CORRECT ELECTRICAL ISOLATION PROCEDURE

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Start

Get permission from an authoritative figure, identify ALL sources of supply (primary, secondary, tertiary — PV, UPS, batteries, generators, EV chargers), complete your Risk Assessment and confirm whether a Permit to Work is required.

Locate all secondary and tertiary supplies and lock off all secondary and tertiary supplies, fit padlocks, retain keys and fit warning notices.

Inspect all test equipment per **PUWER** and **GS38.** Prove your voltage indicators, **NON-CONTACT** and **CONTACT** voltage indicators are working on a known live source / proving unit before and after use. **MFTs** must **NOT** be used to prove dead.

EQUIPMENT DAMAGED → **STOP WORK**

Use a contact voltage indicator on the main incoming head to check for tracking.

VOLTAGE PRESENT → **STOP WORK** AND CALL THE DNO ON 105

0V MEASURED

Place a CT clamp ammeter on the main earth conductor. Any reading above 15mA is potentially dangerous.

>15 mA OF CURRENT PRESENT →

Check for voltage with a non-contact voltage indicator on the main earth conductor. Check any metallic surfaces with a contact voltage indicator. If voltage is detected, investigate the source whether internal or a network fault - alter your RAMS, you are now fault finding.

Upon the main switch opening:
- A slight reduction in current will be the properties earth leakage disappearing.
- If the current disappears drastically then this property likely has an internal fault driven by internal loading.
- If the current does not change then there is an external fault. Being driven by external loads.
- High net currents - The 15 mA danger threshold comes from IEC/BS EN 60479-1 (effects of electric current on the human body).

THE CURRENT DISSAPEARS DRASTICALLY → The property likely has an internal fault driven by internal loading. You now need to discuss this with the client.

THE CURRENT DOES NOT CHANGE → There is an external fault being driven by external loads. Stop work and report and log your findings with with your CPS provider. → **STOP WORK** AND CALL THE DNO ON 105

<15 mA OF CURRENT PRESENT

Check for voltage with a non-contact voltage indicator on the main earth conductor.

VOLTAGE PRESENT
Investigate the source whether internal or a network fault; alter your RAMS, you are now fault finding.

0V MEASURED
With the presence of DNC current alleviated or managed you can proceed to complete your original task.

Locate the circuit for your original task. Isolate, fit padlocks, retain key and fit warning notices.
Test all conductors at the locked-off OCPD or isolated main switch in the correct order.

For a single phase circuit/ equipment	For a 3- phase circuit/ equipment
N-L, E-L, N-E	N-L1, N-L2, N-L3, E-L1, E-L2, E-L3 L1-L2, L1-L3, L2-L3, N-E

0V MEASURED

Re-prove your test equipment on a known live source. System confirmed dead — safe to work. → **BEGIN WORK**

VOLTAGE PRESENT