openreach

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For Openreach people and Contractors

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Temporary support to Poles

During close excavation work by other utilities

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About this document ...

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Content approval

This is the Issue 2 of this document.
The information contained in this document was approved on 25-Aug-2020 by Glen Barford, Overhead Network Policy and Standards Specialist

Version History

Version No.	Date	Author	Comments
Issue 2	25-Aug-2020	Wesley Grantham	Doc reviewed and amended after consultation with Contract Safety Team and stakeholders (section 1.1 refers).
Issue 1	30-Sep-2019	Martin Nottage	Initial issue following review & comment from stakeholders

Table of Content

1 *Introduction*

Like Openreach, other utilities are always working to install / maintain their equipment and this often involves excavation work, some of which can be quite close to an Openreach Pole.

Such close proximity excavations have potential to undermine the foundations of a Pole, which left unaddressed, may result in its partial, or total collapse. The likely modes of failure are shown in figues 1 and 2 below.

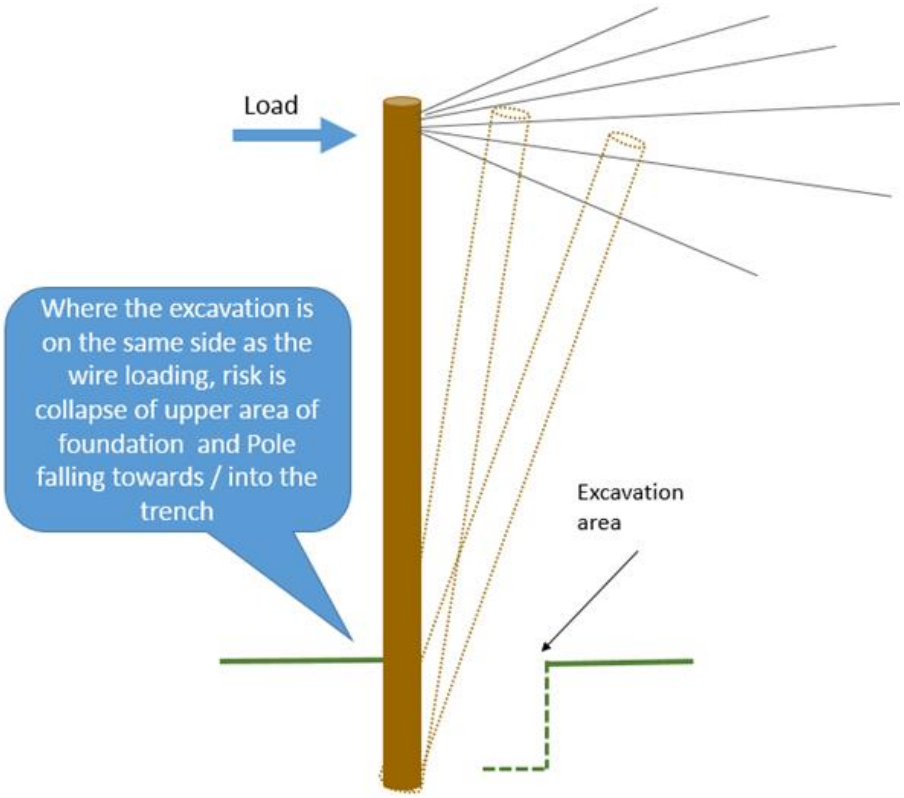

Figure 1 – Close proximity trench (r/h)

