

Committees: Corporate Asset Sub Committee – For Information Projects Sub <i>Committee</i> – For Information PSDS Project Board – For Decision	Dates: 30 September 2021 15 September 2021 1 st September 2021
Subject: PSDS Project: Retrofit Accelerator – Workplaces PSDS Project Unique Project Identifier:	Gateway 3/4/5: Options Appraisal and Authority to Start Work (Regular)
Report of: City Surveyor Report Author: Chris Spicer, PSDS Programme Manager	For Decision (at PSDS Project Board)
<h1>PUBLIC</h1>	

1. Status update	<p>Project Description: Energy efficiency upgrades across Barbican, Guildhall and GSMD (Silk Street, Milton Court and Sundial Court).</p> <p>These works were included as a sub-project within the PSDS Project which was approved at GW2 on 15th March 2021. The purpose of this GW3-5 paper is to approve the recommended works and budget for this sub-project which can proceed separately to other PSDS sub-projects.</p> <p>Authority to enter into contract for this project was delegated to the City Surveyor, in consultation with the PSDS Project Board and the Building Chief Officer Group, at the Court of Common Council on 22nd July 2021.</p> <p>RAG Status: GW2 - Green</p> <p>Risk Status: G2 - Green</p> <p>Total Estimated Cost of Project (excluding risk): £6,277,735</p> <p>Change in Total Estimated Cost of Project (excluding risk): - £907,225 decrease on previous estimate, this is due to the GW2 report including budget costs based on estimates. The GW 3-5 costs are based on contractor quotes.</p>
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	<p>Spend to Date: £25,000k (from PSDS resource budget)</p> <p>Costed Risk Provision Utilised: None</p> <p>Slippage: None</p>
<p>2. Next steps and requested decisions</p>	<p>Next Gateway: <i>Gateway 6: Outcome Report</i></p> <p>Next Steps:</p> <p>This is a design and build contract which will be delivered by Vital Energi Utilities Ltd who are a specialist energy efficiency company with a long track record delivering carbon reduction projects. The contractor was selected following a competitive tender process from the GLA RE:FIT Framework. The key next steps before reaching Gateway 6 are as follows:</p> <ul style="list-style-type: none"> - Enter into Contract with Vital Energi - Deliver programme of works identified in the Investment Grade Proposal and develop additional projects to utilise underspend - Complete commissioning - Commence Measurement and Verification of savings <p>Requested Decisions:</p> <ol style="list-style-type: none"> 1. Approve Option 4, Investment Grade Proposal with option to allocate any remaining grant to additional projects, at an estimated cost of £6,277,734 (excluding risk) up to a maximum variation of 2. Agree an additional budget of £6,277,734, noting this will be wholly funded from the PSDS grant 3. Agree to award a contract for the works to Vital Energi Utilities Ltd at a cost of £6,277,734 and instruct the Comptroller & City Solicitor accordingly 4. Approve the request for Vital Energi to design other opportunities to spend any remaining PSDS grant which is not currently allocated, subject to agreement of these projects by the PSDS Board. This will be delivered through a variation (maximum 20%) to the contract and underwritten by the Energy Guarantee. Any design costs incurred will be agreed with the board and inclusive of the contract value 5. Note the estimated cost of £120,000 for Project Management support which will be funded from the PSDS Resource Budget, approved in the GW2 PSDS paper 6. Note the estimated cost of £43,000 for surveys and consultancy support, will be funded from the PSDS Resource Budget, approved in the GW2 PSDS paper 7. That a Costed Risk Provision of £450,000 is approved (to be drawn down via delegation to Chief Officer).
<p>3. Budget</p>	<p><i>Complete this section in consultation with your Head of Finance</i></p>

The total estimated cost for the PSDS project across all 11 sub projects within the contract is £6,727,734 including a CRP of £450,000. The cost for the project is broken down as follows:

<i>Item</i>	<i>Source of funding</i>	<i>Cost</i>
<i>PSDS Capital Works</i>	<i>PSDS Grant</i>	<i>£6,277,735</i>
<i>CRP</i>	<i>PSDS Grant</i>	<i>£450,000</i>

