
- not do any other duties while performing their safety observer duties;
- ensure they are able to communicate with the worker(s) during the process;
- be aware of any hazards unique to the site, and make sure they are not at risk from them;
- warn against unsafe approach to energised apparatus; and
- stop work processes to prevent unsafe situations arising.

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Working near Hydro Tasmania's ground mounted infrastructure and underground power cables.

Hydro Tasmania's electricity network also uses 'ground mounted' assets, including high voltage substations, electrical cabinets and electrical turrets (photographs of typical examples of these assets are provided in Appendix A).

Hydro Tasmania also has an underground distribution network of cables operating at both high voltage and low voltage.

Contractors planning underground work must contact Dial Before You Dig (DBYD) on 1100 **before commencing work**. A response will be provided on whether Hydro Tasmania 'Does' or 'Does NOT' have a record of infrastructure in the location of the proposed works provided by the contractor.

If Hydro Tasmania does have a record of infrastructure at the location of the proposed works, then the contractor should use a cable location service to accurately identify the location of the infrastructure.

Hydro Tasmania must be notified by contacting King Island (03) 6462 1814 and Flinders Island on (03) 6359 2068 at least 7 days in prior to the commencement of the works if:

- The proposed work is within 2 meters of Hydro Tasmania's ground mounted assets (refer Appendix A); or
- the proposed work is within 1 meter of Hydro Tasmania's underground assets, e.g. cables. The notification must provide details of the proposed work and the location. Hydro Tasmania will provide a response as to whether the work can be undertaken and any requirements that must be adhered to when undertaking the work. Without prior written authorisation from Hydro Tasmania the contractor is not authorised to undertake the proposed work. Failure to comply with this requirement can lead to prosecution under the Electrical Supply Industry Act.

Earthing infrastructure

Earthing systems are essential for providing electrical safety and Hydro Tasmania places a high emphasis on protecting these assets.

Earthing systems are connected to many of Hydro Tasmania electrical assets. The earthing systems are laid in the ground, both near the assets and underneath them. Typically transformer poles, turrets and cabinets are earthed by means of a 1.8 m earth rod (copper rod driven into ground), while substations are earthed using earth rods and an earth mat. Earth mats are installed approximately 0.5 meters below ground level and extend approximately 1.8 meters from the extremities of the substation.

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Earthing systems are made from copper and are not insulated.

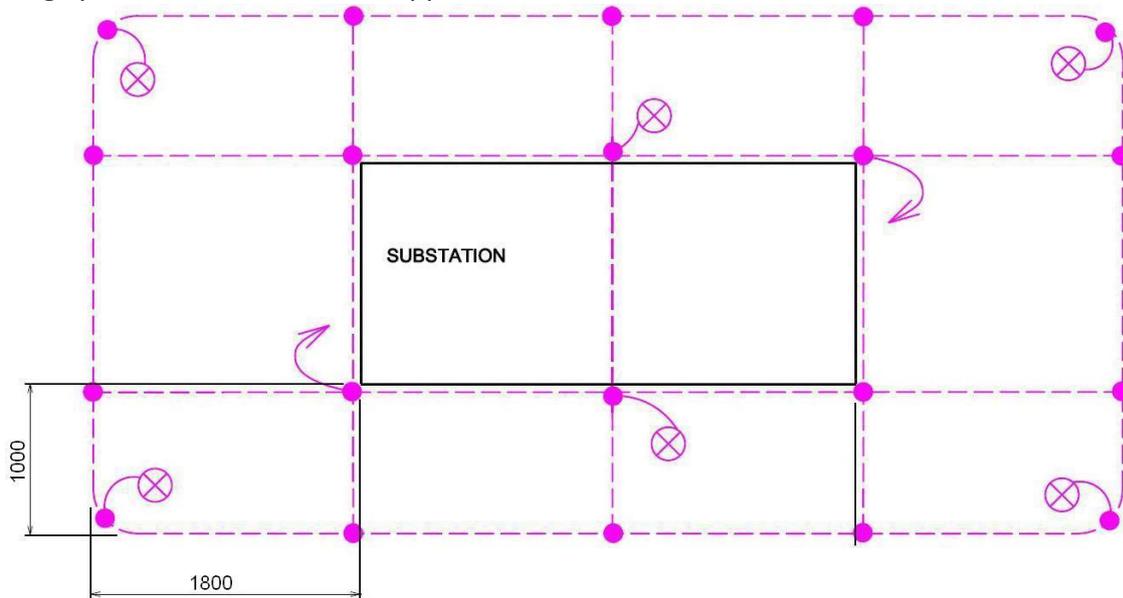


Figure 4: Underground earth mat at substations

If during excavations an earth rod or earth mat is uncovered or damaged then stop work immediately and contact TasNetworks Fault Centre on 132 004.

Provided Hydro Tasmania is notified immediately, Hydro Tasmania will repair the earth system at no cost to the contractor. Hydro Tasmania does this because of the importance of earthing to public safety.

Should the contractor choose not to notify Hydro Tasmania immediately then on becoming aware of the damage, Hydro Tasmania will recover costs from the contractor and report the matter to Work Safe Tasmania.