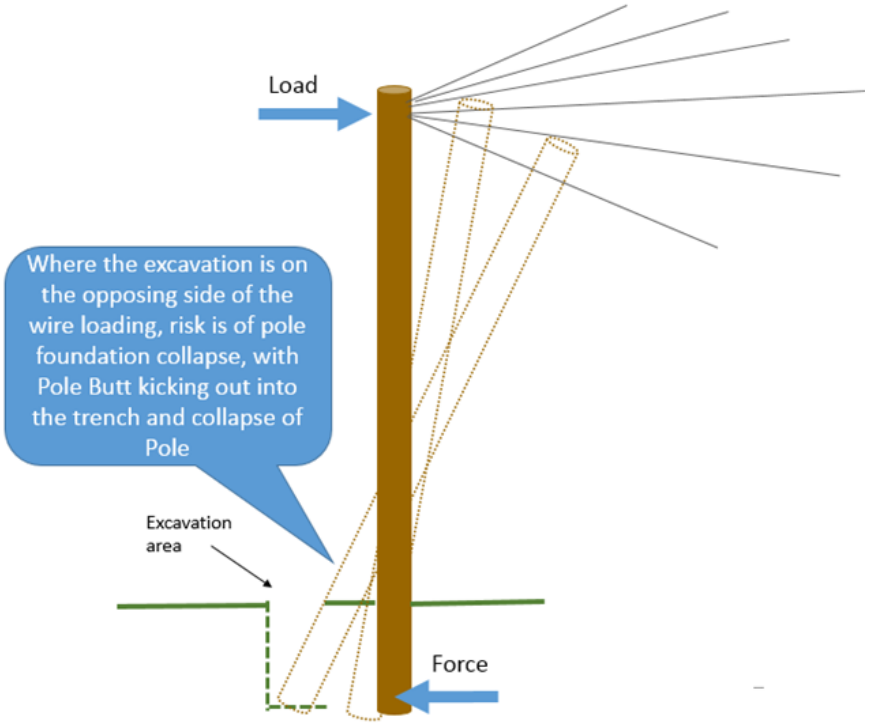

Figure 2 – Close proximity trench (l/h)

1.1 Mitigating the risk of collapse

The problem can be alleviated by providing additional temporary support to the pole for the duration of the excavation work (whilst there is an open trench within close proximity).

The additional support is provided by use of a PEU crane, with attachment made near the top of the pole using a Hawser or Strop.

In some circumstances, the additional support can be provided with Dropwires still attached. However, that approach is not suitable in all circumstances and should only be used where described as appropriate within this document. See table 1 for a summary of the rules:

2 Excavations more than 1m from Pole

Where the proposed excavation work is 1m or more away from the Pole (see examples in figs 3 and 4), no temporary support is required, regardless of the wire loading arrangement (Radial or Sideways).

Note: In the context of this document, “Sideways Loaded” refers to Poles where all of the wires are concentrated on one side of the Pole.

Poles where most of the wires are on one side, but which have a small number of wires in the opposing 180° arc, may be considered Radial.

