

National Asset Delivery
Technical Surveys and Testing

Works Information for 605205 A42 J14
to M1 Electrical Renewals - Electrical
testing Survey

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Original version issued with tender	RAS	06/04/21

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LIST OF ANNEXES

Appendix 1 Supplementary Constraints

1 DESCRIPTION OF THE WORKS

1.1 Project objectives

1.1.1 The principal objective of this project is to carry out electrical testing of the existing cable network from pillars; M1/25, M1/24 & A42/08. Then subsequently provide associated reports & dwgs.

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:

Category	Survey Description
Electrical	Electrical circuit investigation and testing

1.3 Deliverables

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

- (1) An appropriate individual to attend pre-commencement site inspection & client meeting.
- (2) The *Contractor* is to provide plant, materials & labour to carry out all project objectives stated in this document.
- (3) Plant, materials & labour to carry out an electrical survey on site for the timings as stated in section 3 and specification as stated in section 6.
- (4) Spread sheet showing test results as detailed in section 6 within 2 weeks of works being completed on site.
- (5) Reports as detailed in section 6.

2 EXISTING INFORMATION

2.1.1 The Drawings listed below apply to this contract.

Drawing Number	Title	Revision / Date
HE605205-KIER-VGN-A42_M1-DR-CH-0100 09-15	Proposed cable and column testing location sheet 9 of 15 to 15 of 15	P01
HE605205-KIER-GEN-A42_M1-DR-Z-0000 01	Location Plan	P01
HE605205-KIER-HEL-A42_M1-DE-EO-1400 01 to 06	Schematics	P01

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.

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 20:00 to 06:00hrs and weekend working will be allowed with agreement of the *Employer*.
- 3.2.2 Provisional Road space has been booked for 6th to 25th September 2021 inclusive.
- 3.2.3 The contractor to submit a detailed proposed programme at tender.

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 For details of the CDM duty holders, refer to the pre-construction information which will be made available upon award.
- 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.
- 3.3.8 The following risks have been identified as associated with the works;
- (i) Underground Services
 - (ii) Potential Asbestos
 - (iii) Journey Time Reliability
 - (iv) Environmental
 - (v) Access/Egress and movement around site

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 services and other things provided by *Employer* (see Section 5)
 - (ii) The contractor is to allow for a pre-start meeting to develop the programme.
 - (iii) Survey results are expected to be returned within two weeks of the survey completing on site.
 - (iv) Welfare facilities are to be in place prior to works commencing on site.
 - (v) Other Contractors will be working on this site, the principal contractor is to liaise with all parties to develop a programme for the works, it is anticipated that different surveys can be carried out concurrently to minimise the length of the programme.
- 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
- 4.1.5 The *Contractor* updates the programme every week. The *Contractor* submits an updated programme to the *Employer* upon request.

5 SERVICES AND OTHER THINGS PROVIDED BY THE *EMPLOYER*

- 5.1.1 Temporary Traffic Management will be provided by others.
- 5.1.2 The proposed Traffic Management is expected to consist of night-time full closures of the A42 Northbound from junction 14, full closure of the A42 Southbound from Finger Farm RBT, various main line lane closure on M1, line closures on slip roads with some full slip closures. A453 lane closures and ring management of the A453 Finger Farm RBT where required. These TM requirements will be phased in order to minimise disruption to the travelling public (see document 'Provision Programme of Closures - M1 J23A A42 Street lighting survey').
- 5.1.3 There will be provision to escort pedestrian's and cyclist's through the works area if acceptable by the Traffic Management contractor and client. All the above TTM is to be confirmed before works start.
- 5.1.4 Roadspace on Highways England Area 7 network and Leicestershire County Council is to be managed by the principal contractor in coordination with the TM contractor.
- 5.1.5 The other things that will be provided by the *Employer* are as follows:
- (1) Welfare facilities are to be provided by the principal contractor (the TM provider), needs are to be identified by the *Contractor* and communicated with the principal contractor.
 - (2) Desktop search for utility information (Type D) survey has been completed and is available in the Stats folder.
 - (3) Where necessary, site/vegetation clearance to ensure the survey can be carried out effectively will be carried out by others under the direction of the *Employer*.

6 SPECIFICATION FOR THE WORKS

- 6.1.1 The name of the contract is "A42 J14 to M1 Electrical Renewals".
- 6.1.2 Electrical testing surveys are to facilitate the design/installation of street lighting equipment at this interchange.
- 6.1.3 The works extents are shown on drawing HE605205-KIER-GEN-A42_M1-DR-Z-0000 01 and works are shown on drawings HE605205-KIER-VTO-A42_M1-DR-CH-0100 09-15 & HE605205-KIER-HEL-A42_M1-DE-EO-1400 01 to 06
- 6.1.4 **Electrical Survey**
- 6.1.5 The electrical survey shall include for inspection and testing of highway electrical assets fed from feeder pillars M1/25, M1/24 & A42/08. Schematic diagrams for the feeder pillars have been provided for information only.
- 6.1.6 The testing and inspection of network cables shall be carried out by an electrician who has completed the City and Guilds 2391-50 Initial Verification, Inspection, Testing and Certification of Electrical Installations or equivalent.
- 6.1.7 The results of the survey shall be presented as an AutoCAD drawing detailing circuits fed from the feeder pillars. Additionally, any required amendments to the schematic drawing shall also be supplied.
- 6.1.8 The drawings shall detail circuit references, locations, circuit loads, phase, rating and type of protective devices, circuit voltages (source and remote end), circuit earth fault loop impedances Z_e and Z_s and cable sizes.
- 6.1.9 The earth fault loop impedance Z_s , cable type and cross-sectional area of conductors shall be recorded at all lighting columns. The protective devices for the circuits supplying these columns shall also be recorded and the external earth fault loop impedance Z_e at all feeder pillars.
- 6.1.10 Where circuits have high Z_s and/or low IR they are to be broken down in order to identify potential failed sections.
- 6.1.11 Reference shall be made to cables that interconnect circuits between feeder pillars.
- 6.1.12 The location requiring electrical survey and testing are as indicated on the above-mentioned drawings.