National Asset Delivery
Technical Surveys and Testing

Works Information for 605473 M5 J11a Pitmill MP86_7 Trial Holes Survey

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Original version issued with tender	ET	19/03/21

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LIST OF ANNEXES

1 DESCRIPTION OF THE WORKS

1.1 Project objectives

1.1.1 The principle objective of this project is to undertake a trial hole survey to confirm the as-builts of the structure, including measuring expansion gap geometry, surfacing depth around expansion joints and over deck slab, and to confirm location and depth of cover to service ducts in west.

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) Carry out trial hole investigations at locations shown in drawing HE605473-KIER-SBR-M5_BR_21296-DR-CB-010003 C01 to confirm the as-builts of the structure, including expansion air gap geometry around expansion joints, surfacing depth around expansion joints and over deck slab and to confirm location and depth of cover to service ducts in west and east verges.

(2) Trial Hole works are to take place in conjunction with other survey works being undertaken by others, with access to the excavated elements required by others as necessary. Traffic management will be provided.

(3) Trial holes in the carriageway to be reinstated using hot HRA material, prior to reinstatement the base of the trial pit should be clean of debris and a bitumen-based sealant should be applied to all surfaces.

(4) Trial holes in the concrete verges to be reinstated using ST4 concrete.

(5) Trial holes in soft verge to be reinstated as follows:

100mm – 1000mm depth – On completion of works, backfill trial pits with subsoil in layers no greater than 150mm thick and well compacted.

100mm (soft verge) – Replace previously removed topsoil and lightly compact.

1.3 Deliverables

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

(1) Trial hole logs, complete with trial hole dimensions, depth of surfacing, photos and locations of trial holes relative to a fix point i.e. parapet upstand

(2) Survey Report

(3) Programme

(4) Risk Assessments and Method Statements

2 EXISTING INFORMATION

2.1.1 The M5, Junction 11a Pitmill Bridge carries the M5 northbound off slip over Churchdown lane at MP 86.70 prior to joining the A417.

2.1.2 The suite of management and asbestos refurbishment surveys undertaken on the structure indicate that there are no positive or presumed asbestos containing materials in the following areas:

- The two ducts within the west concrete verge or the Denso Tape around the ducts
- The water proofing beneath the carriageway
- The water proofing beneath the verge
- The west expansion joint and its fill
- The East mechanical expansion joint
- Bridge deck parapet edge beam
- Bridge Deck Slab or its formwork

Any areas not tested should be presumed ACM

PAK testing on the bridge in 2015 tested for presence of tar-bound materials. All samples returned negative.

2.1.3 The Drawings and documents 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
HE605473-KIER-SBR-M5_BR_21296-DR-CB-010001 P01	Location Plan	P01
HE605473-KIER-SBR-M5_BR_21296-DR-CB-010002 P01	Statutory Undertakers Plan	P01
HE605473-KIER-SBR-M5_BR_21296-DR-CB-010003 C01	Trial Pitting Location Plan	C01
21296_Pitmill Bridge General Arrangement_Z_00-09-1997_(Id30106) C/9107/B03/01Z	General Arrangement (1993)	C01
M5/86.70/AAP/	Area 2 Asbestos Action Plan (NB off slip)	Rev 0/ May 2015

11A_M5(SW)_86.70_21296 Pitmill Ln Bridge (asbestos rpt)	Asbestos Refurbishment Survey	Rev 0/ March 2015

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 working between 2100 – 0500.

3.2.2 Works to be undertaken under full closure of the slip road.

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.

3.3.3 For details of the CDM duty holders, refer to the pre-construction information which can be found in Pre-Construction Information - Pitmill provided as part of the survey package.

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) The timing of the works will be subject to the availability of road space, traffic management and any site-specific environmental constraints.

(iv) The survey report should be available within two weeks of the completion of the fieldwork.

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) 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 Client to provide 'services and other things.

(v) Key dates for co-ordination with Others.

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

(1) Works to be undertaken under full closure of the slip road at nights. Working window will be between 2100 - 0500.
(2) Traffic management requirements will be finalised during mobilisation.

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

(1) Welfare facilities will be provided by the principal contractor.

6 SPECIFICATION FOR THE WORKS

6.1.1 The *Contractor* shall undertake the works in accordance with:

- Volume 5 Section 3 Part 4, Section 6 of the MCHW "Specification" dated August 1997.
- The site-specific information provided in Section 6.1.2 below.

6.1.2 The Contractor shall carry out Trial Hole investigations on the structure at locations shown in drawing HE605473-KIER-SBR-M5_BR_21296-DR-CB-010003 C01.

(1) Trial Holes are required to confirm:

- Depth of surfacing
- Expansion joint Geometry
- Expansion Gap Dimensions
- Width of ballast wall
- Position of service ducts i.e. distance from inside face of parapet plinth
- Diameter & spacing of service ducts
- Depth of cover to service ducts
- Presence of cables in service ducts

(2) A CAT scan shall be carried out to detect below ground services prior to trial pitting.

(3) All trial holes must be excavated by suitably trained and competent persons (Category B) in accordance with the Control of Asbestos Regulations (CAR) 2012.

(4) A trial hole (TP09) to be located in west soft verge behind south abutment to determine if any cables feed into service ducts in west concrete verge over the structure.

(5) Where Services are found, they must be exposed to allow material, size, depths and spacing to be accurately measured in line PAS128.

(6) Care must be taken not cause damage to the structure. Any accidental damage shall be notified to the relevant highway authority. Repairs of any accidental damage shall be the responsibility of the Contractor and shall be agreed with Highways England.

(7) Prior to reinstatement of trial holes concrete deck surfaces to be coated with two coats of bitumen paint.

(8) Trial holes in the carriageway to be reinstated using hot HRA material, prior to reinstatement the base of the trial pit should be clean of debris and a bitumen-based sealant should be applied to all surfaces.

(9) Trial holes in the concrete verges to be reinstated using ST4 concrete.

(10) Trial holes in soft verge to be reinstated as follows:

- 100mm – 1000mm depth – On completion of works, backfill trial pits with subsoil in layers no greater than 150mm thick and well compacted.
- 100mm (soft verge) – Replace previously removed topsoil and lightly compact.

(11) Contractor to feedback any concerns for clashes between proposed works and any STATS or existing highways furniture.

(12) Site trial hole logs, including full dimensions and photographs of the excavated details, shall be produced by the Contractor to record the data required by this specification.