

Committees: Resource Allocation Sub - for decision Projects and Procurement Sub - for information	Dates: 30 Oct 2024 11 Nov 2024
Subject: Climate Action Strategy (CAS) – Optimisation for Sites Connected to Citigen Unique Project Identifier: <i>PV ID confirmed post CPB via PMO.</i>	Gateway 2 Project Proposal: Regular
Report of: City Surveyor Report Author: Edmund Tran	For Decision
<h1>PUBLIC</h1>	

1. Next steps and requested decisions	<p>Project Description: This project is for the upgrade of internal heating and cooling circuits of sites and buildings connected to the Citigen district heating/cooling network. This project aims to improve return temperatures, reduce energy consumption, carbon emissions and costs within the framework of the Climate Action Strategy Programme. Improving return temperatures to the Citigen Network will result in an improved efficiency, reduced carbon emissions and greater operational reliability across the network, whilst also attracting government grant funding.</p> <p>Next Gateway: Gateway 3-5 or Gateway 3/4</p> <p>Next Steps:</p> <p>To submit an application to the Heat Network Efficiency Scheme (HNES) for up to 50% grant funding towards capital costs.</p> <p>To procure a consultant for the design, project management and quantity surveying for the proposed works' entire lifecycle.</p> <p>Requested Decisions:</p> <ol style="list-style-type: none"> 1. Note that the total estimated cost of the project is £ £3,525,838 (excluding risk). 2. Note that the total estimated cost of the project is £4,445,332 (including risk) 3. Note that £340,904 from Climate Action year 4 capital budget will be drawn down for the procurement of a
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	<p>design/project management/quantity surveyor as well as for early asbestos surveying, validation of current installation, programme management and project management services.</p> <p>4. That a costed risk provision of £60,404 is approved (to be drawn down via delegation to the City Surveyor) to allow for additional building surveys and building control applications (if necessary) if required to reach the next gateway, to be funded wholly through the CAS year 4 Plan for buildings.</p> <p>5. Note that the costed risk budget of £919,449 to cover potential budget variations attributable to unforeseen variations, enabling works, site disruption, inflation fluctuations and asbestos removal. This budget will not materialise at this stage and so is not requested at this stage.</p>																	
<p>2. Resource requirements to reach next Gateway</p>	<table border="1"> <thead> <tr> <th>Item</th> <th>Reason</th> <th>Funds/ Source of Funding</th> <th>Cost (£)</th> </tr> </thead> <tbody> <tr> <td>Fees: Design</td> <td>RIBA3 design, RIBA 4 design, Project Management, Quantity Surveying</td> <td rowspan="4">To be drawn down from CAS Year 4 Capital: Task 1.1 Capital Programme Development – Operational Properties</td> <td>£230,000</td> </tr> <tr> <td>Fees: Asbestos Surveys & Remediation</td> <td>Risk management</td> <td>£15,000</td> </tr> <tr> <td>Fees: M&E Validation</td> <td>Additional verification of current installation</td> <td>£30,000</td> </tr> <tr> <td>Fees: PMO and PM services</td> <td>Programme and Project management support for Climate Action to</td> <td>£65,904</td> </tr> </tbody> </table>	Item	Reason	Funds/ Source of Funding	Cost (£)	Fees: Design	RIBA3 design, RIBA 4 design, Project Management, Quantity Surveying	To be drawn down from CAS Year 4 Capital: Task 1.1 Capital Programme Development – Operational Properties	£230,000	Fees: Asbestos Surveys & Remediation	Risk management	£15,000	Fees: M&E Validation	Additional verification of current installation	£30,000	Fees: PMO and PM services	Programme and Project management support for Climate Action to	£65,904
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		progress to next gateway		
	Total			£340,904
3. Governance arrangements	<p>3.1 All projects will be reported collectively to the following:</p> <ul style="list-style-type: none"> • SRO: Damian Nussbaum, Executive Director of Innovation and Growth • Corporate Projects Board • Projects and Procurement Sub Committee • Resource Allocation Sub Committee <p>3.2 Where a subsequent Gateway paper has an estimated cost (including risk) under £1M it is expected that decisions will be requested from the SRO, under the delegated authority from Policy and Resources Committee.</p> <p>A specific project board is not deemed necessary as this project will be integrated with the existing Climate Action Strategy governance which includes chief and senior officer representation.</p>			

