

Committee(s)	Dated:
Barbican Residents Consultation Committee - For information Barbican Residential Committee – For decision	2 September 2024 16 September 2024
Subject: Energy Audit Report	
Which outcomes in the City Corporation’s Corporate Plan does this proposal aim to impact directly?	5,10,11,12
Does this proposal require extra revenue and/or capital spending?	N/A
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: City Surveyor	For Information
Report author: Emma Bushell & Dan Sanders	

Summary

The purpose of this report is to set out the key findings from the independent Energy Audit of the Barbican Estate Underfloor Heating Supplies during the period April 2021 to March 2023. The report sets out the options for next steps. The total potential liability across the Estate is -£510,345 and includes undercharges from the Electricity Supplier and potential undercharges from the District Network Operator.

Recommendation(s)

The Barbican Residents Consultative Committee is asked to:

- Note the content of the report.

The Barbican Residential Committee is asked to:

- Note the content of the report and provide instruction on how to proceed.

Main Report

Background

1. During a period between April 2021 and March 2023 multiple issues combined relating to the metering and billing of the communal underfloor heating supplies at the Barbican Estate. As a result, residents raised concerns about the accuracy of the data used to compile the utility bills that are passed on through their service charges. For a summary of the issues please refer to appendix 2 – June 2023 RCC Committee paper.
2. In August 2023 to address resident concerns the City Corporation proposed an independent energy cost audit of the relevant supplies over the contested period. Residents had input on shaping the specification and scope of service and have been involved throughout the audit. Due to the specialist nature of the audit the procurement period took longer than anticipated however the supplier PCMG was appointed in March 2024 following agreement with resident representatives.
3. The audit set out to review the commodity and non-commodity charges against all available usage data during the contested period for each block. It also sought to identify any data anomalies at the block level through benchmark comparison.

- PCMG compared billing data provided by the electricity supplier Total Gas and Power to the actual meter data provided by the Meter Operator Stark. A site visit was undertaken to establish the layout of the electrical infrastructure that informs elements of the non-commodity charges passed through from UKPN, the District Network Operator (DNO). To identify anomalous usage patterns a reference block was identified with a clear expected pattern of use. This then formed the basis for a benchmark comparison.

Considerations

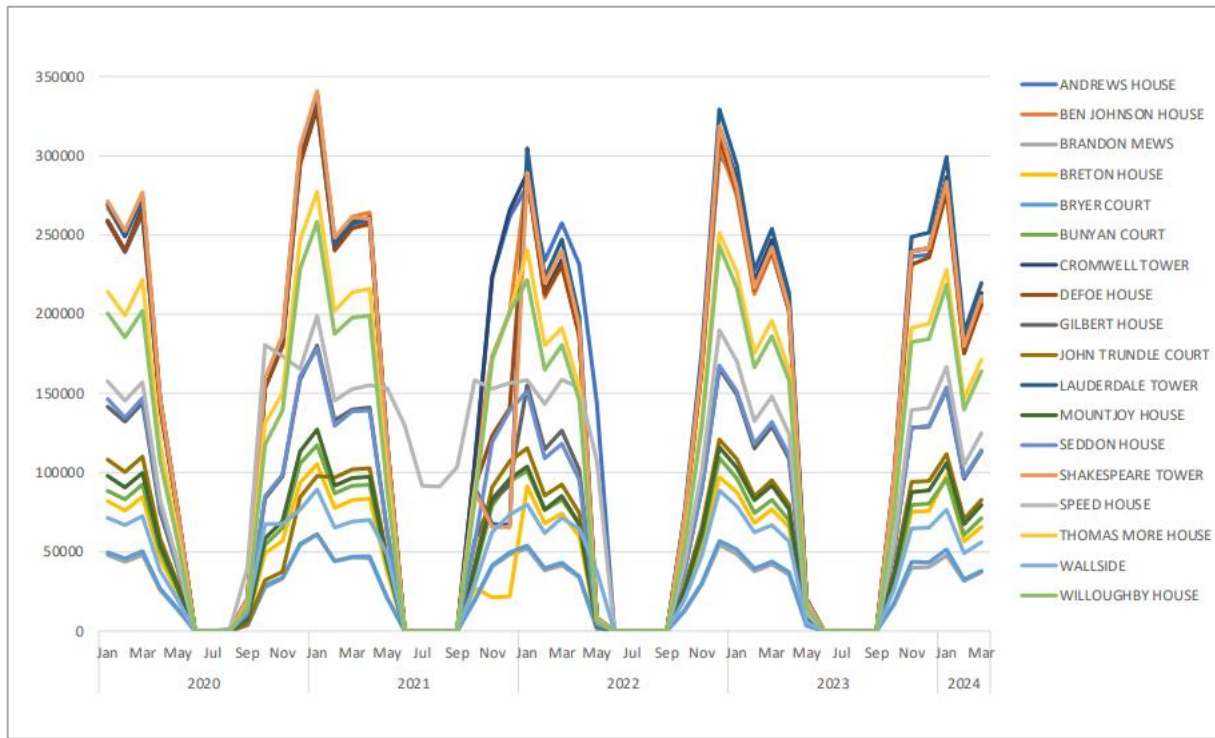
Energy Audit Findings.

- The audit findings are broken down across four potential sources of variation. The first is based on the differences found between the data used by the electricity supplier to generate the bills and the data held by the Meter Operator and the District Network Operator. This will include variations in both commodity and non-commodity costs. The second is based on the site survey undertaken by PCMG to ascertain the detail on how the electrical infrastructure is set out. The DNO calculate some of the pass-through non-commodity charges based on how this infrastructure is installed. The third is where an anomaly in usage data of $\geq \pm 15\%$ has been identified (more information in paragraph 7). The fourth source of variance is in the price profiling by the Supplier where peak usage has been overestimated for some blocks leading to a slight increase in prices as a result.
- The table below details the audit findings for each block.

