

Manchester City Council Report for Information

Report to: Executive – 17 March 2021

Subject: The Manchester Civic Quarter Heat Network

Report of: Strategic Director (Growth and Development)

Summary

The purpose of this report is to provide an update to Members on the progress that has been made to date in respect of the Civic Quarter Heat Network (CQHN) project and next steps. It also provides a position statement on the ongoing external assurance work that is to be completed before the project moves into the operational phase.

Recommendations

The Executive is recommended to:

1. Note the progress that has been made to date.
 2. Note that the final Business Plan associated for the project is to be presented to Executive in June 2021 for approval.
 3. Endorse the previously agreed delegated authority to the Strategic Director (Development), the Deputy Chief Executive and City Treasurer, and the City Solicitor, in consultation with the Leader, Executive Member for the Environment and the Executive Member for Finance and Human Resources, to negotiate and finalise the terms of any remaining contractual and property arrangements necessary to give effect to the delivery of the project and proposals set out in the report.
 4. Delegate authority to the City Solicitor to enter into and complete all documents or agreements necessary to give effect to the recommendations in this report.
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Wards Affected: Deansgate

Environmental Impact Assessment - the impact of the decisions proposed in this report on achieving the zero-carbon target for the city

The Civic Quarter Heat Network will initially reduce the City's CO² emissions by over 1600 tonnes per year and will be in operation for 30 years. It will improve air quality in the city centre by reducing the emissions of oxides of nitrogen currently generated by unabated combustion plant (boilers).

Our Manchester Strategy outcomes	Contribution to the strategy
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	Investment into a Heat Network within the City Centre will help to reduce costs to businesses and improve their resilience to climate change.
A highly skilled city: world class and home grown talent sustaining the city's economic success	The delivery of a series of Heat Networks within the City Centre should facilitate the creation of employment opportunities at a range of skill levels.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	Work with the community sector to find ways of reaching communities to create a thriving active neighbourhoods.
A liveable and low carbon city: a destination of choice to live, visit, work	The delivery of Civic Quarter Heat Network within the City Centre will help improve the environmental quality and attractiveness of the city, reduce energy and resource costs for residents, and help create attractive places that residents and businesses will choose to locate to.
A connected city: world class infrastructure and connectivity to drive growth	Manchester's Civic Quarter is already consists of established transport links throughout; cycling lanes, metro link, bus corridor. Car Parking primarily located within Manchester Central. The CQHN will include provision for high performance fibre communications to be installed along its route.

Full details are in the body of the report, along with any implications for

- Equal Opportunities Policy
- Risk Management
- Legal Considerations

Financial Consequences – Revenue

The companies established to operate the CQHN require working capital funding of £452k, to the end of June 2021, prior to the completion of the funding agreement, transfer of the assets and novation of the project agreement. These agreements will be completed following the finalisation of the updated Business Plan which will be subject to external assurance prior to its consideration by the Executive.

Once operational the CQHN is expected to provide long term savings to the Council through reduced costs of heating and lighting the buildings within the Civic Quarter, whilst also mitigating the uncertainty over price increases.

Financial Consequences – Capital

The current approved capital budget for the project is £24m.

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Background documents (available for public inspection):

The following documents disclose important facts on which the report is based and have been relied upon in preparing the report. Copies of the background documents are available up to 4 years after the date of the meeting. If you would like a copy please contact one of the contact officers above.

- Manchester City Council Climate Change Action Plan 2015/16 - 2017/18, Executive, 18 March 2015
- Civic Quarter Heat Network 'CEF Procurement Route' Proposal, Executive, 1st July 2015
- Capital Programme (Budget 2017/18 – 2021/22), Executive, 11 January 2017

- Civic Quarter Heat Network 'Preferred Bidder' Proposal, Executive, 8 March 2017
- Civic Quarter Heat Network 'SPV' Proposal, Executive, 10 January 2018
- Civic Quarter Heat Network, Executive, 21 March 2018

1.0 Introduction

- 1.1 The purpose of this report is to provide an update to Members in relation to the progress that has been made towards completion of the Civic Quarter Heat Network (CQHN) project and the next steps required to move into the operational phase.
- 1.2 This report includes an update on the construction phase of the project, the development of the business plan for the companies that have been established to operate the network and the governance arrangements that will be in place to ensure effective oversight of the operations.

