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## Cable Insulation

### What is the hazard?

Cable insulation may have deteriorated, allowing live conductors to be exposed, with increased potential for electric shock, arcing and fire.

### How does this hazard occur?

The insulation of the conductor has deteriorated and detached sufficiently to expose the conductive core. It is presumed that this is a result of either a manufacturing defect or an external influence.

### Background

Electrical inspections recently identified existing electric cables within an energised installation that had severely degraded insulation. This cable has been removed and replaced where necessary.



*Figure 1: Degraded cable found in Hobart*

## Risk

Cables that have insufficient insulation may result in shock or arcing that could cause substantial injury and / or damage to the installation.

## Safety considerations

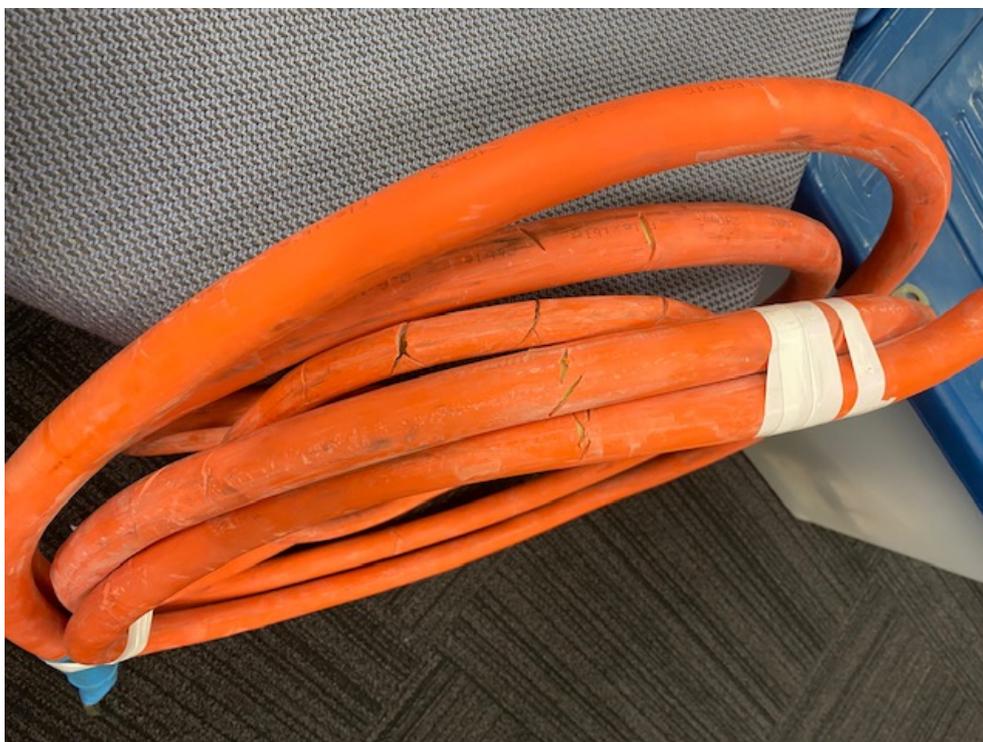
The Standard AS/NZS 4836:2011 *Safe working on or near low-voltage electrical installations and equipment* is an essential consideration to manage the risks. Unknown cable condition should be factored in to your risk assessment prior to removing panels.

## Isolate the installation

Ensure that supply is isolated when working in close proximity to electric cables.

## Inspect for degradation

Look for any visible evidence of deterioration to the cables such as insulation cracking.



*Figure 2: Example of insulation cracking*

## Advise the owner

The installation owner needs to be advised of all instances where deterioration has been identified, if there is an immediate risk of shock, arcing or fire isolate the area immediately until rectification is completed.

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