

SAFETY! ALERT!

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New Plymouth Substation MAD encroachment/Bus Zone tripping - issue 2

WHAT HAPPENED?

During diagnostic inspection and servicing on the 220kV structure and associated equipment at the indoor New Plymouth Substation, the 220 kV MAD was encroached by a 240V extension lead.

This occurred when a member of the Electrix maintenance team was lowering the lead through an opening in the mezzanine floor above Bay 260, which is directly in line with the live, in-service 220kV busbar immediately below the mezzanine. When the lead encroached the minimum approach distance, a flashover and a 220kV bus zone tripping occurred.

Incredibly, the team member lowering the lead was uninjured despite the extension lead being severely damaged beyond repair. No damage was sustained to PPE (boots, overalls etc), however the immediate bus support insulator for the Bus West was damaged as a result of the 220KV earth fault arc flash.



IMMEDIATE ACTION TAKEN

- Permanent ban of all work on the NPL mezzanine floor area above live in-service equipment.
- Reinforcement of Working Above Live Equipment Process (WALE) and ensure TP542 documentation is signed and agreed by both Transpower and Service Provider as part of the job planning process.

ROOT CAUSE

The ICAM is still in progress with a number of recommendations to follow.

LEARNINGS

- All work must be thoroughly planned including a robust and comprehensive risk assessment in advance.
- Reference to Safety Manual - Electrical Industry (SM-EI) Rule 3.711 and Transpower Controlled Document TP542