National Asset Delivery
Technical Surveys and Testing

Works Information for 603427 - M5 River Tone MP 206/0 Deck Refurbishment – Asbestos Testing

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Original version issued with tender	ET	27/01/21

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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 complete a desktop review of the existing asbestos information available and to conduct further site investigation at location shown on drawing HE603427-KIER-VGN-M5_BR_1855-SK-CB-0101, and any additional potential areas identified as part of the desktop review in order to establish if there are any ACMs present that may be affected by the proposed deck refurbishment scheme

(1) The survey works should include:

i. Removal of the plug joints (including waterproofing and steel plate) at the south end of the structure within the hard shoulder against the kerb line so the joint caulking material can be inspected

ii. Check presence and test of potential material in the air gap below mechanical joint at north end of the bridge. This is to be achieved by accessing the air gap from the bearing shelve gallery below the structure of the mechanical joint rubber at the north end so that the caulking material can be investigated. **NOTE the bearing gallery under the structure is locked. Suitable arrangements should be made in advance of the works for the area to be accessible to the contractor and cleared of potential needles and sharps if required.**

iii. Inspection/sampling of the polysulphide sealant within the parapet edge beams.

iv. Lift and inspect kerb drainage units at the out outfall and associated connected chambers in the vicinity to check for asbestos.

v. Any other areas identified during the desktop study that have not been tested or identified in the list above.

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) Complete a desktop study of the existing asbestos information to identify any additional areas that may require testing other than those highlighted on drawing HE603427-KIER-VGN-M5_BR_1855-SK-CB-0101 and in paragraph 1.1.1 (1) i. to v.. **The Asbestos survey Contractor shall seek approval from the *Employer*'s Project Manager regarding the cost of the additional testing in advance of the works.**

(2) Complete a targeted asbestos survey on site. Testing to include detailed areas on drawing HE603427-KIER-VGN-M5_BR_1855-SK-CB-0101 and any additional areas highlighted from the desktop study and **as agreed with the PM.**

(3) When excavating from carriageway level, the contractor is also to record:

i. The depth of surfacing material

ii. The depth of waterproofing material (if present)

iii. The clear width of the gap between the joint and the abutment.

(4) The Contractor is required to submit details of the method of works and material to be used to reinstate the existing joint material (steel plates and asphaltic plug joint material) to the *Employer* for approval prior to the start of the work.

(5) Report back results/findings of the Asbestos testing carried out.

(6) There are a number of services in the area including:

i. Motorway communication cables located in the southbound carriageway verge.

Note, the successful survey contractor should consult with the Principal Contractor of the M5 Queue Detection Scheme during mobilisation to determine if any new services have been installed or existing STATS slewed/relocated as part of the works but not yet noted on the STATS returns.

For details of current services refer to drawing HE603427-KIER-SBR-M5_BR_1855-DR-CB-010003

Deliverables

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

(1) A copy of the completed desktop study report

(2) A copy of the targeted asbestos survey report including the locations of where samples were taken from and test results.

2 EXISTING INFORMATION

2.1.1 Bridge Deck

(1) As shown on the as-built drawings, the deck is a multicellular post-tensioned deck varying in depth longitudinally. The position of the post tension cables vary along the length of the bridge and are nearer to the surface at the piers and end of the deck. The contractor shall not remove structural concrete as part of these investigation works.

2.1.2 Expected depths of excavation

(2) Previously completed trial holes on the bridge deck suggests that the depth of surfacing varies between 60-90mm (at the bridge joint upstands) and between 100-120mm (on the bridge deck).

2.1.3 **Anticipated existing services**

(1) Motorway Communication cables located in the Southbound carriageway verge

For details of current services refer to drawing HE603427-KIER-SBR-M5_BR_1855-DR-CB-010003

2.1.4 **Asbestos**

An asbestos management survey was completed on the Central Reserve in 2016.

The initial AAP was then complied on 6th June 2017 with a further Asbestos Management survey being completed 7th June 2017.

Elements not covered by current AAPs and testing.

- Whilst one of the mechanical joints have been inspected and the caulking material was polystyrene (a known non ACM) the other Mechanical joint has not been inspected.

- whilst the metal plate on the plug joints were lifted and sealant sampled, the plug was not removed to inspect the caulking material within the joint.

- the Polysulphide Sealant in the edge beam has not been inspected/ tested.

- A pitchfibre pipe on the outlet of manholes 02 on the southbound carriageway could not be accessed for inspection and therefore is presumed to be pitchfibre containing chrysotile.

- Outfall of kerb drainage units and associated connected chambers

The purpose of the survey is to further investigate those areas listed above and any other areas identified during the desktop study.

2.1.5 **Tar**

Tar is not expected to be present as samples have been previously taken on both carriageways which reveal that surfacing material was negative for Tar.. However, Complementary PAK testing is to be s completed as part of the trial holes investigation.

