



SAFETY ALERT!

March 2017



Correct Pole Embedment Depth & Marking

WHAT HAPPENED?

This Safety Alert is being sent out to help raise awareness and reinforce the importance of correct pole embedment depths, as well as the marking of wood poles during fitting and installation for future reference. The adjacent photo shows double pole strain poles that were installed in (circa) 1982 to a depth less than the required depth of 2.438, for these 15.850m poles (worst case is 938mm out of specification). This incorrect installation was a contributing factor in a recent incident **35 years later!** Fortunately no one was harmed.

TP.SS 02.13 clause 5.12, Embedment Depth Marking, says that all wood poles are to be marked with a galvanized coach bolt inserted 4m from the butt. Clause D8.3, says that if a timber pole must be cut, this must be at the top to a standard length. This cut must be treated with an approved preservative and pole cap installed. Clause D8.4 – the butts of poles must not be cut off to shorten a pole unless the butt is damaged. Agreement from TP must be obtained in such instances.



IMMEDIATE ACTION TAKEN

- Safety Alert sent out to raise awareness and ensure compliance with Transpower Service Specifications.
- TP.SS 02.13 will be updated to include reference to pole embedment depths. Grid Skills will review their training curriculum to ensure lessons learnt are included in future training.

ROOT CAUSE

Pole not installed to the correct depth at the time of installation, due to workmanship and quality issues. Marking of the pole with a coach bolt 4m from the pole butt did not occur. The manufacturer's pole disc is installed 2m from nominal ground level (which is not marked) on wood poles. This disc can be used as a check on embedment depth but cannot be relied on completely, hence the need for the coach bolt at 4m from the butt.

LEARNINGS

- Do not assume all wood poles are at their required embedment depths. Support or guy as required.
- Record embedment depth of pole on QA, based on design drawing. Install coach bolt 4m from butt on all wood poles as required in TP.SS 02.13.



For more information,
please contact:

Name: John Wilson
Designation: Service Delivery Manager
Ph: 06 590 6028 Mob: 021 655 436
john.wilson2@transpower.co.nz