

# New connections

## Mains trenching and cable laying guide

Read this along with the 'Site information and customer requirements document' provided with your build quotation.

All work carried out must be compliant with our technical guidance (TG-PS-881) available from the SSEN website. It is also recommended that you review the 'Practical guide to Streetworks' before undertaking any excavations. Therefore it's crucial that you contact your Team Manager to arrange a site visit before you start trenching.

[www.ssen.co.uk/CompetitionInConnections/G81Documents/](http://www.ssen.co.uk/CompetitionInConnections/G81Documents/)

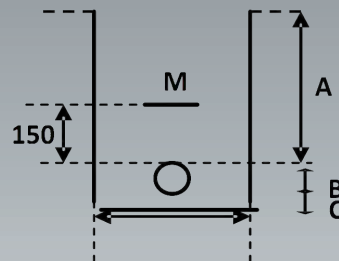
### Practical guide to streetworks

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/4382/practicalguidetostreetworks.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4382/practicalguidetostreetworks.pdf)

**Please note:** It's up to you to supply us with finefill material such as builder soft sand (free of sharp stones and rocks etc) to blind our equipment. You will also be responsible for backfilling and reinstatement of the trenches, it is recommended that this is completed inline with the Specification for the Reinstatement of Openings in Highways 3rd edition (SROH 3rd) in all cases

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/11042/sroh.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/11042/sroh.pdf)

The following trench section shows the position of cable/duct in the ground. It is important that the top of any apparatus is at these depths as a minimum, this includes the top of the duct. In addition to the cable or duct there is a requirement for 75mm finefill material on all sides. Cable mark tape or tiels must be installed 150mm above the top of the apparatus, this needs to have SSEN branding on. This is available from our approved suppliers. See last page.



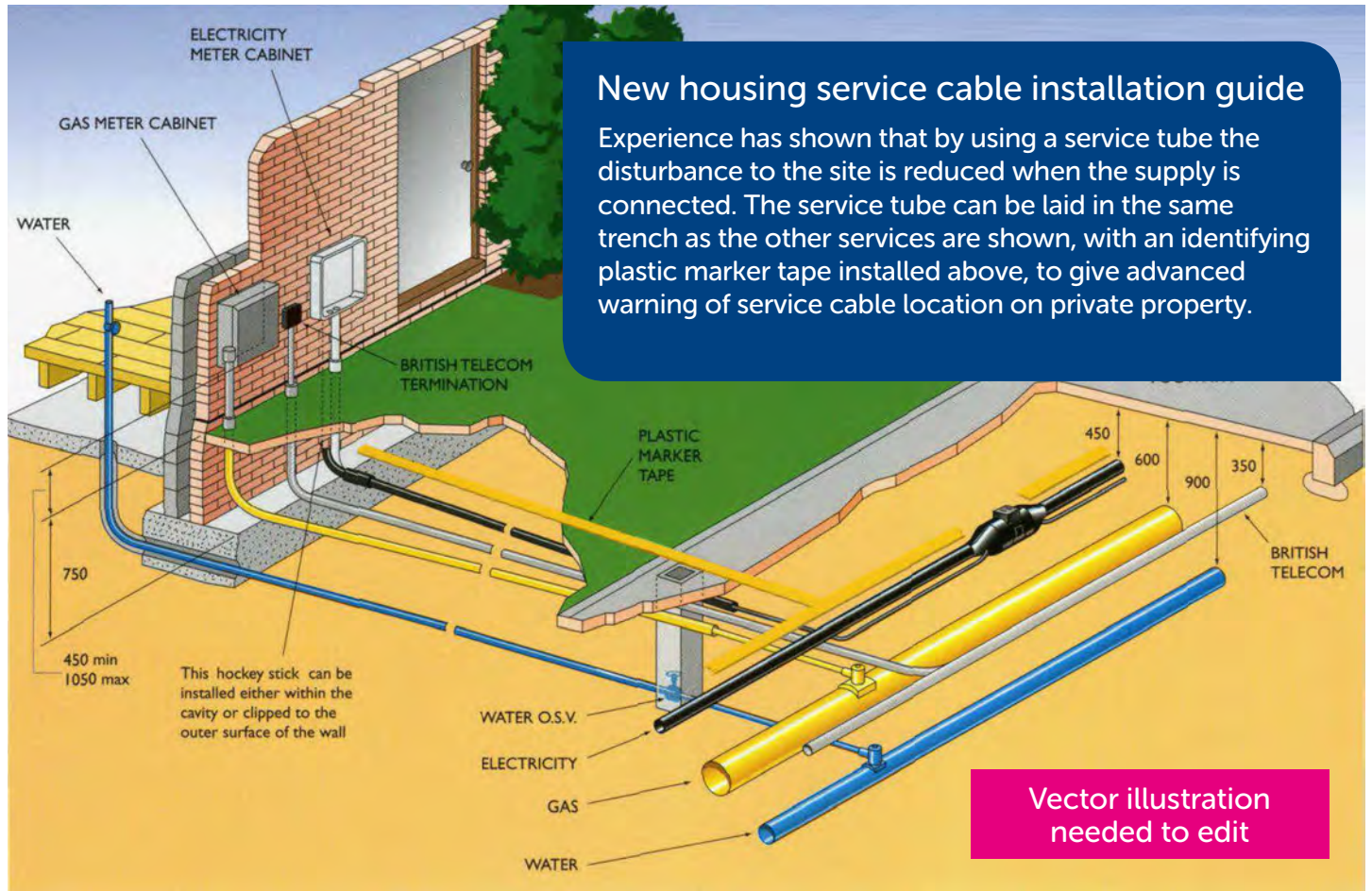
This table shows the minimum depths to top of apparatus (A within the diagram above)

