

Report of the Director of Corporate Resources to the meeting of the Executive Committee to be held on 04 February 2020

Subject:

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Civic Quarter District Heat – Outline Business Case

Summary statement:

This report presents a summary of the outline business case to support the Council's ambition to develop a City Centre based District Energy Network, supplying low carbon heat and electricity on commercial terms, to city centre civic buildings, other public sector buildings and commercial properties.

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Overview & Scrutiny Area: Regeneration and Environment

1. SUMMARY

This report presents a summary of the outline business case to support achieving the Council's ambition to develop a city centre based District Heat Network supplying low carbon heat on commercial terms to City Centre Civic buildings, other public sector buildings and commercial properties. (A glossary of technical terms is included in Appendix 1).

2. BACKGROUND

District Heat Networks (DHN) offers an opportunity to reduce the district's carbon emissions, create new long term secure income streams, and contribute to corporate cost reductions.

The UK government has identified DHN as a significant contributor to reducing UK greenhouse gas (GHG) emissions and as a component in the transition to low carbon energy. The Department for Business, Energy and Industrial Strategy (BEIS) is making financial and technical resources available to support DHN project development across the country.

In 2010, Bradford Council agreed to reduce its carbon emissions from its own activities and for the District by 40% by 2020. The Council also agreed a target of 20% for energy for delivery of its own functions to come from renewable sources (Council March 2010).

Executive considered a Renewable Energy report on 3rd May 2013. This presented a discussion of the Link Member Report Bradford Power 2020 and Beyond, Renewables Future for Bradford Council and set out the Council's approach to deploying a range of renewable electricity and heat projects. The report set out progress to date on a number of renewable technology projects deployed across Council assets and includes the case for use of biomass systems. Executive endorsed this approach.

Funding from the BEIS Heat Networks Delivery Unit (HNDU) has allowed the Council to commission consultants to undertake a technical and economic feasibility of a number of DHN scenarios, using the Civic Quarter as an anchor estate for the scheme and complete the current level of design work. The Outline Business Case (OBC) has also been developed using HNDU funding (67%) as well as West Yorkshire Combined Authority Energy Accelerator (WYCA) funding (33%) and BEIS have also provided grant funding for project management resource (100%). The project management is being delivered by Arcadis, and the OBC has been prepared by a consortium headed by Turner and Townsend and includes Brodies Solicitors and Carbon Trust providing specialist legal and technical advice.

The project has now achieved RIBA Stage 3 design for the electrical and mechanical elements of the network, and the economic model, for a series of scenarios, has been completed. This work package included air quality modelling across the network and a detailed assessment of the pipework route options.

A pre planning enquiry has been submitted to the Council's Planning Department. The initial feedback is positive, stating *"This proposal sits well with the objectives of the Spatial Vision and policies SC1, SC2, SC6, SC9, BD1 EC1 and EN6 of the Bradford Core Strategy."* Officers are working closely with the Air Quality team to ensure that any potential impacts are carefully considered and mitigated, to ensure the development does not create unacceptable air quality issues.

In addition to the provision of heat, the network also offers an opportunity to utilise energy storage technology at a reduced cost if incorporated into the design before construction. The size of the electrical connection would be unaffected and the technology would be able to take advantage of financial incentives available for short term energy storage, these include Frequency Response, TRIADS, peak load management, day/night pricing and the utilisation of onsite generation capacity. This needs to be explored as part of the phase 2 expansion work.

The OBC has been prepared using the 5 case model and demonstrates a strong strategic fit, commercial, economic, financial and management case. The headline information from each case is set out in the appropriate section below. The full outline Business case is attached as Appendix 2.

3. OTHER CONSIDERATIONS

There must be context and understanding of how a district heat network fits into Bradford Council's historic and recent strategic decisions with regard to energy use in the district. Also its fit within the national and regional policy environment and its fit within the districts core strategy. Appendix 2 sets out the reason that District Heat supports the desired outcomes for these strategies.

The objectives of the project as laid out in the document are

- Provide competitively priced energy
- Provide a vehicle with the ability to generate income for the Council
- Minimise carbon emissions
- Reduce cost of heating Council buildings

Analysis of the project's interdependencies, assumptions and constraints is set out in detail and is supported with a risk register that sets out the high level risks and mitigation in place.

Appendix 2 shows a strong strategic fit locally, regionally and nationally. It particularly fits with proposals being put forward under the transforming cities programme where there are options to share civil engineering and landscaping costs along a mutually beneficial timeline.

4. FINANCIAL & RESOURCE APPRAISAL

Appendix 2 provides analysis of the critical success factors relating to the district heat project and applies these to the various options for the development of the scheme then using an evidence based assessment recommends an option for implementation. The options are appraised with whole life financial viability parameters which have been referenced and summarised following a quality assurance process. These include a full techno-economic model and cash flow assessment.

