Committees: Corporate Projects Board - for decision Planning & Transportation Committee - for decision Projects Sub - for decision Culture, Heritage & Libraries Committee – for information	**Dates:** 25 November 2019 12 December 2019 16 December 2019 20 January 2020
Subject: Tower Bridge Service Trenches Refurbishment **Unique Project Identifier:** 12197	**Gateway 2:** **Project Proposal** Regular
Report of: Director of the Built Environment **Report Author:** Mark Bailey	**For Decision**
PUBLIC	

Recommendations

1. Next steps and requested decisions	**Project Description:** Refurbishment of the 300m length of service trenches to the footways of the fixed spans of Tower Bridge. **Next Gateway:** Gateway 3/4 - Options Appraisal (Regular) **Next Steps:** a) Investigate available products/suppliers on the market for the replacement service covers. b) Consult with Local Planning Authorities with respect to bridge listing and heritage issues. c) Consult with Tower Bridge Technical/Operations Team and confirm all operational requirements, full scope of works and any restrictions. d) Identify and investigate technical options and prepare cost estimates. e) Consult with City Procurement on appropriate procurement options **Requested Decisions:** 1. That budget of £10,000 is approved for staff costs and

<table>
<tr><td></td><td>investigations to reach the next Gateway;
2. Note the total estimated cost of the project at between £300,000 and £500,000 (excluding risk).
3. Please note that no Costed Risk Provision is requested at this stage, although £120,000 of costed risks against asbestos and contamination are identified in the Project Risk Register. These will be reviewed at the next gateway following further investigations.</td></tr>
<tr><td>2. Resource requirements to reach next Gateway</td><td>
<table>
<tr><th>Item</th><th>Reason</th><th>Funds/ Source of Funding</th><th>Cost (£)</th></tr>
<tr><td>Staff Costs</td><td>Options Appraisal, liaison and management of investigations</td><td rowspan="2">Bridge House Estates 50-year Repair and Maintenance Fund</td><td>4,000</td></tr>
<tr><td>Investigations</td><td>Preliminary investigation to identify asbestos and other contamination risks</td><td>6,000</td></tr>
<tr><td>Total</td><td></td><td></td><td>10,000</td></tr>
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<tr><td>3. Governance arrangements</td><td>• Planning and Transportation Committee are the Service Committee responsible for the project
• The Senior Responsible Officer will be Paul Monaghan (Assistant Director Engineering)
• Project Board is not considered necessary for a low complexity maintenance project of this value and low risk</td></tr>
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Project Summary

4. Context	• The two “fixed” (or “shore”) spans of Tower Bridge include large covered service trenches in both footpaths, in order to service the North and South Towers, with a total length of trench approximately 300m.

	• The cast iron service covers have reached the end of their serviceable life and require replacement, due to pitting corrosion and other age-related defects leading to brittle fracture. Temporary replacements to a number of covers have been necessary in recent years due to structural failure upon removal for isolated maintenance works • The existing covers are extremely heavy and difficult to lift manually and/or without damage. The opportunity is being taken to consider low or zero-maintenance lightweight alternatives in composite materials, that will facilitate future maintenance and assist with compliance with modern manual handling regulations • Silt and detritus has accumulated within the service trenches over many years, due in part to the logistical challenges of lifting the covers for regular maintenance cleaning. The opportunity will therefore also be taken to remove accumulated silt, detritus and redundant services from the trenches, in the interests of future maintenance and resilience
5. Brief description of project	The project involves the refurbishment of approximately 300m of service trenches on the fixed spans of Tower Bridge, including:- a) Replacement of service trench access covers that have reached the end of their serviceable life b) Removal of redundant services within the service trenches c) Removal of accumulated silt/debris from service trenches and clearing of drainage outlets
6. Consequences if project not approved	• Further brittle failures of covers during lifting or maintenance operations are anticipated, given the aged condition of the covers and apparent defects. • Isolated replacement of these on an individual basis as-and-when failures become apparent is not an economic strategy in the long term, due to the need to manufacture bespoke units in small quantities at inflated costs • The considerable weight of the existing covers is a considerable logistical challenge to maintaining the service trenches, allowing for manual handling considerations and current health and safety regulations • As a result, maintenance cleaning of the service trenches to remove silt and redundant services from the trenches has been limited, which is a risk to future services resilience and the drainage of the trenches.

