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Committees: Corporate Projects Board <i>for information</i> Planning and Transportation Committee <i>for decision</i> Projects Sub <i>for decision</i>	Dates: 25 November 2020 15 December 2020 17 December 2020
Subject: London Bridge Waterproofing and Bearings Replacement Unique Project Identifier: 12017	Gateway 6: Outcome Report (Regular Route) Regular
Report of: Director of the Built Environment Report Author: Trina Desilva	For Decision
PUBLIC	

Summary

1. Status update	Project Description: Replace waterproofing and bearings in north and south abutments on London Bridge RAG Status: Green (Green at last report to Committee) Risk Status: n/a Costed Risk Provision Utilised: £338,000 Final Outturn Cost: £2,804,000
2. Next steps and requested decisions	Requested Decisions: <ul style="list-style-type: none"> • Approve closing the project, providing the final account is agreed within £2,626,000 • Delegated authority is given to the Chief Officer to agree a settlement of disputed items, if this becomes necessary. • Delegated authority is given to the Chief Officer to use released but unspent CRP allocation (up to £61,000) to settle, if this becomes necessary.

3. Key conclusions	<p>The project was delivered early, and within the approved budget. Benefits sought from this project were:</p> <ol style="list-style-type: none"> 1. Reduction of leakage through the structure. 2. No risk to bridge movement from further deterioration of the bearing plates or the bearings themselves. 3. Minimised traffic disruption. <p>The waterproofing is working effectively, with increased water observed in the drains from the deck. The bearings appear to function correctly so far. Movement of the bridge will be more apparent as we go into the winter, as most of the movement is due to temperature changes.</p> <p>Traffic and pedestrian numbers were drastically reduced as a result of the Covid-19 lockdown, so there was minimal disruption as a result of the works. Ensuring the works continued through the lockdown avoided further disruption and narrowing of busy pavements.</p>
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Main Report

Design & Delivery Review

4. Design into delivery	<p>Some minor design changes were required on site. For example, the central reservation was found unsuitable for waterproofing, and was replaced.</p>
5. Options appraisal	<p>As a replacement project, options of how to carry out the works were limited. The project objectives were met, and similar work should not be necessary for another 25-30 years.</p>
6. Procurement route	<p>Early Contractor Involvement was used on this project, which identified that the existing accesses would be adequate for the job. This was followed by a competitive tender. There were no problems with either method of procurement.</p>
7. Skills base	<p>The project was managed by the Bridges Team, with the designers (AECOM) retained as Supervisor on the contract.</p>
8. Stakeholders	<p>There were very few complaints during the project, perhaps because the covid-19 lockdown reduced the numbers of pedestrians and vehicles on the bridge drastically. Stakeholders were kept informed throughout the project, with regular emails from the contractor and a webpage with monthly updates. FM Conway's post-works survey only attracted three responses, perhaps a</p>

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	reflection of the low numbers of commuters/tourists affected by the works.
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Variation Review

