

# Change Control Notice

City of London Corporation, City of London Police



To be completed when the scope of a project / programme is going to change which will result in a change to outcomes, cost, timescales.

Title: Tower Bridge HV Project

CCN Ref No.	2	Date Raised	10.03.2021
Type of Change	Project Scope	Needed by	TBC
Senior Responsible Officer	Ola Obadara	Author	Leadenhall Project Management Ltd (Steve McConaghy)

<b>Reason for Change</b>			
<input type="checkbox"/> Client Request	<input type="checkbox"/> Contractors Request	<input type="checkbox"/> Designer Request	<input type="checkbox"/> PM Proposal
<input type="checkbox"/> Other (Please Specify)			

**Description of the proposed change**  
*Describe what change is required.*

**Summary of Change**  
At feasibility stage, a local Supervisory Control and Data Acquisition (SCADA) system was proposed to facilitate automatic and remote control of HV and LV circuit breakers, monitor demand and automate change-overs and monitor electrical meters for consumption data and power quality analysis only (Feasibility Report 3.1). This CCN (CCN02) relates to additional construction costs associated by SCADA Option 03.

**Background**  
Following discussions with the Tower Bridge Operations team and the incumbent SCADA contractor that installed the controls system for bridge lifting, an opportunity was identified to enhance the bridge lifting operation network resilience in line with the current electrical infrastructure proposals. There was also an opportunity to future proof the existing SCADA system for planned hardware works, as it currently contains multiple point of failures due to the age of the infrastructure.  
The City of London Corporation requested that AECOM carry out a feasibility study to investigate the potential options for the SCADA upgrade as part of the electrical infrastructure project. The feasibility study TBR-ACM-XXXX-TN-EL-00-4001 identified "Option 3 - Partial Integration of SCADA Control Systems" as the preferred option. The Tower Bridge Operations team and Project Board have confirmed that SCADA Option 3 offers the best approach with increased resilience.  
The information below sets out the requirement for the change control notice to deliver the additional scope and funding required

### Scope of Work

This CCN (CCN02) relates to additional construction costs associated with the supply and installation of the partly integrated SCADA system.

#### In summary:

Both the North and South LV switchboards will permit integrated SCADA controls and monitoring.

All SCADA interfaces will utilise the same application via the SCADA server.

SCADA redundancy will be achieved via a dual redundant server with two independent server rack cabinets containing a universal power source (UPS) and bypass switches.

Energy monitoring, trends and information will be provided by a dedicated energy monitoring software application, installed on the dedicated server.

An Ethernet network will provide connection to all devices including connections to the bridge lift programmable logic controller (PLC) system.

### Additional outcome of the change

#### *What benefit, outcome or mitigation will this change provide*

This change would in affect provide a single SCADA controls system for Tower Bridge. This change will mitigate any SCADA interface risks associated with the integration of 2no SCADA systems.

### What will happen if the change isn't approved

#### *Explain the impact and outcomes if the change isn't approved*

If this change is not approved, it is anticipated that the Tower Bridge operations team may not approve the installation of an independent SCADA system to facilitate automatic and remote control of HV and LV circuit breakers, monitor demand and automate change-overs and monitor electrical meters for consumption data and power quality analysis. It is also noted that the remaining SCADA system will require future update to provide a single site SCADA system and resilience.

### Project/Programme Impact

#### *Append any additional information such as breakdown of costs or revised project plans etc.*

Cost / Resources

Timescales

Outcomes

**Pre-Construction Programme Impact:** No impact refer to CCN 01.

**Pre-Construction Cost Impact:** No impact refer to CCN 01.

**Construction Programme Impact:** It is understood that this CCN shall not affect the estimated construction period.

**Construction Cost Impact:** It is estimated that this CCN shall increase construction costs by: **£346,000** which includes; sub-contractor OHP, Testing & Commissioning, BWIC, NPO, Combined Prelims, MC OHP, for Scada Option 3. This change will increase the overall project budget from £5,730,293 to £6,076,293 and will be funded from the Bridge House Estates Trust 50 Year Maintenance Fund for 2021 / 22.

### Project/Programme Review

#### *Will this change impact any of the following and therefore need to be updated*

Opportunity Outline

Organisational Impact  
Assessment

Change Impact Assessment

PID

N/A

## Risk Assessment

Type = Project, Service, Corporate, Regulatory

Likelihood = High, Medium, Low

Impact = High, Medium, Low

Mitigating Plan = Proposed options to address the risk

Description of Risk	Type	Likelihood	Impact	Mitigation Plan

## Project Approval Levels

< £500	< £5,000	> £5,000

## Funded By (Select as appropriate)

<del>Costed Risk</del>	Additional Funds - Bridge House Estates Repairs Designated Fund	<del>No Financial Impact</del>	<del>Local Budget</del>
<del>Other (Please Specify)</del>			

## Cost Estimate

Cost Consultant (Apply +/- 10% Tolerance)		Contractor	
Work Cost	N/A	Construction Costs	£346,000
Fee's	N/A	Professional Fee's	N/A
Total OMIT/ADD £	N/A	Total Cost (ex VAT)	£346,000

Proposed Fee	Drawing	Design/Time
Architectural Comments: N/A - No implication on architectural design.		

Proposed Fee	Drawing	Design/Time
M&E Comments:		

Proposed Fee	Drawing	Design/Time
<b>Project Management Comments:</b> No additional design fees are applicable to the this CCN. Refer to CCN01 for SCADA Option 3 project team design development fees. The current SCADA design proposals align with SCADA Option 03 design proposals and quotation approved under CCN01. SCADA Construction costs associated with this CCN have been market tested and confirmed by Currie & Brown as part of the project Pre-Tender Estimate process.		

Proposed Fee	Drawing	Design/Time
Cost Consultant Comments:		

Authorisation		
Name	Role	Date Approved
NAVDEEP BHAL	Project Manager	11/03/21
OLA OBADARA	PPG Director	22/03/21
	SRO/Project Board	
Jamie Bottono	Tower Bridge Operations Manager	22/03/21

