



# Triple Concentric Cable Identifier

ENA Basecamp 2025 – Problem Statement EIP144

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# About UK Power Networks



**8.3M homes and businesses**

28% of UK Total

**9.3GW+ Distributed Generation Connected**

32% of UK Total

**16GW+ Peak Demand**

28% of UK Total

# What is the problem?

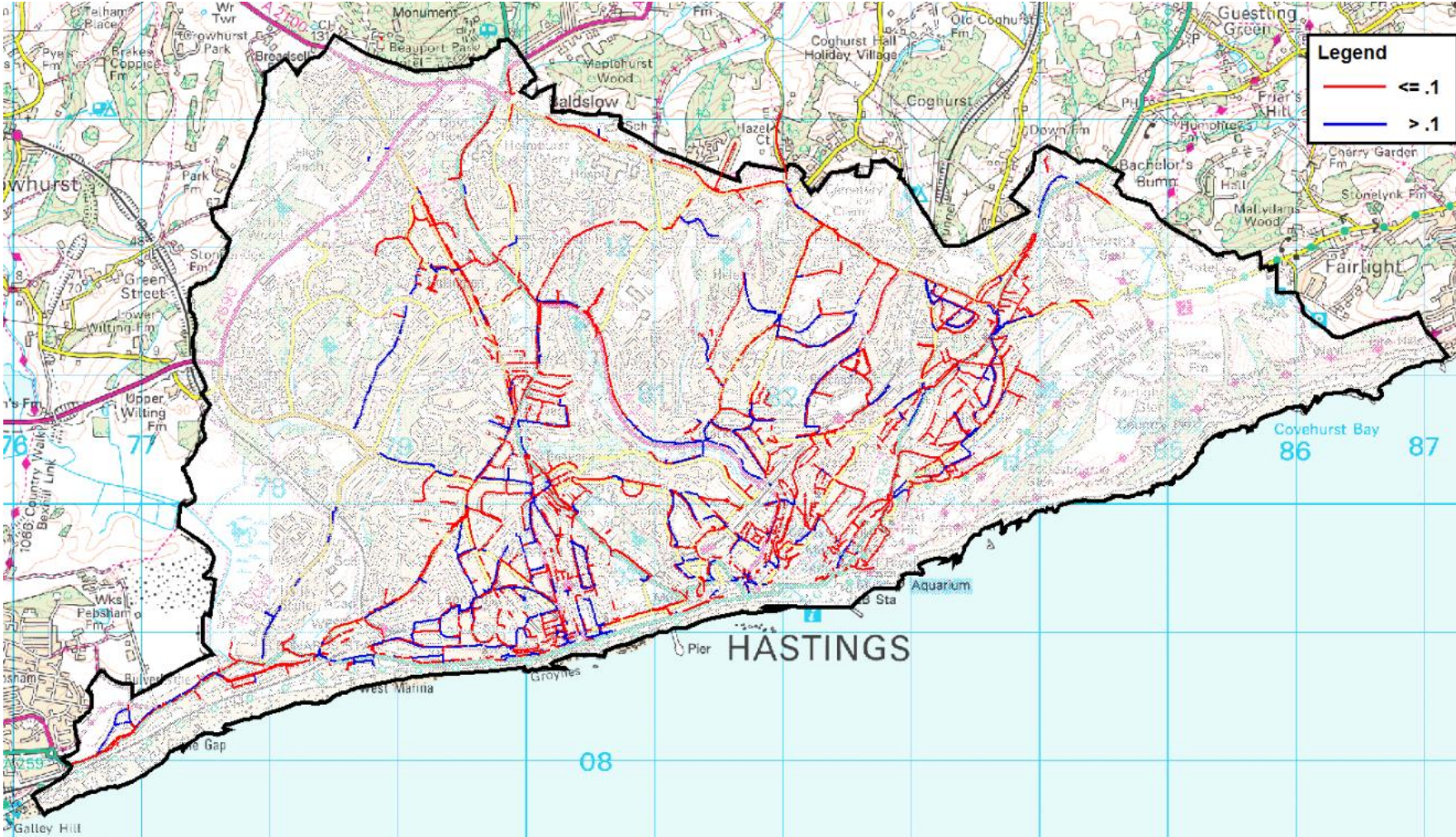
Before cable jointing takes place on any cable, it must be correctly identified. Signal injection identification techniques are used, but they rely on the roll of the cores within the cable. Paper Insulated Lead Covered (PILC) triple and double concentric cables cannot be positively identified using these methods as the cores are concentric and have no roll.

