

CP Specification 15 Civils Avoidance

Revisions

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Foreword

This is an Ancillary Document which forms part of the Physical Infrastructure Access (PIA) contract ("the Agreement"). It contains important information about PIA which our customers ("you") need to understand and should be read together with the Agreement.

If we use capitalised terms in this document then, unless being used as a proper noun, the term will be a defined term in the Agreement where the definition for that term is contained in Schedule 1 (Definitions) of the Agreement. If we refer in this document to schedules or clauses then we mean schedules or clauses contained in the Agreement.

As we introduce or withdraw product features, or otherwise develop our services, we will make changes to this document in line with the change process for Ancillary Documents in the Agreement.

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1. Introduction

Welcome to this Civils Avoidance Guide. It details useful considerations, tools and techniques that you need to have considered before you request a Network Adjustment. Using the information in the guide will help avoid invalid Network Adjustment requests and the delays to your network build waiting for civils to be implemented.

2. Rodding Techniques

Rodding can be carried out with a Ductmotor, by machine rodding, 25mm and 14mm sectional hand rods and Cobra rods which come in a variety of sizes. Smaller diameter (e.g. 6mm) Cobra and 14mm Sectional Rods are useful, particularly for short sections, or in Duct 56, however they tend to be less effective on longer duct sections due to flexing. Long duct sections are best rodded by mechanical means or with more rigid 25mm hand rods. Longer hand rodding distances are best achieved by rodding from each end of the duct section and using a marrying set.

Network Adjustment requests should only be submitted where best efforts have been made using the appropriate approach and equipment.

3. Alternative Route

Before laying duct, alternative duct routes should be considered. Often the same point can be reached with a slightly longer cable run. Obviously this should not be taken to extremes as the longer run may not be as cost effective as laying a small amount of duct. Where an alternative route does not link with the destination chamber laying a small amount of duct may resolve this. For example where there is plenty of duct space on one side of a road but the other side is full a single road crossing may offer an alternative to laying duct along the full length of the road.

4. Alternative Cable

Consider an alternative cable type as, for example smaller cables or sometimes a sub duct can be installed in short sections and then cabled.

5. Overhead

An Overhead solution (OH) uses poles instead of ducts in the ground. For an OH solution consider using existing poles.

There are currently 100,000's of existing poles across the BT network and so to add further capacity in most cases is a simple task. If however a new pole is required it is less intrusive than open trenching and therefore less disruptive meaning cable can be installed quicker. This means that in some cases a suitable and valid option or alternative to the Network Adjustment is a new pole and the use of an overhead route.

Additionally a poling solution can sometimes allow us to reach places and positions that a ducted solution can't due to local site conditions.

Criteria and considerations for identifying if an overhead solution is possible are:

- Pole loading
- Any carriageway clearance and wire/cable height.
- Route stability

- Pedestrian footway clearances
- Power clearances

For further information on poling see CP Specification Overhead - CP8

5. Civils Avoidance Tools and Techniques

We know civil engineering is expensive and time consuming. Whenever we put a spade in the ground it causes delays in delivering service and disruption to the public. These are the key principles to remember:

- If no underground network exists, overhead should be the first option.
- For underground duct blockages/congestion the normal process is to request a Network Adjustment, but, before raising an order for a Network Adjustment, you should ensure you have considered: using an alternative route, cable type or sub duct, a flexible duct drill, duct cameras, or specialist rodding tools/attachments.
- If you have to request a Network Adjustment make sure you provide as much information as possible.

5.5 Flexible Duct Drill

Flexible Duct Drills can be used to clear blockages within 2 metres of duct entry.

It removes debris from a Bend Duct 56 (50mm) at customer premises and poles where soil, mud, or small stones have caused a blockage. The flexible duct drill is available from Emtelle. Contact details are on the website at this [url:- www.emtelle.com](http://www.emtelle.com)



5.6 Gully Suckers & De-Silters

These can be used to clean jointing chambers and de-silting for clearing ducts.



5.7 Duct Camera

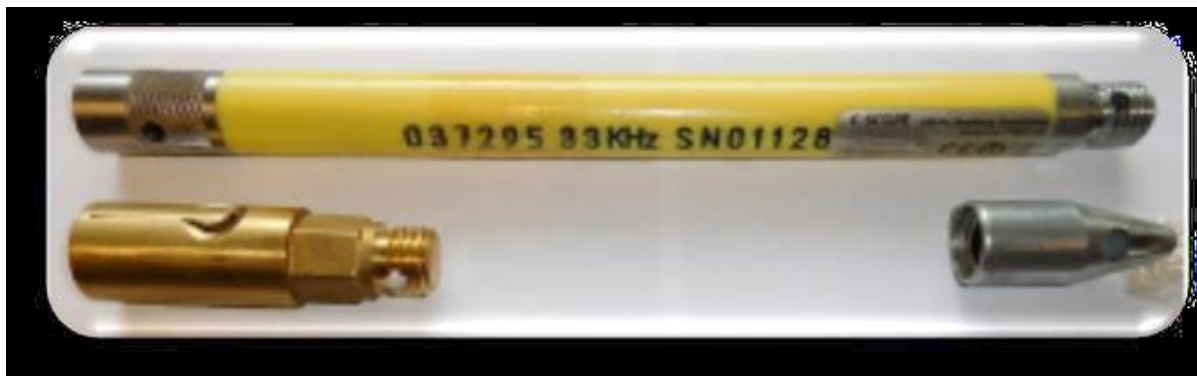
Duct cameras can be used to accurately locate & examine blockages and collect data on duct damage. They are capable of going between 30m and 120m up a duct depending on the model used.

During rodding operations they can help provide service through heavily congested or partially blocked ducts.



5.8 Rodding Oscillator

The use of a Rodding Oscillator can accurately locate blockages by placing it on the end of the rod and tracking it with a Locator. Also, they are used to locate; breakages when drawing in cable, rod ends when coupling-up and the accurate route path.



5.5 Key Insertion Safety Shim (KISS Tool)

Where appropriate, the Key Insertion Safety Shim (KISS tool) can be used to facilitate opening certain types of jointing chamber when key holes in the cover are worn.

An on-site risk assessment must be conducted prior to using the KISS tool because it isn't suitable for all worn keyholes. It also shouldn't be used when the metal work of the keyhole is highly corroded and/or the wear is so severe as to prevent the KISS tool from engaging effectively.



The Engineering Principles and relevant CP specifications should be followed when opening jointing chambers.