
**VOLUME 5 CONTRACT DOCUMENTS
FOR SPECIALIST
ACTIVITIES**

**SECTION 9 MODEL CONTRACT
DOCUMENTS FOR CCTV
SURVEY OF HIGHWAY
DRAINAGE SYSTEMS**

PART 4

METHOD OF MEASUREMENT

Scope **1** This Part applies to the use of CCTV survey for the inspection of highway drainage systems, including recording and storage format of the data for drains not exceeding 1800mm diameter.

CCTV Survey of Highway Drainage Systems

Units **2** The units of measurement shall be:

- (i) site establishment.....item
- (ii) setting up at survey points.....number
- (iii) provision of report.....item
- (iv) surveying of drains.....linear metre
- (v) surveying of gully connections.....linear metre
- (vi) extra over for use of a rodding camera.....linear metre
- (vii) extra over for the use of a pan and tilt cameralinear metre
- (viii) forced ventilation.....day

Measurement **3** Site establishment shall be measured once only and shall include dismantling and removing from site on completion. Any additional site establishment to suit the Contractor's method of working shall not be measured.

4 Setting up at survey points shall be measured once only for each individual section between node points that are included in the survey and shall include moving equipment to the survey point and subsequent dismantling.

5 The length of drain to be surveyed shall be measured as the individual lengths along the centre line between any of the following:

- (i) The internal faces of the chambers
- (ii) The external face of headwalls
- (iii) The intersection of the centre lines at pipe junctions
- (iv) The centre of gully gratings (or where no grating is provided, the centre of the gully)
- (v) The position of terminations shown in the Contract

6 The measurement of forced ventilation shall be per day or part thereof during which forced ventilation is necessary.

Method of Measurement

Itemisation **7** Separate items shall be provided for the measurement of CCTV survey of highway drainage systems in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	<ul style="list-style-type: none"> 1 Site establishment 2 Setting up at survey points 3 Provision of report 4 Surveying of drains 5 Surveying of gully connections 6 Extra over for use of a rodding camera 7 Extra over for use of a pan and tilt camera 8 Forced ventilation
II	<ul style="list-style-type: none"> 1 Depths to invert not exceeding 6 metres 2 Depths to invert exceeding 6 metres
III	<ul style="list-style-type: none"> 1 Diameters not exceeding 125mm 2 Diameters exceeding 125mm but not exceeding 475mm 3 Diameters exceeding 475mm but not exceeding 900mm 4 Diameters exceeding 900mm but not exceeding 1200mm 5 Diameters exceeding 1200mm but not exceeding 1800mm
IV	<ul style="list-style-type: none"> 1 Setting up on pavement 2 Setting up on verge not exceeding 3m from carriageway edge 3 Setting up on verge exceeding 3m from carriageway edge 4 Setting up off highway (beyond highway boundary)

Note: Groups II and III features shall only be used with Group I Features 4 and 5. Group IV Features shall only be used with Group I Feature 2.

CCTV Survey of Highway Drainage Systems **8** The items for CCTV survey of highway drainage systems shall be in accordance with the Preambles to the Bill of Quantities General Directions of MCHW Volume 4 include for:

- Item Coverage
- (a) lifting of covers and replacement;
 - (b) recording and coding;
 - (c) plans;
 - (d) still photographs;
 - (e) video recordings;
 - (f) stoppers and over-pumping;
 - (g) suspension of work due to high flows;
 - (h) scheduling work to avoid times of high flows and to allow clearance of blockages;

- (i) maintaining communication with Overseeing Organisation's Representative for the duration of the survey;
- (j) establishment, moving between locations and removal of forced ventilation plant and equipment;
- (k) protection measures in connection with existing damaged covers and gratings.

NOTES FOR GUIDANCE ON THE METHOD OF MEASUREMENT

1 **Compilation of Bill of Quantities**

Irrespective of whether a contract document is being compiled solely for a CCTV survey or in conjunction with other works the Bill of Quantities must be compiled in accordance with Volume 4 Section 1 Chapters I, II and III, and include such items from Chapter IV as may be required.

In order to ensure that this Series is properly drawn into the Contract the Method of Measurement for CCTV Surveys should be included in the Preamble to the Bill of Quantities either by replication in full or by specific reference to Volume 5.

With regard to Traffic Management the compiler should consider the adequacy of paragraphs 21 to 27 inclusive of Series 100 in relation to the scope of the works.