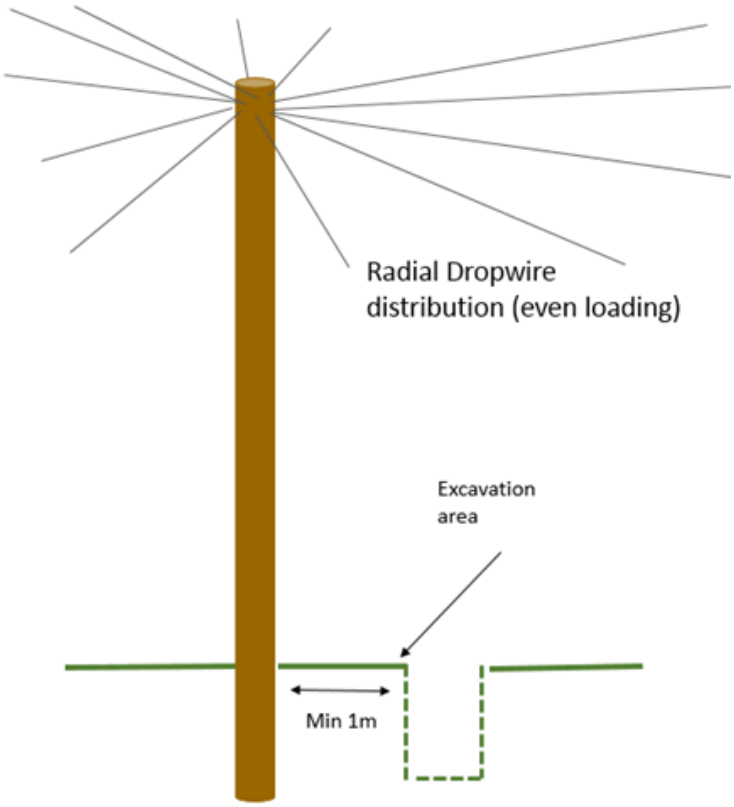

Figure 3 – Radial Pole, excavation >1m

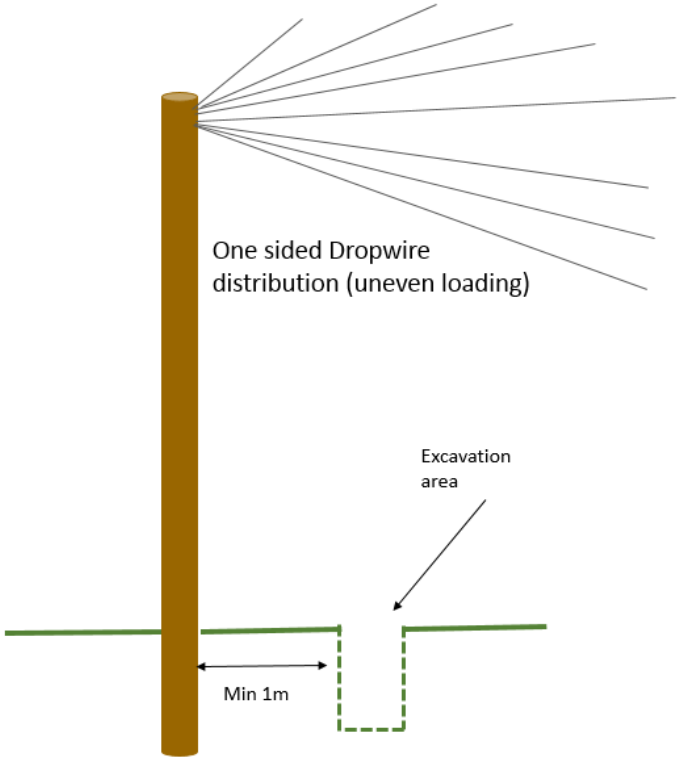

Figure 4 – Sideways load Pole, excavation >1m

3 *Excavations less than 1m from Pole*

Closer excavations carry more risk and so more consideration is required. See 3.1 and 3.2 below.

3.1 Radially distributed Poles (excavation <1m)

Figure 5 refers.

- Where the excavation is between 500mm and 1metre and the wire distribution is radial, no temporary support is required.
- Where the excavation is <500mm away, the Pole should be supported by a PEU, with the wires still attached.

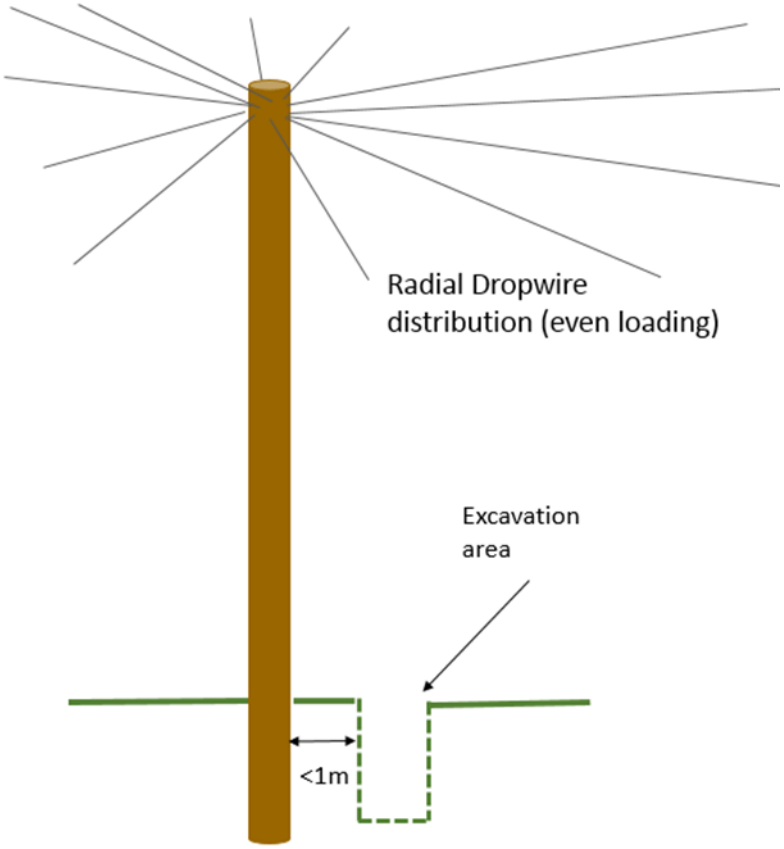

Figure 5 – Radially distributed Pole, excavation <1m

3.2 Sideways loaded Poles (excavation <1m)

Figures 6 and 7 refer.

- Where the excavation is between 500mm and 1m, the Pole may be supported by a PEU, with the wires still attached.
- Where the excavation is <500mm away, wires should be removed and the Pole then supported by the PEU. Wires should be re-erected (renewed as necessary) and pole support removed, after close proximity excavation work is complete and that section of the trench has been backfilled and consolidated.

  NB: Where the Pole has an Aerial Cable attached, the <500mm action should be followed.

  If there is no access for a PEU, support can alternatively be provided by the use of a temporary stay, positioned such that it opposes the load applied by the wires. ISIS EPT/OHP/B038 provides information and guidance on provision of temporary stays.

