
SERIES 200**ROUTE INSPECTION**

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201 General

- 1 All work associated with route proving and subsequent excavation for Permanent Works shall be in accordance with this Specification, together with the following good practice guidance notes issued by the National Joint Utilities Group (NJUG):

(i) Volume 1 Dec 2009 NJUG Guidelines on the Positioning and Colour Coding of Utilities Apparatus

(ii) Volume 2 Jan 2010 NJUG Guidelines on the Positioning of Underground Utilities Apparatus for New Development Sites

(iii) Volume 3 Aug 2007 NJUG Guidelines on the Management of Third Party Cable Ducting

(iv) Volume 4 Nov 2007 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

In addition to NJUG notes, the Health and Safety Executive Guidance Note HS(G)47 – Avoiding Danger from Underground Services should be followed.

- 2 Before commencing any excavation for the Permanent Works, the Contractor shall prove the feasibility of the area of the network concerned by verifying the location of other undertakers' buried apparatus and plant, together with any sub-structures including cellars and the like, by means of exploratory excavations and locating devices. Exploratory excavations shall ordinarily be at a maximum spacing of 30 metres and a minimum depth of 800mm, or sufficiently deep to allow the clearances indicated in Clause 403 of the Specification, unless otherwise agreed with the Engineer. Exploratory excavations may include trial pits and/or trenches across the line of the proposed duct route.
- 3 At the direction of the Engineer, exploratory trial pits may be located at proposed lateral connections, or jointing chamber locations. For jointing chamber locations, where these trial pits prove the location to be satisfactory and where there is mutual agreement between the Engineer and the Contractor, jointing chambers may be constructed at these locations, in advance of other duct and trenching operations.
- 4 All exploratory excavations shall be returned to the 'as found' condition on completion of the work, in accordance with the requirements of the NRSWA 1991. The Contractor shall provide the Engineer with **photographs or** detailed sketches of all exploratory excavations, where requested by the Engineer.
- 5 Any method of subsequently marking the route and/or the location of other undertakers' apparatus and plant on the ground, such as spray paint, shall be soluble, non-toxic and non-permanent.
- 6 The Engineer shall be immediately informed when obstructions are met in footways which, in the opinion of the Contractor, require ducts to be re-routed from the footway into the carriageway; similarly for verges. As per sub-Clause 4 of this Clause, the Contractor shall provide the Engineer with full details of existing plant and features in the area, in order for the Engineer to consider whether the route requires to be locally re-planned.
- 7 All routes shall allow adequate clearance to trees. In this respect, the Contractor's attention is particularly drawn to Clause 108 of the Specification.
- 8 At Special Engineering Difficulties (SEDs) [see Section **5.3** of the Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters], or where the ducts are routed above ground, the actual route, the design and specification of any special measures, together with materials including supports, fixtures and fixings, duct

protection, protection measures to the SED and the like, shall be agreed between the Engineer and the Contractor, and have been confirmed as acceptable by the relevant street authority, other undertaker, or owner of the structure, prior to commencement of any Permanent Works local to, or affecting the SED.

- 9 Notwithstanding the requirements of Sub-Clause 6 of this Clause, the Contractor shall provide the Engineer with a record of the location of each of the exploratory excavations. As a minimum, these should be marked on the As-Built record drawings.
- 10 The Contractor shall allow in his rates for undertaking all exploratory excavations that are necessary to prove the specified route, as described in sub-clause 2 of this Clause. The Engineer may instruct the Contractor to undertake additional trial pits, which shall be paid for in accordance with the Schedule of Rates.

202 Local Build Network Construction

- 1 The Engineer shall be immediately informed if jointing chambers and street cabinets cannot be sited at the locations shown on the schematic route drawings. In such instances, the Contractor shall provide the Engineer with full details of existing other undertakers' apparatus and plant, and other appropriate features in the area, in order for the Engineer to consider whether the route requires to be locally re-planned.
- 2 Swept Ts shall be sited as the drawing so that they can serve, where practicable, a minimum of two properties.
- 3 Duct connections to the property boundary shall:
 - (i) Permit future subscriber connections to be made from within the subscriber's property boundary without any damage, or future disturbance to the paving forming the public footpath (including drilling through back edgings), or any other part of the street;
 - (ii) Be located to enable practical future routing of the subscriber drop i.e. be in line with the side of the property window where other existing cables such as television aerials and telephone lines also enter;
 - (iii) Avoid subscriber's property boundary items such as hedges, gate and fencing posts/pillars;
 - (iv) Avoid paved or metallic surfaces on the property side where an alternative soft dig route is available;
 - (v) Enable surface routing of the subscriber drop cable on a permanent structure, such as a wall.
- 4 The duct shall be terminated at the property boundary with an approved subscriber termination box to enable future relocation and customer installation.
- 5 The correct installation of lateral connections and associated apparatus is critical to the smooth and successful installation of subscribers. Where such installation processes subsequently find that Swept Ts are in the wrong direction (relative to planned Distribution Cabinet), or that the lateral is found to be blocked as a result of the Contractor's earlier operations, the Contractor will be requested to return to site and carry out all remedial works as necessary, which will be at the Contractor's expense.
- 6 The Engineer will specify reasonable time periods, within which the Contractor shall be expected to return to site and carry out these remedial works.

- 7 In respect of sub-clauses 5 and 6 of this Clause, the Contractor's particular attention is drawn to Clause 103 of the Specification.

203 Local Build/National Trunk Network Construction

- 1 As distances between jointing chambers are increased for Trunk routes, trench lines must be set to take into account subsequent and all future cabling/jointing operations. As such, trench lines shall be as straight (in plan) as possible, whilst taking into account natural topography, in addition to measures in relation to other undertakers plant, trees, structures, as described in Clause 201.
- 2 Where the trench line is decided by the Contractor, in accordance with the requirements of this Series, the proposed trench lines should be proposed by the Contractor in advance over distances of 300 - 400 metres and then proved in accordance with Clause 201, at intervals agreed with the Engineer. The Contractor's trench line proposals must be agreed with the Engineer prior to commencement of any Permanent Works.
- 3 Road crossings will be at 90° to the kerb line, although diagonal crossings shall be permitted, where site conditions dictate a diagonal crossing is unavoidable.