

Highways England

Technical Surveys and Testing Engineering and Construction Short Contract for

569243 - A45 Gt Doddington EB/WB Drainage Survey

Works Information

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
1	1	Original version issued with tender	LR	03/09/2019
2	2	Information split into Drainage and Topographical Surveys	LR	10/10/2019

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LIST OF ANNEXES**Appendix 1 Supplementary Constraints**

1 DESCRIPTION OF THE WORKS

1.1 Project objectives

1.1.1. The principle objective of this project is to undertake a drainage survey in accordance with the following documents, as supplemented or amended by this Schedule of Requirements:

- CS 551 Drainage Surveys;
- CD 535 Drainage asset data and risk management;
- Asset Data Management Manual (ADMM).

1.1.2. 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:

- (1) The principal objective of the works is to undertake a full asset inventory and condition survey of the drainage network pertaining to the A45 Great Doddington scheme as outlined in the schedule of requirements document and drawing HE569243-KIER-HGT-A45MP179-DR-CE-0600_001.
- (2) Works along the A45 will be carried out under the protection of Lane closures
- (3) **It is the Tenderer's responsibility to read this document, and the Specification of Requirements, and provide all necessary resources (including plant/machinery/equipment) required to carry out the survey works. Any additional resources (including plant/machinery/equipment) which have not been included within the quote, but are necessary for the survey works to be completed, will be provided at the cost of the Tenderer.**

1.3 Deliverables

- (1) The *Contractor* is required to produce the following deliverables:
See Schedule of Requirements appended below.

2 EXISTING INFORMATION

2.1.1 Existing information and any related as-built drawing will be supplied with this document.

2.1.2 See Site Information Document and Drawing No: HE569243-KIER-HGT-A45MP179-DR-CE-0600_001.

2.2 Underground Services and Drainage

2.2.1 See Drawing No: HE569243-KIER-HGT-A45MP179-DR-CE-0600_003 which includes C2 utility and drainage information pertaining to the site extents. Note that in addition to recorded statutory services, other cables, pipes and services can and do exist which may not be recorded. These may include street lighting, traffic signal control cables and traffic detector loops.

2.3 Drawings

3.3.1 The Drawings listed below apply to this contract. Refer to the site information for details of existing site conditions including ground conditions, limitation on access, position of existing structures etc.

Drawing Number	Title	Revision / Date
0600_001	Topographic, Drainage Survey Extents	July 2019
0600_003	C2 stats services and drainage details	July 2019

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 night time, between 20.00 – 06.00 (times specified are first cone on, last cone off and may vary due to traffic counts, weather constraints, etc.). The survey will be carried out under the protection of lane closures – see document 'Programme A45 M1 J15 to Great Doddington Survey' for the TM programme.
- 3.2.2 The site can be accessed from the carriageway.
- 3.2.3 Traffic management will be provided by the Principal Contractor, and is to be placed between 14/02/2020 and 18/02/2020, consisting of a lane one closure of the Eastbound and Westbound carriageway on consecutive days. The extent of the TM will cover the full extent of the scheme as outlined in drawing ref: HE569243-KIER-HGT-A45MP179-DR-CE-0600_001 with an appropriate taper zone.
- 3.2.4 All staff working on the carriageway must have received a 1-day Highways England Common Induction and a Highways England EMAD induction.
- 3.2.5 Highways England rules require that no person may cross the carriageway on foot unless traffic management is in place.

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 relation to health and safety duties.
- 3.3.2 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 The Principal Contractor shall be the Traffic Management provider when Traffic Management is used.
- 3.3.4 For the pre-construction information please refer to document '05- A45 MP179 TST PCIP'.
- 3.3.5 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

- 3.3.6 In Providing the Works the *Contractor* meets the requirements of Annex 2 of the supplementary constraints in relation to environmental duties. **Please see the Environmental alert form and ecological site visit report documents with the document titles: HE569243-KIER-EGN-A45_MP179-RP-LE-01_ENVIRONMENTAL_ALERT_FORM and HE569243-KIER-EGN-A45_MP179-RP-LE-02_ECOLOGICAL_SITE_VISIT_REPORT for reference.**

Risk Management

- 3.3.7 The *Contractor* identifies, manages and mitigates risks in accordance with the principles of ISO31000.
- 3.3.8 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. The Designers Hazard Risk Assessment for the site and the GG104 Risk Management Decision Matrix documents are included in the TST documentation pack.