9. Assessment of project against key milestones	The Gateway 5 report projected a completion date of August 2020. Despite agreeing to TfL’s revised method of working, which should have increased the project duration by a month, the project finished on 11 September 2020.																																
10. Assessment of project against Scope	Shortly after tender award, TfL required a change in the method so the work would be carried out in three phases. The purpose of this change was to reduce the effect of the rush hour pedestrians on the traffic on the bridge. This was approved, and TfL contributed £180,000 to the works. The covid-19 lockdown started the week after our start on site, so I tried to get Transport for London to return to the original methods, given that there were very few pedestrians on the bridge. They would not agree to go back to two phases of work, in case there was a large return of pedestrians to the city.																																
11. Risks and issues	<p>The table below shows the original GW5 approved budgets for Costed Risk Provision (CRP), the amount requested and the amount used.</p> <table><tr><td></td><td>GW5 budget</td><td>Requested</td><td>Used</td></tr><tr><td>Joints damaged during works</td><td>30</td><td>0</td><td>0</td></tr><tr><td>Condition of concrete not acceptable</td><td>100</td><td>20</td><td>20</td></tr><tr><td>Third Party delays</td><td>200</td><td>27</td><td>0</td></tr><tr><td>Connections to adjacent properties</td><td>10</td><td>0</td><td>0</td></tr><tr><td>Replace entire Eastern footpath</td><td>218</td><td>218</td><td>157</td></tr><tr><td>Variation in quantities</td><td>75</td><td>73</td><td>73</td></tr><tr><td>Total</td><td>633</td><td>338</td><td>277</td></tr></table> <p>£277,000 has been used from the CRP, under delegated authority. A further £61,000 has been drawn down from the CRP but not spent.</p> <p>Without the Costed Risk Provision the project would have hit delays, as there were additional costs which needed to be agreed, particularly in the summer, when committees were not sitting. Being able to go for Director approval meant contract instructions could be placed without any delay.</p> <p>The pandemic was an unforeseen risk. There was potential for this to affect the supply of the bearings and the paving slabs. The work to the bearings did run a little later than originally planned but fortunately this was not on the critical path. We had contingency plans in case the paving was not supplied in time, but fortunately Conway’s were able to</p>		GW5 budget	Requested	Used	Joints damaged during works	30	0	0	Condition of concrete not acceptable	100	20	20	Third Party delays	200	27	0	Connections to adjacent properties	10	0	0	Replace entire Eastern footpath	218	218	157	Variation in quantities	75	73	73	Total	633	338	277
	GW5 budget	Requested	Used																														
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	get hold of the required quantity of stone in time for the eastern footpath to be relaid.
12. Transition to BAU	The original plan was for the bridge to be handed back to the City of London on completion. Transport for London were unwilling to revert to the original traffic signal timings (essential to remove the contraflow from the bridge). In the end it was agreed that TfL would take over the final works (removal of the traffic management and reinstatement of the central reservation) to avoid the City having to maintain the works until TfL could reinstate the signals. This was not the handover as envisaged, but it has allowed the City to avoid the costs for removal of the traffic management (£20k).

Value Review

13. Budget

Estimated Outturn Cost (G2)	Estimated cost (including risk): £5m Estimated cost (excluding risk): £4.28m (CRP first reported at GW3/4)
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All costs in £'000s	At Authority to Start work (G5)	Last Approved Budget
Fees	£97	£93
Staff Costs	£39	£43
FM Conway works	£2,261	£2,770
Other Works	£80	£164
Sub Total	£2,477	£3,070
CRP remaining	£633	£295
Total	£3,110	£3,365

Expected costs at completion are lower than the latest agreed budget, and are shown in Appendix 2.

The final account for these works has not yet been agreed. There are some disputed items remaining to be agreed between FM Conway and the City. The disputed costs are included in the figures quoted above for outturn cost. Negotiation of these disputed amounts may be necessary to avoid formal (and expensive) dispute resolution. It is recommended that delegated authority is given to the Director of the Built Environment to agree any negotiations needed to resolve these

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	<p>items. The cost of disputed items is within the £61k already approved for release from the CRP but unused.</p> <p>It is proposed that the project budget remains open until retention is paid (September 2021).</p> <p>Transport for London have met £180,000 of the project costs, this covers the moves of the hostile vehicle mitigation barriers on the bridge, and the changes TfL requested (three phases of work rather than the two originally agreed). The remainder of the works costs have been met by the Bridge House Trust.</p>
14. Investment	n/a
15. Assessment of project against SMART objectives	Please refer to section 16 below. No SMART objectives were set previously.
16. Key benefits realised	<p>The key benefits stated in the Gateway 2 report were:</p> <ul style="list-style-type: none"> • Reduced leakage will ensure the safety of the structure. • Repair of the bearings will ensure the structure can articulate without stress. <p>The project has delivered these benefits.</p>

