Committee(s)	**Dated:**
Resource Allocation Sub-Committee	5th October 2023
Subject: 22/23 Energy & Decarbonisation Performance Q3 Update for the Operational Portfolio	Public
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	**5,11,12**
Does this proposal require extra revenue and/or capital spending?	**no**
If so, how much?	**n/a**
What is the source of Funding?	**n/a**
Has this Funding Source been agreed with the Chamberlain's Department?	**No**
Report of: The City Surveyor	**For Information**
Report author: Emma Bushell	

Summary

This report presents the 2023/24 Quarter 1 energy performance for City of London Corporation (COLC) operational sites. There has been an 19% reduction in energy usage since the 2018/19 baseline year and we remain on track to achieve our Net Zero Carbon targets by 2027. The first phase of our capital programme has been approved and we are now developing the projects towards installation in 2023.

Recommendation(s)

- Note, that for the rolling year, Q1 23/24 weather corrected energy consumption has reduced by 14% compared to the baseline year 2018/19.
- Note the generation of energy from the PPA has exceeded the energy consumption across the City of London Corporation sites.
- Note the Public Sector Decarbonisation Scheme (PSDS) funded work is complete and the savings are now being monitored and verified.

Main report

Background

1. The 22/23 Q3 Energy performance report was submitted to OPPSC meeting on 3rd July 2023. This noted the rolling 12-month energy performance reduced by 17% on the weather corrected values for the Climate Action Baseline year of 2018/19.
2. The Climate Action Strategy (CAS) year 3 plans have been approved by Policy and Resources Committee. They include the NZ1 plan which is specifically focused on reducing the carbon emissions within the City Corporation's own estate through a range of tasks including: capital works projects, building control improvements, and monitoring and targeting activities.

CAS target alignment

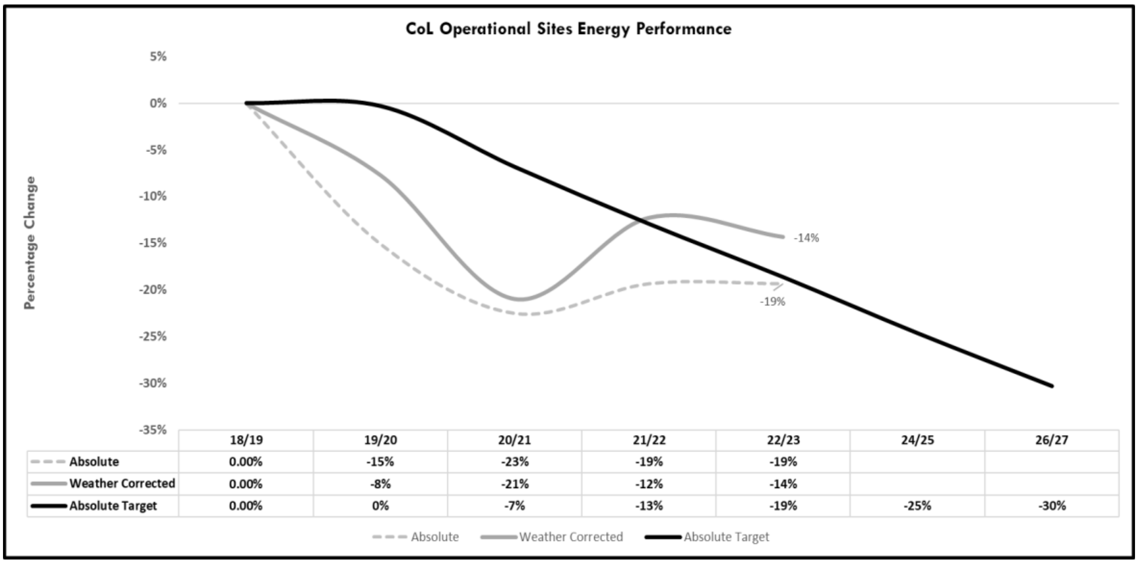
3. The CAS buildings baseline includes operational property portfolio, landlord supplies to housing estates and investment properties.
4. To achieve Net Zero CO_2 target by 2027 for our scope 1 and 2 operational emissions, residual emissions are planned to be mitigated via land-based carbon sequestration from our green spaces. These targets are translated into energy and CO_2e, see Chart 1 and Chart 2 below.

Current position

5. Over the last 12 months the thirty highest consuming sites have seen a reduction in energy consumption of 1.9MWh when compared to the preceding 12 months (Appendix Table 1). The COLC continues to support investment in energy and carbon saving projects through the approved Gateway 2 paper focusing on the top 15 energy consuming sites. This is expected to provide an additional 520 tonnes of CO2e savings per annum across our scope 1 and 2 emissions.