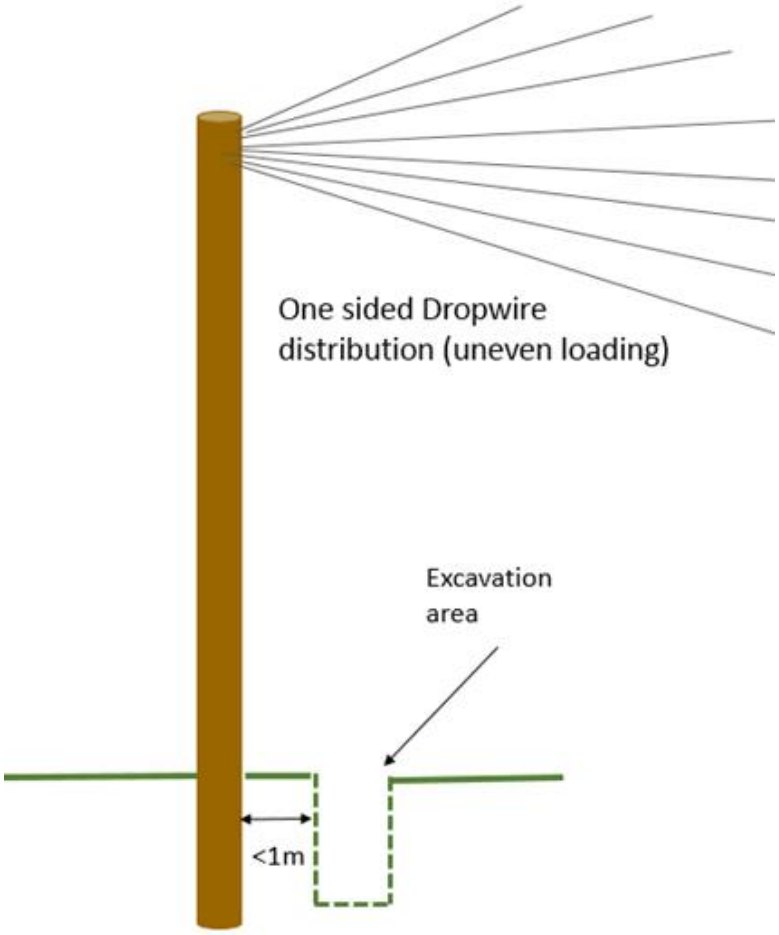

Figure 6 – Sideway loaded Pole, excavation (r/h) <1m

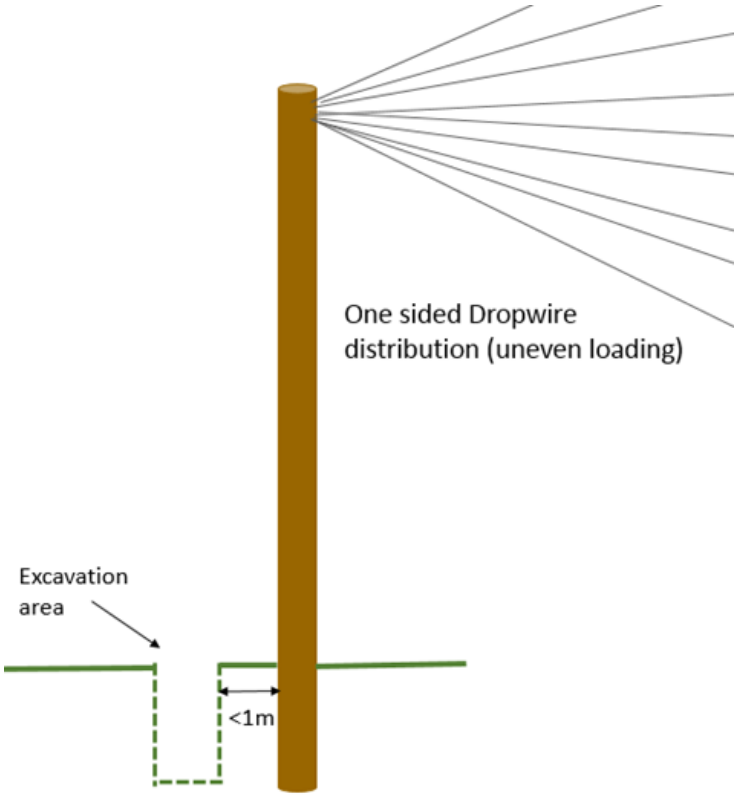

Figure 7 – Sideway loaded Pole, excavation (l/h) <1m

4 *Summary Table*

The table below provides a simple look up option for the various scenarios

.

Pole Distribution Type	**Trench Proximity**	
	Between 500mm & 1m away	**<500mm away**
Radial Type	No support required	Support with PEU (wires attached)
Sideways loaded	Support with PEU (wires attached)	Remove wires. Support Pole with PEU

Table 1 – Summary of support requirements.

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