2.1.6 **The Drawings listed below apply to this contract**

Existing As-builts – 1998 Deck Refurbishment and Abutment Inspection Gallery construction

Drawing Number	Title
BP10335.013-0101B	GENERAL ARRANGEMENT

BP10335.013-0103A	DETAILS OF CONSTRUCTION PHASES 2 OF 2
BP10335.013-0104A	PARTIAL DEMOLITION AND EXCAVATION DETAILS
BP10335.013-0105A	DECK REFURBISHMENT AND PARTIAL DEMOLITION DETAILS
BP10335.013-0106A	DETAILS OF PIER PARTIAL DEMOLITION
BP10335.013-0108A	NORTH AND SOUTH ABUTMENT OUTLINE DETAILS
BP10335.013-0109A	BUTTRESS REINFORCEMENT DETAILS
BP10335.013-0110A	ABUTMENT REINFORCEMENT DETAILS 1 OF 2
BP10335.013-0111A	ABUTMENT REINFORCEMENT DETAILS 2 OF 2
BP10335.013-012B	ABUTMENT BEARING DETAILS
BP10335.013-0113B	DRAINAGE DETAILS
BP10335.013-0114A	MISCELLANEOUS DETAILS

Relevant Historical As-Built

Drawing Number	**Title**
405/203/B15/10/8	Post Tensioning Details

Scheme Drawings

Drawing Number	**Title**	**Revision**
HE603427-KIER-SBR-M5_BR_1855-DR-CB-010001	Location Plan	C1
HE603427-KIER-SBR-M5_BR_1855-DR-CB-010003	Statutory Undertakers Plan	C1
HE603427-KIER-VGN-M5_BR_1855-SK-CB-0101	Trial Hole Locations and Asbestos Testing	C1

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 are anticipated to be 21:00-05:00, working under a series of lane closures with a temporary speed limit of 50mph. The anticipated working hours are dependent on the carriageway traffic counts.

3.2.2 **Work Constraints**

(1) Trial holes conducted previously on the structure have shown that the concrete deck is in poor condition in places. As such, care should be taken whilst any excavation works are completed. All excavations should be dug by hand using mechanical hand tools (i.e. small breaker). The contractor should ensure that the holes are regularly cleaned out whilst breaking is carried out to ensure that no further concrete is damaged.

(2) The contractor is to be aware of the presence of post-tension cables in River Tone bridge deck as mentioned in 2.1.1 and as shown on as-built drawing. The contractor shall develop a suitable method of works and is not to remove any structural concrete as part of these survey works.

(3) The concrete deck is made of reinforced lightweight concrete which is cast over the top of polystyrene void formers and contains reinforcement on some locations. At no point should any concrete be removed from the bridge deck (under the waterproofing material) as part of the works.

(4) Whilst the majority of the proposed works are confined to the bridge decks, the contractor will need to access the inspection gallery under the structure to inspect the mechanical joint caulking material. The contractor should be aware that there is record and evidence to suggest that under the bridge is a hot spot for anti-social behaviour and drug paraphernalia. Operatives should be briefed on this as part of the site induction. The *Employer* is to arrange suitable access and for both inspection galleries to be cleared of needles/sharps if required.

(5) The off-slip for junction 25 is located shortly after River Tone (the 100 yard marker is located at the end of the bridge). The closure of this off-slip will need to be considered when planning the series of lane closures and, if required, should be closed during the works.

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 is included as part of the TST 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.

(1) Vegetation within the footprint of the surveys has the potential to support dormice and nesting birds (depending on the time of year the survey works are carried out). The *Employer* will advise on possible restrictions/constraints once a date is confirmed and clearance levels have been specified.

(2) The area beneath the bridge is utilised as a foraging ground and commuting route by bat species. Any task lighting used for night working should be focused on the works area only and not allowed to spill onto the surrounding habitat, in particular the river corridor beneath the bridge.

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.

The contractor should refer to the Pre-construction information and Design Hazard Checklist and Risk Reduction Schedule provided as part of the TST package.

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:

- Adjacent site activities
- When information will be provided back to the *Employer*

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

(1) A series of lane closures with a temporary speed limit of 50mph If works are being completed in the Hard shoulder/Lane 1 then Lane 2 should also be closed with Lane 3 open to traffic. If works are being completed in Lane 3 and the Central Reservation then Lane 2 should also be closed with traffic running in lane 1. A lane 3 closure should also be provided on the opposite carriageway when works are being completed in the Centre reservation.

(2) (2) Traffic management requirements will be finalised during mobilisation with the successful contractor.

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 the guidance set out by the HSE within HSG264, CAR 2012 Regulation 8, GG 105 and all other relevant standards.

6.1.2 All reports including photos and survey findings should be provided in a PDF format on completion of the works. Sampling and lab testing reports should also be provided.