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 6)
 - (iii) All related drainage documents, including drawings and reports, should be submitted up to two weeks after the survey has been carried out.
 - (iv) The order in which the eastbound and westbound surveys are to be carried out is up to the contractor's discretion in agreement with the traffic management provider.
- 4.1.3 The programme must 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 must be provided in a PDF or MS Project or MS Excel format and cover the full contract period including post site activities. All activities should be clearly defined and named, and the following shall be shown on the programme:
- (i) the *starting date*, *completion date* & *Contractor's* planned completion
 - (ii) for each activity, the proposed resources (plant & labour) expected to deliver each activity should be shown on the programme
 - (iii) review periods for any reporting requirements
 - (iv) key dates for the *Employer* to provide 'services and other things'
 - (v) key dates for co-ordination with Others
- 4.1.5 The *Contractor* updates the programme at the request of the *Employer*. The *Contractor* submits an updated programme to the *Employer* upon request.
- 4.1.6 Any site issues/delays must be reported, initially, to the site supervisor and highlighted within the daily site report. Following each night shift, the report should be sent to the *Employer* by 10am the next day.

5 SERVICES AND OTHER THINGS PROVIDED BY THE *EMPLOYER*

5.1.1 The following temporary traffic management will be provided by the *Employer* to allow the *Contractor* to Provide the Works:

- (1) The survey will be carried out under Lane Closures supplied by the *Employer* – see document 'Programme A45 M1 J15 to Great Doddington Survey' for more information.

5.1.2 Not used.

6 SPECIFICATION FOR THE WORKS

(1) Recyclers are to be used without deviation unless otherwise instructed.

(2) Drainage to be surveyed

All drainage assets within the site extents are to be surveyed and must extend to outfall, unless otherwise stated.

Note: The tenderers should all have access to HADDMS and be competent to interrogate the system and establish any historic or legacy information to aid their pricing. Appended are the relevant drawings for the highway within the scheme extents. They may not represent the current asset and are invalidated.

(3) Survey requirements

- Wincan V7.6 and Wincan VX, both of which are compatible with the DDMS must be utilised to carry out the survey (Wincan V8 is not compatible with the DDMS). If the contractor is using Wincan V8, evidence **must** be provided that the contractor can, and has, successfully converted the data to DDMS compliance.
- Survey Engineers must have 'OS19X pipe sewer condition classification' or 'OS30X pipe sewer condition conversion' qualifications, as stated in CS551.

(4) Time spent on Jetting (15 minutes/3 passes)

On the understanding that this refers to a carrier run, approximately 90m long and up to 900mm diameter, 15 minutes should be allowed. Lateral gully connections should have 5 minutes allowed for.

Note: It is the contractor's responsibility to allow for time moving between locations and setting up/demobilising.

(5) Time to be spent on root cutting

In terms of root cutting it is dependent on amount of mass and length of obstruction. It should be priced as 30minutes per run

(6) Waste Arrangements

Waste is to be included within the pricing for 'Item 1' (undertaking the works) and as such will not be treated as an additional cost.

Copies of Waste Transfer Notes to be sent to Highways England as proof of disposal, weights, etc.

(7) Light site clearance required

Light site clearance may be required for access to locations and at headwalls and outfalls. This should be priced as a two-operative team, with hedge trimmers and strimmer's, along with standard small hand tools IE Grafter, loppers, crowbars etc.

(8) Welfare facilities

The survey contractor is responsible for the welfare of their employees and will provide adequate, sufficient and clean site welfare facilities.

Welfare facilities must include;

- A flushing chemical toilet (including wipes/toilet rolls, etc.)
- Hand wash facilities (hot and cold running water)
Including soap, towels and sink for washing
- Seating / rest area which can be adequately heated (seating with backs, a means for heating water for drinks and warming up food (i.e. A microwave oven)

(9) Cancelled Shifts

Shifts may be cancelled due to several reasons, such as weather, RTC, diversion route due to RTC on other carriageways, etc.

- In this case each cancelled shift will be paid at a defined cost. These will be treated as a Compensation Event when we instruct the contractor to either 'not start the works' or 'stop the works' and are assessed in accordance with Clause 63 of the core contract documents.



East Midlands Asset Delivery

Drainage Surveys

Schedule of Requirements

A0 Introduction

1. The drainage survey shall be undertaken in accordance with the following documents, as supplemented or amended by this Schedule of Requirements:
 - CS 551 Drainage Surveys;
 - CD 535 Drainage asset data and risk management;
 - Asset Data Management Manual (ADMM).
2. These documents can be found at <http://www.standardsforhighways.co.uk/ha/standards/>
3. CS551 and CD535 are within Part 4 of Volume 4 of the Design Manual for Roads and Bridges (DMRB).
4. A drainage survey shall include all drainage assets within the survey or scheme extents:
 - sub-surface assets (pipework and chambers); and
 - surface items (e.g. combined kerb drainage, ditches, ponds).
5. The drainage survey extents shall include the outfall(s).
6. Survey data shall be uploaded to the Highways England Drainage Data Management System (DDMS) no later than 60 days after completion on site. This includes round tripping of data.

