

Shared Learning

SL 023/16

Recoveries – Redundant Equipment, Cables, Wiring

Infrastructure Projects



Background

Over the last year there have been a number of instances where project recoveries have led to operational equipment being affected.

These include:

- 230V Power feed cable being cut & recovered, affecting operation of an AHB.
- A live operational wire was cut & repaired incorrectly; joining an operational level crossing circuit to a bomb-tailed wire.
- An operational Track Circuit Interrupter was recovered.

This Shared Learning is to remind teams of the formal arrangements that lead to successful recovery of redundant equipment, cables and wires.

Working with Electricity

Network Rail Lifesaving Rules;



Always have a valid permit to work where required



Never assume equipment is isolated – always test before touch



Always test before applying earths

Test Before Touch

Anyone intending to access equipment housings such as location cases, power enclosures, PSPs, REBs and relay rooms containing signalling power supply equipment above 175V should follow the standard below and the flowchart within;

- [NR/L3/SIGELP/50002 NR/SPS S001 Planning of Work on or Near Signalling Power Supplies above 175V](#)

On site if the task includes the use of tools, comes within 300mm of exposed conductors and terminals above 175V follow the guidance below;

- [NR/L3/SIGELP/50002 NR/SPS S004 Safe Access to Equipment Housings](#)

Before Work is Carried Out

- It is essential for the operatives to fully understand the nature of the work to be completed
- Relevant task briefing sheets are complete where appropriate
- Relevant documentation / drawings are available and authorised
- Contact the controlling signal box prior to the work to advise the location of the team should any issues with operational equipment arise

Wiring / Cable Recoveries - Key Points

It is essential that redundant wires and equipment are removed in a logical and careful way to avoid affecting the safety of working circuits.

A wire / cable may only be removed if:

- both ends of it have been labelled as redundant and have been insulated and made secure in a safe position away from working equipment, or you have:
- checked with the wiring and analysis drawings that it is intended to be redundant, and made a continuity check by physically tracing or checking with a Technician's meter to ensure you have both ends of the same wire. Then disconnected both ends, cut off the termination and insulated the wire end
- the wire / cable can be easily removed over its entire length without excessive force that might damage working wires, cables, or equipment
- there will be no physical disturbance to any working equipment

Wiring / Cable Recoveries - Key Points

- Do not work on more than one wire at a time if the wire runs also contain working circuits. If a wire run or tree to one position is completely redundant, it may be removed as a whole after each individual wire end has been checked as instructed above.
- If any doubts arise as to whether a wire may be safely removed, seek the advice of your Supervisor.

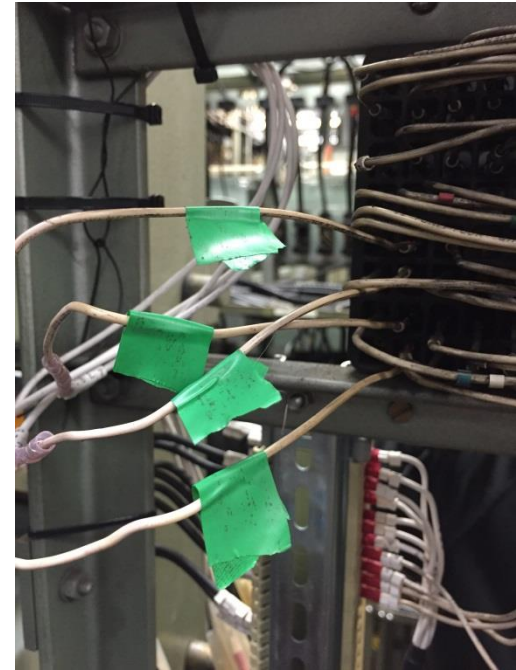


A mixture of working circuits & redundant wires as shown above is not uncommon.

Wiring Recoveries - Guidance

Always follow the recoveries guidance as detailed in the appropriate standard to your work;

- Signalling Installation
[NR/L3/SIG/11303/1D20 Electrical Wiring: Alterations: Alterations to an existing installation](#)
- Signalling Works Testing Handbook
[NR/L2/30014/D115/DT2-21 Recovery Identification Check & NR/L2/30014/D115/DT2-22 Wiring Recoveries](#)



STOP!

- If an operational wire/cable is cut, stop work immediately, notify the Signaller and Fault Control.
- Stay on site until maintenance (or another suitably qualified team) are in attendance to rectify the fault OR provide full details to fault control of the work you have completed and make safe the wiring / cable
- **NEVER attempt to repair without staff that hold the required competencies to carry out the task in attendance.**



Further information...

For any further details or information please contact:

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