

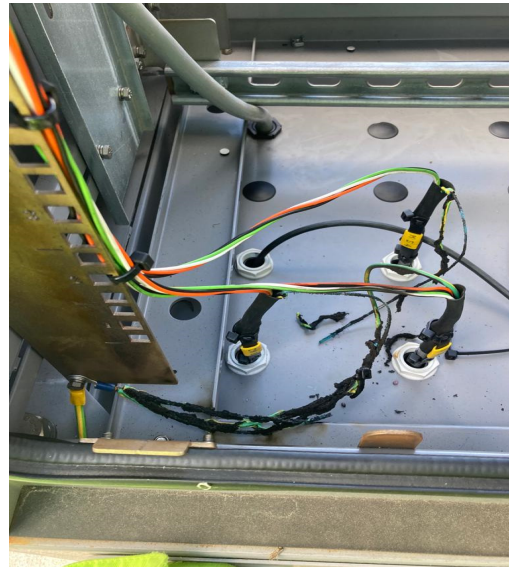


New 600C Cabinet Damage

On 15th April 2021 during a planned visit by a BMJV sub-contractors, heat / burn damage to cables was discovered at a newly installed 600C cabinet. The incident was immediately reported and an investigation was started.



New cabinet



Damaged cables inside

The initial investigation was carried out by the bmJV Electrical AP.

Immediate actions taken:

- All outgoing circuits from the cabinet isolated to limit the risk of electric shock.
- Checks to the internal wiring to determine the cause of the fault.

Findings:

- The Neutral conductor had become live within the Electrical Interface unit on the project boundary, meaning there was a high risk of electric shock as all the metal work on the external cabinet was live (240 Volts).
- Further checks were then made to the incoming DNO supply cable and readings showed that both the Live and Neutral conductors were both carrying a supply voltage.

Follow up actions:

- Outgoing cables from the electrical interface unit to the new 600C cabinet were isolated.
- Barriers erected around the boundary electrical interface unit and area made safe
- Watchman put in place to prevent anyone accessing the area.
- bmJV AP contacted DNO Company to arrange for them to be called out to deal with the problem.



- DNO supply company (SSE) started work to determine the cause of the fault.

Outcome:

- The report from DNO Company (SSE) stated that a connection fault had occurred from outside of the site boundary on the incoming DNO supply cable feeding the electrical interface unit and that the fault had caused the damage inside the new site 600c unit.

Lessons Learned

- The reporting process within the scheme was well executed and the initial investigation was carried out in a safe and concise manner.
- The following points are the recommended checks that all electricians / technicians going into an Electrical Interface cabinet on Highways should do.
 - With a Non-Contact voltage detector check to see if the shell of the metal cabinet is live.
 - Once satisfied that it isn't live, open the doors and remove the covers to the MCX0164 box.
 - Using an approved voltage tester and proving unit check tester with the proving unit.
 - Then check polarity and voltage present on the correct conductors.
 - Re-check tester using the proving unit.
 - Close up covers and doors.
 - Record and leave site.

Location of the damage M27 J4 – J11, J5 WB on-slip