Project management and survey support will be met from the already approved PSDS Resource budget. It comprises:

<i>Commercial Review (Currie and Brown)</i>	<i>PSDS Grant</i>	<i>£9,950</i>
<i>M&V Review EEV's</i>	<i>PSDS Grant</i>	<i>£3637.50</i>
<i>Asbestos Surveys</i>	<i>PSDS Grant</i>	<i>£29,000</i>
<i>PM Resource</i>	<i>PSDS Grant</i>	<i>£90,000</i>

The total cost excluding risk is £6,277,735. This is expected to be the maximum cost for the project based on the contractors proposal, any exclusions have been allowed for within the Costed Risk Provision (see risk register for details), this includes asbestos management, potential for temporary plant and any additional builders work. The table below shows a breakdown of how the cost is allocated.

The proposal is £907,925 below (excluding CRP) the £7.2m budget originally included in the PSDS application. This is due to the GW3-5 costs being based on contractor quotes rather than budgets. Consideration is being given to using this funding for further projects. These will be reported to a subsequent PSDS Board for approval.

The project will be funded entirely through the BEIS PSDS Grant, which was awarded to the City of London Corporation in May 2021.

For recommended option 4 the cost for each energy conservation measure (excluding risk) is as follows:

Item	Funds/ Source of Funding	Supplier Cost (£)	Original Budget
BAC HVAC & BEMS	PSDS Grant	850,276	1,704,682

	BAC Lighting	PSDS Grant	1,262,334	1,348,542
	BAC Metering	PSDS Grant	557,699	320,617
	GSMD Silk St HVAC & BEMS	PSDS Grant	149,919	179,647
	GSMD Silk St Lighting	PSDS Grant	343,022	265,691
	GSMD Metering	PSDS Grant	Included in BAC Metering	180,312
	Guildhall Lighting	PSDS Grant	2,221,567	1,235,454
	Milton Court HVAC & BEMS	PSDS Grant	204,367	476,158
	Milton Court Lighting	PSDS Grant	314,905	1,043,471
	Milton Court Metering	PSDS Grant	Included in BAC Metering	213,526
	Sundial Court Lighting	PSDS Grant	188,506	216,859
	Draught Proofing	PSDS Grant	29,843	N/A
	Pipework Insulation	PSDS Grant	32,489	N/A
	Associated works (IGP and BMS Upgrade)	PSDS Grant	122,807	N/A
	Total		6,277,734	7,184,959
<p>The Guildhall Lighting costs have increased due to the requirement for bespoke luminaires within the chilled beam. These will need to be manufactured specifically to retain the same levels and appearance of the lighting within the Guildhall.</p> <p>Costed Risk Provision requested for this Gateway: £450,000</p>				

This includes the following:

Asbestos Management and Remediation – £300,000 for surveys and remediation of any asbestos identified during installation of the work

Builders work in connection – £50,000 to cover any unforeseen builders work required once installation is in progress this includes pipe freezing, making good, re-decoration

Temporary Plant - £50,000 to cover the provision of temporary heating plant if required

FM Support – £20,000 to cover any additional FM support from contractors for delivery of the project

Additional Resource - £30,000 to provide additional project management resource to ensure the project is delivered

Remaining Budget

It is expected that an estimated £420k of the PSDS Grant will be unallocated (or not currently required to fund the PSDS projects at GW5) although this is expected to increase as the CRP budget is released. We request approval for Vital to design additional projects which can be delivered by March 2022. These projects will be bought back to the PSDS Board for approval once the business case is developed. These will be delivered as variation to the main contract up to a maximum of 20% of the contract value.

