



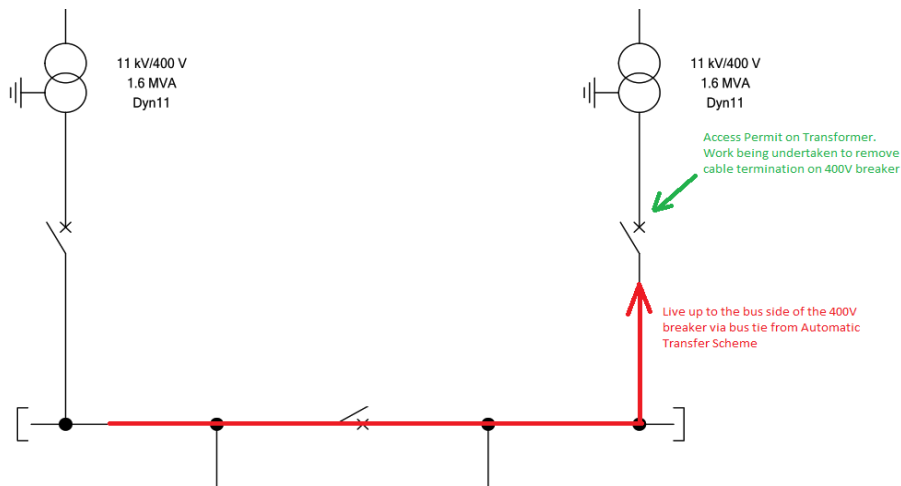
Non-Conformance with AS/NZS 4836:2023

Safe Working on or Near LV & ELV Electrical Installations & Equipment

WHAT HAPPENED?

While carrying out planned work to remove an incomer cable from a 400V Switchboard, a previously unknown bus was identified to the rear of the board. Work was subsequently stopped with the bus tested and confirmed to be live via the tie breaker from the other half of the bus. To manage the works, an insulated divider was installed to act as a barrier while the incomer cable was removed. No further protection measures were taken to carry out the task.

The board is 400V and has a fault rating of 27kA, posing a high risk of serious harm to personnel. **AS/NZS 4836:2023** recommends Category 4 PPE (Arc Flash Rating 40cal/cm²) be worn for work on all switchboards >800A. In this instance, workers donned only the Transpower minimum required PPE which is Cat 2 (Arc Flash Rating 8cal/cm²).



ROOT CAUSES

In failing to follow the principles, guidelines, practices and recommended safe working procedures as outlined in **AS/NZS 4836:2023**, a section of the bus remained live. Isolating all feeds to the work area, as per the Hierarchy of Controls, would have eliminated the risk, removing the requirement of installing insulated dividers and the need for CAT 4 PPE.

LEARNINGS

AS/NZS 4836:2023 provides clear principles, guidelines, practices and recommended safe working procedures and should be referenced when planning for and carrying out any work on or near LV & ELV Electrical Installations & Equipment

The standard notes that it is commonly assumed that substantial arc flash incidents only occur in HV situations. However, these incidents can and do occur in LV and ELV installations due to high fault currents.

Given that Transpower has a number of high fault current boards in operation it is essential that all works are planned and managed accordingly.

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