2.0 Background

- 2.1 The Executive considered and approved the use of the “Carbon and Energy Fund” (CEF) Procurement Framework to procure a delivery partner to deliver the CQHN in July 2015. The Carbon and Energy Fund (CEF) provide project, procurement and management support together with the necessary technical, commercial and procurement experience within the City Council to deliver such a project.
- 2.2 Vital Energi, an experienced provider of sustainable and renewable energy schemes, were appointed to deliver the network under a Design, Build and Operate and Maintain (DBOM) contract signed on the 31 December 2018.
- 2.3 The project entails a low-carbon Energy Centre at Manchester Central Convention Complex incorporating combined heat and power (CHP) and boilers connected to a 2km district heating network. It connects several buildings, including Manchester Town Hall & Extension, Manchester Central Convention Centre, Central Library, Manchester Art Gallery, The Bridgewater Hall, and Heron House.
- 2.4 Heat created during electricity generation will be distributed through a highly efficient underground network of insulated pipes whilst the boilers will be used to “top up” the heat supplied by the CHP when required. The electrical power generated will be delivered to the majority of the buildings on the network via a private wire connection, surplus electricity is exported to the Electricity North West grid (ENW) and traded utilising a “sleeving” model. This will allow the CQHN to sell surplus power directly to customers that are not directly connected to the network.
- 2.5 Carbon emissions from the Council’s buildings account for 73% of its overall emissions, the buildings within the Civic Quarter are some of the most difficult to reduce the emissions from due to their historic nature and location and this project is a key component of reducing emissions for these buildings.
- 2.6 The project was forecast, in 2019, to reduce the Council’s direct carbon emissions by approximately 2,200 tonnes of CO² when fully operational with 1,600 tonnes being saved in the first year of operation in 2021. The actual

impact of the scheme may now be comparatively lower as decarbonisation of the energy sector has accelerated since the scheme was originally approved.

- 2.7 The options to reduce the carbon emissions of the project have already started to be considered. This may involve the introduction of ground source heat pumps into the project and / or the use of hydrogen within the fuel mix for the CHP engine. The consideration of these options will form part of the ongoing Business Plan for the CQHN.

3.0 Construction Update

- 3.1 The energy centre and pipework was scheduled to be completed in January 2021. There have been a number of delays to various elements of the project due to the impact of Covid and delays within the supply chain for specific elements of the project.
- 3.2 The Energy Centre should have commenced commissioning on 15th January 2021 following the energisation of the new gas supply planned for that date. This has not happened due to the Covid issues outlined above and the need to conclude the position with the design/installation of the gas pipe within the energy centre compound. The contractual responsibility for the delivery of the gas connection rests with Vital Energi and their sub-contractor, Energy Assets Utilities (EAU) who are an experienced contractor delivering gas, electricity, and water networks in the UK's public and private sectors. Once all of the outstanding issues have been resolved the final connections to the buildings can be completed. Should this lead to a more substantial delay a full update will be provided to June Executive.
- 3.3 All other elements of the project are either complete or at as far an advanced stage as they can be pending commencing commissioning of the energy centre. There is a 16 week period following the commissioning of the energy centre until project completion.

4.0 Capital Budget Position

- 4.1 The current approved budget for the project is £24m. In addition to this there is also a further £2m capital budget approved to provide additional capacity in the form of a second engine, if there is enough demand. Any drawdown of the additional funding will be subject to a further business case.
- 4.2 It is forecast that the project will be within budget. This will be confirmed once the position in relation to the gas connection is resolved and the final position will be reported to Members.

5.0 Operational Phase - Financial Modelling

- 5.1 The original business case for the CQHN in 2018 was underpinned by a detailed financial model which KPMG were commissioned to deliver. This took the consumption data from the proposed off-takers, projected charges and

estimated contract, utility and financing costs to determine the cashflow position of the company.

