Work Near Exposed Electrical Equipment

Hazardous structures and work methods

Target Audience

- **Persons with management or control of a workplace** near exposed electrical equipment – including 1500VDC, low-voltage AC or high-voltage AC.
- **Persons designing infrastructure** in the rail corridor.
- **Persons responsible for infrastructure management**, including configuration control.

The issue

Recently, a near-miss incident occurred at Hurlstone Park where contractors erected scaffolding near live exposed 1500V overhead wire (OHW) and a worker on the scaffold encroached the Safe Approach Distance (SAD) to live exposed electrical equipment while **working without an Electrical Permit**, and **without an approved L5 Manager request to work near live exposed electrical equipment with appropriate safety controls**.

The investigation also showed the galvanised steel troughs installed at this location:

- create a climbing aid allowing persons to stand within easy reach of the OHW; and
- infringes the structure gauge for the rolling stock operated by Sydney Trains.

Attention is drawn specifically to:

- PR D 78700 Working around Electrical Equipment;
- SP D 79049 - Safe Approach Distances;
- PR D 78501 – Electrical Permits;
- NSW Work Health & Safety Act 2011;
- Rail Safety National Law;
- Guideline for the Management of Activities within Electricity Easements and Close to Electricity Infrastructure; and
- ISSC20 - Guideline for the Management of Activities within Electricity Easements and Close to Electricity Infrastructure.

What you must do

Rail infrastructure designers must ensure structures do not create climbing aids facilitating unauthorised access to exposed electrical equipment (per *ISSC20*). This applies within the rail corridor as well as externally.

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Rail infrastructure designers and **Rail infrastructure managers** must ensure structures do not infringe the structure gauge.

All **persons with management or control of a workplace** must ensure work near exposed electrical equipment within the rail corridor is conducted in accordance with Sydney Trains *Electricity Network Safety Rules*. As described in *PR D 78700*, **where the work may encroach the SAD to live electrical equipment** either:

1. arrange for the aerial line to be removed from the vicinity of the worksite; or
2. obtain and work in accordance with an Electrical Permit (i.e. an electrical isolation); or
3. install an approved physical barrier to prevent anything contacting exposed live electrical equipment; or
4. use an approved controlled process, temporary structure or plant that ensures persons, the tools or materials they hold cannot encroach on the SAD to exposed electrical equipment in any circumstance including human error, unintended movement or equipment failure.

NOTE

Alternative (4) may only be considered when an Electrical Permit was requested, and either declined or cancelled by Sydney Trains Isolations Planning (ICON).

Where this approach is considered, the **persons with management or control of a workplace MUST issue a completed Notification of work near live electrical equipment** to Sydney Trains ICON Electrical. The form must:

- confirm a documented risk assessment has been produced identifying the hazards and the safety controls that will be applied;
- be reviewed and signed by a person holding appropriate qualifications for the type of work per *PR D 78701*, acknowledging they have reviewed the proposed work (i.e. a person within the Transport cluster – not the contractor's organisation); and
- be signed by a person authorised by Sydney Trains Electricity Distribution Unit as a "L5 Manager".

If ICON Electrical does not acknowledge by issuing a receipt number, the work must not proceed.

Please reach out to your Line Manager, Sydney Trains' Electrical Distribution Unit or Safety, Environment, Quality and Risk (SEQR) professionals and advisers if you have any questions.

Chadi Chalhoub
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