Mayor & Cabinet			
Report Title	Response to the recommendations of the Housing Select Committee scrutiny review into communal heating		
Key Decision	No		**Item No.**
Ward	All		
Contributors	Executive Director for Customer Services; Head of Planning; Head of Law;		
Class	Part 1	**Date:** 30 September 2015	

1. Purpose

1.1 This report sets out a response to the recommendations of the Housing Select Committee scrutiny review into communal heating.

2 Recommendation

The Mayor is recommended to:

2.1 Approve the responses from the Executive Director for Customer Services.

2.2 Agree that this report should be forwarded to the Housing Select Committee.

3. Policy Context

3.1 The Climate Change Act (2008) commits the UK to establishing a low carbon economy, with a target of reducing carbon dioxide emissions by at least 80% on 1990 levels by the year 2050. Energy use in housing accounts for a quarter of carbon dioxide emissions in the UK and more than half the emissions for Lewisham.

3.2 Government guidance on improving energy efficiency in new build homes is set out in the Code for Sustainable Homes. Developments aiming for certification under the Code are required to achieve standards, for which they are able to gain credits, in the following areas:

- energy/carbon
- water
- waste
- materials
- surface water run-off
- health and well being
- pollution

- ecology
- management

3.3 Building regulations require all new homes to be built to the level three standard of the Code for Sustainable Homes. Homes built with government funding are required to achieve level four. The Council requires all new developments to achieve level four of the Code.

3.4 London's strategic plans set out a hierarchy for achieving reduced carbon emissions in all new developments. The GLA's target is 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:

- Be lean: use less energy
- Be clean: supply energy efficiently
- Be green: use renewable energy

3.5 Proposals for major developments are required to include detailed energy assessments as part of their submission for planning permission to demonstrate how they intend to meet the London Plan target for carbon dioxide emissions within the framework of this energy hierarchy.

3.6 Major developments are also required to assess the feasibility of joining existing heat networks by linking to existing infrastructure. The viability of site-wide combined heat and power systems and communal heating are included in this assessment.

3.7 Lewisham's sustainable communities strategy sets out the ambition for Lewisham to be 'clean green and liveable'. The strategy highlights the importance of ensuring Lewisham's contribution to a sustainable future by tackling waste and making effective use of resources.

3.8 Lewisham's Carbon Reduction and Climate Change Strategy was published in 2008. In 2013 the Council set a new target of a 44% reduction in the borough's carbon emissions by 2020 from a 2005 baseline.

3.9 Lewisham's Core Strategy, which directs the borough's planning framework, includes the objective that:
'All new residential development (including mixed use) will be required to achieve a minimum of Level 4 standards in the Code for Sustainable Homes from 1 April 2011 and Level 6 from 1 April 2016, or any future national equivalent.' (Lewisham Core Strategy, p97)

4. Background

4.1 As part of the work programme for 2014/15 the Housing Select Committee carried out a review of communal heating systems in Lewisham. The review

was scoped in October 2014, with evidence sessions in November 2014, December 2014 and January 2015. The final report was discussed in May 2015 and referred to the 15 July 2015 Mayor and Cabinet meeting.

4.2 Communal heating via a centralised heat production and distribution to a number of properties can be set up in a number of different ways. A communal heating system might incorporate a single building, a number of buildings (community heating) or a wider larger area, incorporating a number of buildings including homes, schools and businesses (district heating). There are thought to be between 10 and 15 thousand communal heating systems in operation in the UK.

4.3 A number of benefits are claimed for communal heating systems. In theory, efficiencies should be achieved through the scale of heat production. The use of communal heating systems also allows for the deployment of low carbon technologies that might not be feasible on a home by home basis. Communal heating systems might also reduce the requirement to carry out unit by unit maintenance and checks, in contrast to individual boiler systems.

4.4 The Housing Select Committee agreed the following review question: "How can the Council help to ensure the effective deployment of communal heating systems in the borough, where appropriate?"

