

<b>Committee(s)</b>	<b>Dated:</b>
Operational Property and Projects Sub Committee	26 October 2022
<b>Subject: CAS NZ1, NZ3 and RS3 Workstream update for the Operational Portfolio</b>	<b>Public</b>
<b>Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?</b>	<b>5,11 &amp; 12</b>
<b>Does this proposal require extra revenue and/or capital spending?</b>	<b>Yes</b>
<b>If so, how much?</b>	<b>£10,527,715 mix of revenue and capital</b>
<b>What is the source of Funding?</b>	<b>CAS Budget</b>
<b>Has this Funding Source been agreed with the Chamberlain's Department?</b>	<b>Yes</b>
<b>Report of: The City Surveyor</b>	<b>For Information</b>
<b>Report author: Graeme Low</b>	

### Summary

This report presents an update on the key actions of the operational buildings workstreams as part of the Climate Action Strategy (CAS). Progress has been made in the following key areas:

- Vital Energi have started a programme of building energy surveys, all top fifteen buildings have High Level Assessments issued. Following this, five detailed proposals are now in development.
- Climate Impact Modelling has begun with a "digital twin" model of the square mile in development, workshops are planned for July focusing on heat stress and flooding.
- Building Energy Management System analytics software has been rolled out for the Guildhall and LMA.

### Recommendation(s)

- Note the progress made on actions within the report.
- Note progress made in delivery of project tasks including energy surveys, BEMS Strategy, and design and technology standards.
- Note the progress made on the delivery of capital projects including PSDS phase 1.
- Note the successful award of £50k low carbon skills funding for 6 key sites.

### Main Report

#### Background

1. The Climate Action Strategy (CAS) measured our direct building emissions in 2018/19 as 36 ktCO<sub>2e</sub>, by 2026/7 this must reduce to 15.3 ktCO<sub>2e</sub> to reach our net

zero target for our operational properties and Housing portfolio. CO<sub>2</sub>e emissions for Housing and operational properties are as follows:

**Table 1: Baseline and current carbon emissions by portfolio and 2027 target**

Portfolio	Baseline 2018/19	year to date (Q1 2022/2023)	2026/27 Target
Housing	10.6 kt/CO <sub>2</sub> e	1.21 kt/CO <sub>2</sub> e	4.6 kt/CO <sub>2</sub> e
Operational Properties	22.2 kt/CO <sub>2</sub> e	3.18 kt/CO <sub>2</sub> e	10.8 kt/CO <sub>2</sub> e

- To support this goal, the CAS buildings approach was presented at the April Corporate Asset Sub Committee in 2021 with a series of discrete actions which conjoin to deliver the CAS strategy NZ1, NZ3 and RS3 for the Operational buildings' portfolio – including housing. These actions are summarised in the table 2 below and demonstrate the requirement for the City to continue investment in carbon reduction projects.

**Table 2: NZ1 - Operational Property and Housing Landlord Areas Actions**

1 – Commission building energy surveys – operational assets and housing
2 - Develop building controls management strategy
3 - Enhance monitoring and targeting programme
4 - Decarbonisation of Heat
5 - Deep fabric retrofit pilot – Commercial asset??
6 - Additional energy specialist resources
7 - Capital programme roll-out

## Status Updates

**Action 1 Progress:** Commission building energy surveys – operational assets & Housing

### Corporate

- Vital Energi Ltd. are providing energy efficiency audits to the top fifteen buildings (appendix 1) in support of the Climate Action Strategy. Their activities have involved a high-level assessment of each building, providing a list of projects that can be immediately undertaken, and a list of projects that rely on other existing CoL projects finishing.
- To date, all fifteen buildings have been through an initial survey and a High-Level Assessment issued. This is currently being reviewed and appraised and a programme of further detailed proposals and subsequent works will be developed into a Gateway 2 paper and expected to be presented in October. Five investment grade proposals have been completed at the Guildhall, Freeman's School, Tower hill Coach and Carpark, Central Criminal Court & Girl's School.

## Housing

5. Etude Consulting Ltd. have been appointed in September to provide resource support to the tasks related to Housing within NZ1, particularly supporting the management of initial surveys, development of decarbonisation plan, and support surrounding Housing Heat decarbonisation.
6. Survey work has been completed at the Barbican Estate to evaluate the benefit of improving insulation and heating controls with properties. Further cost analysis has recently been completed providing the value and benefit of undertaking these works. We continue to consult with the Barbican Association as these proceed.
7. Housing surveys are currently being commissioned to review scope 1 & 2 operational emissions, focusing on options for PV, LED lighting upgrades and other opportunities such as pump controls, ventilation, and lift efficiency improvements. This will combine with concurrent survey work focusing on heat decarbonisation opportunities. Procurement of these surveys is expected to complete in September.

Next Steps – Action 1	
a.	<b>Operational:</b> Completion of decarbonisation delivery plan. Presentation of Gateway paper for capital works.
b.	<b>Housing:</b> Completion of procurement for surveys and feasibility studies for pilot projects.

**Action 2 Progress:** Develop building controls management strategy.

8. The Schneider Electric Building Advisor platform (Analytics) has been operating since July 4<sup>th</sup>. It has already identified opportunities for efficiency improvements and is being integrated with Facilities Management in regular management reporting for the Guildhall and LMA.
9. The building controls draft strategy is nearing completion and expected to be completed by the end of September.
10. Sigma EMS integration with BEMS is progressing as the BEMS is migrated and Sigma is fully onboarded over the forthcoming quarter.