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Lessons Learned and Recommendations

17. Positive reflections	<p>FM Conway prioritised this project even with the Covid lockdown in place. Potential delays in the manufacture and delivery of the bearings, and cutting of stonework, were eliminated and we were still able to complete the work ahead of programme. There were no instances of staff with symptoms, or having to self isolate, which could be a result of the new procedures introduced both from the City and from FM Conway.</p> <p>There were savings against the replacement of the paving on the east side of the bridge. This was due to the contract being remeasurable, so the rates tendered were used directly to build up the cost of this additional item. It is recommended that the savings against this item are used to offset the cost of disputed items.</p>
18. Improvement reflections	There were no significant 'lessons learned' to be noted for future projects.
19. Sharing best practice	All relevant information will be kept in the Bridges Team records.
20. AOB	n/a

Appendices

Appendix 1	Project Coversheet
Appendix 2	Approved and Expected Outturn Costs

Contact

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Appendix 1 – Project Coversheet

Project Coversheet

[1] Ownership & Status

UPI: 12017

Core Project Name: London Bridge Waterproofing and Bearing Replacement

Programme Affiliation (if applicable): n/a

Project Manager: Trina Desilva

Definition of need: Reduce leakage through the structure. Ensure structure is able to expand and contract as designed.

Key measures of success:

- | |
|--|
| 1) Reduction of leakage through the structure. Reduction of risk to stability of the structure from further leakage and corrosion. |
| 2) No risk to bridge movement (expansion/contraction) from further deterioration of the bearing plates or the bearings themselves. |
| 3) Minimised traffic disruption. |

Expected timeframe for the project delivery: March to October 2020

Key Milestones:

Are we on track for completing the project against the expected timeframe for project delivery? Y

Has this project generated public or media impact and response which the City of London has needed to manage or is managing?

The CoL media office have issued press releases and are involved as required with the project. There hasn't been any significant public or media impact.

[2] Finance and Costed Risk

Headline Financial, Scope and Design Changes: none.

'Project Proposal' G1-4 report (as approved by PSC and P&T June/July2018):

- Total Estimated Cost: £5 million
- Resources to reach next Gateway (excluding risk): £84,000
- Spend to date: none
- Costed Risk Against the Project: none
- CRP Requested: none
- CRP Drawn Down: none
- Estimated Programme Dates: Works on site August 2019 – January 2020

Scope/Design Change and Impact: none

Issues report (as approved by PSC 19/06/2019):

- Total Estimated Cost (excluding risk): £4,216,000
- Resources to reach next Gateway (excluding risk): no further amount requested
- Spend to date: £57,319
- Costed Risk Against the Project: £720,000
- CRP Requested: £720,000
- CRP Drawn Down: none
- Estimated Programme Dates: Works on site March to September 2020