This work identifies a preferred core scheme and explains the changes made to this preferred scheme from the previous recommendation and the reasons for the changes. It also includes elements of route optimisation and other changes due to

changes in the built environment around the magistrate’s court and this route with all relevant connections is included Figure [5].

A review of the techno-economic model for the core scheme is included. This is supported with an analysis of any optimism bias and then an analysis of the wider sustainability impacts.

The case demonstrates that there is a positive IRR for the scheme as designed and that the scheme remains technically feasible with updated information about the capital and revenue cost streams.

The financial case section of Appendix 2 presents the findings of the financial appraisal of the preferred option recommended in the economic case. Inputs to the appraisal were primarily sourced from the techno-economic model (TEM) initial prepared by Sustainable Energy Ltd (SEL) and subsequently modified by Woodward Energy Consulting Ltd (WEC). Key issues addressed in this appraisal include funding requirements and funding sources, budget forecasting, project operations, financial risk, sensitivity analysis and state aid.

This financial case focuses on the core heat network, the subject of Appendix 2. However, the intent is to expand the scheme to include additional buildings and enhance the project returns. The detailed financial projections for the SPV are included in an appendix to the document. This financial assessment has been undertaken by the Carbon Trust and is still subject to internal financial analysis.

The cost of this project is £14.463M, which is proposed to be used and funded as follows:

| Core Scheme | £000 | % |
|----------------------------------|--------------|----------|
| Uses of Funds | | |
| Energy Centre | 5618 | 39% |
| Distribution Network | 7840 | 54% |
| Interest During Construction | 145 | 1% |
| Professional Fees | 750 | 5% |
| Working Capital | 110 | 1% |
| Total Uses | | |
| | £000 | % |
| Sources of Funds | | |
| HNIP Grant | 6459 | 45% |
| Council Equity | 5023 | 35% |
| Council Loan | 2871 | 19% |
| Council Working Capital Facility | 110 | 1% |
| Total Funds | 14463 | |

The ‘Council Loan’ will be repaid and alongside the working capital facility is invest to save funding within the Capital Programme. The ‘Council equity’ of £5,023k will be funded by corporate borrowing in the Capital Programme.

The current financial modelling shows that the new District Heating Network over its life will bring in a share of Business Rates to the Council's General Fund over and above the corporate borrowing amount – though it is the case that the Business Rates framework is currently being reviewed by the Government.

Please note, the project would incur abortive costs under the terms of the funding agreement held with West Yorkshire Combined Authority should the project be abandoned for reasons not deemed reasonable. These costs are currently in the region of £40,000 but would escalate under the commercialisation stage of work and would create a pressure on the General Fund should the project be stopped. In the event that the development is abandoned due to a problem with the project's overall financial viability, this claw-back would not be triggered.

5. RISK MANAGEMENT AND GOVERNANCE ISSUES

The Management case takes a view on how the scheme has progressed and outlines how the project will be managed through the commercialisation phase, while providing a broad view of how the project will be implemented. It sets out the key milestones within the short and long term plan and how the project needs to co-ordinate with other development and regeneration activities within the Council such as activities related to the transforming cities fund bid.

There is a projection of the likely costs associated with the commercialisation and delivery phases splitting out the costs by each of the activities although much, if not all, of this cost is able to be funded via support from BEIS (HNDU & HNIP) and the WYCA (Energy Accelerator).

There is a summary of the proposed governance arrangements for the project both throughout the commercialisation and delivery phase. This includes likely resource requirements for the Council governance board and other internal stakeholders as well as the resources that will be required to deliver each of the work packages.

The case demonstrates that there is a viable management methodology that satisfies the council's requirements as well as the requirements of potential grant funders.

6. LEGAL APPRAISAL

Appendix 2 provides an overview of the procurement and commercial strategies of the project. This is particularly important given the wide range of options around both of these crucial elements and how those choices impact on the Council's options in terms of revenue, costs, access to grants and the amount of control it would retain.

Firstly Appendix 2 addressed the commercial concerns, reviewing the objectives to understand the key outputs to achieve and then overlaying these aims with the Council's appetite for risk, requirements for control of project development and need to share in returns as well as any constraints and dependencies.

This process informed the preferred delivery model and that formed the basis for the rest of the case. The key benefits and opportunities, risks and barriers are summarised with any opportunities for mitigation.

There is an explanation of the Special Purpose Vehicle (SPV) that will be required to operate the delivery model. This also sets out the benefits, risks and barriers that are associated with the recommendation as well as the process that needs to be undertaken to draft the terms correctly and what considerations need to be made during this process. Such as the board structure and where decisions require Council approval.

