

ABERDEEN CITY COUNCIL

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COMMITTEE	Full Council
DATE	29 <sup>th</sup> June 2016
DIRECTOR	Pete Leonard
TITLE OF REPORT	Heat Network Torry – Phase 1
REPORT NUMBER	CHI/16/126
CHECKLIST COMPLETED	Yes

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1. PURPOSE OF REPORT

To seek permission to proceed with the next stage of the heat network proposal in Torry. This will include the procurement and appointment of the technical design consultants for the detailed heat network design of the heat network and routes, including an investment grade business case which will detail the capital investment and revenue implication of the heat network over the life of the proposed energy from waste (EFW) facility and beyond.

The initial heat network in Torry will be the Phase 1 of the heat network development connected to the energy from the EFW. The scope of works for the technical consultants on this project will also outline the future phases of the heat network expansion which will include expanding the heat network further into Torry, towards the City centre and other areas in Aberdeen which could benefit from the heat network.

2. RECOMMENDATION(S)

To instruct the Director of Communities, Housing and Infrastructure to implement the following:

- Develop a brief for the scope of works to procure the services of technical consultants to produce a fully costed detailed design of the Phase 1 heat network in Torry and to provide an initial assessment of how this could be further extended within the Torry area and more widely across the city.
- Proceed to procure and appoint technical consultants.
- Prepare a report to future committee meeting with the findings.

### 3. FINANCIAL IMPLICATIONS

There will be costs associated with the appointment of the technical consultants carrying out the detailed network design and preparing business case. It is estimated that these costs will be around £50k. This cost is purely an estimate at this stage as the tender would inform the cost of this service. This cost will be met by the CH&I directorate.

The initial feasibility study for Phase 1 heat network in Torry indicated that the potential heat network development and implementation cost to be circa £11m. The findings from the detailed design will provide a more accurate build cost. The Council will have to decide on the financing option for funding this capital investment.

Once the heat network is in place, there will be revenue costs for the heat network in terms of network maintenance and operation. This will be presented in the reports from the consultants.

There are no state aid implications as we shall follow the necessary open procurement processes.

### 4. OTHER IMPLICATIONS

It is advised that the Project Lead for this work must seek services and advice from the Commercial and Procurement (CPS) and also from other services such as Finance, Asset Management and Housing.

### 5. BACKGROUND/MAIN ISSUES

Aberdeen City Council has an ambition to become an energy exemplar City and as such the provision of a more widespread heat network benefitting residents, business and public bodies would be a key component of this vision. As part of this ambition, officers are working on proposals to establish an Energy Services Company (ESCO) which will lead in developing and implementing heat networks and sustainable energy sources and also co-ordinate demand-side activities such as insulation, retrofit and energy management systems.

These objectives also feature highly in Powering Aberdeen – Aberdeen’s Sustainable Energy Action Plan, the draft of which was approved by Council on 11 May this year.

An extended heat network would be anchored by the EFW facility and, ideally, connect to the existing heat networks and CHP facilities that have grown organically under Aberdeen Heat & Power’s (AHP) stewardship and extend these networks to cover a much wider area of the city.

The provision of the EFW facility in Aberdeen City requires there to be a credible heat plan and this fits in with the Council's ambition to extend its heat network across the city. The Council wish to develop a heat network locally to the EFW facility in order that the community in Torry can benefit from the heat and it is likely that there will be surplus heat that can be utilised elsewhere in the city provided that the heat network can be extended and cross the River Dee.

A desk top study carried out on behalf of the Council by Resource-Efficient Scotland mapped out how a heat network in Torry could be developed. Ultimately, the network could provide connections to thousands of domestic premises and a number of business/commercial premises. However, this is a very large scale undertaking and would take a number of years to develop. It is perhaps more realistic to develop the network in a series of planned stages and this report focuses on carrying out further detailed research in order to develop a robust business case for a Phase 1 network.

