National Asset Delivery
Technical Surveys and Testing

M69 SB M1 to J1 Pavement & Lining
Stage 1 – Coring and DCP

Works Information

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Original version issued with tender	GB	

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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 Coring, Pak marker testing and the potential for additional PAH and WAC testing, Dynamic Cone Penetrometer (DCP) and Unbound Material Sampling (UMS) at the locations stated in HE601892-KIER-HPV-M69_ML_M1_JN1_B-SH-CH-01 Schedules and Plans and provide subsequent reports and testing in accordance with the requirements detailed in the specification.

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) Coring & DCP

(2) UMS & Moisture Content Testing

(3) Pak marker testing

(4) Reinstatement of core holes

(5) Subsequent potential testing for PAH or WAC Criteria

(6) Storage of cores

(7) Disposal of cores

(8) Coring backfill requirements:

(9) Fully flexible – Cold asphalt

(10) Flexible composite – Quick set concrete with at least 180mm asphalt on top

(11) Rigid with no asphalt surfacing - Quick set concrete

(12) Rigid with asphalt surfacing - Quick set concrete at least 180mm asphalt on top

(13) Note all cold asphalt is to be compacted mechanically with a Kango.

(14) Contractor to propose the temporary traffic management they require. Once agreed Employer will provide the temporary traffic management.

1.3 Deliverables

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

Coring

(1) Core logs should at least contain following information:

(2) Core Number

(3) Core Location (chart section, section chainage, marker post, position of core, lane, traffic direction, GPS coordinates)

(4) Total core thickness

(5) Thickness of each individual layer

(6) Any missing layers

(7) Material description of each individual layer

(8) Condition of each individual layer (e.g. intact, voided, disintegrated, cracked, etc.)

(9) Condition of the bonding between layers

(10) Aggregate type of each individual layer

(11) PAK-marker result of each individual layer as a positive or negative reaction

(12) Nature of the material at the bottom of the core hole (e.g. crushed stone, gravel, etc.)

(13) Photographs from a minimum of two angles

(14) Photograph of the top of the core showing the surfacing

(15) Photograph of core hole

(16) All the cores should be kept for 12 months from the date of receipt of the core log for potential further required testing. They should be kept in the appropriate temperature and moisture content as per the standard laboratory practices.

(17) All details are to be provided within a month of undertaking the surveys and supplied in electronic format. And kept by the contractor for a period of 1 year from the date of the original submission.

PAH & WAC test requirements

(18) Following the Pak marker testing the designer may request subsequent testing for Tar bound materials PAH 17 (USEPA 16 + Coronene) + Leachable Phenol (in line with the Adepts guidance " Managing Reclaimed Asphalt - Highways and pavements) dependant on the results WAC testing to determine disposal category.

Dynamic Cone penetrometer (DCP)

(19) DCP result should at least contain following information:

(20) DCP Number (same as the corresponding core number)

(21) Location (same as coring requirements)

(22) Hole depth below ground surface

(23) Thickness of disturbed material (where applicable)

(24) Layer thickness

(25) Accumulated No. of blows

(26) Strength (mm/blow)

(27) Calculated CBR

(28) CBR graph

Unbound Material Sampling (UMS)

(29) Confirm the foundation material types, their layer thickness and performance properties.

(30) Unbound material sampling is to be undertaken through the base of the core. The UMS shall not exceed a depth of 1.5m beneath the pavement surface.

(31) Moisture content test.

1.3.2 The Contractor shall provide the results of the surveys in the format as detailed in requirement 6.1.2 of this document.

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.

Drawing Number	Title	Revision / Date
HE601892-KIER-GEN-M69_ML_M1_JN1_B-DE-Z-0000-01	Location Plan	P01
HE601892-KIER-HPV-M69_ML_M1_JN1_B -SH-CH-01 Schedules and Plans	Coring/DCP/Deflectograph/UMS Schedule and Plan	
HE601892-KIER-VGN-M69_ML_M1_JN1_B -DE-CH-0000-01 to 13	Coring/DCP/Deflectograph & UMS Plans	
HE601892-KIER-VUT-M69_ML_M1_JN1_B -DE-Z-2700 01 to 16	Statutory Undertakers Drawings	P01

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 05:00

3.2.2 Weekend working shall be permissible

3.2.3 Provisional Road space availability begins on the 13/07/20 at 20:00 and ends on the 17/07/2020 at 05:00.

3.2.4 Refer to environmental assessment.

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 When implemented, 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 here HE601892-KIER-GHS-M69_ML_M1_JN1_B -HS-ZS-01_Pre-Construction Information.

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)

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) 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:

(i) Assumed traffic management for this is as follows;

- Varying lane/hard shoulder closures for main carriageway as required.

(ii) *Contractor* to liaise with *Employer* regarding the Temporary traffic management they require to carry out the works.

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

(i) Welfare facilities will be provided by the Principal Contractor
(ii) Desktop search for utility information (PAS128 Type D) survey. This information will be provided to the contractor at the pricing stage. The contractor is not required to send out for this information again.

6 SPECIFICATION FOR THE WORKS

6.1.1 The *Contractor* shall undertake the works in accordance with National AD Technical Surveys & Testing contract documentation as well as the additional requirements:

6.1.2 Coring Surveys in accordance with DMRB CS 229.

6.1.3 Dynamic Cone penetrometer in accordance with DMRB CS 229.

6.1.4 UMS (Unbound material sampling) in accordance to BS 5930:2015. Moisture Content tests to BS 1377-2 (partially superseded by BS EN ISO 17892-1 and BS EN ISO 17892-2) and BS 812-109

6.1.5 PAH 17 (USEPA 16 + Coronene) + Leachable Phenol (in line with the Adepts guidance “Managing Reclaimed Asphalt - Highways and pavements).

6.1.6 Waste acceptance criteria testing (WAC) to determine waste classification for disposal in accordance with EA guidance WM3 "Guidance on the classification and assessment of waste", (1st Edition 2015) and WAC classification testing is then to be carried out to confirm or deny suitability for a specific type of landfill site.