



Contractor Incident at Naylors Road Substation

On Wednesday 12th August 2015, during routine electrical re-wire works, a steel retractable tape measure was knocked from the 11kV transformer lid and fell onto the LV bushings causing a phase to phase flashover.

The steel tape recoil mechanism had failed and approximately 10 inches of tape was left extended from the body of the unit when placed on top of the transformer.

Whilst it had been identified as part of the site specific risk assessment that exposed live bus-bars were present within the work area, only the visible LV board had been properly shrouded. No shrouding had been applied to the LV terminals at the transformer.

Following installation of plastic conduit to the wall adjacent to the transformer and whilst descending a ladder, the electrician`s mate knocked the extended steel tape which caused the body of the unit to slide across the lid and fall behind the protective cover onto the transformer live LV terminals

Both HV and LV circuit breakers operated correctly to disconnect the transformer from system voltage. The electrician`s mate was not hurt.



Extended steel tape measure



Damage caused to terminals during flashover

Recommendations and action points

- Authorised staff to be reminded of the possibility of exposed live conductors behind the protective cover to the 11kV/415V transformer LV connections.
- All exposed live equipment adjacent to the work area shall be shrouded to prevent inadvertent contact with persons or objects.
- Only approved insulated tools shall be used when working adjacent to live equipment.
- A steel retractable measuring tape is not an approved tool and must not be used. The approved tool for measuring purposes is a 3 metre non conductive measuring tape, stock code 30982608.