



City Procurement

Procurement Options Report

Tower Bridge Re-decking and Approach Viaduct Works 2016

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1 Introduction

The bascules on Tower Bridge are currently constructed of riveted steel girders and decking plates, above which the carriageway is formed by timber decking above polyurethane block fill. This fill construction form (above the original steel structure) has been in situ for approximately 50 years and the current condition of both the polyurethane blocks and the top surfaces of steel girders and decking plates is currently unknown. The timber decking to the bascules has reached the end of its service life and requires replacement.

In addition, water ingress to the approach viaduct arches are a nuisance to tenants and have the potential to cause deterioration of the structure.

The City of London have term contracts with AECOM who are engaged as a structural consultant and J B Riney who undertake Highways Maintenance; neither of these contracts have the capacity; in line with the procurement undertaken to incorporate the substantial repair/maintenance works proposed below.

1.1 Associated papers

Tower Bridge Redecking Gateway 1&2
Tower Bridge Redecking Gateway 3

2 Executive summary

The aim of the projects is to carry out essential Civil Engineering maintenance works to Tower Bridge and its approach structures. The works will include; stripping down of the bascules' timber decking and fill, to expose the steelwork; repairs and repainting of steelwork and then reinstatement of the road build-up. Also, major excavation to the approach viaduct arches to provide a new waterproofing layer to these structures and mitigate current water ingress problems. At this early stage, the works are estimated in the region of £3.35m (including fees), as currently outlined in the BHE 50 year plan.

3 Options

3.1 Professional Services

The following services will be required:

- Exploratory/Condition investigation surveys: to be delivered by J B Riney under term contract (and/or by specialists) estimated at £80,000
- Client Engineering services (high level advice, outline design, checking and project management/supervision)– to be delivered by AECOM under term contract (value depends on design procurement option selected)
- Cost consultancy services: to provide client advice post gateway 3 and through the design and construction stages, estimated at £150,000
- Engineering Design: will require procurement, estimated c.10% of the contract value; options are considered below:

Option	Pros	Cons/Risks
1. Instruct AECOM under term contract.	Consistency of supply. Speed to market. Retention of knowledge.	Not within scope of original OJEU tender. Cost likely to exceed OJEU tender price. AECOM not able to dually act as Client Engineer.
2. Open procurement; invite companies to express an interest	Access to full market. Specialist designer can be procured.	Speed to market is not as short as other options. May not receive appropriate level of EOI (too many or too few)
3. Procurement via framework	Timescales are defined and framework is a compliant route to market	May not have the most appropriate suppliers
4. Transfer design responsibility to the contractor, with AECOM retained in a Client/checking role	Retains AECOM's long term & intimate knowledge of the structures in a checking role, whilst transferring design/procurement risks to the contractor	May not receive appropriate level of EOI from suitably experienced contractors with full design capability (too few)

3.2 Construction

Whilst the works to the approach viaduct structures are less specialist and within the capabilities of many medium-to-large Civil Engineering contractors, the timber and polyurethane components currently used in the bascule sections of the bridge itself are fairly “niche” items with a very limited supply base in the UK. The cost of these has been reviewed and purchase of the goods alone would require the majority of the budget allocation; therefore the City will need to investigate alternative products. In addition, strong consideration is given to using the services of an ECI/D&B contractor from the early stages of the project development, as the programming and methodology of the works in relation to road and river closures is considered to be critical to the success of the project.

3.2.1 Contractor Procurement Strategy

#	Option	Pros	Cons/Risks
1.	Traditional Approach (City procure a designer on the basis of a full design and contract supervision role; then procure a contractor for works)	City's consultant is responsible for finding suitable or alternative products in the market. City retains ultimate responsibility for the design.	No contractor input on logistics or practicalities that could inform the design. Time consuming; City may not be able to find suitable or alternative products. Market currently not responsive to traditional approach. Any new product will require approval by English Heritage. Risk is retained by the City
2.	Two stage Design and Build (City procure a contractor who takes responsibility for both the design and build elements of the project from Concept stage – Gateway 3 onwards - until completion and handback). D&B contractor develops a fully priced solution based on open book tendering	Contractor is responsible for sourcing suitable or alternative products and develops the design and full scheme of works. Supplier can be incentivised to deliver within budget. Buildability is ensured. Risk is transferred to the Supplier. Invest supplier into the success of the project	Any new product will require approval by English Heritage. Retention of contractor from concept through to build may not realise benefits
3.a	Early Contractor involvement - City procure a contractor who provide guidance and support to the Project team from concept design to detailed design stage (GW3 to GW4 only), followed by procurement of a D&B contractor (3.b below) at GW4	Contractor provides specialist advice during concept phase only.	Requires additional procurement projects to be undertaken (time consuming)
3.b	Two stage Design and Build (City procure a contractor who takes responsibility for both the design and build elements from detailed design onwards (GW4+))	City responsible for finding alternative products in the market. Price certainly for construction element. Buildability is ensured. Risk is transferred to the Supplier	Any new product will require approval by English Heritage. Any knowledge and experience from the works contractor is not necessarily included in early stages of project.

3.2.2 Route to market

Option	Pros	Cons/Risks
1 – Framework	Speed to market. Suppliers are known to the City.	No appropriate framework has been identified.
2 – Open Tender	Allows for specialist contractors to bid for the works	Can be time consuming.

4 Recommendation

4.1 Professional Services

4.1.1 It is recommended that AECOM are instructed under the terms of their current term contract, to provide high level advice, design/supervision of exploratory investigations and checking services up to Gateway 5, followed by contract management and site supervision services on behalf of the City during construction (this will need to be decided based on the estimated value).

4.1.2 For the other professional services requirements (i.e. cost consultancy); which are standard services provided to the City on a regular basis; it is proposed that these will be procured via open tendering or approved frameworks.

4.2 Construction

4.2.1 It is recommended that an open tender for a two stage design and build contract (with early contract involvement) is undertaken following Gateway 3, with Contractors invited to bring ideas for innovation (option 2).

4.2.2 This will enable the City to explore the available suppliers on the market and ensure that the appropriate suppliers are contracted to deliver the works and allows the City to maintain an involvement/overview of any procurement of sub-contractors

4.2.3 The Contractor would be initially appointed post-GW3, working in liaison with AECOM to develop outline solutions, then taking these through to detailed proposals and a fully priced solution based on open-book tendering at GW5, for approval by the City, with a view to being appointed for the works post-GW5.

4.3 Terms and Conditions

4.3.1 The current contract with AECOM is based on NEC3 terms and it would be appropriate to keep this consistent and compatible with AECOM and the ECI and D&B Contractors; utilising pre-construction agreements as appropriate

4.3.2 The terms and conditions for other professional services will be also be based on NEC3 terms, or as dictated by any framework which is used to go to market.