Next Steps – Action 2	
a.	Completion of BEMS strategy
b.	BEMS integration with Team Sigma.

**Action 3 Progress:** Enhance monitoring and targeting programme.

- 11.. Benchmarking, target setting and analysis against variables is currently being set up within Team Sigma for individual sites. This is expected to be available in Q3.

**Action 4 Progress:** Decarbonisation of Heat

12. Citigen - New centre of excellence resource will be in place from October to support with the Citigen strategy. Meetings have been held with St. Bartholomew's Hospital

and Museum of London to support the development of the network and unlock further carbon saving potential.

13. Operational estate – A £50k Low Carbon Skills Fund grant has been successfully obtained to develop heat decarbonisation plans for Heathrow Animal Reception Centre, Walbrook Wharf (update to existing plan), Epping Forest (the View and the Warren) and City of London Crematorium. These plans, once complete will mesh with the delivery plans for each site.
14. Housing – Additional consultancy support is near to being place as part of the programme to review opportunities focused on reducing fossil fuel-based heat provision.

<b>Next Steps – Action 4</b>	
a.	Identify additional funding streams for decarbonisation support including a potential new PSDS application for the LMA.
b.	Continue with Citigen decarbonisation studies prior to review period in 2024.
c.	Undertake review of housing opportunity.

**Action 5 Progress:** Deep fabric retrofit pilot – operational asset

15. This project will be a proof of concept to inform our wider design and resilience standards. Scoping and delivery will be driven by the dedicated design resource within the Centre of Excellence. It will follow the completion of the Design and Technology Standards

**Action 6 Progress:** Additional energy specialist resources.

16. Following a review of the Centre of Excellence, we have recently appointed a new consultant to support with Housing decarbonisation, new resource is coming in October to support on heat decarbonisation. One role remains vacant within the Energy and Sustainability Team (Energy Engineering Project Manager) following unsuccessful recruitment campaigns.
17. The Centre of Excellence will also address the NZ3 and RS3 work streams plus the Investment portfolio (NZ4) approach.

<b>Next Steps – Action 6</b>	
a.	Appointment of remaining Energy Engineering Project Manager.
b.	Actions 1,2,3,4 & 5 are reliant on a fully resourced Centre of Excellence.

**Action 7 Progress:** Capital programme roll-out

18. The main capital programme roll-out will flow from opportunities identified in the energy surveys (action 1). The £9.5m PSDS project, Phase 1 & 2 of the Energy

Reduction Programme (completion 2022/23) and £4.5m Guildhall Cooling replacement project (completion expected summer 2023) will contribute to our carbon reductions. Project resource has also been procured to ensure Climate Action Strategy capital works can continue from July following the closure of the PSDS phase 1 grant.

19. Specific projects at three sites categorised as ‘quick-wins’ have been progressed to the Investment Grade Proposal stage. These are LED lighting projects for which there is immediate known benefit and value for money. Projects are focusing on City of London Freeman’s School, City of London School for Girls, and Central Criminal Court. The school projects are currently on hold, pending funding confirmation and a trial at Central Criminal Court is due in Q3.

<b>Next Steps – Action 7</b>	
a.	Extend interim project management resource for 2023/24 and onwards.
b.	Delivery of quick win projects at three sites.

### **NZ3 Capital Projects Design Standards and RS3 Resilient Buildings**

20. Arcadis have been appointed to develop the technology and design standards which will be delivered in Q2 and Q3, respectively. Work continues on both the Design and Technology standards scoping has completed. We are now working through the design and functionality of the standards. Embedding these standards will begin in October 2022, planned completion is in March 2023.
21. The climate impact modelling began with a digital twin model of our buildings in June, focusing on flood and heat stress. Two workshops have been completed to inform further on the interventions required for key assets. This modelling will inform the resilience action plan which is planned for completion by Q3.

### **Project support activities**

22. Arcadis have been appointed by the City Surveyor to provide, initial assurance support; ongoing assurance; establishing and promoting the Centre of Excellence and to lead the development of an auditable energy management system. The assurance support will finish as planned in November 2022.

### **Key risks**

23. Key risks are included within item 3. of the appendix.

## **Corporate & Strategic Implications**

### **Strategic implications:**

24. This suite of actions drives the objectives of the Climate Action Strategy, buildings stream and will provide linkage and co-ordination with ongoing property management, capital schemes and cyclical works.

**Financial implications:**

25. The CAS tasks in this report are covered within the overall Climate Action Strategy programme. Capital and resource costs are estimated at £21m for the 6-year term for the tasks related to these project plans. This funding forms part of the £68m agreed at RASC and P&R committees in September 2020.

**Climate implications:**

26. This action stream will deliver the Net zero carbon goals of the Corporation and support the climate resilience goals of the broader programme.

**Conclusion**

27. The City Surveyor has commenced the mobilisation and has moved into the delivery stage of the building-related workstreams, three being relevant to this Sub Committee (NZ1, NZ3 & RS3). A flexible approach continues to be necessary to secure the right mix of skills and experience needed. This approach will support our need to move the programme forward and meeting key milestones.

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