

**National Asset Delivery**  
**Technical Surveys and Testing**

**Works Information for A43 MP34/5A**  
**Syresham Bypass Cutting Repair CCTV**  
**Drainage Survey**

**CONTENTS AMENDMENT SHEET**

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**LIST OF ANNEXES****Appendix 1 Supplementary Constraints**

## 1 DESCRIPTION OF THE WORKS

### 1.1 Project objectives

The principle objective of this project is to undertake CCTV drainage survey as shown on drawing HE605181-KIER-HGT-A43\_NB\_MP34\_5A-DR-CE-604 and provide subsequent drawings and a report in accordance with the requirements detailed in the specification to allow design of repairs to an earthwork.

1.1.1 The specification that applies to the *works* is included in Section 6

### 1.2 Scope of works

1.2.1 The *works* to be provided under this contract are a CCTV drainage survey to provide the following:

- To confirm the current asset condition and provide type and connection details at the crest and toe of the earthwork.
- Drainage structural condition and serviceability condition scores shall be assigned in accordance with the scheme used in HADDMS.
- The survey shall extend laterally from the rumble strip to the Highways England boundary fence and longitudinally 50m either side of the earthworks defect as shown on the drawings. The drainage survey shall include the outfall(s), inclusive of where these fall outside of the scheme extents. Where outfalls fall outside of the highway boundary, permission of the adjacent landowner shall be obtained by Highways England in advance of the works.
- The drainage survey shall include all drainage assets, as defined in CS551, within the survey extents.
- The final round-tripped data shall be uploaded to the Highways England Drainage Data Management System (DDMS) within 30 days of completion on site as stated in the ADMM for drainage inspections.
- The tenderers shall have access to DDMS and be competent to interrogate the system and establish any historic or legacy information to aid their pricing.
- All underground assets to be subject to a Pipework and Chamber Defect Survey by CCTV, in accordance with standard CS 551 chapter 7.
- All ditches and above ground assets to be subject to an Asset Condition & Connectivity Survey, in accordance with standard CS 551, chapter 6.
- All assets condition and connectivity survey;
- Pipework and chambers defect survey by CCTV.

### 1.3 Deliverables

1.3.1 The *Contractor* is required to produce the following deliverables:

**Pipework and chambers defect survey by CCTV**

- (1) A summary report in PDF format is required, to include CS 551 Drainage Surveys, Section 7 'Pipework and chambers defect survey by CCTV, paragraph 7.73 to 7.74 inclusive.
- (2) CAD drawings in DWG, DXF and PDF formats are required.
- (3) All drawings shall be produced in accordance to GG 184. Three sets of drawings shall be supplied:
  - Survey Inventory Drawings - detailing drainage type and layout, connectivity and flow direction;
  - Survey Condition Drawings - detailing grade 4, 5 defects and survey abandonments;
  - Survey Level Drawings - showing cover level, invert levels, pipe size & type, flow direction.
- (4) The survey data to be packaged with a proprietary viewer is required in addition to the standard data deliverables.
- (5) Highways England IT systems may struggle to download very large file sizes therefore a 'non-returnable' portable storage device is required in addition to internet transfer.
- (6) Interim survey data is not required to be provided to the Overseeing Organisation's representative during the course of the survey (detailed daily shift reports shall be issued following each shift).
- (7) An indicative schedule of remediation options shall be provided for all defects. These options shall provide a basic, non-prescriptive account of potential works. These options have no design liability and shall not be taken as final confirmed remediation proposals.
- (8) CCTV surveys are to be in a format viewable with WinCan® software.
- (9) Any manually recorded Survey Inspection Sheets shall also be provided.
- (10) A single plan view drawing of the survey area shall be produced.
- (11) If encountered within the drainage pipes, the following shall be recorded, photographed, and included within the CCTV Drainage Report:
  - The level of water and deposits / limescale as a percentage of the cross-sectional area and whether this is following jetting of the pipe;
  - The start and end points of any cracking and the location recorded in clock reference i.e. 9 O'clock;

- Locations of misaligned joints, joint defects, and intrusions in to the pipe, and an estimate of the reduction of pipe capacity made;
- Details of any blockages or problems detrimental to the operation of the drainage system.