Performance update

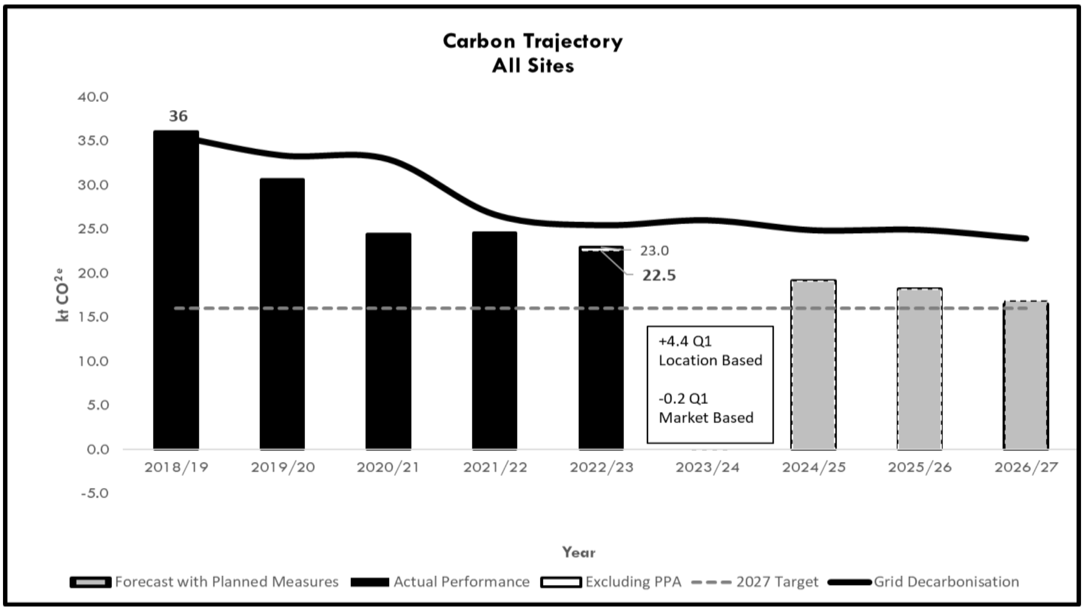
Chart 1. Performance against CAS target: Absolute & weather corrected kWh consumption.



	18/19	19/20	20/21	21/22	22/23	24/25	26/27
Absolute	0.00%	-15%	-23%	-19%	-19%		
Weather Corrected	0.00%	-8%	-21%	-12%	-14%		
Absolute Target	0.00%	0%	-7%	-13%	-19%	-25%	-30%

6. **Long term:** Chart 1 shows continued progress towards the interim target. Compared to the 2018/2019 baseline, the performance up to Q1 2023/2024 indicates:
   a. A 19% reduction in absolute energy consumption.
   b. A 14% reduction when corrected for the weather.

Chart 2. Carbon Trajectory progress towards the 2027 carbon target for the COLC portfolio:



   a. A saving of 13,051 tonnes of CO_{2e} or a 36% reduction from 2018/2019, based on the last full financial year figures (2022/23). Note this figure includes the impact of the PPA.

b. Over Q1 23/24 the PPA has generated more energy than the COLC has consumed which explains the -0.2 figure for market based carbon emissions. The 4.4 kt of CO2e is calculated on a location basis, which uses the carbon factor of the local grid and excludes the generation from the PPA.

7. The savings since 2018/19 demonstrate a positive trajectory for the CAS 2027 Net Zero Carbon target. Completion of the energy and carbon saving projects under NZ1 will support continued reduction of emissions. The PPA has contributed to reduced carbon emissions, as demonstrated by the white bar with the black outline. Carbon emissions for the Q1 23/24 would have been 4.4 kt CO2e without the PPA.

8. The Operational property carbon performance, without landlord emissions for Housing and IPG portfolios shows a reduction of 8.19 KtCO_2e or 37% since 2018/19. The portfolio is on track to support the COLC targets for 2026/27 (Appendix – Item 6)

Chart 3. Overall performance Q4 Top 5 sites – weather corrected.

