

Project Briefing

Project identifier	
[1a] Unique Project Identifier	[1b] Departmental Reference Number
[2] Core Project Name	<i>BEMS Upgrade Project-CPG Estate – Phase 2</i>
[3] Programme Affiliation (if applicable)	<i>BEMS Upgrade Project CPG Estate</i>

Ownership	
[4] Chief Officer has signed off on this document	Paul Wilkinson
[5] Senior Responsible Officer	James Rooke
[6] Project Manager	Brendan Crowley

Description and purpose																																																																			
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<p>The City Surveyor's Corporate Energy Team has oversight of the Building Energy Management System (BEMS) which monitors and controls the HVAC plant (& other engineering systems) across the CPG estate. We have commissioned Schneider Electric to conduct a condition survey of 5 sites which remain on the obsolete legacy BEMS system and are vulnerable to system failure. This is the second phase of a larger estate-wide upgrade of the corporate BEMS. This involves the replacement of critical end-of-life components for core services – heating cooling and ventilation and life-safety systems. The BEMS upgrades of these sites supports the Climate Action Strategy (CAS) by providing the backbone for a Smart Buildings network and will be an essential tool to control and monitor the City's buildings into the future – allowing us to quantify the effects of the many carbon reduction projects planned as part of the CAS. This project supports the Climate Action Strategy by offering state of the art technology to optimise the operation of energy intensive building services. This is a business resilience project not a direct energy efficiency project (this is reflected in the modest direct energy savings shown the table below) however, the new BEMS system will prevent the inevitable and significant energy waste resulting from a legacy system failure causing plant to be operated out of control 24/7. A failure will also prevent visibility of the plant on site increasing the risk of energy waste and increased Co2 emissions especially important on these sites as not all have full time maintenance teams. The new system will be providing vastly improved energy management capabilities & ability to integrate with other building systems including IoT devices and sensors. Energy and maintenance savings resulting from the project are estimated to be in the region of £12,000/ann.</p> <p>Below is a breakdown the total project cost for <i>BEMS Upgrade Project-CPG Estate – Phase2</i>:</p>																																																																			
<table border="1"> <thead> <tr> <th>Site</th> <th>Est. Savings kWh/ann</th> <th>Est. Savings £/ann.</th> <th>Est. Carbon Savings TCo2e/yr.</th> <th>Est. Reactive Maintenance Savings £/ann.</th> <th>Total Est. savings, £/ann.</th> <th>Estimated Project Cost (excl. Risk)</th> <th>Total project est. Cost (incl. Risk)</th> <th>Request for Central Funding</th> </tr> </thead> <tbody> <tr> <td>HARC</td> <td>76,230</td> <td>£3,855</td> <td>10</td> <td>£3,422</td> <td>£7,277</td> <td>£128,230</td> <td>£150,859</td> <td>£150,859</td> </tr> <tr> <td>The Warren</td> <td>22,045</td> <td>£915</td> <td>3</td> <td rowspan="4">£2,069</td> <td rowspan="4">£4,078</td> <td rowspan="4">£122,450</td> <td rowspan="4">£99,453</td> <td rowspan="4">£99,453</td> </tr> <tr> <td>The View</td> <td>12,112</td> <td>£509</td> <td>2</td> </tr> <tr> <td>Harrow Rd Pavilion</td> <td>5,632</td> <td>£384</td> <td>1</td> </tr> <tr> <td>The Temple</td> <td>4,730</td> <td>£202</td> <td>1</td> </tr> <tr> <td>Total</td> <td>120,749</td> <td>5,865</td> <td>17</td> <td>5,491</td> <td>11,355</td> <td>250,680</td> <td>250,000</td> <td>250,000</td> </tr> <tr> <td>City Cash Total</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>£150,000</td> </tr> <tr> <td>City Fund Total</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>£100,000</td> </tr> </tbody> </table>	Site	Est. Savings kWh/ann	Est. Savings £/ann.	Est. Carbon Savings TCo2e/yr.	Est. Reactive Maintenance Savings £/ann.	Total Est. savings, £/ann.	Estimated Project Cost (excl. Risk)	Total project est. Cost (incl. Risk)	Request for Central Funding	HARC	76,230	£3,855	10	£3,422	£7,277	£128,230	£150,859	£150,859	The Warren	22,045	£915	3	£2,069	£4,078	£122,450	£99,453	£99,453	The View	12,112	£509	2	Harrow Rd Pavilion	5,632	£384	1	The Temple	4,730	£202	1	Total	120,749	5,865	17	5,491	11,355	250,680	250,000	250,000	City Cash Total								£150,000	City Fund Total								£100,000	
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[8] Definition of Need: What is the problem we are trying to solve or opportunity we are trying to realise (i.e. the reasons why we should make a change)?																																																																			