### **Ditch survey**

1. All ditches shall be surveyed using GPS equipment or alternatively using a 'total station' should canopy coverage restrict signal. Certification of calibration of the utilised equipment shall be supplied within the tender documents.
  2. A ditch profile shall be taken at suitable longitudinal intervals along the length of the ditch. Intervals of between 20m to 50m are recommend however, the overall length of the ditch will dictate. The minimum intervals shall be: start of ditch; mid-point; and end of ditch.
  3. Levels shall be taken at the following locations as a minimum, and any significant undulations:
    - a. the fence line;
    - b. top of ditch (inside);
    - c. bottom of ditch channel (inside);
    - d. bottom of ditch channel (outside);
    - e. top of ditch (outside);
    - f. back of verge;
    - g. top of kerb;
    - h. channel line;
    - i. blockages
- (1) The following deliverables are required:
- CAD drawings in DWG, DXF and PDF formats showing a plan of the ditch profiles locations;
  - CAD drawings in DWG, DXF and PDF formats showing a series of cross sections denoting the ditch profiles;
  - photos indicating the depth of silt at each profile location;
  - results of ditch detritus soil classification testing at each profile location along with a SCR (Soil characterisation Report).
- (2) All drawings shall be produced in accordance to GG 184. One set of drawings shall be supplied:
- Ditch Profile Drawings - detailing cross-sectional and long-sectional levels, depth of silt and ditch profile, including location of sections.

## 2 EXISTING INFORMATION

2.1.1 The Drawings listed below apply to this contract.

| Drawing Number                                 | Title                               | Revision |
|--|-------------------------------------|----------|
| HE605181-KIER-HGT-A43 NB<br>MP 345A-DR-CE-602  | C2 STATS SERVICE<br>LOCATIONS       | C1       |
| HE605181-KIER-HGT-<br>A43_NB_MP34_5A-DR-CE-604 | REQUIRED DRAINAGE<br>SURVEY EXTENTS | C2       |

2.1.2

2.1.3 Refer to the site information for details of existing site conditions including ground conditions, limitation on access, position of existing structures etc.

2.1.2 Information about buried services is provided in the C2 returns listed in the Pre-Construction Information and summarised in the site information.

### **3 CONSTRAINTS ON HOW THE CONTRACTOR PROVIDES THE WORKS**

#### **3.1 General**

- 3.1.1 The *Contractor* Provides the Works in such manner as to minimise the risk of damage or disturbance to or destruction of third party property.
- 3.1.2 The *Contractor* complies with the constraints and meets with the requirements outlined in Appendix 1.
- 3.1.3 The *Contractor* submits information detailing how the *Contractor* will provide the Works to the *Employer* prior to the *works* commencing. This information will include any lifting plans, risk assessments, method statements, the *Contractor's* staff training information and any other relevant Health and Safety requirements.

#### **3.2 Working hours & site specific constraints**

- 3.2.1 The *Contractor's* working hours for site works shall be confirmed by the *Employer's* representative. The works will be done during night time TM of the NB & SB A43 carriageway. Time should be allowed for liaison with TM Contractor to ensure closure phases are appropriate for the works. Requirements will be phased in order to minimise disruption to the travelling public. Access to the SB carriageway will be required for the works (jet in one direction and camera in the other, and assessment of the outfall into the pond/stream). Lane 1 closures in both directions.
- 3.2.2 Drainage on-site work is expected to be completed in shifts between 06/09/2021 – 17/09/2021, dates are to be confirmed upon award based on Traffic Management availability. Details of the traffic management shall be as described in Section 5.1.1.
- 3.2.3 All vegetation clearance will be done by others.
- 3.2.4 The nearest depot to the site is Pytchley Depot, Pegasus Court, Kettering South Business Area, Northants NN15 6XS. Reception Tel: 01164029905.
- 3.2.5 The nearest A & E hospital is Northampton General Hospital, 01604 634700, Cliftonville, Northampton, Northamptonshire, NN1 5BD.
- 3.2.6 No welfare facilities are available on the site and the Survey Providers should not assume these will be provided. If these are required it is recommended the Survey Providers make their own arrangements.
- 3.2.7 Access is via the A43 northbound & southbound carriageways.
- 3.2.8 Environmental constraints are given in the Pre-Construction Information.



- 3.2.9 The site is classified as Zone 2 for the use of electrical equipment in potentially explosive atmospheres, in accordance with DSEAR S.I. No. 2776.
- 3.2.10 All vehicles used on site shall comply with Chapter 8 marking requirements, which as a minimum comprises high visibility chevrons on the rear, high visibility side stripes and double amber flashing beacons.
- 3.2.11 Topographic and Ground Investigation surveys may run concurrently.