Note: [The tenderers should all have access to HADDMS and be competent to interrogate the system and establish any historic or legacy information to aid their pricing. Appended are the relevant drawings for the highway within the scheme extents. They may not represent the current asset and are invalidated.](#)

A1 General requirements

The contractor will provide site supervision trained to a minimum of SSSTS. Where the contractor is taking 'Principal Contractor' responsibilities, the supervisor provided will be SMSTS trained (or equivalent).

All drainage assets within the site extents are to be surveyed and must extend to outfall, unless otherwise stated.

1. State the survey type, to be one or more of the following:
 - a. **validation survey;**
 - b. ~~priority asset survey;~~
 - c. ~~filter drain condition survey by GPR;~~
 - d. **all assets condition and connectivity survey;**
 - e. **pipework and chambers defect survey by CCTV;**
 - f. **pipework geometric survey by laser profiler.**

2. The location of the survey is to be detailed by:
 - a. ~~stating the location of the survey, area name, road number, location within or adjacent to the carriageway, marker post chainage; and~~
 - b. **providing maps/plans/drawings showing the extent of the survey. (See drawings HE569243-KIER-HGT-A45MP179-DR-CE-0600_001 to 0600_003 and the site information document)**

3. Detail any constraints on the works, including:
 - a. **Night time works—8pm to 6am**
 - b. **Traffic Management details**
(Lane 1 road closure of the north and southbound in sequence)
 - c. **An Environmental Scoping Proforma will be supplied with this document.**

4. Define periods outside normal working hours.
Working times stated are ‘first cone on’ and ‘last cone off’ times. The installation of Traffic Management will be dependent on a number of constraints. IE. Traffic counts, weather, etc.

5. Detail any variation in the scope of the survey works from that defined in this specification.
 All attempts must be made to gain access to chambers, over which the lids have been bolted down, and any culverted pipe-work, which may be behind a trash screen. Bolts are to be removed prior to the survey, and to be replaced after the survey.

6. Provide pre-construction information covering the works.
Any drainage related drawings that are available, within the site extents, will be supplied with this document

7. State the classification of the site for the use of electrical equipment in potentially explosive atmospheres, in accordance with DSEAR S.I. No. 2776 [Ref 2.I], either:
- a. **the site is classified as Zone 2,**
 - ~~b. the site is classified as Zone 1.~~

Contractors shall provide evidence that all electrical equipment to be used is in accordance with The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (EPSIUPEAR) for the Zone classification indicated above.

8. State the responsibility for traffic management, either:
- a. **by others arranged by the area management team;**
 - ~~b. by others arranged by the Overseeing Organisation's representative;~~
 - ~~c. arranged by the survey team.~~

Any site issues/delays must be reported, initially, to the site supervisor and highlighted within the daily site report. Following each night shift, the report should be sent to the Employer by 10am the next day.

A2 Survey requirements

A2.1 General

1. State the requirement for survey data round-tripping, either:
- *Note - round tripping is always required, you must request the existing catchment shapefile from the Drainage Asset Manager / Team**
- a. **some drainage inventory information in the catchment(s) to be surveyed is available on the DDMS and round-tripping of this data is required;**
 - ~~b. no drainage inventory information in the catchment(s) to be surveyed is available on the DDMS and round-tripping of this data is not required.~~
2. State the requirement for off-highway working not accessible by conventional two-wheel drive vehicles, either:
- a. **off-road vehicles are not required;**
 - ~~b. off road vehicles are required;~~
 - ~~c. off road vehicles may be required.~~

Welfare facilities

The survey contractor is responsible for the welfare of their employees and will provide adequate, sufficient and clean site welfare facilities.

Welfare facilities must include;

- A flushing chemical toilet (including wipes/toilet rolls, etc.)
- Hand wash facilities (hot and cold running water)

Including soap, towels and sink for washing

- Seating / rest area which can be adequately heated (seating with backs, a means for heating water for drinks and warming up food (i.e. A microwave oven)

A2.2 Pipework and chambers defect survey by CCTV

1. State the requirement for pan and tilt CCTV camera, either:
 - a. **pan and tilt CCTV camera required;**
 - b. ~~fixed head panoramic view CCTV camera required.~~

A jack-up camera will be required for larger diameter pipes to ensure CS 551 item 7.8 (9) is met i.e. the camera is to be positioned centrally within the pipework to within a positioning tolerance of $\pm 10\%$ of the vertical pipework dimension.