Currently to identify a triple concentric cable the method is as follows:

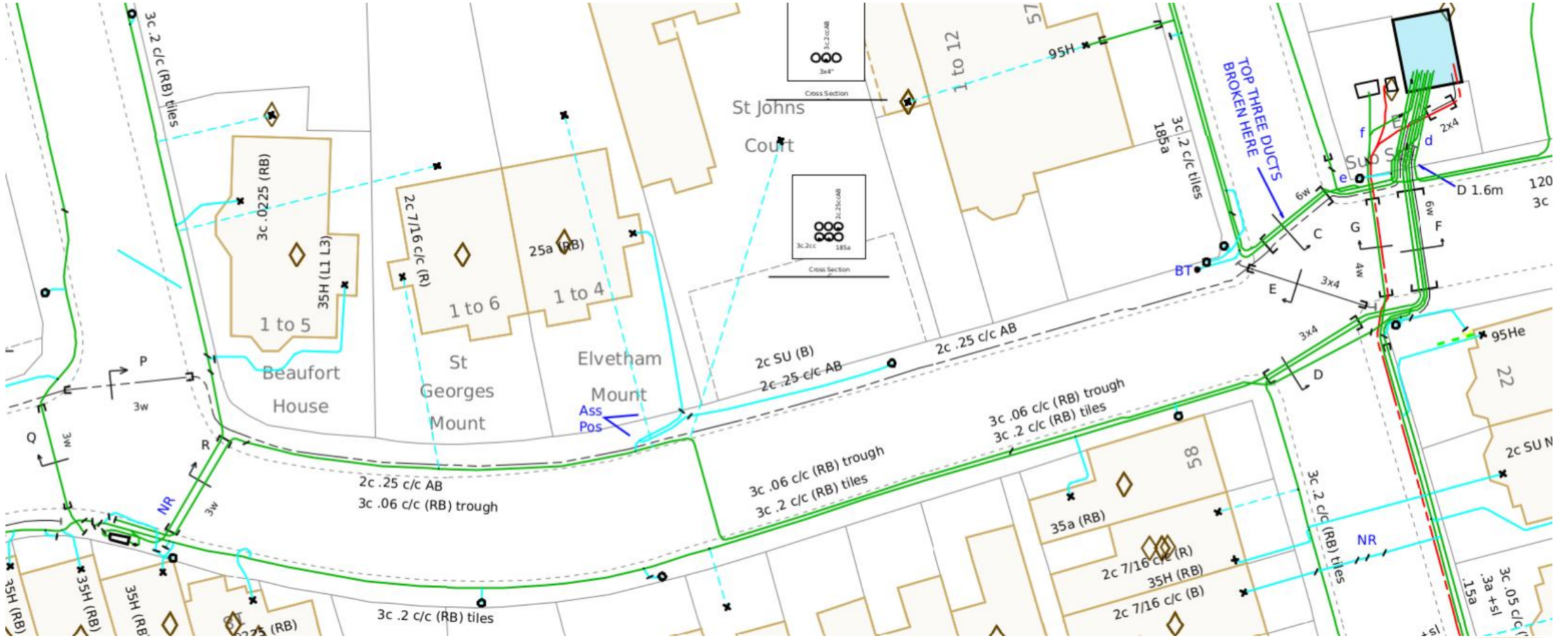
- Digging a larger joint hole to expose all cables in the immediate vicinity.
- Once all other cables have been identified, the remaining cable must be the concentric cable.
- This is then confirmed by digging back to an expected joint, requiring extra excavation work.



# What is the problem?



# Cable records



# What are we looking for?

A method or tool to be able to identify a triple and double concentric cable without having to excavate for a positive identification.



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# What are the constraints?

The solution must:

- Must operate when the cable is energised to avoid supply interruptions.
- Provide an unambiguous identification.
- Avoid any form of “cross-talk” with other cables.
- Must also work with a dead cable. An AC supply may be available from a LV busbar.

The solution should:

- Simple to operate so it becomes “method of choice”.