### **3.3 Health, Safety and Environment & Risk Management**

#### Health and Safety requirements

- 3.3.1 In Providing the Works the *Contractor* meets the requirements of Annex 2 of the supplementary constraints in relation to health and safety duties.
- 3.3.2 When implemented, the *Contractor* shall comply with the requirements of Highways England's safety passport scheme and ensure that all of his employees, and any of his subcontractor's, are registered in accordance with the implementation of the scheme. Details on the scheme can be found here: <http://www.highwayssafetyhub.com/safety-passport.html>
- 3.3.3 For details of the CDM duty holders, refer to the pre-construction information which can be found here Pre-Construction Information and Designer's Hazard Checklist and Risk Reduction Schedule.
- 3.3.4 Before commencing the construction phase of the *works*, the *Contractor* confirms to the *Employer* that adequate welfare facilities are in place. Where the facilities detailed in section 5 are not deemed adequate, the *Contractor* provides all necessary facilities to Provide the Works and to comply with the minimum requirements set out in HSE guidance document L153.

#### Environmental requirements

- 3.3.5 In Providing the Works the *Contractor* meets the requirements of Annex 2 of the supplementary constraints in relation to environmental duties.

#### Risk Management

- 3.3.6 The *Contractor* identifies, manages and mitigates risks in accordance with the principles of ISO31000.
- 3.3.7 The *Contractor* submits a risk register, which captures all risks associated with the delivery of the *works* including those identified by the *Employer*, with his tender and maintains it for the contract period.

#### 4 REQUIREMENTS FOR THE PROGRAMME

- 4.1.1 The *Contractor* submits programme to the *Employer* with his tender.
- 4.1.2 The *Contractor* Provides the Works taking into account the following programme constraints:
- (i) the *starting date* and *completion date* and any post site works, reporting and review period
  - (ii) The services and other things provided by *Employer* (see Section 5)
  - (iii) Draft reporting shall be within 1 week of completion of site works.
  - (iv) The site works shall be completed within the timeframe of the traffic management.
- 4.1.3 The programme should be in the form of an activity and time related bar chart, produced as a result of a critical path analysis.
- 4.1.4 The programme should preferably be provided in either a PDF or MS Excel format and cover the full contract period including post site activities. Activities should be clearly defined and named and the programme should detail the following:
- (i) dates and times associated with the project, including the *starting date*, *completion date* & *Contractor's* planned completion, and any other dates or times that will specifically impact the delivery of the project
  - (ii) activities associated with delivering the project
  - (iii) The *Contractor* should provide details of the proposed resources (plant, labour, subcontractors etc.) expected to deliver each activity. This information can either be shown on the programme itself or provided in an associated resource statement included in the Proposal for Providing the Services.
- 4.1.5 The *Contractor* updates the programme every two weeks. The *Contractor* submits an updated programme to the *Employer* upon request.

## **5 SERVICES AND OTHER THINGS PROVIDED BY THE *EMPLOYER***

5.1.1 The Employer's Traffic Management Provider will arrange for Traffic Management to be provided. The requirements and instructions of the Traffic Safety Control Officer (TSCO) shall be complied with at all times.

5.1.2 Other Services Provided by the Employer.

- (1) The TM provider will undertake (temporary) removal of the VRS barriers for access if required.
- (2) All vegetation clearance will be done by others.
- (3) The layout, type and details of TM are to be confirmed - two night shifts have been assumed for lane 1 closure of the NB and SB carriageways.
- (4) Other Technical Survey Contractors may be on-site during the same period, the TM Contractor will act as Principle Contractor.

## 6 SPECIFICATION FOR THE WORKS

- 6.1.1 The *Contractor* shall undertake the works in accordance with:
- 6.1.2 The Drainage Survey Specification is that described in chapter 7 of Highways Standard CS 551 entitled Drainage Surveys and the following Schedule of Requirements thereto.
- 6.1.3 The survey type is a Pipework and Chambers Defect Survey by CCTV.
- 6.1.4 The location of the survey is shown in the drawings listed in section 2 of this document.
- 6.1.5 The survey shall be undertaken as follows:
- Pre-cleansing is required.
  - Using a pan and tilt CCTV camera.
  - Forced ventilation will not be required.
  - Blockages shall be cleared by surveying the pipework run from the other direction, then proceed to remove the blockage by cleansing.
  - Root cutting is required.
- 6.1.6 The full survey shall include:
- The GPS position of the drainage system relative to one another (taken from the topographic survey).
  - How various drainage systems connect with one another.
  - The condition of the drainage system encountered where the water discharges.
  - Cover and invert levels.
- 6.1.7 Reporting and drawings
- See section 1.3 (Deliverables).