

Housing Select Committee		
Report Title	Update on the Housing Select Committee scrutiny review into communal heating	
Ward	All	Item No. 7
Contributors	Asset Management Planning Manager	
Class	Part 1	Date: 10 January 2017

1. Purpose

- 1.1 This report provides an update on the Housing Select Committee scrutiny review into communal heating.

2 Recommendation

- 2.1 The Committee is invited to note the contents of this report.

3. Background

- 3.1 Communal heating involves the distribution of heat from a centralised heat source to a number of properties. There are thought to be between 10 and 15 thousand communal heating systems operating in the UK. These range from communal heating systems in a single building, to heat networks that extend to a number of buildings, as well as area-wide district heating schemes.
- 3.2 The benefits of communal heating systems derive from efficiencies compared to individual boiler systems. These efficiencies can be achieved through the scale of heat production, the potential for low carbon technologies as the source of heat generation and the maintenance requirements of a single system as opposed to individual boilers.
- 3.3 Communal heating systems are however complex, and optimum performance is dependent on effective and integrated design, build and maintenance that responds to the needs of multiple end users. It also requires accurate and timely billing and information for end users.
- 3.4 The Greater London Authority has a target to reduce London's carbon dioxide emissions by 60% on 1990 levels by 2025. Through the London Plan, the Mayor expects all new developments to reflect the following hierarchy:
- Be lean: use less energy
 - Be clean: supply energy efficiently
 - Be green: use renewable energy

- 3.5 Proposals for major developments are required to show how they intend to meet the London Plan target for carbon dioxide emissions within the framework of this energy hierarchy. Decentralised, or communal, heating is one of the established ways of demonstrating a development will be supplied by an efficient source of heating. The planning system has therefore been an important driver of communal heating systems for new developments.
- 3.6 Lewisham's Housing Select Committee undertook a scrutiny review of communal heating systems in 2014/15 as a result of issues raised by residents in social housing properties served by communal heating. The Review was based around the question: "*How can the Council help to ensure the effective deployment of communal heating systems in the borough, where appropriate?*". The Committee's recommendations were referred to Mayor and Cabinet in July 2015 and the response from officers agreed by the Mayor in September 2015.
- 3.7 The Committee's recommendations and the responses agreed by the Mayor are presented below in an appendix to this report.

4. Update

- 4.1 The Committee found that the expected benefits of communal heating systems were often not being achieved in practice. The Committee heard evidence that new-build developments were particularly susceptible to problems since modern air-tight buildings with higher insulation standards are more at risk of over-heating.
- 4.2 Problems identified in the course of the Committee's evidence sessions include:
- Over-sized heat sources generating excessive heat relative to demand, leading to overheating, higher costs and unnecessary carbon emissions.
 - Poorly insulated and/or designed pipework leading to overheating.
 - Poor integration of design, build and operation resulting in inefficient running of systems and a lack of the specialised skills required across the industry to deliver high quality systems.
 - Problems with billing, supply of information and communications by operators of communal heating systems.
 - A general lack of understanding of how communal heating systems are performing in practice and how this compares to predicted performance.
 - A lack of consumer protection for households served by communal heating systems in comparison to the role OFGEM provides customers of traditional energy suppliers.
- 4.3 The Committee also heard evidence that there was potential for systemic biases in the calculation of the performance of systems resulting in over-estimates of the benefits of carbon reduction.