Project Summary

4. Context	<p>4.1 In January 2020, the City of London Corporation (City Corporation) set out on a fast-paced, cross-City Corporation journey to develop an ambitious Climate Action Strategy (CAS).</p> <p>4.2 The City Corporation assessed the carbon footprint across both its own varied property holdings and the Square Mile, to develop a plan to achieve Net Zero by 2027 for scope 1 and 2 emissions and Net Zero by 2040 across the investment portfolio and supply chains.</p> <p>4.3 The CAS marked the start of a new and transformative programme of action. On 8th October 2020, the CAS was adopted by the Court of Common Council for the City Corporation. Fifteen costed project delivery areas have since been consolidated into ten project plans.</p>
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	<p>4.4 This paper refers to the “NZ1 Corporate Property and Housing Landlord Areas” Project Plan. The year 4 plan and the tasks associated with it has been approved at the Policy and Resources Committee on 11th April 2024.</p>
<p>5. Brief description of project</p>	<p>5.1 As part of the Climate Action Strategy Year 3 plan, a feasibility study was carried out for the optimisation of heating and cooling circuits within buildings and sites connected to the Citigen District Heating Network.</p> <p>5.2 The feasibility study was completed and recommended a series of refurbishment measures to improve efficiency and return temperatures. This includes a series of mechanical works to reduce recirculation, replacement of heat exchangers, insulation, pump replacements, controls modifications, replacement of control valves, maintenance / replacement of instrumentation.</p> <p>5.3 As a portfolio, these projects have an overall carbon saving of 300 tCO₂/annum with an energy cost saving of £345,000 per annum at a project cost of £4,445,332 (including risk). The average payback of the portfolio is therefore 13 years. The overall cost per ton of carbon saved is £15,000 /tCO₂. Energy cost savings will return to the Build Back Better fund on behalf of City Fund and City Estate. A monitoring and verification process will be conducted in order to confirm savings after each project has completed in order to determine these returns. The project will also improve return temperatures of Low Temperature Hot Water (LTHW) and Chilled Water (CHW) back to the Citigen network. This will help to improve efficiencies of the network now and into the future as heat generation equipment is transitioned away from combustion based sources and towards heat pump based sources.</p> <p>5.4 There is an opportunity to apply for government grant funding Heat Networks Efficiency Scheme (HNES) for up to 50% match funding for this project. An application can be made in November 2024 or February 2025. Following approval of this paper, the project may split into several smaller projects and applied for funding at different funding windows as appropriate. The project will be reviewed for suitability against a set of criteria including improvement of return temperatures as well as energy savings. It is reasonably expected that we will be successful in the application. This will reduce the project cost to £2,993,611 (with risk) 9 years payback at £10,000/tCO_{2e}/yr or £2,074,117 (without risk) and 6 years payback at £7,000/tCO_{2e}/yr. Funding for a full financial year value of</p>

the grant can be drawn down in advance of the need.

- 5.5 Local co-ordination has been carried out with the Barbican Renewal team to discuss elements of the work to be carried out, in order to ensure a lower risk of abortive works. These works do not negatively impact planned upgrades to HVAC services in 2025, and the Renewal project is aware of potential works in other areas. Significant works on secondary heating/cooling distribution circuits as part of the Renewal project are unlikely to occur until 2029/2030, if approved. As this occurs after the 'Net Zero' deadline of FY26/27 and HNES grant funding is time limited, it is recommended that this project proceeds with the intent of obtaining grant funding, and further design work is carried out during the next stage to minimise any abortive works.
- 5.6 Local co-ordination with Guildhall School of Music & Drama (GSMD) has been carried out and is expected to have low/no impact on existing and upcoming projects/CWP. A separate GW2 paper "Guildhall School of Music & Drama Heating, Cooling & Ventilation Replacement" approved at RASC on 30th Nov 2023 will have a complimentary effect on this project.
- 5.7 Consultation with Guildhall complex has been carried out and it is expected to have low/no impact on existing and upcoming projects/CWP. Further consultation will be carried out during the design stage in order to ensure that changes to heating systems in this building are amenable to the site's operations, whilst aiming to achieve CAS aims and objectives.
- 5.8 Further stakeholder engagement with each site is expected as the project proceeds through the next design stages.
- 5.9 Procurement of £340k mechanical and electrical design services, quantity surveying and project management for the lifecycle of the project will be carried out by open tender.
- 5.10 If this paper is approved, the next step will be to: A) commence RIBA Stage 3 design on measures identified, as well as ascertain further improvements to tertiary systems, in preparation for a tender pack and B) apply for HNES grant funding at the most appropriate application window. This may be carried out as one application for the whole project, or two separate applications for groups of sites in different windows.