Phase 1 of the heat network is likely to include circa 300 homes, primary school, swimming pool, community centre, some industrial buildings in East Tullos industrial estate and commercial offices, with a potential annual heat demand of approximately 11GW. The approximate length of this heat network is 10km.

The desktop exercise indicates that Phase 1 would require an investment of around £11m. However, this should be seen as an indication only and the full costs will not be known until a full technical feasibility study is carried out.

There are a number of available sources of funding to develop a network of this scale and early work has been done on developing sustainable business models to support the development and management of the network over the long term.

A business case detailing the design, investment requirements and business model for the Phase 1 network will be presented to a future committee.

## 6. IMPACT

### **Improving Customer Experience –**

Phase 1 of the heat network in Torry would benefit the customers connecting to the network as they could potentially get a reliable, affordable source of heat, which has a low carbon impact. By connecting to the heat network, customers would also benefit from a reduction in their cost of boiler or heat system maintenance.

## **Improving Staff Experience –**

The success of the heat network development and the achievement of the overall energy ambition of the Council would reflect on the dedication, commitment and tenacity of the staff involved in the EFW project, Powering Aberdeen, Waste Management, Energy Management, Planning, Procurement and other professional services throughout the Council.

## **Improving our use of Resources –**

The use of district heating is one of the most efficient way of heating multiple residential/public/commercial buildings via a heat network. This heat network project will use heat produced as part of the EFW process and this process heat is used to heat the water for the district heating. By using district heating, there is potential to lower heat costs to the building users and it is more environmentally friendly compared to using heat from gas or electric heating that consumes fossil fuel sources.

The technology used in the energy production and distribution is a proven technology with minimum risk and complications. If a building or dwelling is connected to the heat network, there will be no requirement for individual boilers or other heat sources for these buildings, reducing costs and carbon.

## **Corporate -**

This project will deliver the aims of:

- Aberdeen – the Smarter City Vision  
*Smarter Environment (Natural resource)*  
*Smarter Living (Quality of Life)*
- Strategic Infrastructure Plan
- Powering Aberdeen
- Energy Management Service Plan

## **Public –**

This report would likely to be of interest to the public in general and specifically for the community in Torry as the heat network will be developed in Torry, initially identified as Phase 1, and eventually expand to most of Torry in future phases.

## 7. MANAGEMENT OF RISK

<b>Risk</b>	<b>Risk level</b>	<b>Mitigation/Control</b>
Unsuccessful appointment of technical consultants	Low	Ensure that procurement description for the service required is clear and budget is allocated. The brief for the scope of works has to be clear.
Council unable to secure the funds for building the heat network.	Medium	Ensure that the report findings from the appointed technical consultants are robust and are of an Investment Grade Business Case standard. This report should be scrutinised by senior level officers in Finance and Procurement. Project Lead to ensure that all relevant information is provided.
Issues with the physical route for the proposed heat network, including technical constraints by existing infrastructure such as roads and buildings.	Medium	The route for the heat network needs to be technically viable on all aspects. Ensure that appropriate council officers from Roads, Planning and building control are consulted at early design stage
The build of the EFW plant not going ahead as scheduled.	Medium	There are still ongoing discussions and agreements to be finalised before the EFW is built. Ensure that the relevant council officers are consulted and briefed on the outcome of the findings.

## 8. BACKGROUND PAPERS

- Review of Energy from Waste Business Case – Zero Waste Sub Committee report 1<sup>st</sup> December 2015 ref ZWSC/7602
- Powering Aberdeen: Aberdeen's Sustainable Energy Action Plan

[http://www.aberdeencity.gov.uk/council\\_government/shaping\\_aberdeens/SustainableEnergyActionPlan.asp](http://www.aberdeencity.gov.uk/council_government/shaping_aberdeens/SustainableEnergyActionPlan.asp)

## 9. REPORT AUTHOR DETAILS

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