4.5 In order to answer this question the Committee heard evidence in relation to:

- The issues influencing the development and deployment of heating systems in Lewisham;
- The benefits and drawbacks of existing communal heating systems in the borough;
- The factors influencing the effective design and operation of heating systems.

5. Housing Select Committee Recommendations and Officers' Responses

5.1 The recommendations from the Housing Select Committee scrutiny review are set out below with a commentary for each. The scrutiny review raised a number of important questions particularly in relation to the gap between predicted and actual performance of communal heating systems and heard evidence of problems associated with this in some systems within the borough in relation to overheating, reliability and the cost to residents.

5.2 The scrutiny review was also an opportunity to bring together a range of external industry and housing practitioners working in this area including from the GLA, the Association of Decentralised Energy, social housing providers, housing developers and architects. The themes of the review were widely acknowledged by those participating and reflected experience elsewhere, particularly in relation to the need to ensure systems are specified properly and

with a clear understanding of the whole life cost of design, construction and management.

5.3 The review aligned with work going on elsewhere, most notably the Association for Decentralised Energy's Code of Practice for heat networks, published after the conclusion of the scrutiny review in July 2015. The new Code of Practice has received broad support and seeks to focus attention on the key issues the industry needs to address as well as providing the technical underpinning to raise standards in the specification, delivery and running of communal heating systems. The new Code represents a steep learning curve for much of the industry involved in communal heating and the Council should use as many opportunities as it can to press developers and social housing providers to adopt the Code. The Council should also encourage moves in central and regional Government to improve the understanding of how communal heating systems perform in practice and to reflect this understanding in policy and funding decisions.

5.4 The scrutiny review also raised important questions about the Council's capacity to influence the implementation of communal heating systems, particularly in relation knowledge and capacity given the increasing resource constraints on officers across environmental health, planning and building control. Pressures on public finances mean there are limited solutions to these issues but there remain practical things the Council can do.

RECOMMENDATION 1

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.

RECOMMENDATION 2

(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.
(ii) The Council should lobby other local authorities and housing associations to collect 'as built' performance data.
(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.
(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.

5.5 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.

5.6 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.

5.7 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.

5.8 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.

5.9 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.

RECOMMENDATION 3

The Council should consider setting minimum design efficiency/loss requirements at the planning stage for communal heating schemes.

5.10 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.

5.11 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.

5.12 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.

RECOMMENDATION 4

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.

5.13 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).

5.14 It is hoped that this resource will provide the information suggested without requiring a separate Lewisham-specific exercise.

RECOMMENDATION 5

The Council should look very critically at attempts to down-grade or mitigate planning conditions that are made after planning permission has been granted.

5.15 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.

RECOMMENDATION 6

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.

5.16 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.

5.17 The only area that Lewisham has a specific focus on the use of decentralised energy is in Lewisham Town Centre and this policy is outlined in the Lewisham Town Centre Local Plan:

Policy LTC24
Carbon dioxide emission reduction

1. All 'major development' will be required to incorporate communal heating and cooling which future-proofs the development and allows for larger scale decentralised energy clusters to be developed in the medium to long term, in some cases beyond the plan period. Where it has been demonstrated that a communal heating and cooling system would not be the most suitable option in the short to medium term, the development should ensure a connection can still be facilitated in the medium to long term. In doing so developments should:
(a) incorporate energy centres that are appropriately sized not only to accommodate the interim requirements of CHP and other centralised plants, but to accommodate a 'consumer substation unit' – to provide all the necessary equipment for a connection to a heating and cooling network and for domestic hot water preparation,
(b) where a communal heating system is not installed, incorporate pipework to the edge of the site which is compatible with any other existing networks or sections and ensure the likely shortest distance to future networks,
(c) locate energy centres close to a street frontage (but without creating 'dead frontage' to a street), ensuring the likely shortest distance to future networks,
(d) safeguard routes from site boundaries to energy centres to enable a connection to be made to a network in the future.