	<p>5.11 Upon successful award of grant funding, a GW3/4 paper will be produced with updated budget allocations for a decision to proceed to procurement of a contractor.</p> <p>5.12 If the grant funding application is unsuccessful, the scope of the project will be reduced to within CAS available funds (whilst ensuring a reasonable £/tCO_{2e}/yr benefit still remains) and a GW3/4 paper will be produced to seek approval to proceed to procurement of a contractor.</p> <p>5.13 The portfolio of projects is expected to be delivered over the financial years 2025/26 – 2026/27. The budget expenditure timeline is highlighted in Appendix 1.4.</p> <p>5.14 In the case of centrally funded sites, financial savings that are made will accrue back to the City Corporation as a contribution to the Build Back Better Fund held in City Fund or City Estate as appropriate. Therefore, departmental local risk budgets will be adjusted accordingly. A monitoring and verification process will be conducted and reported on at GW6 to confirm the energy savings.</p> <p>5.15 The financial performance of the proposed projects (paybacks) has been aligned to the assets management plan, ensuring that the paybacks are within the period of occupation / operation of the buildings.</p> <p>5.16 The estimated costs and savings set out in this paper will be regularly reviewed and reported throughout the project. A post-project verification exercise will be carried out, aided by the additional metering equipment and software upgrades included within the project.</p>
<p>6. Consequences if project not approved</p>	<p>6.1 Missed opportunity to reduce the carbon emissions of the City of London Corporation by 300 tCO_{2e}/yr which represents a significant proportion of the reduction requirements to meet the City of London's net zero carbon target.</p> <p>6.2 Missed opportunity to reduce the energy costs to the City of London Corporation by £345,000 /yr.</p> <p>6.3 Missed opportunity to apply for and receive up an estimated £1.45M grant funding towards works.</p> <p>6.4 Most of the projects include the replacement/refurbishment of existing building services which would currently require</p>

	cyclical replacement, and hence investment, within 5-10 years.
7. SMART project objectives	<p>7.1 Each project achieves specified performance and design parameters.</p> <p>7.2 Each project achieves high levels of stakeholder and user satisfaction. All projects will be developed jointly with local FM teams and asset managers.</p> <p>7.3 Minimise disruption to the site's occupants and services.</p> <p>7.4 Energy cost savings of c.£345 k/year.</p> <p>7.5 Carbon emission savings of c.300 tCO_{2e}/yr.</p>
8. Key benefits	<p>8.1 Compliant and high-quality building services which satisfies needs.</p> <p>8.2 Lower return temperatures for heating and higher return temperatures for cooling, resulting in better CO_{2e} and reliability performance from the Citigen network.</p> <p>8.3 Replacement of equipment and higher reliability of supplies from the Citigen network.</p> <p>8.4 Lower energy and maintenance costs for the City of London Corporation.</p> <p>8.5 Energy and carbon emission savings to contribute towards City of London Corporation targets.</p>
9. Project category	5. Other priority developments
10. Project priority	A. Essential
11. Notable exclusions	None

Options Appraisal

12. Overview of options				
	Option	Carbon Savings	Cost Savings	Additional benefits
	Option 1: Not doing anything	Will not deliver any additional carbon savings or efficiency benefits for CoL or Citigen.	Will not deliver any additional cost savings to the CoL This will lead to a higher exposure to energy costs volatility.	It will not require any capital expenditure from the Climate Action Fund. No need to incur monitoring and evaluating costs.
	Option 2: Develop the proposed programme (dependent on HNES funding)	Highest level of carbon emission reductions in the region of 300 tCO ₂ /year	Will generate savings in the region of £345,000 per annum. Grant funding of £1.45M potentially available	Would allow the CAS budget to be forecasted and planned in the near and mid-term.
<p>Conclusion:</p> <p>The Option 2 is the only option that will deliver on the Climate Action targets and will also generate significant and predictable cost savings to the Corporation, as well as support other projects by way of enabling additional funding.</p>				

Project Planning

13. Delivery period and key dates	<p>Overall project: On-site works completed and commissioned by March 2026 and final project completion by end of March 2027.</p> <p>Oct 2024: Procurement of design/PM/QS consultant</p> <p>Oct 2024: GW2 approval.</p> <p>Nov 2024: Grant funding application window</p> <p>Dec 2024: Design/PM/QS consultant appointed</p> <p>Feb 2025: Grant award notice</p> <p>March 2025: GW3-4, tender project</p> <p>May 2025: GW5 Authority to start work</p>
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	<p>July 2025: Start on site (main contract)</p> <p>Sept 2026: Practical completion</p> <p>March 2027: GW6 report</p> <p>This project may split into sub-projects and will be further set out in the subsequent gateway papers. However, the above sets out the expected timeline.</p>
14. Risk implications	<p>Overall project risk: Medium</p> <p>14.1 To be drafted</p>
15. Stakeholders and consultees	<p>Internal for overall project:</p> <p>15.1 Energy Team: Graeme Low, Mark Donaldson</p> <p>15.2 Wider City Surveyors: Pete Collinson, Paul Wilkinson</p> <p>15.3 CAS Team: Kate Neale, Damian Nussbaum</p> <p>15.4 Minor Projects Team: Chris Sharpe, Jonathan Cooper, Nazar Banyamin, Christopher Herbert</p> <p>15.5 Facilities Management: Matt Baker, Jan Horton</p> <p>15.6 Corporate Property Group (CPG): Peter Young, Paul Friend</p> <p>15.7 Chamberlains: Procurement (James Carter), finance (Andrew Little, Sonia Virdee)</p> <p>15.8 Comptroller: Sean Austin</p> <p>15.9 IT departments for City of London and Barbican/GSMD</p> <p>Site specific to provisional selected sub-projects:</p> <p>15.10 Barbican Arts Centre: Philippa Simpson, Cornell Farrell, Richard McQuillian, Mark Lowman, Carmel McGowan</p> <p>15.11 GSMD: Sheree Miller, Robert Bennett</p> <p>15.12 Guildhall: Dorian Price</p>