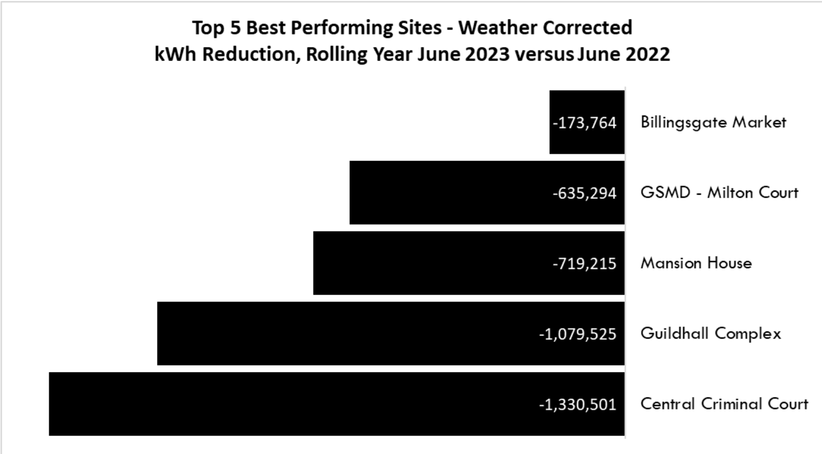
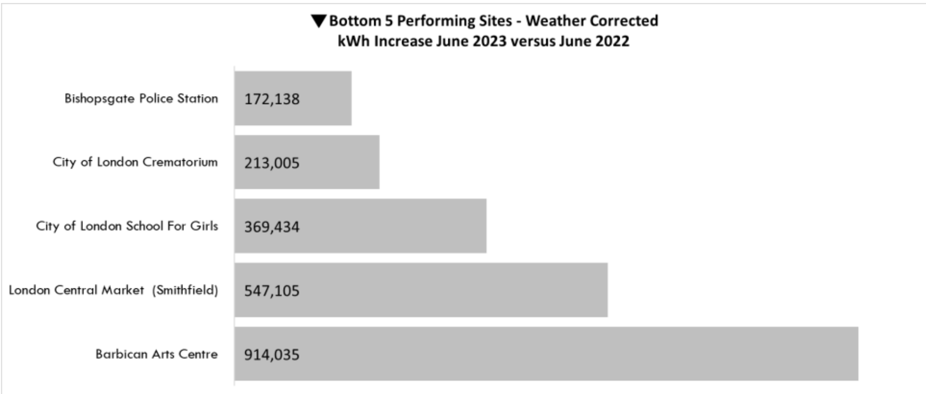


Chart 4: Overall performance Q4 bottom 5 sites – weather corrected.



9. Chart 3 shows the top performing sites with the highest energy reductions over the past 12 months to 30th June 2023, when compared to the previous 12 months. Chart 4 shows the worst performing sites with the highest increases in energy use over the same period.

10. The top performing sites have continued to show a reduction due to improved controls and implementation of energy saving measures.

11. The bottom sites have seen increases in heating demand and occupancy levels and increased refurbishment activities. The Energy and Sustainability Team continue to collaborate with these sites to optimise their performance. Further information can be found in the Table 2 of the Appendix.

Progress on energy projects

12. **PSDS Project:** In 2021 the COLC were awarded £9.5M under the Public Sector Decarbonisation Scheme (PSDS) to deliver energy efficiency works across five sites, anticipated to save annually c.900 tCO2e (based on 2027 carbon factors) and c.£600k in energy costs (based on 2021 energy prices). These works are now completed and our initial post-project verification indicates annual savings of c.800 tCO2e and c.£840k in avoided energy costs (based on current short-term projected prices). Where anticipated energy/carbon savings have not been achieved we are investigating. Final verification of the savings is expected at Gateway 6 in Q4.

13. **CAS Capital Programme**: NZ1 of CAS includes for the development and delivery of a capital works programme to invest in carbon saving projects across the scope 1 and 2 emissions within our buildings. In December 2022 Policy and Resources Committee approved a Gateway 2 paper setting out a programme of projects across our operational portfolio. The total capital cost is estimated at £5,338,615 (excluding risk) and is targeting savings of 520 tCO_2/annum and energy cost saving of £550,000 per annum. The first projects have been approved at Gateway 5 and works onsite are proceeding and aim for completion by November 2023. Other projects are in design and development stages with further Gateway approvals over the coming months.

14. **BEMS**: Improved control of our energy usage through Building Energy Management System (BEMS) within buildings has played a key role in improving operational energy efficiency, supported through the deployment of a new Building Analytics Platform at the Guildhall and LMA with a further roll-out of the software to CCC and Mansion House is due to go live in Sept '23. The transition of the BEMS to a new platform has continued with projects due for completion at LMA, Walbrook Wharf, Tower Bridge and Guildhall East Wing and Smithfield West Market by end of September 2023. These projects are enablers for further energy efficiency projects at these sites.

Corporate and strategic implications

15. **Strategic implications:** Energy performance is linked to resilience and helps ensure business continuity through reduced pressure on the energy infrastructure within the square mile. We support a thriving economy through ensuring environmental responsibility in this way. Our energy performance helps to shape outstanding environments through the reduction of CO_{2e} emissions and our commitment to procuring clean renewable energy. In this way our energy performance helps shape outcomes 5, 11 and 12 of the Corporate Plan.

16. **Financial implications:** The savings in this report detail reductions in energy consumption and not against agreed budgets. For longer sustainable gains the focus needs to be on improving efficient use of energy, through targeted investment in energy saving measures. Note that future savings as a result of lower energy spend related to the PSDS project will be transferred to the Build Back Better fund for re-investment with further projects.

Conclusion

17. The energy performance within Q1 remains on track with the long-term trajectory needed to meet our CAS targets for 2027. We continue to mobilise workstream (NZ1) related to operational buildings within the Climate Action Strategy. We have absorbed the impact of the reoccupation of our building stock. Our new targets are challenging but the current data indicates achievable, requiring action in all areas of the City Corporation to ensure we meet our planned objectives. Our focus is now on ensuring the next phase of climate action projects can be implemented in a timely and effective manner.

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