

<b>Committees:</b> Planning and Transportation - <i>for information</i>	<b>Dates:</b> 18 February 2020
<b>Subject:</b> Bridge House Estates River Crossings Annual Update Report on Structural Inspection and Maintenance	<b>Progress Report</b>
<b>Report of:</b> Director of the Built Environment  <b>Report Author:</b> T Creed	<b>For Information</b>
<h1>PUBLIC</h1>	

<b>1. Status update</b>	<p>This report gives a general overview of the structural inspection and maintenance regime for the Bridge House Estates river crossings and associated structures during the 2019/20 financial year. This includes a summary of the inspections carried out, key maintenance identified, future Supplementary Revenue Projects required for the bridges and inspection contract renewal.</p>
<b>2. Key points to note</b>	<p>2019/20 was the sixth and final year of the inspection contract carried out by AECOM. A new six-year programme of inspections will commence in 2020/21 under a new contract following a competitive tender process (refer to separate report January 2020).</p>
<b>3. Reporting period</b>	<p><i>April 2019 to March 2020</i></p>
<b>4. Progress to date</b>	<p><b><u>Annual Inspections</u></b></p> <p>Every two years, each of the bridges is inspected in accordance with the Design Manual for Roads and Bridges, the industry standards for the design, assessment and operation of highway structures. Every third inspection of each structure is a Principal Inspection where every element is inspected in detail and at touching distance. The inspections are carried out by our consultant AECOM, managed by the District Surveyor's engineering team.</p> <p>Since April 2019, the following inspections have been carried out:</p>

- Southwark Bridge (General Inspection)
- Southwark Bridge Northern Approach (General Inspection)
- Southwark Bridge Southern Approach (General Inspection)
- Park Street Bridge (General Inspection)
- Duke Street Hill Footbridge (Principal Inspection)
- Blackfriars Bridge (Principal Inspection)

There were no new significant defects found in the general inspections and the information gathered from these will feed into the planned refurbishment of the Southwark Bridge approach in 2021.

The Principal Inspection of Duke Street Hill footbridge was carried out with no new significant issues identified.

The re-programmed Principal Inspection of Blackfriars Bridge commenced in December and is scheduled to be completed before the end of January. The inspection of this structure has been a significant challenge in recent years with the refurbishment of the adjacent railway bridge, installation of the cycle superhighway, installation of Hostile Vehicle Mitigation measures and now the presence of the Thames Tideway Tunnel site in the foreshore. This not only creates a physical restriction in terms of access but also removes the ability to close spans of the bridge without significantly restricting the project's ability to deliver and remove materials by river for all its riverside sites across London. In order to complete the Principal Inspection, specialist geospatial camera equipment has been used (from a boat) to identify any possible defects. Focused roped access teams have then been used to survey any issues in more detail as required.

The defects identified, and information gathered in these inspections are stored on BridgeStation; a specialist bridge asset management database used by all London boroughs. The information collated on BridgeStation then goes on to inform the 50-year Plan for Inspections and Maintenance.

### **Engineering Projects Since April 2019**

This year, as a result of third-party access restrictions, there have been no major engineering projects on site on the Bridge House Estates bridges. However, there are a number of significant projects which are being developed and are due on-site in the coming years. These include:

	<p><i>Bearing replacement at London Bridge (delayed as a result of gas works in Cannon Street)</i>  Inspections of London Bridge have identified a deterioration and cracking of the original bearings at the abutments of London Bridge on which the bridge sits. This project will replace the bearings and re-waterproof the bridge. The project due on site in March/April 2020</p> <p><i>Blackfriars Bridge Refurbishment</i>  The bridge is overdue a re-paint and some works are required to repair cracks in the parapet. This project has been delayed due to access restrictions from the adjacent Tideway Tunnel work site as described above. However, the tender process and subsequent contract award is due to take place in 2020.</p> <p><i>Southwark Bridge Approaches</i>  The refurbishment of the approach span of Southwark Bridge have been postponed due to the adjacent development works. This is now due to commence on site in 2021.</p> <p><i>Scour Protection</i>  The District Surveyor's engineering team have been working collaboratively with Tideway in obtaining bathymetric data of the bed of the river in the proximity of the bridges. This information has been gathered by Tideway but will help to inform the scope of any future scour protection works required. This information monitors all five of the Bridge House Estates' river crossings.</p> <p>It should be noted that there are several major maintenance projects, particularly related to the operation of Tower Bridge and funded from the 50-year plan for Repairs and Maintenance, which are also in progress and are reported on separately by the appropriate departments. A list of all the projects expected over the next three years was reported to this committee in January 2020 and is included for reference in Appendix 1 of this report.</p>
<p><b>5. Next steps</b></p>	<p>Over the last year, an extensive review has been carried out by the Engineering team in conjunction with AECOM to establish the useful expected remaining life of each bridge and when the replacement of each bridge should be considered. This rather unique study looks at the long-term cost implications of maintaining the stock and replacing the structures in the future. The information and analysis carried out as part of this exercise will now be used to inform a wider replacement strategy for the bridges.</p>

	<p>2019/20 was the sixth and final year of the structural Inspection and Maintenance contract carried out by AECOM. This year, the tender process for the next six-year contract was completed. This was reported to this committee in January 2020.</p> <p>In the early part of 2020/21, The Tideway Tunnel will be constructed directly beneath all five of the Bridge House Estates' river crossings. The Engineering team will continue to work very closely with the project to minimise any impact on the structures in both the short and long term.</p>
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### **Appendices**

<b>Appendix 1</b>	Capital & SRP Projects (expected in the next three years)
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### **Contact**

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## **Appendix 1**

<b>Table 1</b>	<b>Project</b>	<b>Starting Date</b>
Blackfriars Bridge	Parapet repairs /Painting	2019/20-2022/23
Southwark Bridge	Approach Spans Refurbishment Footway Strengthening	2020/21-2021/22 2021/22-2022/23
London Bridge	Bearing replacement/Waterproofing Scour Protection	2020/21 2020/21
Millennium Bridge	Cable re-tensioning (if required)	2021/22
Tower Bridge	High Voltage System Replacement Hydraulic Power Pack Replacement Domestic/Foul Water Drainage Sprinkler System Replacement Paint Touch-up Service Cover Duct Replacement	2019/20-2021/22 2019/20-2020/21 2022/23 2022/23 2021/22-2023/24 2020/21-2021/22
All Bridges	River Camera Projects	2020/21(TBC)