The table below shows a summary of how the total £9.4m grant is being spent across the PSDS Programme:

Project	Current Budget (including CRP)
RAW	£6,727,734
Guildhall Ventilation	£1,187,601
BEMS Software	£138,939
Guildhall Cooling	£131,775
Guildhall Metering	£105,367
LMA Ventilation	£89,940
Energy Software	£49,000
PSDS Resource	£595,000
Unallocated	£420,588
TOTAL	£9,445,944

4. Overview of project options	<p><i>Option 1 (not recommended) – Do not proceed – Under this scenario, the project would be cancelled and the PSDS grant funding would be handed back to BEIS. COL would not benefit from the £450k per annum cost saving and 20% carbon reduction, against the 2019/20 baseline used for the project.</i></p> <p><i>Option 2 (not recommended) – Proceed with scope of Investment Grade Proposal – The scope of the project has been developed to meet the requirements of the Grant scheme and be delivered by the funding deadline of March 2022. This is not recommended as the estimated £420k currently unallocated to projects would need to be returned to Salix.</i></p> <p><i>Option 3 (not recommended) – Proceed with scope of Investment Grade Proposal excluding Guildhall Lighting – This option has the same scope as Option 2 but would exclude the Guildhall Lighting project from the scope. This is not recommended as the Corporation would need to hand back a significant sum of money back to Salix and financial/carbon savings would not be realised.</i></p> <p><i>Option 4 (recommended) – Proceed with scope of Investment Grade Proposal and approve for Vital Energi to design additional project to be completed by March 2022 to utilise remaining PSDS Grant funding, for projects subject to separate approval as a variation to their contract with CoL. The level of variation will be limited to 20% of the current £6.25 contract value.</i></p>
5. Recommended option	<p>We recommend that Option 4 is progressed as the scope has been designed to be deliverable within the funding timescales dictated by Salix and BEIS. It will allow us to identify additional projects across the four existing buildings, or ,with the agreement of the funding authority, across the COL portfolio which can be designed to utilise the remaining PSDS Grant and maximise the opportunity available for significant carbon and cost savings. As these are designed approval of the PSDS Board will be sought to allow them to proceed.</p>
6. Risk	<p>Further information available in the Risk Register (Appendix 2)</p>
7. Procurement approach	<p>The contract will be delivered through the contract with Vital Energi, which was procured through the GLA RE:FIT Framework (Retrofit Accelerator – Workplaces). This is a design and build contract with guaranteed savings. The savings which are identified in the Investment Grade Proposal are monitored post installation, if the savings are not achieved then the Contractor will be required to make up the difference through additional energy efficiency measures or a financial payment.</p> <p>As stipulated above, the appointment followed a compliant procurement process via the RE:FIT framework, this will be a</p>

	variation to this existing contract. Vital, have been appointed competitively and their technical ability demonstrated with the existing Commercial structure maintained.
8. Design summary	<ol style="list-style-type: none"> 1. Lighting Upgrades – Replace existing fluorescent fittings with energy efficient LED luminaires across Barbican, GSMD Milton and the Guildhall with new controls. This is also expected to reduce maintenance costs and improve lighting levels 2. BMS Optimisation – Improvement to the Building Management System to enhance efficiency and optimise the operation of HVAC systems at BAC and GSMD buildings 3. Pipework Distribution Repair – Upgrades to the heating and chilled water pipework distribution circuits 4. Ventilation Distribution Repair – improvements to the ventilation distribution systems through the replacement of failed equipment 5. Pipework Insulation – new insulation installed onto exposed pipework, valves and heat exchangers 6. AHU EC Fan Retrofit - This measure involves the replacement of fan motors, belts, and fan assemblies in selected Air Handling Units (AHUs) 7. Metering – Installation of new energy metering to better understand energy consumption across the estate 8. Draught Proofing – Addition of new sealant around windows to stop cold draughts and reduce heating load
9. Delivery team	<ol style="list-style-type: none"> 1. Contractor – Vital Energi will deliver the work through the existing design and build contract which was procured through the RE:FIT Framework. Vital Energi will deliver the scope of work outlined in the attached Investment Grade Proposal. 2. Project Manager – Beveridge Associates 3. COL Team – Energy team and site FM 4. CDM – Vital Energi (Principal Contractor and Principal Designer) 5. Engineering support – Silver EMS/Beveridge Associates 6. Commercial Review – Currie and Brown 7. Measurement & Verification Review – EEV's
10. Success criteria	<ol style="list-style-type: none"> 1. The project is completed by the Salix programme deadline on 18th March 2022 2. Carbon savings of 1070 Tonnes/CO2 per annum are achieved and the target of £274 3. The project meets the needs of the building stakeholders and meets performance specification and standards