Appendix 2 then reviews the options around procurement strategies. This commences with a review of the constraints involved with the supply of heat and power from the network and provides a route that satisfies contract standing orders and that can be accessed by the other public body customers. It follows with an assessment of the proper procurement route for the construction phase.

Appendix 2 makes an assessment of any state aid implications on the council and the SPV and provides guidance on where different rates apply due to the majority of the scheme falling within a class 'c' assisted area.

The case shows that the scheme as designed will operate within the council's preferred business structure and that the recommended development packages can be procured using the routes available to the council.

Internal Considerations

The council's commercial legal team had involvement in the commercial workshop and together with procurement has been given the opportunity to consider the OBC. There is further development required during the commercialisation phase of work around:

- the formation and role of the SPV;
- procurement options, particularly in relation to the supply of energy;
- trading powers; and
- state aid

All commercialisation development work will be undertaken in conjunction with officers from legal and procurement to ensure that an appropriate path which adheres to the Council's standing orders and to legislation will be followed throughout.

7. OTHER IMPLICATIONS

7.1 EQUALITY & DIVERSITY

No impact

7.2 SUSTAINABILITY IMPLICATIONS

- Please see background and description of Strategic Case for full details of how this project supports the Council's wider sustainability objectives.

7.3 GREENHOUSE GAS EMISSIONS IMPACTS

Scheme is currently projected to save 12,640 tonnes of Carbon emissions over the project life however it needs to be recognised that the scheme itself is transitional with the aim being to provide a network that does not present a financial burden to the council in the earliest stages of its implementation. There are aims to continually improve the network both adding connections and reviewing the heat sources to ensure that the carbon emissions are maximised over the life of the scheme. Officers have observed from other schemes such as Nottingham and Sheffield that once the initial infrastructure is in place the secondary expansion is deliverable and networks expand to their capacity. This is also being demonstrated in Leeds where the “pipes” scheme is being expanded.

7.4 COMMUNITY SAFETY IMPLICATIONS

No impact

7.5 HUMAN RIGHTS ACT

No impact

7.6 TRADE UNION

No impact

7.7 WARD IMPLICATIONS

The Energy centre will be located in City Ward directly at the boundary with Little Horton Ward. This development will require planning permission and some of the planning guidance from the pre application is summarised in the background section of the report. The main issues to ensure we do not cause a nuisance are the sound emissions from the energy centre and the air quality impacts that are experienced as we move emissions sources within these areas. These issues are understood and steps are being taken to ensure that the scheme does not create adverse impacts.

7.8 AREA COMMITTEE ACTION PLAN IMPLICATIONS (for reports to Area Committees only)

N/A

7.9 IMPLICATIONS FOR CORPORATE PARENTING

No Impact

7.10 ISSUES ARISING FROM PRIVACY IMPACT ASSESMENT

No Impact

8. NOT FOR PUBLICATION DOCUMENTS

Appendix 2 – Full Outline Business Case

Appendix 2 is Not for Publication and is exempt from disclosure in accordance with paragraph 3 of schedule 12a (financial or business affairs) of the Local Government Act 1972. It is considered that in all the circumstances, the public interest in maintaining the exemption outweighs the public interest in disclosing the information

Appendix 3 – Project Delivery Plan

Appendix 3 is Not for Publication and is exempt from disclosure in accordance with paragraph 3 of schedule 12a (financial or business affairs) of the Local Government Act 1972. It is considered that in all the circumstances, the public interest in maintaining the exemption outweighs the public interest in disclosing the information

9. OPTIONS

1. To reject the Outline Business Case and request that officers restart this project seeking alternative solutions to heat generation technologies, additional heat customers, alternative route options or other changes that deliver alternative outputs.
2. To reject the Outline Business Case and to choose to pursue alternative arrangements for the currently allocated resources that are needed to deliver the scheme and develop alternative plans as part of the council's response to the climate emergency.
3. To accept the recommendations of the Outline Business Case and direct officers to start progression through the next stages of project development including appropriate grant funding applications, commercialisation work and required procurements.

10. RECOMMENDATIONS

Recommended

- 1) That the Outline Business Case is accepted and that Executive request officers continue to develop the project to commercialisation on the basis of the recommendations made to deliver the preferred outputs and business structure as described throughout the OBC and subject to finance approval of the financial and economic business cases by Strategic Director Corporate Resources in consultation with the leader of the council.
- 2) That appropriate decision making authority is delegated to the Strategic Director Corporate Resources in consultation with the Healthy People and Places, and Regeneration Portfolio Holders to allow necessary milestones be hit to achieve the project. This delegated authority will allow funding applications to be submitted and project decisions on the structure and development of the project elements, such as agreeing heads of terms with customers, continue without delays.

11. APPENDICES

1. Glossary of terms
2. Outline Business Case – Not for publication
3. Delivery plan – Not for publication

12. BACKGROUND DOCUMENTS

- None