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<p><i>Scope/Design Change and Impact: Programme moved forward to avoid conflict with works on Canon St, which would be part of the diversion route during the works.</i></p> <p>'Authority to start Work' G5 report (as approved by PSC November 2019):</p> <ul style="list-style-type: none"> • Total Estimated Cost (excluding risk): £2,475,000 • Resources to reach next Gateway (excluding risk): £2,475,000 • Spend to date: £57,319 • Costed Risk Against the Project: £1,330,000 • CRP Requested: £633,000 • CRP Drawn Down: none yet • Estimated Programme Dates: March – September <p><i>Scope/Design Change and Impact: Budget decreased in line with tenders.</i></p>
<p>Issue report (as approved by the Chairmen and Deputy Chairmen of PSC and P&T, February 2020):</p> <ul style="list-style-type: none"> • Total Estimated Cost (excluding risk): £2,730,000 • Resources to reach next Gateway (excluding risk): £2,730,000 • Spend to date: £66,000 • Costed Risk Against the Project: £1,330,000 • CRP Requested: £633,000 • CRP Drawn Down: none yet • Estimated Programme Dates: March – October <p><i>Scope/Design Change and Impact: TfL requested changes to the method of work, which would increase the total estimated cost to £2,731,000 and delay completion by four weeks.</i></p>
<p>Budget Adjustment (approved 25.03.2020)</p> <ul style="list-style-type: none"> • Total Estimated Cost (excluding risk): £2,730,000 • Resources to reach next Gateway (excluding risk): £2,730,000 • Costed Risk: £1,330,000 • CRP Requested: £245,000 • CRP Draw Down: none yet • Estimated Programme Dates: completion October 2020 <p><i>Changes and Impact: TfL funding for requested changes confirmed at £180,000. Anticipated need to replace all the paving on the east footpath. £245,000 of risk money released to cover replacement of the paving (£218,000) and part of the costs of the additional phase of works (£27,000).</i></p>
<p>Budget Adjustment (approved 19.08.2020)</p> <ul style="list-style-type: none"> • Total Estimated Cost (excluding risk): £2,730,000 • Resources to reach next Gateway (excluding risk): £2,730,000 • Costed Risk: £405,000 • CRP Requested: £388,000 • CRP Draw Down: £245,000 • Estimated Programme Dates: completion September 2020 <p><i>Changes and Impact: Approval given to extend FM Conway's contract to include reinstatement of the road to Transport for London's design. This will be an increase of £31,498.41 on the contract value. The 'third parties' budget will be used to cover this.</i></p>
<p>Budget Adjustment (approved 19.08.2020)</p> <ul style="list-style-type: none"> • Total Estimated Cost (excluding risk): £2,730,000 • Resources to reach next Gateway (excluding risk): £2,730,000 • Costed Risk: £405,000

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- CRP Requested: £338,000
- CRP Draw Down: £275,000
- Estimated Programme Dates: completion September 2020

Changes and Impact: Approval requested to extend the value of FM Conway's contract to cover potential variations in cost to a total value of £93,293. The 'variations in quantities' budget in the costed risk provision will be used to cover this.

Issues Report (approved 02.09.2020)

Approval given to enter a licence with Transport for London to ensure ongoing maintenance of the cycle separators to be installed on London Bridge.

Total anticipated on-going commitment post-delivery [£]: no proposed increase in maintenance costs

Programme Affiliation [£]: none

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Appendix 2 – Approved and Expected Outturn Costs

Description	Costs (£'000s)			Comments
Item	Last approval Aug 2020	Estimated outturn costs	Change	
Pre works costs	66	66	0	
Works costs				
Preliminaries	251	251	0	
Waterproofing	1367	1362	-5	
Bearings	388	388	0	
Access	0	0	0	
Traffic Management	348	356	8	Most of this is a disputed item, the removal of a traffic island
Replace broken paving slabs and kerbs	218	157	-61	Rates for estimate of replacement cost were higher than contract rates, a small area of paving was able to be reused rather than replaced
Costs to split working on east side of bridge			0	
Additional Prelims	37	37	0	
Additional TM	48	48	0	
Debris barriers	8	0	-8	
Revised TM drawings	4	4	0	
TM for HVM adjustment	19	0	-19	No additional TM required
Adjust Road Marking	2	0	-2	Covered by TfL reinstatement
Waterproofing additional mobilisation	23	23	0	
CCTV cameras	2	0	-2	Dummy cameras provided by TfL
Additional planing visit	24	0	-24	
Installation of new road layout	31	0	-31	Covered by TfL reinstatement
FMC works sub-total	2770	2626	-144	
Additional movement of HVM	64	56	-8	Original quote incorrect

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Third Parties	100	19	-81	Only one out of three CCTV cameras required moving to implement contraflow. No reinstatement costs, temp camera to remain until new permanent system is installed next year.
Fees/staff costs	70	60	-10	
Total cost	3070	2827	-243	