- 5.2 The financial model was also used to determine the level of debt (loans from the Council) and equity (shares held by the Council) that the company could support from its forecast cashflows.
- 5.3 The overall return on investment for the Council over a 30-year period was calculated at 5.5% with a proposed debt/equity split of 85%/15%.
- 5.4 The financial model is a live model and updated as the underpinning assumptions change. In particular it has been updated to reflect:
 - The revised capital budget position.
 - Reduction in the interest rate on debt from 6% to 5% to reflect the current low borrowing costs.
 - Revised (increased) demand profile for the Town Hall and Heron House.
 - Assumed tariff inflation amended from an assumed 2% p.a. to a blended (50/50) increase based on CPI and the wholesale price of gas.
 - Electrical demand for the Art Gallery included based on 'sleeved' pricing as there is no direct electrical connection.
- 5.5 The cashflows for the company have also been updated based on revised heat and power rates that provide a discount of c.5% to the current market prices for the buildings connected. This assumes initial connections to the Town Hall Extension, Manchester Central Convention Centre, Central Library, Manchester Art Gallery, The Bridgewater Hall, and Heron House. It also assumes the connection to the Town Hall in 2024 and further, third party connections by 2024.
- 5.6 The initial connections account for c.55% of the useful heat and power output of the CHP engine. It is assumed within the financial model that by 2024 demand equates to 66.6% of the useful heat produced and 78.8% of power.
- 5.7 The business plan for the CQHN is targeting 70% and 84% respectively within the first 5 years of operation which would further improve the financial position of the CQHN beyond that forecast within the revised model.
- 5.8 The revised financial model reduces the overall return of the project to the Council. However, the project is still forecast to provide a return to the Council as well as repaying all of the original investment. The forecast project IRR is now 3.41% reflecting a 49%/51% debt /equity split with debt (principal repayments) forecast to start from 2024. Equity redemption is scheduled for March 2051, reflecting the long term nature of the investment.
- 5.9 The KPMG commission has also included tax and accounting advice. The impact on State Aid considerations has also been considered in relation to the change in the split of debt and equity and there is no adverse impact.

Working Capital

- 5.10 A number of costs are beginning to be incurred by TradeCo in preparation for the commencement of commercial operations. The majority of these relate to energy (gas) costs in relation to the commissioning of the energy centre. Additional costs relate to the ongoing technical support that the project requires and the project management in relation to both the practical completion of the network and the subsequent connection to the Town Hall (August 2021).
- 5.11 The total value of these costs is estimated to be £452k prior to the sign off of the final business plan, completion of the funding agreement and novation of the contract.

Due Diligence, Risks and Mitigation

- 5.12 The following due diligence has been carried out and is set out in more detail in the following sections of the report.
- KPMG have reviewed and updated the financial model and assumptions as the financial model underpins the ability of the company to repay the Councils investment. This has been set out in paragraph 5.8
 - The first task of the new company will be to establish a full business plan. A draft business plan has been produced and EY have been commissioned to provide assurance in relation to the content. This includes the financial model and assumptions. Further detail is set out in section 8 of the report.
 - Legal assurance has been obtained, – as per section 6 of the report
 - Lessons learnt from other Local Authority companies and Joint Ventures have been reflected in the governance arrangements as set out in section 7 of the report.
- 5.13 From this work the following have been identified as the main risks to the project alongside their mitigation are outlined below.
- 5.14 The main risk to the forecast financial model is a failure to make the forecast connections to the network within the first 5 years. This would result in the continued underutilisation of the CHP engine, reducing the revenues and make it unlikely that the company could commence repayment of the principal element of the debt financing.
- 5.15 The mitigation in this case would be to either delay the repayment of the principal elements of the debt and / or convert some, or all, of the debt to equity at a point in the future. This would be dependent on revised demand projections from buildings on or around the network.
- 5.16 The other potential risk would be legislative change in respect of the Climate Change Levy (CCL) which the heat and power produced by the CQHN is exempt from. This is currently mitigated within the draft off-take agreements

but may mean that the Council, and other customers, do not continue to receive a discount against current market prices.