7. SMART project objectives	1) Replacement of existing covers with alternatives that mitigate manual handling risks for maintenance operatives and facilitate regular future maintenance/cleaning of service trenches 2) Replacement of existing covers with low or zero maintenance alternatives which reduce future revenue life-cycle costs 3) Removal of redundant services and silt from service trenches to improve future servicing resilience
8. Key benefits	1) Reduction in revenue costs for maintenance of the service trenches 2) Mitigation of health and safety manual handling risks to maintenance staff 3) Facilitating efficient and economic future maintenance of the service trenches on regular basis 4) Improving services resilience for Tower Bridge
9. Project category	7b. Major renewals, typically of a one-off nature (supplementary revenue)
10. Project priority	B. Advisable
11. Notable exclusions	The existing proposals and project budget do not include for replacing the cast-iron bedding frames and concrete plinths which support the existing covers. These appear to be good condition and would not be expected to deteriorate within the service life of the new covers, particularly if lightweight materials are used

Options Appraisal

12. Overview of options	1) Retain existing covers and replace on an individual like-for-like or similar basis when further failures occur 2) Replace all covers on a like-for-like or similar basis 3) Replace all covers using alternative lightweight/composite materials

Project Planning

13. Delivery period and key dates	**Overall project:** Expected completion in Q3/Q4 2020 **Key dates:** Estimated Gateway 3/4 Feb 2020 Estimated Gateway 5 June 2020 **Other works dates to coordinate:**. Project to be coordinated with all Tower Bridge projects referenced in the 50-year plan, particularly Tower Bridge HV Replacement Scheme
14. Risk implications	**Overall project risk:** Low The risk profile of this project is considered to be very low, as the project comprises only low complexity works to replace existing service trench covers, with associated silt removal and striping for redundant services from the service trenches. Further information available within the Risk Register (Appendix 2)
15. Stakeholders and consultees	1) Tower Bridge Operations/Technical Team 2) Tower Bridge Exhibition 3) Transport for London 4) Port of London Authority 5) Local Planning Authorities (and Historic England) *6)* Local businesses and residents

Resource Implications

16. Total estimated cost	**Likely cost range (excluding risk):** £300,000 to £500,000 **Likely cost range (including risk):** As above – no CRP requested at this stage	
17. Funding strategy	Choose 1: All funding fully guaranteed	Choose 1: Internal - Funded wholly by City's own resource

Funds/Sources of Funding	**Cost (£)**
Bridge House Estates 50-year Repair and Maintenance Fund	£300k to £500k
Total	£300k to £500k

Funding to this maximum value is already identified in the currently approved 50-year plan for Tower Bridge

18. Investment appraisal	Not applicable
19. Procurement strategy/route to market	Full consultation with City Procurement will be conducted prior to Gateway 3/4. However, given the low complexity of the project and the absence of any design elements, this project lends itself to construction under either the term contract or a competitively tendered traditional works contract.
20. Legal implications	None
21. Corporate property implications	This meets the following Asset Management objectives of the Corporate Asset Management Plan; • Operational assets are fit for purpose and meet service delivery needs • Capital and revenue projects are affordable, sustainable, prudent and directed to the highest corporate priorities • Align asset management activity with Service Committee's business plans to deliver asset related corporate and business objectives • To seek to improve the efficiency and sustainability of operational assets in accordance with corporate objectives and statutory requirements
22. Traffic implications	Subject to agreement with Transport for London, phased temporary lane closures (possibly overnight or at weekends) are envisaged so that construction vehicles and mobile lifting plant can access the working areas to remove existing covers and silt from the footways Similarly, phased temporary footway closures are envisaged, with dedicated road crossing points provided to divert pedestrians to the opposite footway at each end of the fixed spans.
23. Sustainability and energy implications	The use of replacement covers using lightweight composite materials from recycled material will be considered as part of the project development, in addition to low or zero-maintenance products for their design life.
24. IS implications	None
25. Equality Impact Assessment	Not applicable. An equality impact assessment will not be undertaken

26. Data Protection Impact Assessment	Not applicable

Appendices

Appendix 1	Project Briefing
Appendix 2	Risk Register

Contact

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