

**National Asset Delivery
Technical Surveys and Testing**

**Works Information for
570124 M5 J26 NB MP217.0 FHS
Drainage Survey and Vegetation
Clearance**

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Tender Issue	JH	19/10/20

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LIST OF ANNEXES

Appendix 1 **Supplementary Constraints**

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1 DESCRIPTION OF THE WORKS

1.1 Project objectives

1.1.1 The principle objective of this project is to carry out a Drainage Survey of the existing highway drainage system. The existing drainage system within the scheme extents is shown on drawings HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06. Vegetation Clearance to be carried out to facilitate the drainage survey works where required.

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) Drainage Survey to be carried out of the existing drainage system (including watercourse culverts and ditches) within the scheme extents as shown on drawings HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06).
- (2) High volume jetting to be carried out to the existing drainage where blockages are encountered.
- (3) Minimal vegetation clearance is to be carried out where required to facilitate drainage survey works. Vegetation clearance may be required for outfall pipes, outfall locations and along ditches where outfalls discharge.

1.3 Deliverables

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

- (1) Drainage Survey of the existing drainage system as shown on drawings HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06 in accordance to CS551.
- (2) The Drainage Survey deliverables (data submission and report) are to be in accordance with CD535 Drainage Surveys.
- (3) Drainage Survey summary report in PDF and digital data format.
- (4) Drainage Survey drawings in DXF/DWG and PDF format.
- (5) Drainage Survey data to be packaged with a proprietary software viewer necessary to view all of the data (Wincan VX) in accordance with the following:

- all of the coded data (both header and detailed defect observations) for every inspection carried out on every section of pipework, culvert, chamber, outfall/oulets, and gully, including repeat inspections;
 - all of the associated photographs and videos;
 - facilities that allow the survey data to be viewed in conjunction with the video and photographs, such that viewing an asset or observation in the data will automatically retrieve the associated section of video and relevant photographs;
 - an unrestricted licence for the use of the software viewer.
- (6) Drainage Survey data to be provided in HADDMS shape file format and to be uploaded to the Highways England Drainage Data Management System (HADDMS).

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2 EXISTING INFORMATION

- 2.1.1 The inventory details of the existing drainage system are shown on drawings: HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06.
- 2.1.2 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
HE570124-KIER-GEN-M5_MP218.6-MP216.5-DR-CD-0000_01	Location Plan	C1/ October 2020
HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06	Drainage Survey Location Plan	C1/ October 2020

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 22:00 – 05:00.
- 3.2.2 *Contractor* to remain within the Highways Boundaries for the duration of the works, except where agreed with both the *Employer* and the land owner in advance, as per clause **Error! Reference source not found..**
- 3.2.3 Access to the site will be via the M5 carriageway traffic management. It is anticipated that lane closures will be required as part of the traffic management. TM requirements are to be confirmed by the Contractor.
- 3.2.4 The drainage survey works require entry into confined spaces (drainage chambers, culverts, inlets and outlets etc), the Contractor is to provide risk assessment and method statement for confined spaces work.
- 3.2.5 Vegetation clearance may be required to locate and access existing drainage assets. Contractor to provide vegetation clearance where required.

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 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 within 570124_ PCI, 570124_ FRM_ Hazard Identification Drainage Survey and 570124_ PCI, 570124_ FRM_ Hazard Identification vegetation clearance .
- 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) Works are classified as confined spaces working, and the Contractor should include for this within their method statement and risk assessment.
- 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) for each activity, the proposed resources (plant & labour) expected to deliver the activity should be shown on the programme;
 - (iv) review periods for any reporting requirements;
 - (v) key dates for the Employer to provide 'services and other things';
 - (vi) key dates for co-ordination with Others.
- 4.1.5 The *Contractor* updates the programme every 2 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 following temporary traffic management will be provided by the *Employer* to allow the *Contractor* to Provide the Works:

- (1) The traffic management is anticipated to consist of a lane closures and is to be installed after 22:00 and removed before 05:00. TM requirements are to be confirmed by the Contractor.

5.1.2 The other things that will be provided by the *Employer* are as follows:

- (1) None

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6 SPECIFICATION FOR THE WORKS

6.1.1 Drainage Survey

6.1.2 The *Contractor* shall undertake the works in accordance with: drawings with the specified area shown on drawing; HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06.

6.1.3 The *Contractor* must provide the *works* under a quality management system which is certified to ISO 9001 & BS 11000 and Environmental management system which works to ISO14001.

6.1.4 The Drainage Survey is to be carried out in accordance with the Design Manual for Roads and Bridges, Volume 4 Geotechnics and Drainage, Part 10, CS 551 Drainage Surveys.

