Committee(s): Community & Children's Services Committee – For Decision	**Dated:** 1st November
Subject: Opt-out of the Communal Heating and Hot Water System	Public
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	N/A
Does this proposal require extra revenue and/or capital spending?	N
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?	N/A
Report of: Director of Community and Children's Services	**For Decision**
Report author: Jason Hayes, Head of Major Works	

Summary

Following the Gateway 5 approval where Community and Children's Services Committee decided on the option to replace the existing communal heating and hot water system at Middlesex Street Estate in September 2019. Members approved the replacement of the existing gas heated system with a new, more efficient communal heating and hot water system.

A proposal has been made by Members of the Community and Children's Services Committee to allow leaseholders to opt-out of the new communal heating and hot water system and install their own individual heating and hot water system.

The original report shared at Community and Children's Services in September has been updated to address queries raised since. A further meeting was held on behalf of the wider committee on 6th October, with residents, to review the detail and consider the views of residents in the decision.

Recommendation(s)

Members are asked to decide on the option below:

- Communal heating and hot water system is to continue to be installed to <u>all</u> properties on the Middlesex Street Estate that are currently served by the existing communal heating system, as per leases under repair, continue to recover services charges for the communal heating and hot water system installation and future servicing costs.

Main Report

Background

1. The Gateway 5 report for the replacement of the existing gas fired communal heating and hot water system was approved in September 2019. Work started in November 2019 to the existing plantroom and a new temporary boiler was installed to help support the existing old boilers. Middlesex Street Estate was constructed in the 1970's and the existing pipework infrastructure was nearly 50 years old at the time of the report, with all components supporting the system beyond their expected life and recommended for replacement. This was confirmed by PCM Ltd, who were the consultant acting on behalf of the City of London Corporation.

2. The existing system has been subject to multiple failures with many parts for the existing system now unobtainable and likely to fail at any point. Much of the existing pipework has corroded to such an extent that sections of the pipework could not be reinstated due to safety risks with high pressure and high temperatures involved. The existing pipework was installed in risers internal to the flats during construction and it was ascertained that the new pipework could not be installed back into the existing risers.

3. The work includes gas fired condensing boiler system with new distribution pipework, individual Heat Interface Units (HIU's), new internal pipework to the flats and heat emitters (radiators).

4. Work was paused following the Covid -19 pandemic in March 2020. As the Government eased restrictions, work started in the plantroom once more and pipework infrastructure across the estate before being paused again due to resident objections to the Planning Application. Conditions were finally agreed, and planning permission granted, after 12 months of further consultation.

5. In March 2021 Cadent (regional gas distribution company that supplies gas to the northern side of London) approached residents in Petticoat Tower with an Energy Exchange Programme (EEP). The EEP was an initiative led by Cadent where existing gas infrastructure (same age as the communal heating and hot water pipework) is deemed beyond its expected life span and, replacement is required in order to safely continue to use gas in homes across the estate. Cadent are unable to reinstall the pipework in the existing risers for the same reasons the new communal heating and hot water system could not, and any new pipework would need to be run externally. EEP was offered as an alternative to the new externally installed pipework by offering residents £2,000 as compensation to forgo the gas supply to the property and purchase an electric cooker, together with any required electrical alterations. The EEP was successfully taken up by 100% of residents on the larger City of London estate at York Way, Islington.

6. After consultation with residents by Officers and Cadent representatives, of the 41 existing gas users in Petticoat Tower, 14 refused, 17 did not respond to any

of the letters and 4 failed to provide the relevant details required by Cadent to process. The scheme requires 100% of residents to sign up to it.

7. The new pumps, boiler and other ancillary items will provide a much more efficient heating system using much less energy than the existing system. The HIU's will also allow accurate individual billing rather than the current system where all costs are shared equally. If a resident uses less hot water and heating, they pay less. The new communal heating and hot water system benefits from a connection installed and ready to accept another form of energy to supply the heating and hot water. This could be in the form of air source heat pump technology, water source or potentially a district heating system.

8. In addition to the future of the energy supply, Officers are working with a nearby developer to supply the estate with waste heat from a commercial property. The waste heat supply will contribute to the energy required to provide heating and hot water to the estate. The developer has offered design costs and to cover the cost of the equipment that will supply the waste heat to the Middlesex Street Estate.

Current Position

9. The DCCS Major Works Team are continuing to install the communal heating and hot water system alongside the communal cold-water system.

10. A report on the opt out was taken to Community and Children's Services committee on 14th September but a decision could not be reached. A further meeting was held on behalf of the wider committee on 6th October, with residents, to review the detail and consider the views of residents in the decision.

11. The existing system has reached a point where certain sections of the pipework cannot be refilled due to the condition of the pipework and the risk of leaks, flooding and harm to residents is too high. Parts that are still in operation are failing on a near daily basis and leaks, pumps failures etc. are a regular occurrence.

12. Officers are working with the developers of the commercial property around the design and legal agreements of the waste heat supply. This is at no cost to the HRA or leaseholders.

Options

13. This report is for decision, on the option noted below.

- Communal heating and hot water system is to continue to be installed to <u>all</u> properties on the Middlesex Street Estate as per leases under repair, continue to recover services charges for the communal heating and hot water system installation and future servicing costs.

Key Data

14. Appendix 1 shows the feasibility study undertaken by PCM Ltd. The report covers the old communal heating system and provides a condition score. The report also raises a number of additional concerns which have been dealt with as part of this project, such as asbestos removal.