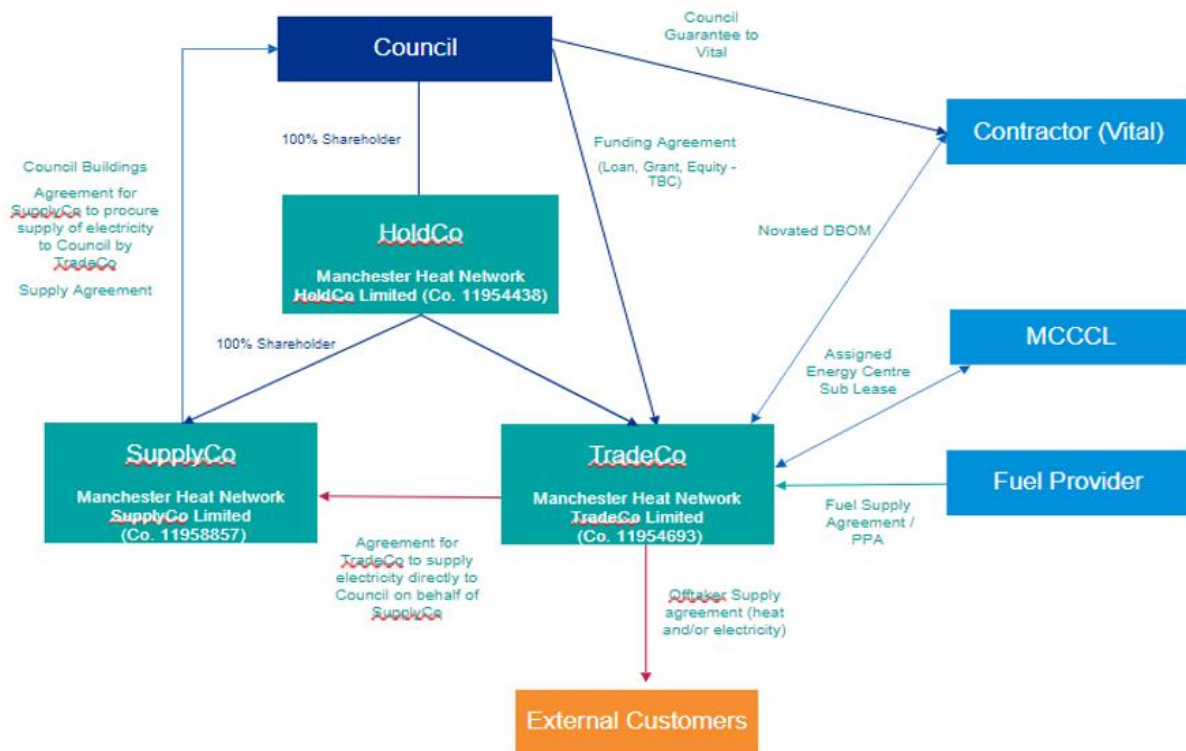
- 5.17 Further mitigation against unexpected costs or changes is through achieving optimal usage of the CHP engine. However, there are also a number of improvements to the model that could be achieved through variations to the pricing strategy.
- 5.18 The original business case stated there would be a reduction in the revenue costs to MCC in relation to the heat and power. This has been assumed (at 5%) within the current pricing strategy. This could be reduced to a more marginal level to increase revenues to the SPV.
- 5.19 Furthermore, the ongoing inflation on heat and power charges has been assumed to match the inflationary expenditure from production (unitary charge and the gas supply). However, consideration could also be given to price increases that track market rates for electricity.
- 5.20 These risks will be monitored through the reporting arrangements set out in section 7 of the report. This will include quarterly monitoring reports to the Council's Commercial Board incorporating the key performance indicators and the impact of any material variations from the base financial model on the financial position of the company.

6.0 Legal Assurance

- 6.1 External advice for the project has been secured from a number of specialists. Browne Jacobson, legal advisers, have recently completed a comprehensive gateway report on all the legal advice and support which has been provided throughout the project to highlight any further areas where further information or considerations are required.
- 6.2 Their report confirms that the advice previously given in relation to matters such as SPV structure, procurement, vires, governance and regulatory issues remains valid. Following the UK's exit from the EU, Browne Jacobson are currently in the process of providing updated advice on the potential application of the state aid/subsidy control regime to the project, which will be particularly relevant when structuring the loan and equity funding arrangements from the Council to the company.
- 6.3 As set out elsewhere in this report, strong corporate governance arrangements will be required, both within the companies and in the Council and this will also be reflected in updated articles of association for the companies and within the funding documentation. The Council's internal legal team and external legal advisors are also providing support to document the novation of the Project Agreement from the Council to TradeCo.

