



## Risk of Electric shock from Temporary Power Supply

As part of final work activities at the Wilton Substation, it was observed that a power extension lead was routed under the door and extended beyond the controlled area, through the fence line, beyond the earthgrid, where the work area was set-up. The following hazards were identified:

1. The extension lead crossed beyond the Earthgrid (*potential step-touch risk during fault event*).
2. The extension lead was not protected, causing an abrasion to the cable's outer sheathing (*potential risk of electric shock from the door, had the damage to the lead continued*).
3. The new lead was not tested and tagged (*a non-compliance to the SSSP and industry best practice*).
4. No RCD protection

### Immediate actions

- The damaged lead was unplugged and discontinued use.
- Replaced power tools with battery-powered tools.
- A toolbox talk was conducted prior to work restarting with all staff involved to reinforce the critical importance of using only tagged and tested equipment, ensuring appropriate cable routing of leads, and always maintaining safe setup procedures.
- Incident raised and investigation underway.



### Previous related incidents with extension lead used through doorways

1. **Wilton Substation, 03 December 2013:** A worker suffered an electric shock after an extension lead (not RCD protected) was routed through a doorway. As the door was closed at the end of the day, it crushed the lead, damaging the insulation. This caused the metal door to become live. The worker, holding the door and an earthed handrail, became the fault path, where electricity passed through his body sticking the workers hand to the rail and in an attempt to release the arm, the worker suffered a dislocated shoulder.
2. **Hamilton Substation, 31 January 2023:** An extension lead was observed passing through an open doorway. This posed a trip risk to personnel and had the potential to cause damage to the extension lead and could result in exposed live internal wiring, exposing personnel to the possibility of an electric shock.



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