	4. Project is delivered within the project budget and CRP allowance 5. Energy Consumption savings of circa £488k per year are achieved, in line with the proposal
11. Progress reporting	<i>The project will report bi-weekly to the PSDS Programme Board</i>

Appendices

Appendix 1	Project Coversheet
Appendix 2	Risk Register

Contact

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Options Appraisal Matrix

Option Summary	Option 1	Option 2	Option 3	Option 4
1. Brief description of option	Do nothing – Do not proceed with Investment Grade Proposal	Proceed with scope of current Investment Grade Proposal (IGP)	Proceed with scope of Investment Grade Proposal excluding the Guildhall Lighting	Proceed with scope of the Investment Grade Proposal and allocate remaining grant spend to an additional project/s
2. Scope and exclusions	<ul style="list-style-type: none"> Do not proceed 	<p>The scope of the project includes a range of energy efficiency upgrades across the Barbican Arts Centre, GSMD and Guildhall. Below is a list of the technologies in the scope of the IGP:</p> <ul style="list-style-type: none"> LED Lighting – Guildhall and Barbican estate Upgrades BMS Optimisation Pipework Distribution Repair Ventilation Distribution Repair Pipework Insulation AHU Fan Retrofit Metering 	As per option 2 but excluding the Guildhall LED Lighting project	As per option 2 but including additional projects which deliver cost/carbon savings and meet Salix grant funding eligibility requirements

Option Summary	Option 1	Option 2	Option 3	Option 4
Project Planning				
3. Programme and key dates	<i>Not applicable</i>	Aug 21 – Approve IGP Sep 21 – Commence procurement of materials Sep 21 – Commence Installation Feb 22 – Complete Installation Mar 22 – Complete Commissioning	Aug 21 – Approve IGP Sep 21 – Commence procurement Sep 21 – Commence Installation Feb 22 – Complete Installation Mar 22 – Complete Commissioning	Aug 21 – Approve IGP Sep 21 – Commence procurement for IGP scope Sep 21 – Commence Installation Sep 21- Agree additional project/s Feb 22 – Complete Installation Mar 22 – Complete Commissioning
4. Risk implications				Overall project option risk: Medium (please refer to attached risk register)
5. Stakeholders and consultees	<i>Not applicable</i>	<ul style="list-style-type: none"> • PSDS Programme Board • Corporate Property • IT • Chamberlains • Legal • Site users/clients • Procurement • PSDS Programme Board 		

Option Summary	Option 1	Option 2	Option 3	Option 4
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6. Benefits of option	<i>Low risk option</i>	<ul style="list-style-type: none"> • Annual cost savings of £488,000 (energy savings guaranteed under the contract) • Carbon emission reduction of 20% • Annual energy consumption reduction of 21% • Improved lighting levels • Reduced backlog maintenance and costs • Improved ventilation levels 	<ul style="list-style-type: none"> • Annual cost savings of £389,000 (energy savings guaranteed under the contract) • Carbon emission reduction of 17% • Annual energy consumption reduction of 18% • Improved lighting levels in Barbican only • Reduced backlog maintenance and costs • Improved ventilation levels 	<ul style="list-style-type: none"> • Annual cost savings of £488,000 (energy savings guaranteed under the contract) plus additional costs savings for additional projects identified and to be developed • Carbon emission reduction of at least 20% • Annual energy consumption reduction of at least 21% • Improved lighting levels • Reduced backlog maintenance and costs • Improved ventilation levels
7. Disbenefits of option	<ul style="list-style-type: none"> • <i>The grant funding would need to be returned</i> • <i>Carbon savings of 18% would not be achieved</i> 	<ul style="list-style-type: none"> • Disruption to operational areas • Fast pace of project to meet funding timescales lead to conflict with other priorities 	<ul style="list-style-type: none"> • Disruption to operational areas • Fast pace of project to meet funding timescales lead 	<ul style="list-style-type: none"> • Disruption to operational areas • Fast pace of project to meet funding timescales lead to conflict with other priorities

