

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

**Scope for A43 MP34/5A Syresham**  
**Bypass Cutting Repair - Topographical**  
**survey**



## TABLE OF CONTENTS

<b>1</b>	<b>PURPOSE OF THE <i>SERVICES</i></b> .....	<b>4</b>
1.1	Project objectives.....	4
1.2	Scope of <i>services</i> .....	4
1.3	Deliverables .....	4
<b>2</b>	<b>EXISTING INFORMATION</b> .....	<b>5</b>
<b>3</b>	<b>CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE <i>SERVICES</i></b> ...6	
3.1	General .....	6
3.2	Working hours & site specific constraints .....	6
3.3	Health, Safety and Environment & Risk Management.....	6
<b>4</b>	<b>REQUIREMENTS FOR THE PROGRAMME</b> .....	<b>8</b>
<b>5</b>	<b>SERVICES AND OTHER THINGS PROVIDED BY THE <i>CLIENT</i></b> .....	<b>9</b>
<b>6</b>	<b>SPECIFICATION FOR THE <i>SERVICES</i></b> .....	<b>10</b>

## LIST OF ANNEXES

- Appendix 1 Not Used
- Appendix 2 Drawings
- Appendix 3 Health & Safety
- Appendix 4 Risk & Opportunity Register
- Appendix 5 Environment
- Appendix 6 Supplementary Constraints

## 1 PURPOSE OF THE SERVICES

### 1.1 Project objectives

1.1.1 The principal objective of this project is to carry out a topographic survey and associated reports and drawings for the east bound carriageway, verge and earthwork, in anticipation of detailed design for remediation of a defective section of the cutting located adjacent to the marker post 34/5A of the A43 Northbound carriageway.

1.1.2 The specification that applies to the services is included in Section 6

### 1.2 Scope of services

1.2.1 The services to be provided under this contract are:

Category	Survey Description
Topographical	Undertake a topographic survey across extents shown on drawing HE605181-KIER-HGT-A43_NB_MP34_5A-DR-CE-603 from NGR 461434, 40357 to 461584, 240427.
Vegetation Clearance	Vegetation clearance to enable features to be accurately surveyed.

### 1.3 Deliverables

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

- (1) An appropriate individual to attend pre-commencement site inspection & client meeting.
- (2) The *Consultant* is to provide plant, materials & labour to carry out any vegetation clearance to enable features to be accurately surveyed.
- (3) Plant, materials & labour to carry out a Topographical survey on site for the timings as stated in section 3/4 and specification as stated in section 6.
- (4) 2D & 3D CAD Models of surveys, CAD dwgs, & reports on TOPO findings as detailed in section 6 within 2 weeks of works being completed on site.
- (5) Reports as detailed in section 6.
- (6) The *Consultant* shall make reasonable efforts to undertake the survey within areas of tree planting. The Consultant shall undertake any necessary vegetation clearance to ensure complete survey coverage of the earthwork. A check shall be made for any nesting birds before removing any trees.

## 2 EXISTING INFORMATION

2.1.1 The Drawings listed below apply to this contract.

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

<b>Drawing Number</b>	<b>Title</b>	<b>Revision / Date</b>
HE605181-KIER-HGT-A43_NB_MP34_5A-DR-CE-603	REQUIRED TOPOGRAPHICAL SURVEY EXTENTS	C1
HSD-KIER-VTO-AREA7-DR-C-01	TYPICAL SURVEY REQUIREMENTS DUAL CARRIAGEWAY	C1
HSD-KIER-VTO-AREA7-DR-C-05	TYPICAL SURVEY REQUIREMENTS EMBANKMENT & CUTTING SLOPES	C1

### **3 CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE SERVICES**

#### **3.1 General**

- 3.1.1 The *Consultant* Provides the Services in such manner as to minimise the risk of damage or disturbance to or destruction of third party property.
- 3.1.2 The *Consultant* complies with the constraints and meets with the requirements outlined in Appendix 6.
- 3.1.3 The *Consultant* submits information detailing how the *Consultant* will provide the Services to the *Client* prior to the *services* commencing. This information will include any lifting plans, risk assessments, method statements, the *Consultant's* staff training information and any other relevant Health and Safety requirements.

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

- 3.2.1 The *Consultant's* working hours for site works shall be confirmed by the Employer. Night shifts between the hours of 20:00 to 06:00 with a lane one closure are anticipated.
- 3.2.2 Topographical on-site work is expected to be completed in 1 shift between 06/09/2021 – 17/09/2021, dates are to be confirmed upon award based on Traffic Management availability.
- 3.2.3 Refer to environmental assessment.

