FAILURE OF A COPPER SALT TREATED POLE

An incident has occurred in Northern Powergrid with a 2007 copper salt treated wood pole.

A customer reported an LV pole swaying in the wind which resulted in their staff attending site to deal with the report. Site staff confirmed stability issues with the pole which resulted in the pole being jacked out, and inspected. As can be seen from the photographs, the decay process has taken place below the ground line. An initial visual inspection of the pole appeared to show that it was in good condition, however, the pole below ground level was severely decayed. The wood from the ground level mark was checked and all the outer softwood fell off the inner heartwood in chunks. As the majority of the pole strength resides in the outer ring of the pole, the residual strength of the pole was severely compromised.

Pole jacked out of the ground

This affects all copper salt treated poles from all manufacturers.

It order to prevent this from happening, all copper salt treated poles coming to SPEN are fitted with a protective barrier sleeve by the pole supplier prior to delivery, though some of the initial poles were erected without the sleeve. The sleeve is located on the pole below ground level up to 150mm above ground level and this stops the copper tolerant organisms from having access to the wood, therefore preventing this decay.

Trials of a new copper oil wood preservative will start later this year which, combined with the barrier sleeve, will have substantially improved protection over poles treated with the copper salts preservative.

Severe decay below the ground line

Recommendations and action points

- **In line with the working at height hierarchy, work shall be carried out from a MEWP wherever reasonably practicable.**
- **Prior to climbing a copper salt treated pole (including the use of ladders), ensure that the barrier sleeve can be seen above ground level.**
- **As the decay below ground cannot always be detected by sounding the pole above ground, where the barrier sleeve cannot be seen above ground level and climbing is the only viable method of pole top access, the pole shall be inspected below ground level by excavating a minimum of 300mm below ground and repeating the same checks below ground for signs of decay. Only after confirming that the pole is in sound condition below ground level shall the pole be climbed.**