Option Summary	Option 1	Option 2	Option 3	Option 4
	<ul style="list-style-type: none"> Operational cost savings of £450k per annum would not be realised Opportunity to improve internal environmental through enhanced lighting levels and ventilation would be missed 		<p>to conflict with other priorities</p> <ul style="list-style-type: none"> Opportunity to upgrade lighting in Guildhall will be missed as the grant funding would need to be returned. Also, it is unlikely this project would be affordable when funded through a different method 	
Resource Implications				
8. Total estimated cost	£0	<p>£6,277,735 (excluding risk)</p> <p>There is a high confidence in the accuracy of these figures. The contractor will assume the commercial risk for any price increases outside of the agreed exclusions (which will be covered by the CRP allowance)</p>	<p>£3,623,486 (excluding risk)</p> <p>There is a high confidence in the accuracy of these figures. The contractor will assume the commercial risk for any price increases outside</p>	<p>£6,277,735 (excluding risk) plus up to an additional 20% for variation to include any PSDS underspend.</p> <p>There is a high confidence in the accuracy of these figures. The contractor will assume the commercial risk for any price increases outside of the agreed exclusions (which will</p>

Option Summary	Option 1	Option 2	Option 3	Option 4
			of the agreed exclusions.	be covered by the CRP allowance). Additional projects will be identified and designed by Vital Energi, with further approval sought from the PSDS Board to proceed with these projects. The current unallocated budget is estimated at £420k but this is expected to increase once the CRP budget is available.
9. Funding strategy	<i>N/A</i>	Project will be 100% funded by the Public Sector Decarbonisation Scheme		
10. Investment appraisal	<i>N/A</i>	Simple payback of 13 years (although project is 100% grant funded) based on an annual cost saving of £488,000	Simple payback of 9 years (although project is 100% grant funded) based on an annual cost saving of £389,000	Simple payback of 13 years (although project is 100% grant funded) based on an annual cost saving of £488,000. Additional projects will increase these annual savings achieved.
11. Estimated capital value/return	<i>None</i>	As above		

Option Summary	Option 1	Option 2	Option 3	Option 4
12. Ongoing revenue implications	<i>None</i>	<p>All energy savings achieved through the contract, after allowing for any changes in energy prices or usage by the service departments, will contribute to the Build Back Better Fund.</p> <p>There is also expected to maintenance cost savings due to lower reactive and backlog maintenance.</p>		
13. Affordability	<i>Not applicable</i>	<p>Project is 100% grant funded therefore there is not expected to be any financial contribution from the Corporations reserves</p>		
14. Legal implications	<i>None</i>	<p>The City of London Corporation and Vital Energi have signed a call off contract from the framework.</p> <p>Before commencing work a JCT contract will need to be signed and discussions between Vital Energi and COL are currently in progress.</p>		
15. Corporate property implications	<i>None</i>	<ul style="list-style-type: none"> • Works require careful planning, consultation and coordination to minimise the disruption and impacts to building services and site users. • A contractor site set up will be required for welfare, storage and waste at Guildhall and Barbican • Works require coordination with other site works/projects and activities/events. • Security considerations for contractor access to certain areas. • Maintenance contracts and registers need to be updated to account for the changes to the building services and systems. 		

Option Summary	Option 1	Option 2	Option 3	Option 4	
16. Traffic implications	None				
17. Sustainability and energy implications	Carbon emissions at the Barbican and Guildhall estate would stay the same or increase, impacting on the Corporations ability to meet the Net Zero 2027 target. The Corporation would also need to hand back unspent capital.	<ul style="list-style-type: none">All options contribute towards the Corporations Net Zero carbon target and reduce annual energy consumption (kWh) across the Guildhall, Barbican and GSMD increasing energy efficiency			
18. IS implications	None				
19. Equality Impact Assessment	N/A				
20. Data Protection Impact Assessment	N/A				
21. Recommendation	Not recommended	Not recommended	Not recommended	Recommended	