The Current BEMS platform is obsolete, end-of-life & increasingly unreliable. We intend to:

1. Mitigate the Business Risk posed by the failure of the obsolete system which monitors & controls critical plant (in some cases Life Safety Systems) with the installation a new, fit-for-purpose BEMS.
2. Mitigate this ris of increased C02 emissions to the Corporation with the upgrade of the system the latest BEMS platform, Schnieder EcoStruxure.
3. Invest in a modern, flexible & easily optimised control system for the CPG estate building assets. Bringing with it improved building energy preformance and, as such, supporting the Climate Action Strategy.
4. Use the new BEMS as a platform to implement further innovative smart building technologies and for it to control and monitor all remote sites from one central system at Guildhall – as was the case on the legacy BEMS Continuum.

[9] What is the link to the City of London Corporate plan outcomes?

[5] Businesses are trusted and socially and environmentally responsible.
 [7] We are a global hub for innovation and enterprise.
 [9] Our spaces are secure, resilient and well-maintained.
 [11] Our spaces are digitally and physically well-connected and responsive.

[10] What is the link to the departmental business plan objectives?

Property assets and facilities management: We will ensure buildings are fit for purpose, sustainable, safe and secure, providing access for all, meeting service needs and community expectations and delivering value for money through enhancing our efficiencies;

Links to City Surveyor’s Business Plan programme item 12 to “Implement the new Carbon Descent Plan, developing programme of energy efficiency projects across the Estate” & item 16 to “Deliver a rolling programme of reviews, rationalisation and optimisation of Facilities Management (FM) services, working in partnership with the FM corporate contractors.”

[11] Note all which apply:

Officer: Project developed from Officer initiation	N	Member: Project developed from Member initiation	N	Corporate: Project developed as a large scale Corporate initiative	N
Mandatory: Compliance with legislation, policy and audit	N	Sustainability: Essential for business continuity	Y	Improvement: New opportunity/ idea that leads to improvement	N

Project Benchmarking:

[12] What are the top 3 measures of success which will indicate that the project has achieved its aims?
 <These should be impacts of the activity to complete the aim/objective, rather than ‘finishes on time and on budget’>>

1. Have a fully reliable, resilient BEMS which meets customer needs for the 5 sites selected in phase 2
2. Have building assets that are optimised to operate as efficiently as possible via a new BEMS platform and via integration with energy management software, resulting in energy consumption savings.
3. Phase2 being the part of the development of a centralised BEMS command centre, where assets on all CPG sites are monitored and optimised centrally by a dedicated BEMS team based at Guildhall.

[13] Will this project have any measurable legacy benefits/outcome that we will need to track after the end of the ‘delivery’ phase? If so, what are they and how will you track them? (E.g. cost savings, quality etc.)

- The new/upgraded BEMS will be monitored post-commissioning by the Corporate Energy Team to verify it conforms to specification and meets site needs. Any deviations will be raised during the defects period with the commissioned contractor as appropriate.

[14] What is the expected delivery cost of this project (range values)[£]?

Lower Range estimate: £230,000
 Upper Range estimate: £250,000

[15] Total anticipated on-going revenue commitment post-delivery (lifecycle costs)[£]:

The maintenance of the current BEMS is managed via the building operations contract with Skanska, this will continue for the new system. It is expected that the cost of maintaining a new BEMS will be significantly less due to increased reliability of the new hardware and software.

[16] What are the expected sources of funding for this project?

- Central Funding: £250,000 of funding is requested.

[17] What is the expected delivery timeframe for this project (range values)? Are there any deadlines which must be met (e.g. statutory obligations)?

Lower Range estimate: 01/9/2022
Upper Range estimate: 31/6/2023

Project Impact:

[18] Will this project generate public or media impact and response which the City of London will need to manage? Will this be a high-profile activity with public and media momentum?

No

[19] Who has been actively consulted to develop this project to this stage?

<(Add additional internal or external stakeholders where required) >

Chamberlains: Finance	Hazel Lerigo, John James, Diane Merrifield
Chamberlains: Procurement	
IT	David Clelland
HR	
Communications	
Corporate Property	Alison Bunn, Daniel Tyler, Liam Boyle, Samantha Williams
External	Andy Waters (Schneider Electric)

[20] Is this project being delivered internally on behalf of another department? If not ignore this question. If so:

Please note the Client supplier departments.

Who will be the Officer responsible for the designing of the project?

If the supplier department will take over the day-to-day responsibility for the project, when will this occur in its design and delivery?

Client	Department:
Supplier	Department:
Supplier	Department:
Project Design Manager	Department:
Design/Delivery handover to Supplier	Gateway stage: <Before Project Proposal>, <Post Project Proposal>, <Post Options Appraisal>, <Post Detailed design>, <Post Authority to start work>