

Target Audience

Persons undertaking work within the electrified rail corridor.

The Issue

Several incidents in the past six months involving persons, tools or materials having contact with rail and nearby metallic structures has resulted in electric shock, exposure to electric arcs, and damage to the assets.

A circuit formed between your body, adjacent infrastructure, rail or a rail-mounted vehicle may result in a serious electric shock. In addition, creating a direct metal-to-metal contact can result in significant electrical current flowing and, if broken, a hazardous arc may result. This current is not limited by protection devices and the resulting arc may cause serious injury or damage to the infrastructure.

What you must do

All personnel are reminded that rail is not earthed and you must therefore not create a connection between the rail/rollingstock and nearby infrastructure. You must ensure persons, rail mounted vehicles, tools and equipment do not form a circuit between the rail and structures connected to the local earth, such as (but not limited to):

- Scaffolding or elevated work platforms;
- Galvanised steel troughs;
- Station structures including awnings, handrails, platforms, station furniture and equipment;
- Poles supporting lighting, CCTV or communications equipment (e.g. trackside phones);
- Fences;
- Buildings, bridges, handrails or barriers;
- Metallic infrastructure in the rail corridor such as Overhead Wiring (OHV) stanchions, boom gates, pit covers, signalling equipment;
- Electrically powered tools;
- Metallic equipment installed on platforms or access paths;
- Metallic covers in the 4-foot;
- Maintenance Centre buildings and Hi-Road structures; or
- Broken rails.

Where work requires the rail or OHV structures to be connected to nearby metallic objects, a documented risk assessment shall be undertaken by competent persons [including an Authorised Officer Mains (AOM)] to identify safety hazards, the associated risk and controls.

While performing maintenance and construction work where there is a potential to make earth rail contact, appropriate Personal Protective Equipment (PPE) must be worn.

Important Notes:

- Working with an Electrical Permit may not mitigate the risk of forming a circuit between equipment connected to rail, and equipment connected to local earth. Consult an AOM for advice on how to protect your worksite.
- Should the structure be found to be hazardous to work on (i.e. >50V) contact an AOM within your business unit. A list of AOM is available [here](#) (refer to *Section 4.10*).
- When working on any 1500V OHV structure or structures connected to rail, power tools must be either battery-operated or supplied from an isolating transformer, generator or inverter.
- In the event of an electric shock follow the electric shock protocol ([D2013/80869](#)). Medical attention is required regardless of the initial symptoms. **All electric shock incidents shall be reported to ICON-Elec on 9379-4911 and the Incident hotline.**
- All persons receiving an electric shock are to attend the nearest hospital by ambulance for assessment, regardless of how minor the contact may appear on reporting.

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

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