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

##### Health and Safety requirements

- 3.3.1 In Providing the Services the *Consultant* meets the requirements of Annex 2 of the supplementary constraints relation to health and safety duties.
- 3.3.2 The *Consultant* 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 in Appendix 3 of the works package.
- 3.3.4 Before commencing the construction phase of the *services*, the *Consultant* confirms to the *Client* that adequate welfare facilities are in place. Where the facilities detailed in section 5 are not deemed adequate, the *Consultant*

provides all necessary facilities to provide the Services and to comply with the minimum requirements set out in HSE guidance document L153.

- 3.3.5 A method statement, programme of works, risk assessment and safety plan for the survey shall be submitted to the client before commencing work on-site.

#### Environmental requirements

- 3.3.6 In Providing the Services the *Consultant* meets the requirements of Annex 5 of the supplementary constraints in relation to environmental duties.

#### Risk Management

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

#### 4 REQUIREMENTS FOR THE PROGRAMME

- 4.1.1 The *Consultant* submits programme to the *Client* with his tender.
- 4.1.2 The *Consultant* Provides the Services 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 *Client* (see Section 5)
  - (iii) The *Consultant* is to allow for a pre start meeting (remotely), to develop the programme.
  - (iv) Survey results are expected to be returned within two weeks of the survey completing on site
- 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) the *starting date*, *completion date* & *Contractor's* planned completion
  - (ii) review periods for any reporting requirements
  - (iii) key dates for the Employer to provide 'services and other things'
  - (iv) key dates for co-ordination with Others
- 4.1.5 The *Consultant* 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.
- 4.1.6 The *Consultant* updates the programme every week. The *Consultant* submits an updated programme to the *Client* upon request.

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

5.1.1 The following temporary traffic management is anticipated being provided by the *Employer* to allow the *Contractor* to Provide the Works:

- (1) A43 NB lane one closure along extent of area to be surveyed.
- (2) Surveying *Consultant* should allocate time for liaison with TM Contractor to ensure closure phases are appropriate. Requirements will be phased in order to minimise disruption to the travelling public. All the above TTM is to be confirmed before works start.

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

- (1) Other Technical Survey Contractors may be on-site during the same period, the TM Contractor will act as Principle Contractor.

## 6 SPECIFICATION FOR THE SERVICES

- 6.1.1 The *Consultant* shall Provide the Services in accordance with the below.
- 6.1.2 The *Contractor* must provide the *works* under a quality management system which:
- (1) is certified to ISO 9001,
  - (2) incorporates an environmental management system which works to the principles of ISO 14001,
  - (3) includes requirements for adopting the principles of BS 11000 and
  - (4) Complies with good industry practice and encourages innovation during the contract duration.
- 6.1.3 Specific requirements relating to the output of the survey e.g. format of the report and ICT standards. –
- 1) 2D & 3D CAD Models (DWG & PDF Format) produced: All surveys results shall be provided electronically and include two CAD files, one in 2D, the other a 3D file, both in dwg format compatible with AutoCAD Civil3D (and in PDF format) in accordance with GG 184 – Specification for the use of Computer Aided Design. In addition the survey shall be provided with 3D strings and points in GENIO format for use in Bentley MX V8i software.
  - 2) A schematic drawing of the TOPO survey with relevant key and any associated notes plus interpolated contours at 0.5m vertical intervals and a grid of levels at maximum 5m centres
  - 3) Drawing layers are to be constructed and labelled in accordance with BIM standards, as laid down in the NBS.
  - 4) A breakdown / record of any problems encountered whilst undertaking the Topographical survey in PDF format
  - 5) Utility location survey report in PDF format
  - 6) Site diaries
  - 7) Site photographs
  - 8) The required positional accuracy is +/- 100mm
  - 9) The required vertical accuracy is +/-25mm
- 6.1.4 Specific requirements relating to the output of the survey e.g. features to be recorded where encountered, including but limited to the below. –

### **String Features**

- 1) Edge of pavement

- 2) Road markings
- 3) Kerbs
- 4) VRS (front & back)
- 5) Filter drains
- 6) Breaks of slope
- 7) Boundary fence / hedgerow
- 8) Internal fences
- 9) Soil slips – tension cracks, back scars & toe bulges
- 10) Ditches – top and bottom of side slopes
- 11) Culverts

**Point Features**

- 12) Headwalls
- 13) Marker Posts
- 14) Node markers
- 15) Lighting columns
- 16) Electrical cabinets
- 17) Electrical feeder pillars
- 18) Boreholes
- 19) Sign posts
- 20) Trees & large bushes
- 21) Gullies
- 22) Chambers catchpits and manholes. The levels on chambers shall be the cover and invert level, plus the invert and diameter of any connecting pipe work.
- 23) Permanent ground markers, giving 3D coordinates