Corporate & Strategic Implications

Strategic implications

15. The new heating and hot water system will not only protect and enhance value for the City, and its leaseholders, but additionally provide warm homes with a reliable, more efficient components and help keep bills for all residents as low as possible.

16. A study on another block owned by the City, has shown that there is a significant difference in the energy costs over a 20 year period, comparing communal gas heating with individual electric boilers and electric radiant panels. The table below is taken from a report on a residential block of a similar construction and age (costs are based on lower corporately procured electricity rates, compared with domestic supplies, and electrical running costs are likely to be higher).

System Type	**Energy Costs (20 Years)**
Replace Existing heating and hot water system like for like (existing boilers and controls)	£ 937,605.00
Individual electric boilers	£ 2,790,951.00
Electric radiant panel heaters	£ 2,713,022.00

17. Electricity prices are much higher than gas rates and an electrically heated domestic system can be as much as four times more expensive in running costs.

18. The combined fuel costs and installation costs are shown in the table below:

	Cost to install	**Running Cost over 20 year period**	**Total**
Individual Electric System	£8,850.00	£39,313.16	£47,980.43
Communal Gas System	£15,000.00	£13,588.48	£28,588.48

The table shows a difference of £19,391.95 over a twenty-year period.

19. The new system is also future-proofed to allow renewable or further sustainable resources to provide heat for the long-term future. A connection has been installed in readiness for either contribution as a hybrid system (gas and renewable), a full reliant renewable energy supply or full renewable supply with a gas back-up for emergency.

20. Individual electric heating systems will place a far greater load on a limited electrical infrastructure that will not only require significant upgrades, but the incoming supply will also require upgrading (depending on the number of properties). The estate has five electrical supplies into the building, so any upgrades will be expensive. Early studies of Electrical Installation Condition Reports for flats in Petticoat Tower have confirmed that some electrical supplies may not be adequate for the additional load of electric heating.

21. A small number of properties converting to an electric only heating system is unlikely to have a significant impact on the electrical infrastructure however, a much larger number would require replacement of electrical distribution that was recently replaced in 2019. Although the electrical infrastructure has been replaced, it was designed with the current demand rather than what would be required for a large number of properties to convert to electric heating systems. Alternatively, there would need to be an assessment on the total number of properties that cold convert and a limit placed on those who could change to electric heating.

22. Current estimates for converting to electric heating are £8,850 without any infrastructure changes. This includes the new heaters associated equipment, wiring etc. Further upgrades could see this cost rise to £19,800 with distribution board replacements, wiring and electrical intake room upgrade work.

23. If there are less properties on then system and a large number of properties are removed, then the existing energy system may be too big for the number of homes being supplied and therefore less efficient.

Financial implications

24. Removal of residents from the communal system increases the apportionment and therefore contribution for the remaining leaseholders making the contributions more expensive. This is the same for any future servicing, repair cost and any costs towards future component replacement. It also adds an additional financial burden on the already stressed HRA budgets.

25. Financial contribution increases will be relative to the number of residents opting out. For example, if ten residents opt out, there could be an increase of approximately £1,000 on the average cost for the existing heating system for the remaining properties. The £1,000 doubles to approximately £2,000 for twenty residents opting out.

26. Future replacement of the communal system could be less feasible and more expensive to run in the future, due to less consumers using the system.

Resource implications

27. The contractor has struggled with team resource and competing with new build sites has proved problematic for the contractor. Delaying the work may see that resource move to other sites where the contractor is unable to retain them due to lack of work on Middlesex Street Estate.

Legal implications

28. The Comptroller and City Solicitor has been consulted in relation to the proposed option in this report and comments as follows.

29. The City **can** compel leaseholders to provide access to flats for the inspections/ surveys for the replacement heating system. The City **can** compel leaseholders to provide access to flats for the installation of the replacement heating system. A challenge to the reasonableness of costs on the basis that those costs have been incurred contrary to the Corporation's Climate Action Strategy, could in theory be brought before the First-tier Tribunal (Property Chamber). However, any such challenge faces substantial difficulties and is unlikely to succeed.

Risk implications

Cost Risk

30. Delaying the project whilst decisions are made will lead to extension of time claims by the contractor and therefore further increase in costs. Material prices are continuing to rise and could lead to a further claim by the contractor. Alternatively, the project can be completed, and connections left outside the opting out properties for a future connection. Individual one-off installations may be more expensive than installing through a main contract.

Organisational Risk

31. None

Exclusions

32. None

Equalities implications

33. None

Climate implications

34. Around 43% of the UK's electricity is renewable (according to National Grid Group) and the UK's electricity supply still requires fossil fuel to provide enough power across the UK.

35. The communal system is future-proofed to allow a renewable or more sustainable source of energy and removal of this communal heating and hot water system from certain properties may be permanent, meaning a missed opportunity to upgrade in the future.

Security implications

36. None

Conclusion

37. Communal and district heating systems are becoming more and more preferred across the UK and European counterparts. The use a single source of energy that can be renewable would suit Middlesex Street Estate long term. When the gas is no longer available it is much easier to prepare for a new heating source with a communal system than to replace individual heating systems. It can also be argued that a communal heating system is more efficient than individual systems, having less impact on the environment.

Appendices

- Appendix 1 – PCM Ltd Feasibility Report

Jason Hayes
Head of Major Works, DCCS Property Services

T: 07850 513364
E: jason.hayes@cityoflondon.gov.uk]