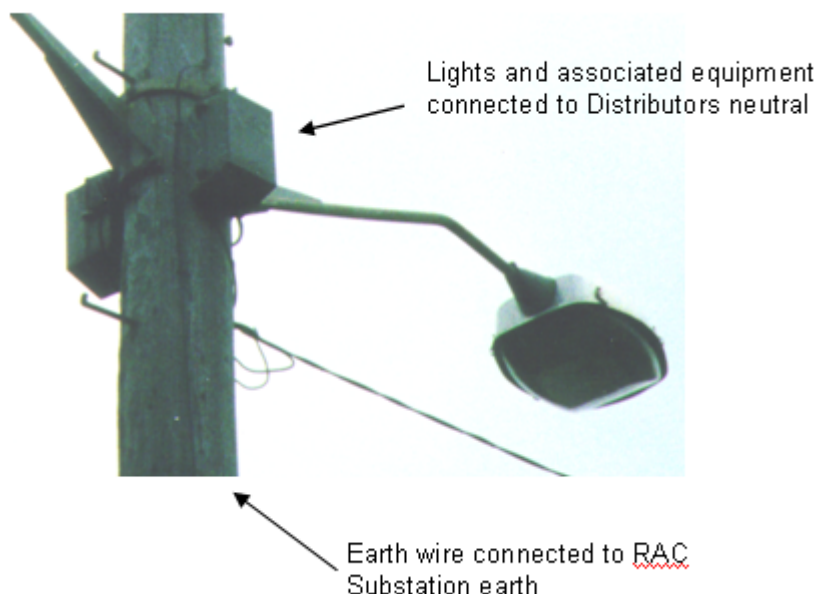


Electrical Technical Note

Segregation of earths on poles – Safety Issues

In many locations the local electricity distributor (Energy Australia or Integral Energy) has its equipment attached to Rail Infrastructure Corporation's transmission line poles. These arrangements are covered by "Joint Use" Agreements, most of which would have been entered into between SRA and the predecessors of the current distributors.

Several poles that carried a RIC feeder with an aerial earth wire and also street lighting supplied from the local distributor's network have been noted in the system. There were earth "down wires" installed on the poles. Where the earth down wires came close to the light fittings they were bent out away from the pole so as to avoid contact with the light fittings (see attached photo). The down wires were bare copper with the normal cover board up to 2500 mm above ground.



This situation may represent a safety hazard for any person coming into simultaneous contact with both the RIC and local distributor's earthing systems. In the event that there is a fault on either system a dangerous potential could exist between the two earthing systems.

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ETN 01/06

10 August 2001

Expires

Audience

- Infrastructure Maintenance Engineers
- Electrical Asset Engineers
- Electrical Team Leaders

Main Points

Contact

D. Stuart-Smith

Distribution

Open

Last Open Distribution

Would you please ensure that all our staff who work on poles are aware of this risk and include checking for this hazard in their hazard assessment process.

The following actions are recommended:

1. Identify all such situations.
2. Inform the local distributor about the presence of a possible hazard.
3. Undertake remedial work to provide insulation or other segregation of the earths in the zone where the local distributor's equipment is attached.

Action 3 will require a design. If such work is required it is recommended that you contact the Electrical Design Section to have a generic design prepared.

Approved for Issue:

David Stuart-Smith
Principal Design Engineer Electrical