6.1.5 The Drainage Survey recording of inventory and condition of drainage assets is to be carried out in accordance with the Design Manual for Roads and Bridges, Volume 4 Geotechnics and Drainage, Part 4, CD 535 Drainage Asset Data and Risk Management.

6.1.6 Schedule of Requirements, Appendix A1 General Requirements;

- Drainage Survey to be carried out of the existing drainage system (including watercourse culverts) within the scheme extents (MP218/6 to MP216/5) is to include the following surveys:
 - a) validation survey;
 - b) priority asset survey;
 - d) all assets condition and connectivity survey;
 - e) pipework and chambers defect survey by CCTV.
 - f) Culvert inlet and outlet including photos of the inlet/outlet/headwalls
- Validation survey to verify whether the inventory information (chambers, culverts, inlets, outlets, kerb grips and ditches) held on the drainage data management system (DDMS), previously derived from drawings, is a true record of the visible surface point assets.
- The location of the Drainage Survey to be carried out is shown on drawings HE570124-KIER-HDG-M5_MP218.6-MP216.5-DR-CD-0100_03-06.
- The works will have the following constraints;
 - a) access to the site will be by the M5 carriageway traffic management;
 - b) drainage survey works are to be carried out week days from 22:00pm to 05:00am.

- 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], is the site is classified as Zone 2.
- The responsibility for traffic management will be by others arranged by the Overseeing Organisation's representative.

6.1.7 **Appendix A2 Survey Requirements.**

A2.1 General.

- Survey data round-tripping is required, some drainage inventory information in the catchment(s) to be surveyed is available on the DDMS and round-tripping of this data is required.
- There is no off-highway working, use of off-road vehicles are not required.

A2.2 Pipework and chambers defect survey by CCTV.

- Pan and tilt CCTV camera will be required.
- Forced ventilation of pipework and/or culverts will not be required.
- Pre-cleansing of the drainage system is not required.
- If any blockages are encountered to the pipework the following is to be carried out to continue the survey and clear the blockages;
 - a) survey the pipework run from the other direction, then proceed to remove the blockage by cleansing.

6.1.8 **Appendix A3 Reporting Requirements.**

A3.1 General – Not Any.

A3.2 Pipework and chambers defect survey by CCTV

- The summary report is required in PDF format in addition to digital data.
- CAD drawings in DXF and PDF formats are required in addition to digital data.
- The survey data is to be packaged with a proprietary viewer in addition to the standard data deliverables.
- Interim survey data or report will not be required during the survey.
- The survey data is to be transferred by internet transfer.

6.2 **Vegetation Clearance**

- 6.2.1 Minimal vegetation clearance is to be carried out where required to facilitate drainage survey works along M5 eastbound and westbound carriageway verges between MP218/6 to MP216/5. Vegetation clearance may be

required for outfall pipes, outfall locations and along ditches where outfalls discharge.

6.2.2 Dormice, Great Crested Newts and reptiles have been identified within the area, please liaise with the Kier Environmental Team prior to commencement of vegetation clearance. No dense clearance outside the swathe cut should be undertaken without consultation being undertaken with the Kier Environment Team. Pre checks or supervision may be required depending on works timings. No large trees (above 150mm at DBH) should be removed as part of the clearance. Vegetation clearance should be undertaken outside of bird nesting season (late February to early September inclusive).

6.2.3 Ecological Clerk of Works (ECoW) is required to supervise vegetation clearance works.

6.2.4 Extents of vegetation clearance where required to include;

- All tall grasses, brambles and ferns are to be cut down to allow foot access, approximately 150mm above ground level. Grassland should be cut using hand tools and following a phased cut methodology to displace reptiles and GCN. All vegetation cuttings are to be tipped off site by the Contractor.
- All small trees of DBH below 150mm, bushes and hedges are to be cut down to allow foot access, approximately 150mm above ground level. All felled timber to be tipped off site by the Contractor.
- All works are to be carried out in accordance with MCHW Series 200 Specification for Highway.

6.2.5 Extents of vegetation clearance where required, along line of existing ditch to include;

- Removal of vegetation within existing ditch. All vegetation cuttings are to be tipped off site by the Contractor.
- All tall grasses, brambles and ferns are to be cut down to allow foot access, approximately 150mm above ground level. Grassland should be cut using hand tools and following a phased cut methodology to displace reptiles and GCN. All vegetation cuttings are to be tipped off site by the Contractor.
- All small trees DBH below 150mm, bushes and hedges are to be cut down to allow foot access, approximately 150mm above ground level. All felled timber to be tipped off site by the Contractor.
- All works are to be carried out in accordance with MCHW Series 200 Specification for Highway.