- 4.4 The Committee's Review and its final report were of interest to the Greater London Authority, the Department of Energy and Climate Change, the Association of Decentralised Energy and others working in the industry. The issues raised reflected a growing recognition in the industry that greater focus was needed on understanding the performance of communal and decentralised heating schemes and the skills and standards needed to deliver high quality schemes.
- 4.5 Since the Committee reported its findings there have been a number of national developments. These include:
- The Heat Networks Code of Practice for the UK published by CIBSE and the Association for Decentralised Energy, published in June 2015. The Code of Practice received broad support and provides a technical underpinning to raising standards in designing, delivering and running communal heating systems.
 - The Heat Trust, launched in November 2015, which offers free independent customer service standards and complaint resolution. In September 2016 The Heat Trust launched a Heat Cost Calculator, an online tool, designed specifically for domestic customers served by new district heating schemes to allow them to compare their annual heating and hot water costs with a typical, alternative heating system.
 - A review of 'SAP' (the Standard Assessment Procedure methodology for predicting the energy performance of buildings) by Government proposes amendments to the distribution heat loss factors from communal heating systems. Consultation on the proposed changes runs until the 27 January 2017.
 - In 2015 the Department of Energy and Climate Change funded the use of web-based technology to analyse performance data of communal heating systems, generating data across the system as a whole and using sophisticated analysis to identify the root causes of inefficiency. This work demonstrated significant benefits in terms of costed-measures to improve the heat networks it was trialled in.
- 4.6 A review of Lewisham's Local Plan is currently in progress. The review is an opportunity to focus communal heating on appropriate sites and support the use of alternative approaches where these may be more suitable.
- 4.7 The Committee visited several sites of good practice and the findings of the Review recognised the potential opportunity that exists within Lewisham from the South East London Combined Heat and Power (SELCHP) facility.
- 4.8 In January 2016 the Council published the findings of a feasibility study delivered with funding from the Government's Heat Network Delivery Unit assessing the potential for a heat network connecting SELCHP and the University of London Goldsmiths campus. The study identified a potential route, but assessed the economic viability of the route as a standalone heat network as low. A key issue highlighted by the study was the highly constrained exit route from the SELCHP site with Surrey Canal Road offering the only viable option.

- 4.9 In March 2016 the Heat Network Delivery Unit awarded Lewisham Council further funding to assess the feasibility of a network extending to Convoys Wharf and other development sites in the north of the borough. This feasibility study is likely to enhance the economic case for a network exiting SELCHP via Surrey Canal Road and is expected to be published before April 2017.
- 4.10 In November 2016 the Heat Network Delivery Unit launched the Heat Network Investment Programme (HNIP) a five-year £320m capital investment programme supporting delivery of heat networks. The deadline for bids for a £39m pilot exclusively offered to local authorities closed in November 2016.
- 4.11 The Council's current feasibility study is not due to complete until March 2017. It was not therefore considered practical to submit a bid for HNIP funding at this stage. If the current feasibility study does demonstrate the economic and technical viability of a network, the Council will need to consider the role it wants to play in bringing it forward. This will mean taking a view on the potential opportunity the network offers in terms of delivery of policy objectives and financial benefits, as well as the Council's willingness to invest resources including staff capacity and appetite for risk including financial and reputational. In reaching a view the Council will also need to understand the intentions of Veolia, the primary owner of the SELCHP site.

5 Legal implications

- 5.1 There are no legal implications arising directly from this report.

6. Financial Implications

- 6.1 There are no financial implications arising directly from this report.

7 Crime and disorder implications

- 7.1 There are no crime and disorder implications arising directly from this report.

8 Equalities implications

- 8.1 There are no equalities implications arising directly from this report.

9 Environmental implications

- 9.1 There are no specific environmental implications arising from this report however national, regional and local targets for carbon reduction depend in part on the implementation of improved design for new buildings and decentralised energy is an important part of the mix of relevant solutions.

10 Conclusion

- 10.1 The Housing Select Committee scrutiny review on communal heating addressed a challenging subject in a timely way that pre-empted many of the subsequent developments at national level.
- 10.2 The CIBSE Heat Networks Code of Practice, published in June 2015, is a key reference point that developers and others involved in the commissioning and implementation of buildings with communal heating systems are expected to use.
- 10.3 The Committee gave strong support to the Council pursuing opportunities to connect the SELCHP facility to supply low cost low carbon heat to homes and businesses in the borough. To maximise the use of external funding that may be available the Council will need to reach a view about the role it wants to play in the delivery of a heat network.
- 10.4 The Committee is invited to review and comment on the contents of this report.

