

Technical Bulletin

TB-0200 - Waterway Crossings for Communication Cables

Purpose

This technical bulletin provides the requirements for communication cables to be installed over waterway crossings attached to Endeavour Energy poles.

Actions

The risks associated with any conductor crossing a waterway are significant and therefore the attachment of any communication cables to Endeavour Energy's assets for the purposes of a waterway crossing, are subject to an individual risk assessment / review.

Prior to any design or construction work associated with a communications cable water crossing, Endeavour Energy Network Mains Manager shall be contacted.

Communication cables to be installed above navigable waterways under Endeavour Energy's mains shall meet the requirements of:

- NSW Maritime's Crossing of NSW Navigational Waters;
- Endeavour Energy's MDI 0031, and;
- AS 6947 – Crossing of Waterways by Electricity Infrastructure for guidance.

Figure 1 shows Endeavour Energy's minimum required clearances for waterway crossings. The proposed communication cable is not to restrict the height of vessels that may travel along the waterway. It is highly probable that the installation of a communication cable on existing structures will not comply with these clearances, therefore requiring the span and structures to be reconstructed.

In cases where the communication cable owner's design does not comply with the clearances

outlined in figure 1, the communication cable owner must either:

1. Use an alternative route for the cable, or;
2. Augment/Re-build the waterway crossing to meet the required clearances in accordance with Endeavour Energy standards.

When it is proposed to install communication cables underneath Endeavour Energy's 66 kV or 132 kV conductors, the cable owner shall determine what additional clearances are necessary to prevent damage to the cables outer jacket from the overhead conductor's electric field. These clearances shall align with the space potential ratings of the cable and Endeavour Energy's minimum safety / reliability requirements.

The communication cable owner shall use a break-away construction to prevent overloading the poles during any wire-strike incidents.

In cases where the communication cable owner wishes to augment any section of an Endeavour Energy water crossing, the following process shall be used:

1. Request the risk assessment template and the recorded details of the particular waterway crossing from Endeavour Energy's Network Mains Manager. The communication cable owner shall confirm all details provided to them as part of the risk assessment process. The recorded details available may include:
 - Max vessel height,
 - Tidal heights and details,
 - Wave effect,
 - Location of existing signage.
2. Submit design and new risk assessment to Endeavour Energy's Network Mains Manager for approval (as part of the Network

Connections certification process). These shall outline all proposed changes by the inclusion of the communication cable and the associated equipment, including:

- Any changes to construction (including pole strength calculations), and;
 - Existing signage replacements/ changes.
3. Construction is completed by the communication cable owner.
 4. As built survey is completed and submitted to Endeavour Energy's Network Mains Manager along with updated risk assessment for final approval*.

*Where Endeavour Energy is not satisfied with the as built survey due to changes resulting in higher risks to the company than the design specified, the communication cable owner shall rectify these issues prior to final acceptance by Endeavour Energy of the project.

Any incident associated with the communications cable, such as a wire strike or activity that may

have caused potential or actual pole movement on Endeavour Energy assets shall be immediately notified to Endeavour Energy. All costs associated with damage or required rectification works to Endeavour's assets will be the communication cable owner's responsibility.

The maintenance requirements for the signage of water crossings with communication cables installed will be determined by Endeavour Energy and may require compliance reports to be submitted on an annual basis.

Impacted Standards

The contents of this technical bulletin will be included in the next update of the following standard(s):

- MCI 0002 – Attachment of Broadband communication cables to Endeavour Energy poles

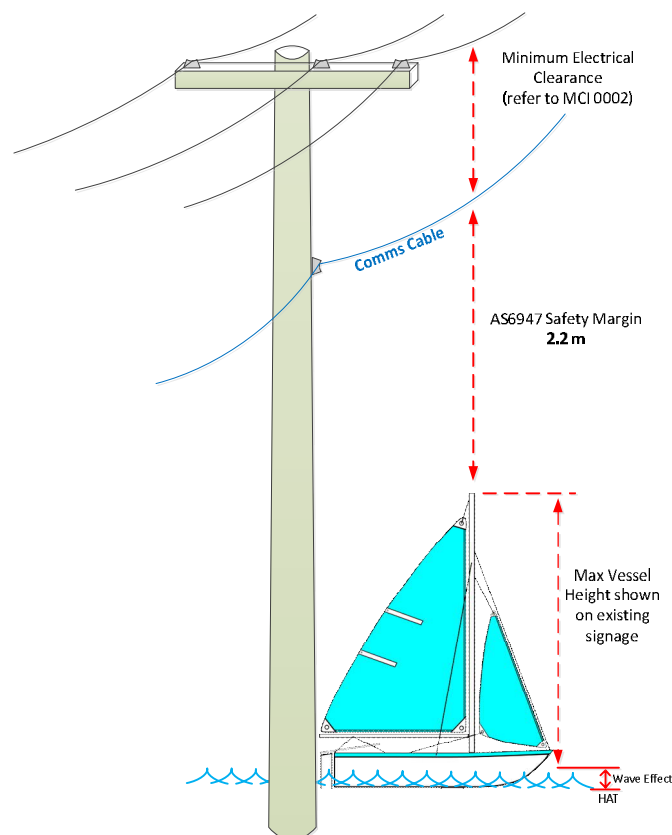


Figure 1 - Waterway Crossing Clearances