

BRIEFING PAPER

SUBJECT: FEASIBILITY WORK FOR THORNHILL DISTRICT ENERGY SCHEME
DATE: 10 OCTOBER 2013
RECIPIENT: OVERVIEW AND SCRUTINY MANAGEMENT COMMITTEE

THIS IS NOT A DECISION PAPER

SUMMARY:

The Council is in the process of securing Energy Company Obligation (ECO) funding. This is a significant opportunity to provide for structural and environmental improvements to the Council's housing in the City and includes funding support for new heating and hot water systems.

An ECO funded energy improvement programme supports the Council's strategic aspirations to improve insulation and heating in its housing stock, and to provide support to residents with the aim of responding to fuel cost rises and tackling fuel poverty.

As part of this investment programme Cabinet are, at the 15 October meeting, recommended to approve the next stage of development for a District Energy (DE) scheme in the Thornhill area of the City. Such a scheme has the potential to provide fuel bill savings for residents, achieve significant Carbon reductions, provide a long-term revenue stream for the Council and generate local employment opportunities.

Investment funding for the scheme will be required from the Council using a mix of General Fund and HRA Capital. Significant ECO funding is available which is essential to the financial viability of the scheme. The scheme forms part of the overall ECO funded investment programme. There will also be ongoing revenue implications for the HRA and GF.

Cabinet is requested to approve the next phase supported by Capita, which includes: seeking planning approval; engaging with residents, securing ECO funding, developing a detailed financial business case and preparing for an OJEU tender covering a Design, Build, Operate and Maintain (DBOM) contract. The detailed financial business case will include an assessment of the capital and revenue implications for the Housing Revenue Account (HRA), General Fund (GF) and the tenants who will receive their heating and hot water from the scheme. This will be reported to Council in November 2013.

BACKGROUND AND BRIEFING DETAILS:

1. The Council approved the development of a Strategic Energy Action Plan (SEAP) in December 2012 as a response to the priority issues of energy cost, energy security and CO2 reduction, as well as other key priorities such as jobs and economic growth.
2. One of the main SEAP project streams is to secure Energy Company Obligation (ECO) funding which is currently available from the energy utilities to support the delivery of insulation and to fully or partly fund new heating installations in selected Council owned housing areas of the City. The Council is in the process of selecting a suitable strategic partner to deliver a substantial ECO programme over the next 2 - 7 years.

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3. ECO funding is currently guaranteed until April 2015 for completed schemes. Although there is likely to be a further ECO funding round for the period to 2020, the level of funding and criteria for investment are yet to be determined. This lack of certainty over future ECO funding is a significant driver for the actions and the timescales outlined in the Cabinet report.

Fuel Poverty and Affordable Warmth

4. The Council is committed to addressing the continuing rise in energy bills affecting its tenants and leaseholders in the City. A large proportion of the Council's housing stock in the City uses electricity as the principal means of providing heating and hot water. These heating systems are inefficient, costly to run and generate relatively high amounts of Carbon. Other heating system technology choices for the public sector housing stock are:
 - Newer more efficient and controllable electrical heating systems;
 - Individual gas boilers and where appropriate communal gas or biomass boiler district heating systems for tower blocks and larger blocks of flats;
 - District Energy networks with gas Combined Heat and Power (CHP) and biomass boilers for two or more multi occupied buildings.

District Energy

5. A related SEAP project stream is to explore the potential for developing district energy (DE) schemes in the City. DE covers both district heating and cooling, and can also include Combined Heat and Power (CHP) through electricity generation and using the waste heat for a hot water network. These schemes are seen to be the most cost effective and efficient ways to deliver heat and hot water in areas of high building density and demonstrate the following strategic outcomes:
 - Helping to tackle fuel poverty by providing residents with more control over current and future energy costs;
 - Improving building performance and reducing long term maintenance and replacement costs for alternative heating systems;
 - Producing a potential revenue stream for the scheme owner;
 - Reducing CO2 levels on a whole lifecycle basis.
6. There are currently five DE schemes in Southampton which include; Centenary Quay, the University of Southampton campus, and the General Hospital. Cofely District Energy finance, own, operate and maintain the City Centre scheme (including the Holyrood Estate), These schemes collectively reduce CO2 emissions in the City by circa 20,000 tonnes per annum and achieve in excess of £4 million savings per annum in energy for scheme consumers.
7. A number of feasibility studies were undertaken by Capita on behalf of the Council in areas identified by a 2010 citywide heat mapping exercise. The feasibility studies demonstrate that in areas of high building density DE networks could represent the best solution for heating and hot water.