Block	Variance in Supplier billing vs industry data	Variance in DNO charges	Variance in benchmark consumption	Variance in Supplier Price Profiling	Total
ANDREWS HOUSE	-£6,869	-£18,998	£29,006	£552	£3,691
BEN JOHNSON HOUSE	-£17,478	-£19,485	-£16,965	£2,322	-£51,606
BRANDON MEWS	£59	-£5,400	-	-£117	-£5,458
BRETON HOUSE	-£30,075	-£7,120	-£17,373	-£277	-£54,845
BRYER COURT	£28	-£5,436	-	£1,127	-£4,281
BUNYAN COURT	-£27	-£8,038	-	-£20	-£8,085
CROMWELL TOWER	-£208	-£16,268	-	£1,929	-£14,547
DEFOE HOUSE	-£6,789	-£19,365	-£33,730	-£543	-£60,427
GILBERT HOUSE	-£154	-£10,092	-£12,813	£2,076	-£20,982
JOHN TRUNDLE COURT	£8,246	-£7,915	-£5,038	£509	-£4,198
LAUDERDALE TOWER	-£67,888	-£16,370	-£57,479	£1,230	-£140,507
MOUNTJOY HOUSE	£46	-£7,983	-	-£2	-£7,940
SEDDON HOUSE	-£236	-£9,951	-	£2,102	-£8,085
SHAKESPEARE TOWER	-£129	-£16,181	-£55,476	£3,615	-£68,170
SPEED HOUSE	-£127	-£11,460	-	£2,671	-£8,917
THOMAS MORE HOUSE	-£15,945	-£17,080	-£5,626	-£380	-£39,031
WALLSIDE	-£121	-£6,418	£13,146	£1,148	£7,755
WILLOUGHBY HOUSE	-£9,788	-£16,162	-	£1,238	-£24,712
TOTAL	-£147,455	-£219,722	-£162,348	£19,180	-£510,345

- The line graph below are the usage patterns generated using the data from the Meter Operator. This graph clearly highlights the erroneous usage attributed to Speed House over the summer of 2021 for which the supplier went to the Settlements Board, Elexon, to get resolved and £34,000 has since been recredited to the block. To quantify other anomalous

usage Willoughby House was identified as a reference block as the pattern of usage looked to be the most consistent. Each block was then benchmarked against Willoughby House and any blocks that deviated by +/- 15% have been identified along with the value of that deviation.



Exposure across the four sources of variance.

8. The Limitation Act 1980 used by the energy industry states the limitation period is 6 years, after which any discrepancies in billing can no longer be amended. The following paragraphs set out the four sources of variance in order they appear in the above table.
9. This energy audit identified an underbill by the electricity supplier of £147,455 over the contested period. The bulk of these undercharges took place in 2022 and therefore from 2028 can no longer be rebilled.
10. A thorough visual inspection during the site visit made by PCMG noted that the design of the electrical distribution infrastructure across the estate is not reflected in the charges from the DNO over the contested period. Should the DNO review the electrical distribution infrastructure and seek to retrospectively bill for the correct charges the estate is liable for based on the actual installation this would amount to a total of £251,878. Given the current charges from the DNO are based on incorrect design data this liability is ongoing, although the sums will vary from year to year. The DNO is highly unlikely to review how these charges are calculated.
11. The third source of variation is based on the anomalous usage identified by PCMG in this energy audit. As this is not sourced from metered data it will not be possible for either the City Corporation or the electricity supplier to seek restitution. Meter data is settled within a 14-month period and any dispute beyond this would need to be taken to Elexon, the Settlements Board. Given the sums involved and the time elapsed this is highly unlikely to be successful. Across the estate this audit identified a potential underbill based on usage of £162,348.

12. When the Supplier calculates prices for each City Corporation site it profiles the electricity usage. Where electricity use is profiled within a peak period there is an increase in some non-commodity elements of the unit price. As the corporate contract with the Supplier is a fixed price rates can only be amended if there is a clear and proven error. Given the sums involved it is unlikely these discrepancies would qualify.

Options for Next Steps

Allow for Statute of Limitations to expire

13. Allow for 6-year Statute of Limitations to expire, noting the financial risk in the table below.

Year	Variance in Supplier billing vs industry data	Variance in DNO charges	Variance in Supplier Price Profiling	Total for Year
2020	£110	-£94,266	£2,534	-£84,401
2021	-£8,433	-£80,163	£6,645	-£277,180
2022	-£126,883	-£78,778	£1,954	-£161,850
2023	-£10,391	-£17,676	£2,775	-£15,076
2024	-£1,863	£19,002	£5,281	£28,161

Voluntarily pay the underbilled amount to the electricity supplier

14. Issue copy of independent energy audit to electricity supplier to seek settlement to be met through the service charge.

Corporate and Strategic Implications

Strategic implications

15. This report contributes to the outcome “Providing Excellent Services” in the Corporate Plan.

Financial implications

16. Potential service charge implications as per report.

Legal implications

17. There are no legal implications.

Conclusion

18. The independent energy audit has found Barbican Estate Leaseholders have not been overcharged for electricity supplying the communal underfloor heating, except for Speed House, which has been resolved. Potential undercharges were identified and options for managing the risk have been set out.

Appendices

- Appendix 1 – PCMG Report
- Appendix 2 – June RCC Committee Report

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