Minimum apparatus depth	Unmade ground, verges and Footway (mm)	Carriageway (Road) (mm)	Agricultural (mm)
LV cables	450	600	1000
11kV cables	600	750	1000
33kV cables	800	900	1100

Minimum Excavation depth required = (A) minimum depth of apparatus + (B) outside duct/cable size + (C) 75mm of sand bedding

Please note that (M) represents the cable marker tile (for 33kV cables) or tape for all other installations (Please see TG-PS-881).

Please note: Where there are sudden changes in surface type (e.g footway to carriageway), excavations should always be at the greater of the depths required.

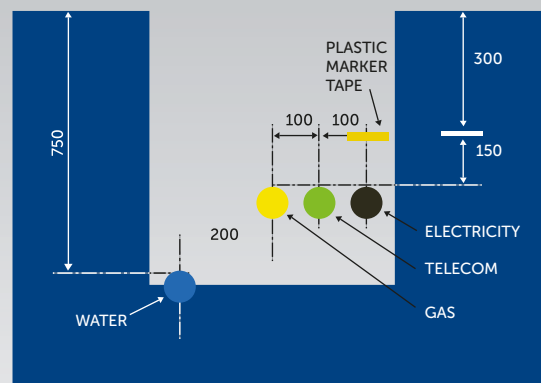


## External meter cabinets

The external meter cabinets must be positioned in agreement with SSE to provide unrestricted access. The preformed 'hockey sticks' can be installed either within the cavity or clipped to the outer surface of the wall below the cabinet. White 'hockey sticks' must be used on the outer surface of walls. The service tubing must be securely coupled to the 'hockey sticks'.

The cabinets are only large enough for our equipment. You should fit your own main switches on an inside wall so that the length of interconnecting cable does not exceed 3m. This cable must only enter through the bottom of the cabinet, using the right hand hole, when viewed from the front.

## Typical cross section of a service trench



## Installation of ducts



Bell mouth roller

For the installation of ducted schemes the use of Black electric ducts only (see table on last page for approved suppliers) are permitted for use. You should think about the type of ducts you plan to use before ordering as your excavations will be different depending on which duct supplier you use. You will also need to review the minimum cable bending radius by referring to the manufacturer's specification.

Emtelle supply smooth bore ducts which have rigid preformed bends at differing angles. It is however important that angles bends are not placed too close together otherwise pulling tensions will become greater than the manufacturer's guidelines during the installation process.

## Winch Cable installation

All cable must be installed not exceeding the manufacturer recommended pulling tensions. You should familiarise yourself with these loads before hiring the equipment to ensure that these loads are not exceeded.

**For all Cable pull you should have;**

- Winch
- A display of the pulling tension on the winch (calibrated)
- A free moving swivel
- Rollers (every 4 metres and/or where cable would come into contact with ground)
- Cable socking to ensure good grip of cable

**In Addition For ducted schemes you will also need;**

- Bell mouth roller
- Lubricant
- Cable drum trailer for each drum

For single core cables it's recommended that you put colour indicators on each cable.

You will need to securely anchor the drums and the winch at either end and ensure that the cable does not come into contact with any thing that can damage the cable sheath.



# Approved Suppliers

The following supplier's materials are approved for use on SSEPD network.

Item	Manufacturer	Manufacturing location	Notes
LV Concentric cables	Tratos	UK	
	Cabelte	Portugal	
LV Wavecon cables	Prysmian	Wrexham UK	
	Hellenic	Greece	
11kV Three core cables	Nexans	Hannover, Germany	AL stranded and solid conductors
	Prysmian	Wrexham UK	
11kV Single core cables	Tele-Fonica Kable	Poland	Cu or Al Stranded for all sizes.
	Prysmian	Wrexham UK	
	Nexans	Hanover, Germany	Solid AL up to and including 300 mm <sup>2</sup>
33kV single core cables	NKT	Cologne, Germany	Cu or Al Stranded for all sizes or Solid Al up to and including 300 mm <sup>2</sup>
	Tele-Fonica Kable	Poland	
	Prysmian	Wrexham UK	
	Nexans	Hanover, Germany	
Cable duct	POLYPIPE CIVIL LTD	UK	
	EMTELLE UK LTD	UK	
Cable tile	CENTRIFORCE	UK	
Cable warning tape	CENTRIFORCE	UK	
Plastic tape tile	CENTRIFORCE	UK	100 mm wide. when laid by plough
Duct sealant	TE Connectivity	UK	Rayflute products
	WT Henley	UK	Service ducts (green plastic compound)
	Winn & Coates (Denso)	UK	Denso mastic Denso tape
	CSD Sealing System	UK	RISE sealant system

**Got a question? Contact your Team Manager.**

This guide incorporates the NJUG recommendations that Scottish and Southern Electricity Networks have adopted for 'Service entries for new dwellings on residential estates'.