Background documents

Scope of the Housing Select Committee review into communal heating

<http://councilmeetings.lewisham.gov.uk/documents/s31297/Appendix%20D%20-%20Communal%20heating%20review%20scope%20011014.pdf>

Final report from the Housing Select Committee review into communal heating

http://councilmeetings.lewisham.gov.uk/documents/s36591/05AppendixACHSRevisedReportv2_190515.pdf

Mayor and Cabinet report setting out the response to the Housing Select Committee review into communal heating

<http://councilmeetings.lewisham.gov.uk/documents/s38782/Response%20to%20SDSC%20Communal%20Heating%20Review.pdf>

New Cross Heat Network feasibility study

<http://www.lewisham.gov.uk/inmyarea/regeneration/deptford/Pages/New-Cross-heat-network-feasibility-study.aspx>

Appendix: full list of recommendations from the Housing Committee Review on Communal Heating and the response provided on 30 September 2015

RECOMMENDATION 1	RESPONSE
<p><i>The Council should explore the gap between the projected 'potential' performance of communal heating systems (manufacturer's estimations) and their 'as built' performance (actual performing rates). This could be done by engaging independent engineers, paid for by the developer, to assess the performance of the installed systems at a number of practical intervals as the scheme is built out. This would enable the Council to produce a revised assessment of schemes once built, which would also incorporate any changes made during the building process.</i></p>	<p>As the Committee identified these are issues that go beyond the borough's boundaries. They are also extend wider than communal heating, and in June 2015 the Zero Carbon Hub published 'Overheating in Homes, the Big Picture' identifying wider issues including communal heating affecting energy performance in new build developments. Officers support the recommendation that the Council should be reinforcing these issues with central and regional Government. This is particularly true in relation to the future changes of the Standard Assessment Procedure (SAP) by the Department of Energy and Climate Change and in encouraging support for voluntary entry of heat network performance information in the Product Characteristics Database.</p> <p>Monitoring the implementation of communal heating schemes is of particular importance as all new system require fine tuning to optimise their performance. This is often a lengthy process and something that can suffer where there is a disconnect between construction and management of a new system. Monitoring actual performance and sharing this information in a consistent way is therefore an essential part of running an efficient system and will help improve the overall understanding of performance to inform policy and standard setting.</p> <p>The suggestion that contributions from developers could pay for monitoring of performance in Lewisham is likely to be difficult to enforce in relation to the requirements for setting planning conditions or obligations set out in a Section 106 agreement. It also has the potential to increase the cost of such developments potentially affecting overall viability.</p> <p>It is suggested therefore that a national or regional approach to assessing the performance of communal heating systems is the most effective way to produce the evidence-base needed and that the Council should support the approach set out in the Association of Decentralised Energy's new Code of Practice.</p> <p>Given many of the issues relate to delivery by Registered Providers it is suggested that officers could work with the Association for Decentralised Energy to run a training session for local Registered Providers to go through the new Code of Practice – using this as an opportunity to disseminate information on best practice. Such training would also be potentially valuable to planning officers and others within the Council.</p>
RECOMMENDATION 2	
<p><i>(i) The 'as built' assessment figures (see recommendation 1) should be compared with the Standard Assessment Procedure (SAP) calculator figures to determine if schemes are performing as expected and delivering the carbon savings they are intended to deliver.</i></p> <p><i>(ii) The Council should lobby other local authorities and housing associations to collect 'as built' performance data.</i></p> <p><i>(iii) This data should be shared with the GLA and DECC to allow a thorough evaluation of installed communal heating schemes to take place in the hope that a thorough evidential foundation can be established for communal heating schemes.</i></p> <p><i>(iv) The Council should put pressure on the GLA and DECC to undertake this evaluation and develop a systematic approach to reviewing successful and less successful communal heating schemes. This would enable, for example, the GLA to better understand the impact of their decentralised energy policies, to verify their carbon saving calculations and help establish an evidence base which might encourage better practice across the industry.</i></p>	