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8. Although residents will inevitably be subject to future energy price rises, DE schemes provide the scope to fix prices below market rates to offer a degree of protection. Gas required as a fuel for a CHP engine can be purchased in bulk at a commercial rate that is much cheaper than the domestic alternative.

The Thornhill area of the City is considered to be the best starting point for developing a DE scheme in conjunction with ECO energy efficiency improvements for the following reasons:

- The area qualifies for ECO funding in the current programme with a scheme that could be brought forward quickly, delivering substantial carbon savings.
- Most of the properties identified are in need of insulation with a large number of the current heating and hot water provision being provided by electricity.
- There are 3 tower blocks and 88 walk up blocks within the scheme area, comprising over 1,050 individual properties in a very closely defined geographical area. This provides a good level of heat load to sustain a scheme. This would constitute phase 1 of the scheme.
- Within the same area, there are a number of potential additional future connections including a further 550 housing units, schools, and the Antelope Retail Park, providing for further financial benefits to energy consumers and the Council. The 550 extra dwellings would constitute phase 2 of the scheme and the financial implications of this will be part of the report to Council in November. Any subsequent connections are not part of the financial appraisal at this time.
- There is a clearly identifiable location for the heat station, on a portion of the land currently owned by the Council on the old Eastpoint school site.

9. Although Thornhill is seen as the best choice for an initial DE scheme, it is important to emphasise that this forms part of a much wider energy efficiency programme in the Council's housing stock. The delivery of a DE scheme in Thornhill should be seen in the context of a significant programme of energy efficiency works throughout the City which can be facilitated through ECO funding.
10. Due to pressures on existing resources across the City, it is recognised that the scheme would need to demonstrate a positive rate of return to be considered a viable Council investment. There has already been major investment through the CESP programme in Weston, which involved external cladding and replacement of inefficient electric heating systems in four tower blocks.
11. Capita, drawing on a substantial experience of DE and other large scale heating schemes, has developed an outline operational and financial model for the Thornhill scheme. The capital required for this scheme provides for an Energy Centre with a combined heat and power (CHP) plant, heating boilers, all associated internal and external pipe work, metering and radiators. The Capita model shows that the project is worthy of a detailed assessment.
12. The Thornhill scheme would also include a large-scale investment in insulation measures funded predominantly by ECO, which means that the overall investment in phase 1 would be around £30 million.

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RESOURCE/POLICY/FINANCIAL/LEGAL IMPLICATIONS:

Capital/Revenue

13. At the 15 October 2013 meeting Cabinet are recommended to approve the next stage in the development of a delivery programme for the Thornhill district energy (DE) scheme, supported by Capita at a cost of £90,000 funded from the HRA capital programme, with formal contract commitment decision making reports by November 2013.
14. The detailed financial business case setting out the implications for the General Fund, HRA and tenants is currently being prepared and that this will be reported to Council in November 2013.

Policy

15. A District Energy scheme in Thornhill satisfies a number of Council policies and key objectives, which are included the provisions of the Southampton Council Plan, and the Council's housing and property strategies.

Legal Implications

16. Section 1 of the Localism Act 2011 permits the Council to do anything that any other person or private body could do (the 'General Power of Competence'). The use of the power is subject to a number of pre and post commencement limitations, none of which are considered to apply in this case.

TIMESCALES

17. The proposed project plan provides outline timescales for the next phase of the development with key dates for the delivery of a scheme prior to April 2015 in order to capture and guarantee the maximum amount of ECO funding. A final decision to deliver the scheme would be required at Council in November 2013. That report will include the full financial assessment and will seek approval for the required Capital expenditure and the procurement and appointment of a preferred contractor to commence works in early 2014 (appropriate delegated approval). Subsequent stages would see design, build and operation of the plant, laying heating mains, connecting the flats to the new facility and setting up the payment mechanisms by April 2015.

Appendices/Supporting Information:

1. None

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