7.0 Structure and Governance

- 7.1 The Manchester Heat Network is structured as follows:



- 7.2 Given the recent range of reports which have been published regarding commercial activity undertaken by Council's across the country, it has been ensured particular attention is paid to the governance and decision-making framework for the SPV.
- 7.3 The Public Interest report on Nottingham's energy company, Robin Hood Energy, has been used as a frame of reference to ensure that all considerations highlighted in this report has been taken into account for both the board operation and reporting to Shareholder.
- 7.4 It must be noted that the aims and objectives of the CQHN are significantly different to both the Robin Hood Energy Company and the Bristol Energy Company, which have suffered significant failures. These energy companies attempted to compete in the highly competitive domestic provider market with a focus on providing affordable energy to resident, increasing environmental performance and providing a financial return. The Manchester Heat Network generates its own Heat and Power which it subsequently sells to a small number of directly connected buildings. These buildings, once connected, would incur a relatively high cost to move to an alternative energy provider and/or reinstatement of their own boiler plant. This results in a significantly reduced likelihood that the customer base will be eroded. The Network will not provide services directly to domestic customers, and as a result has both much lower overheads in respect of billing and customer service and a significantly reduced likelihood of bad debts and non-payment.

Governance

7.5 The Governance arrangements in the Council and in the Company will be critical to the success of the Company.

At present, the Council Directors on the SPV are:

- Director of Commercial and Operations: HoldCo, TradeCo and SupplyCo
- Head of Corporate Estates and Facilities: HoldCo

7.6 To support the Council Directors on the SPV Boards, three Non-Executive Directors have been recruited, all of which have extensive careers in energy and commercial sectors. Further Directors will be identified from within the Council or partner organisations once the final business plan has been agreed. This will ensure that Directors with the necessary skills are appointed based on the expected development and evolution of the CQHN.

7.7 In order to underpin Board decision making, there has been a clear and comprehensive delegations matrix produced. The delegation matrix is attached at Appendix 1. This ensures there is absolute clarity on the level of autonomy and decision making each component of the SPV has and what must be referred back to the Shareholder. This will be reviewed on an annual basis to ensure that the responsibilities remain appropriate. The delegation matrix has previously been reviewed and supported by the Commercial Board.

7.8 Amendments are still to be made to the Articles of Association to reflect the delegations matrix given that model articles were originally adopted on SPV establishment. Browne Jacobson are to be commissioned to undertake this work on behalf of the SPV.

7.9 Performance monitoring by the Shareholder will be undertaken via quarterly updates from HoldCo to the Councils Commercial Board, with annual report being presented to the Executive. The report to the Executive will be set in the context of both company performance and contribution towards zero carbon. In addition, the business plan will be presented to the Council as Shareholder for annual approval.

8.0 Business Plan

8.1 The business plan for the CQHN has been drafted based on the assumptions set out within this report. Due to the complex nature of the project external assurance has been commissioned from Ernst & Young (EY) using subject matter experts. The commission is in two phases; a gap analysis of the current draft of the plan, followed by an assurance review on the final content. The first phase is complete with the draft business plan being strengthened in the areas highlighted. It is to be noted that the findings of the gap analysis is mainly around the provision of further detail, rather than any fundamental issues.

- 8.2 The business plan will also consider the potential development of the network required to reduce the carbon emissions in line with the Council's overall zero carbon ambition. This will require future measures such as the introduction of ground source heat pumps and the use of alternative fuels, such as hydrogen for the engine.
- 8.3 It is proposed that the final business plan be presented to Executive in June 2021 following completion of the external assurance exercise by EY and approval by the Commercial Board.

9. Contributing to a Zero-Carbon City

- 9.1 The CQHN will reduce CO² emissions and improve air quality.

10. Key Policies and Considerations

(a) Equal Opportunities

- 10.1 There is no impact on equal opportunities as a result of this decision.

(b) Risk Management

- 10.2 Project risks and appropriate mitigations are addressed within the body of this report

(c) Legal Considerations

- 10.3 The legal issues and considerations are addressed within the body of this report