<p style="text-align: center;">RECOMMENDATION 3</p>	<p style="text-align: center;">RESPONSE</p>
<p><i>The Council should consider setting minimum design efficiency/loss requirements at the planning stage for communal heating schemes.</i></p>	<p>The Planning Department already use planning conditions to require developments to meet target carbon savings, as set in approved energy statements. However these targets are not then tested, it is a compliance condition.</p> <p>The introduction of any additional local standards for communal heating systems would require a specific evidence base on design efficiency and identified standards for what is considered to be the standard to be adopted. In the absence of this Planning can only advocate for high quality systems but not require a specific standard.</p> <p>Officers will review whether the Council's Residential Standards document can be updated to advise developers to use systems with the highest efficiency possible and to follow guidance in the new Code of Practice.</p>
<p style="text-align: center;">RECOMMENDATION 4</p>	<p style="text-align: center;">RESPONSE</p>
<p><i>The Council should consider undertaking a piece of work to compare costs, heat loss, carbon savings etc. for residents in new builds with communal heating systems and those with individual boilers, and then project these forward to assess if the benefits/losses even out in the future. In this way the Council can create a realistic heat comparator for residents.</i></p>	<p>The Heat Trust is working on a Heat Cost Comparator which will provide a like-for-like comparison of the cost of heat in different systems. The comparator, which was reviewed by an independent committee of consumer groups, industry participants and government officials, will look at not just the unit price of fuel but also other variables such as boiler maintenance and replacement. The Comparator is due to launch alongside the Scheme later this year and will be available on the Heat Trust Website (www.heattrust.org.co.uk).</p> <p>It is hoped that this resource will provide the information suggested without requiring a separate Lewisham-specific exercise.</p>
<p style="text-align: center;">RECOMMENDATION 5</p>	<p style="text-align: center;">RESPONSE</p>
<p><i>The Council should look very critically at attempts to down-grade or mitigate planning conditions that are made after planning permission has been granted.</i></p>	<p>The Planning Department already resists measures to down-grade energy savings within approved schemes. However with regards communal heating systems the Council does not specify the technical requirements of such systems and so cannot make these subject to conditions. In the absence of an evidence-base that can be used to underpin conditions on standards the Council can only condition the installation of system but not the specific type or any standards the system should achieve.</p>
<p style="text-align: center;">RECOMMENDATION 6</p>	<p style="text-align: center;">RESPONSE</p>
<p><i>As a local authority, Lewisham should 'slow down' the pace of adopting communal heating systems and make sure that we critically engage with other options available to deliver carbon savings, moving our emphasis from simple compliance to actual performance.</i></p>	<p>Existing Planning policy is technology neutral – the Lewisham and London Plan policies require a total overall reduction in carbon dioxide emissions arising from the development, there isn't any requirement upon developers to meet it in a specific way, for instance by requiring the adoption of communal heating systems. Instead the policy requires developers to demonstrate they have considered each stage of the Mayor's energy hierarchy to meet the overall carbon reduction levels but doesn't require them to use elements from each stage to do so.</p> <p>The only area that Lewisham has a specific focus on the use of decentralised energy is in Lewisham Town Centre</p>

