



Technical Bulletin

TB 0241 - CONCRETE/STEEL DESIGN POLE IN BUSHFIRE PRONE AREAS

Purpose

The purpose of this technical bulletin is to clarify the design requirements for distribution concrete/steel poles in bushfire prone and remote areas.

Background

Conductive (concrete/steel) poles are required in bushfire prone areas (which includes bushfire buffer zones) where the earthing is defined as remote in accordance with company policy.

Due to the poles being conductive, they can increase the risk associated with step and touch voltages if the area is not remote.

Action

An earthing design for a proposed pole considered to be located in a remote area must assess all conductive potential hazards nearby, such as fences, household switchboards and taps. The assessment criteria to be used are detailed in EDI001 clause 5.2.3.3. If the expected average monthly allowable contacts are below that listed in the table extract below then the location can be considered to be “remote”. In this case a concrete or steel pole must be used.

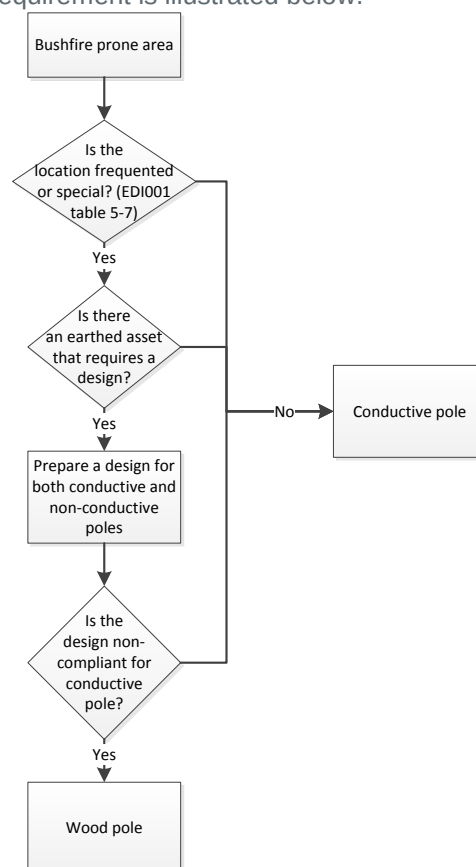
Fault Duration	Average monthly allowable contacts
0.1 sec	6.41
0.2 sec	6.26
0.5 sec	5.84
1 sec	5.26
1.5 sec	4.78
2 sec	4.38
3 sec	3.75
4 sec	3.29
5 sec	2.92
6 sec	2.63
7 sec	2.39
8 sec	2.19
9 sec	2.02
10 sec	1.88

If these criteria are not satisfied for any hazards then the location must be considered to be “frequented” or “special”. An earthing design for an asset in this location that requires an earth, such as pole substation, LBS or recloser, must be risk assessed to determine the type of pole to be used.

All poles without an asset which requires an earth must be concrete or steel regardless of the location.

In a frequented/special location an earthing design must be prepared for both conductive and timber poles. If it is found that no practical earthing system can be designed for a conductive pole that complies with the safety criteria then a timber pole is to be used. The design assessment and approval is undertaken in line with normal processes, such as by contestable works staff and no dispensation is required.

The requirement is illustrated below.



All Fault and Emergency replacements should be like for like with the existing pole.

Impacted standards

EDI100 – Clause 5.5.1.3 and 5.5.5.1
MDI0031 – Clause 3.3.2