

Committee: Bridge House Estates Board	Date: 06 July 2022
Subject: Tower Bridge HV System Replacement and Increasing Resilience	Gateway 5 Regular Progress Report
Unique Project Identifier: 11520	
Report of: Joint Report of the City Surveyor and Managing Director of Bridge House Estates	For Information
Report Author: Devjani Bal CS 202/22	
NOT FOR PUBLICATION	

1. Status update	<p>Project Description: Refurbishment of the High Voltage (HV) and Low Voltage (LV) electrical infrastructure at Tower Bridge and increasing its power resilience (i.e., the secondary source of power in the event of a power failure). The project works comprise of replacing the HV & LV switchgear and transformers, segregating HV & LV services (via switch room on new mezzanine floor), replacement of existing HV cables, removing existing generator, provision of a new secondary HV supply North Shore and provide generator plug in connection point, together with existing South Shore HV cable route replacement.</p> <p>RAG Status: Red (Amber at last report to BHE Board. Increased due to the extended programme)</p> <p>Risk Status: Medium (Medium at last report to BHE Board)</p> <p>Total Estimated Cost of Project: The total estimated cost of the project is £7,459,408 (including risk) and £5,914,408 (excluding risk) as reported previously to the Board.</p> <p>Spend and Committed to Date: £5,749,262</p> <p>Funding Source: Bridge House Estates - Bridge Repairs Designated Fund</p> <p>Costed Risk Provision Utilised: a costed risk provision of £1,545,000 was approved at the last gateway. Risk provision utilised to date £222,811. The project remains within the approved budget including risk with inflation managed within the costed risk provision.</p> <p>Slippage: delay due to global shortage of long lead materials including HV Cables, circuit controls and analogue output card (this device controls equipment such as ventilation extract fans).</p>
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	<p>The issues are impacting procurement from the USA, Mexico, China, Thailand and Taiwan, the contractor has advised they require 31 additional weeks to the contract programme. This is in addition to the 9 weeks delay due to the extended period to agree the works contract.</p> <p>As a result, the revised completion date is April 2023. The delivery team are reviewing options to address this delay within the current proposal the contractor will complete works in December 2022 with a temporary solution in place for the ventilation extract fan.</p> <p>Therefore, the system would be operational but will require the contractor to return in April 2023 to install the permanent component and recommission the ventilation extract fan.</p>
<p>2. Key points to note</p>	<p>Next Gateway: Gateway 6: Outcome Report</p> <p>Key Points:</p> <ul style="list-style-type: none"> • Construction ongoing • Testing & commissioning to follow • Completion of works with temporary solution for ventilation fan: December 2022 • Completion of works: April 2023 • G6 Outcome Report: September 2023
<p>3. Reporting period</p>	<p>Oct 2021 to June 2022</p>
<p>4. Progress to date</p>	<p>1. CBRE (main contractor) commenced site works in accordance with the Contract Construction Programme.</p> <ul style="list-style-type: none"> • Mobilisation Period: November 2021 – December 2021 • Start on site: January 2022 • Completion: September 2022 (anticipated completion April 23) <p>2. Ongoing Construction works include:</p> <ul style="list-style-type: none"> • Electrical HV/LV upgrade works, including new HV supplies • Removal of existing generator, north shore • New generator plug-in point, north shore • Maintain bridge functionality throughout works • Installation of new mezzanine floor • New UKPN substation for the North shore secondary power supply • TFL /PLA Engagement in relation to the works deliveries and any works activities over the river • Discharge of Planning & Listed Building Planning Application conditions with Tower Hamlets and Historical England <p>3. CBRE have provided notice to CoL external project manager that the estimated project Practical Completion date be delayed until April 2023 due to a delay with HV and SCADA equipment.</p>

The SCADA equipment is a combination of hardware and software which operates and monitor electrical infrastructure. The global component shortage has impacted the progress of the works beyond the control of the CBRE and includes followings long lead items;

Long lead items	Planned delivery date	Forecast delivery date	Reason
HV Cables (North Supply)	04/04/2022	23/05/2022 (Delivered)	Global electrical equipment shortage
HV Cables (South Supply)	04/04/2022	22/06/2022	Global electrical equipment shortage
Ring Main Unit x 2 (Circuit Control)	20/04/2022	14/07/2022	Global electrical equipment shortage
SCADA Rockwell Power Supplies	17/05/2022	10/11/2022	Global shortage
SCADA Phoenix Equipment	19/05/2022	10/08/2022	Global shortage
SCADA Rockwell Analogue output cards	18/07/2022	23/03/2023	Global shortage

4. CBRE is currently in process of submitting an Extension of Time (EoT) request for the external Project Managers assessment. This will be when the SCADA equipment delivery dates are confirmed, allowing CBRE to update the project recovery programme. At present no financial claim for the EoT has been submitted by CBRE however additional professional fees will be incurred which will be managed within the project.

5. CBRE are currently working with the incumbent SCADA supplier, to review their programme mitigation options. Alternative SCADA equipment options were presented by CBRE and are currently under review and assessment by the project professional consultants (Mechanical & Electrical Consultant and external Project Manager).

6. The external Project Manager continues to closely monitor site progress and equipment delivery dates.

5. Next steps	<ul style="list-style-type: none"> • Construction ongoing • Assessment of alternative SCADA equipment options • Submission and review of Extension of Time request • Progress Report to BHE: January 2023 • Testing & commissioning • Handover & Completion • G6 Outcome Report: September 2023
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Appendices

Appendix 1	Project Coversheet
Appendix 2	Risk Register
Appendix 3	Cost Book
Appendix 4	Programme

Contact

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