2. The LBL Energy Strategy recommends that there is potential for at least three Policy Areas which could support a cluster of decentralised energy in Lewisham town centre in the future, as follows:
(a) Loampit Vale Policy Area,
(b) Lewisham Gateway Policy Area,
(c) Ladywell Road Policy Area.

5.18 The three areas were identified on the basis of work done to understand the heat loads currently in place and the high quantum of development likely to be supported by development sites in those areas which creates a relatively large heat load in a small area.

5.19 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'.

5.20 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.

5.21 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.

5.22 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 chance in policy.

5.23 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.

RECOMMENDATION 7

The Council should insist on the installation of ultra-low NOx boilers in medium and poor air quality zones.

5.23 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.

5.24 Local authorities in England and Wales are required to review and assess air quality across their areas every three years:

- to assess the current air quality against the Air Quality Strategy objectives
- 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.'

5.25 Based on this Lewisham have declared 6 Air Quality Management Areas (AQMAs).

RECOMMENDATION 8

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.

5.26 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.

RECOMMENDATION 9

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.

5.27 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.

RECOMMENDATION 10

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.

5.28 The Head of Law has asked the Equalities team to look at this who will report back separately to the committee.

RECOMMENDATION 11

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.

5.29 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.

5.30 Developments surrounding SELCHP have been future-proofed to facilitate a connection to a district heating system should one come forward in the future.

6 Legal implications

6.1 There are no specific financial implications arising from this report.

7. Financial Implications

7.1 There are no specific financial implications arising from this report.

8 Crime and disorder implications

8.1 There are no specific crime and disorder implications arising from this report.

9 Equalities implications

9.1 Lewisham's Comprehensive Equalities Scheme (CES) 2012-16 describes the Council's commitment to equality for citizens, service users and employees. The CES is underpinned by a set of high level strategic objectives which incorporate the requirements of the Equality Act 2010 and the Public Sector Equality Duty:

- to tackle victimisation, harassment and discrimination
- to improve access to services
- to close the gap in outcomes for citizens
- to increase understanding and mutual respect between communities
- to increase participation and engagement

9.2 The central concern from an equalities perspective in relation to communal heating systems regards the cost of systems and how these compare to the equivalent cost of individual boilers. If communal systems were more expensive this could raise equalities issues in relation to the impact on low income families living in properties served by communal heating. Recommendation 4 on cost comparators is relevant to this issue and the planned Heat Cost Comparator being developed by the Heat Trust should

inform future thinking about the policy considerations relating to communal heating systems.

10 Environmental implications

10.1 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 given the overall contribution of space and water heating to current carbon emissions decentralised energy is an important part of the mix of relevant solutions.

11 Conclusion

11.1 The Housing Select Committee scrutiny review on communal heating has addressed a challenging and timely subject in a way that has engaged with and received support from a number of external organisations locally, regionally and nationally.

11.2 In the right circumstances, with the right design, construction and management and an understanding of the whole-life costs and benefits communal heating can deliver heating and hot water in an efficient and cost effective way. But the supply chain involved in delivering and running systems is often disjointed and there are considerable skills gaps across the industry. The consequence of this has been schemes that are not appropriate or that have not been specified, built or maintained correctly. This is not simply a problem of engineering: it is often a social problem with significant consequences for residents living in properties that are overheated and expensive. It is also potentially an environmental problem if assumed carbon emissions are not delivered in practice.

11.3 The Committee's assessment of communal heating systems is echoed in the new Code of Practice published by the Association of Decentralised Energy in July 2015. The Code should be supported as an important step to addressing the issues that have been raised. There is more that central and regional government should be doing to understand and respond to the gap between theory and reality on communal heating systems and the Housing Select Committee's review is a useful opportunity to reinforce this message.

11.4 The Mayor is recommended to agree the recommendations set out above to:

- Approve the responses from the Executive Director for Customer Services.
- Agree that this report should be forwarded to the Housing Select Committee.

12. Background documents and report author

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

12.1 If you would like any further information regarding this report please contact Martin O'Brien on 0208 314 6605.