	<p>and this policy is outlined in the Lewisham Town Centre Local Plan.</p> <p>The National Planning Policy Framework (NPPF) has a presumption in favour of sustainable development. In relation to decentralised energy, Section 97 of the NPPF states that ‘In determining planning applications, local planning authorities should expect new development to: comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable’.</p> <p>Lewisham Council has to be in conformity with the NPPF and, given there is no specific policy relating to the adoption of decentralised energy systems, the onus is upon developer to demonstrate the deployment of a decentralised energy system isn’t appropriate, rather than giving local authorities the ability to challenge their usage. In assessing the applicability of decentralised energy officers will encourage developers to adopt the approach set out in the Association of Decentralised Energy’s new Code of Practice.</p> <p>On Lewisham Council developments, officers take the same approach to identifying the most technically appropriate way to deliver overall carbon reductions. This should include the use of the new Code of Practice to ensure any systems are suitable for domestic or non-domestic occupants to use, with regards to functionality and cost, as well as having consideration to whole-life costings for the system.</p> <p>The installation of communal heating systems is compliant with Regional (London Plan) planning policy and Local (Core Strategy/Development Management Local Plan) policy. A specific presumption against communal heating systems would therefore require a change in policy.</p> <p>It is recognised that poorly planned or executed schemes may not represent the best use of investment and the individuals or organisations involved in specifying schemes or in considering proposals that involve communal heating systems should look critically at the alternatives, including passive-house solutions and investment in the fabric of the building to achieve long-lasting and potentially more readily achievable outcomes.</p>
RECOMMENDATION 7	RESPONSE
<p><i>The Council should insist on the installation of ultra-low NOx boilers in medium and poor air quality zones.</i></p>	<p>The Council’s Core Strategy already provides for this through policy DM 23 Air Quality, and use conditions that require approval of abatement technology utilised to minimise emissions to air from the boiler/CHP installed.</p> <p>Local authorities in England and Wales are required to review and assess air quality across their areas every three years:</p> <ul style="list-style-type: none"> • to assess the current air quality against the Air Quality Strategy objectives

	<ul style="list-style-type: none"> • to predict the future air quality against the Air Quality Strategy objectives • to designate Air Quality Management Areas where Air Quality Strategy objectives are unlikely to be met and prepare a written action plan for such areas.' <p>Based on this Lewisham have declared 6 Air Quality Management Areas (AQMAs).</p>
<p align="center">RECOMMENDATION 8</p>	<p align="center">RESPONSE</p> <p>The designation of what constitutes a major development is a national policy definition that the Council has no discretion over. There is scope in current policy to consider whether installation of such a system is feasible and there are times when it is not feasible for a smaller development to accommodate communal heating and therefore alternative measures are needed in order for a development to comply with planning policy.</p>
<p><i>Based on the evidence the Committee heard, the definition of what constitutes a major development (10 units+) falls below the threshold of a viable communal heating system. Planning decisions need to properly take into account the viability of such schemes, particularly given the air-tightness of new dwellings.</i></p>	
<p align="center">RECOMMENDATION 9</p>	<p align="center">RESPONSE</p> <p>The new Code of Practice aligns with the issues identified by the Committee and the Council should seek to promote the Code and encourage developers and those managing communal systems to adopt it. Whilst planning can attach an informative to a consent advising that the developer comply with the new Code of Practice, this is not within planning policy and therefore is not enforceable and can only be encouraged.</p>
<p><i>The Council should consider insisting that all developers using district heating sign up to and comply with the Heat Network Code of Practice, prioritise cases of overheating and follow good practice established elsewhere. This should include existing social housing developments where communal heating systems have been installed and where poor performance has been reported.</i></p>	
<p align="center">RECOMMENDATION 10</p>	<p align="center">RESPONSE</p> <p>Legal reported on this separately.</p>
<p><i>The Council's Head of Law should be asked to comment on the equalities and other legal implications of communal heating schemes, in particular that high charges mean that some of the borough's poorest residents are paying to deliver wider carbon savings; and that, where there is no opportunity to opt out of the communal system residents are, in effect, being denied a choice of heating and hot water supplier.</i></p>	

RECOMMENDATION 11	RESPONSE
<p><i>South East London Combined Heat and Power (SELCHP) is a good example of a large scale, viable district heating scheme. The Council should work hard to bring forward proposals to connect Lewisham housing estates to the network.</i></p>	<p>Lewisham Council has received funding from the Heat Networks Development Unit in the Department of Energy & Climate Change to conduct a feasibility study in 2015/16 for a network from SELCHP to Goldsmiths College in New Cross. This study assesses the technical feasibility of a network, including a route proving exercise which will establish the initial part of a route that can also be used to go towards strategic development sites including Convoys Wharf. The route also looks at the scope to connect in existing housing estates.</p> <p>Developments surrounding SELCHP have been future-proofed to facilitate a connection to a district heating system should one come forward in the future.</p>