Resource Implications

16. Total estimated cost	<p>Likely cost range (excluding risk): £3,525,838</p> <p>Likely cost range (including risk): £4,445,332</p>	
17. Funding strategy	<p>Choose 1:</p> <p>Partial funding confirmed</p>	<p>Choose 1:</p> <p>Mixture - some internal and some external funding</p>

Funds/Sources of Funding	Cost (£)
Climate Action Strategy (including risk)	£2,993,611
Heat Network Efficiency Scheme (government funding)	£1,451,721
Total	£4,445,332

Financial savings where this relates to City Estate and City Fund will return to the Build Back Better Fund.

17.1 Climate Action Strategy. The Year 4 Climate Action Strategy plans were approved by Policy and Resources Committee in April 2024. This included a budget drawdown request for 2024/25 and a revised projected budget drawdown for 2025/26 and 2026/27. This project relates to the plan for the 'Buildings – Corporate Properties & Housing (landlord areas)' and of the approved capital budget the plan sets out that £3,517,712 is allocated to the design, development, management and delivery of works which includes those in the scope of this project. The projected capital budget drawdown over 2025/26 and 2026/27 is £7,910,914 or which £5,277,000 has been provisionally allocated to the scope of works for which this project would form part.

17.2 Heat Networks Efficiency Scheme: A large portion of this work would be eligible for part funding through a government grant called HNES. We shall apply for this funding and update the funding strategy and budget accordingly through subsequent gateways. Such grant funding would improve the business case. Where grant funding is refused, the project will be de-scoped to fit within the remaining budget available from other sources, assuming that a reasonable benefit is still achieved.

18. Investment appraisal

18.1 The Chamberlain have requested that financial savings that are made will accrue back to the City as a contribution to the Build Back Better Fund held in City Fund or City Estate. As a consequent departmental local risk budgets will be adjusted accordingly.

18.3 Payback and £/tCO₂e (pounds per annual ton of CO₂ saved) are the main indicators used to prioritise the projects.

The estimated costs and savings set out in this paper will be regularly reviewed and reported throughout the project.

19. Procurement strategy/route to market	19.1 Following design, the procurement route will be established. Due to the expected value of the projects at each site, it is anticipated that there are two routes for procurement – either via the Fixed Term MTC or an open tender. The preferred route will be detailed in the following GW3/4 paper in consultation with City Procurement.
20. Legal implications	20.1 There may be individual contracts per site or per group of measures, to be determined at the next gateway stage.
21. Corporate property implications	<p>21.1 Investment in energy efficiency and decarbonisation projects is required to meet the targets set by the Climate Action Strategy.</p> <p>21.2 Projects will align with existing site plans to minimise disruption and maximise opportunities during installation.</p> <p>21.3 The projects will be planned in consultation with local FM teams and Asset Managers to ensure there is transparency in dates and deadlines.</p>
22. Traffic implications	22.1 Not available at this stage. Any traffic disruption will be addressed in GW 3-5 papers.
23. Sustainability and energy implications	<p>23.1 The programme will deliver carbon and energy efficiency improvements in the most energy intensive operational buildings.</p> <p>23.2 The Energy and Sustainability Team will be further consulted during the design and specification drafting stage to ensure all designs are compliant with existing City Corporation plans. All measures to be installed are consistent with the Climate Action targets and they go above and beyond the legal and regulatory energy performance obligations of the Operational Buildings.</p> <p>23.3 The programme is aimed to improve the resilience of the City Corporation operations and reduce the overall cost of operation.</p>
24. IT implications	24.1 None
25. Equality Impact Assessment	25.1 An equality impact assessment will not be undertaken
26. Data Protection Impact Assessment	26.1 The risk to personal data is non-applicable and a data protection impact assessment will not be undertaken

Appendices

Appendix 1	Project Coversheet
Appendix 2	Risk Register
Appendix 3	Project Briefing

Background Information

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Contact

Report Author	Edmund Tran
Email Address	Edmund.tran@cityoflondon.gov.uk
Telephone Number	+44 7857 665672