Wincan V7.6 and Wincan VX, both of which are compatible with the DDMS must be utilised to carry out the survey (Wincan V8 is not compatible with the DDMS). If the contractor is using Wincan V8, evidence **must** be provided that the contractor can, and has, successfully converted the data to DDMS compliance.

Survey Engineers are required to have 'OS19X pipe sewer condition classification' or 'OS30X pipe sewer condition conversion' qualifications, as stated in CS551.

2. State the requirement for forced ventilation of pipework and/or culverts, either:
 - a. **forced ventilation will not be required;**
 - b. ~~forced ventilation will be required;~~
 - c. ~~forced ventilation may be required.~~
3. State the requirement for pre-cleansing of the drainage system, either:
 - a. ~~pre-cleansing not required;~~
 - b. **pre-cleansing is required;**
 - c. ~~pre-cleansing required in some locations.~~

Recyclers are to be used without deviation unless otherwise instructed.

Time spent on Jetting (15 minutes/3 passes)

On the understanding that this refers to a carrier run, approximately 90m long and up to 900mm diameter, 15 minutes should be allowed.

Lateral gully connections should have 5 minutes allowed for

Note: It is the contractor's responsibility to allow for time moving between locations and setting up/demobilising.

4. State the responsibility for clearing blockages, either:
 - a. **survey the pipework run from the other direction, then proceed to remove the blockage by cleansing;**
 - ~~b. do not attempt to remove the blockage, then survey the pipework run from the other direction;~~
 - ~~c. move to another location whilst the blockage is cleared by others as arranged by the Overseeing Organisation's representative.~~
5. State the requirement for root cutting, either:
 - a. **root cutting is required;**
 - ~~b. root cutting is not required;~~
 - ~~c. root cutting may be required.~~

Time to be spent on root cutting

In terms of root cutting it is dependent on amount of mass and length of obstruction. It should be priced as 30minutes per run

6. Waste Arrangements

Waste is to be included within the pricing for 'Item 1' (undertaking the works) and as such will not be treated as an additional cost.

Copies of Waste Transfer Notes to be sent to Highways England as proof of disposal, weights, etc.

A3 Reporting requirements

A3.1 General

1. Detail any variation in the scope of the reporting requirements from that defined in this specification.

N/A

A3.2 Pipework and chambers defect survey by CCTV

1. State the requirement for a summary report in PDF format in addition to digital data, either:
 - ~~a. summary report in PDF format is not required;~~
 - b. **summary report in PDF format is required.**
2. State the requirement for CAD drawings in DWG, DXF and PDF formats in addition to digital data, either:
 - ~~a. CAD drawings in DWG, DXF and PDF formats are not required;~~
 - b. **CAD drawings in DWG, DXF and PDF formats are required.**

***Note: CAD drawings shall confirm to IAN 184/16.**

3. State the requirement for the survey data to be packaged with a proprietary software viewer, in addition to the standard data deliverables, either:

- a. **survey data packaged with a proprietary viewer is required in addition to the standard data deliverables;**
 - ~~b. survey data packaged with a proprietary viewer is not required, only the standard data deliverables are required.~~
4. State the requirement for items of the survey report to be provided to the Overseeing Organisation's representative during the survey, either:
 - a. **interim survey data is not required during the course of the survey; (detailed daily shift reports shall be issued following each shift)**
 - ~~b. interim survey data is required during the course of the survey (details of required deliverables, frequency and timing to be stated).~~
5. State the means of transferring the data deliverable, either:
 - ~~a. by internet transfer;~~
 - b. **by portable storage device;**
 - ~~c. by DVD.~~

Cancelled Shifts

Shifts maybe cancelled due to several reasons, such as weather, RTC, diversion route due to RTC on other carriageways, etc.

- In this case each cancelled shift will be paid at a defined cost. These will be treated as a Compensation Event when we instruct the contractor to either 'not start the works' or 'stop the works' and are assessed in accordance with Clause 63 of the core contract documents.

Equipment Breakdown

The contractor is responsible for the maintenance and repair of their own equipment.

If a breakdown occurs prior to attending site, that the equipment cannot be used, the cost of the equipment for the shift will be deducted from the final payment. Every effort must be made, by the contractor, to ensure the equipment is repaired/replaced ready for the following shift.

If a breakdown occurs during a shift, information regarding this shall be appended within the daily site report.

*Note – Highways England will not be held responsible for damage to site vehicles (IE. punctured tyres, chipped windscreens, etc.), or theft from site vehicles (vehicles must remain locked at all times when unattended).