



Project Proposal

Project Name	Heat Network Torry Phase1	Date	17/4/2017
Author	Mai Muhammad	Approved by SMT?	

1 Description

Describe the idea and its objectives.

The idea is the installation of a district heating network supplying low carbon heat from energy from a newly constructed Council owned local waste plant to the residents of the Torry area, to be delivered in phases from 2017.

The objectives are

- The heat network infrastructure for Phase 1 to be delivered before the completion of Energy from Waste (EfW) facility at East Tullos.
- Residents/tenants of 800 homes in Torry area be beneficiaries of the project
- Contribution towards alleviation of fuel poverty in Torry (one of the city's most deprived areas)
- Contribution towards the low carbon reduction targets of the Council
- To meet the operational permit obligations of the project as defined by the Council's contract with SEPA

2 Business Need

Why is the project needed?

The Energy from Waste Plant (EfW) has been agreed by Council as a preferred requirement going forward to meet the Council's obligations to deal with waste disposal and a Board has been operational since 2011 to deliver its requirements.

Via an update report, at its meeting on 24 October 2016, the Council agreed that

'a heat network is of fundamental importance to this project both in order to meet the permit requirements of SEPA but also to provide low-cost energy to those living in nearby communities' (Resolution 3 xii)

The closest community to benefit from this scheme will be the community of Torry where it is anticipated that 800 residents will be able to receive low carbon heat from the plant to be delivered in phases from 2017. This will be phase 1 of the heat network project from the EfW plant.

Torry is a community of approximately 10,000 people with a high density of council owned houses and where high levels of fuel poverty are evident. The area is identified as possessing some of the most disadvantaged datazones in Aberdeen (Scottish Index of Multiple Deprivation, SIMD). Improving household income is a key driver for one of the Council's strategic plans, the Torry Locality Plan, and it forms part of the plan's improvement measures.

The project provides a perfect example of matching a modern waste solution providing low cost and

energy efficient heat to a community who requires it close by.

To facilitate this, the heat network infrastructure for Phase 1 should be delivered before the completion of the Energy from Waste (EfW) facility at East Tullos, which means that it has to be designed, built and delivered before the completion of the EFW plant in 2017.

Moreover, the delivery of a heat network to a local community is critical for the utilisation of heat from the EfW plant and its positive end usage is an essential permit requirement for its operation. The low carbon heat supply from the EfW to existing properties helps to reduce carbon emissions by displacing existing fossil fuel heat source.

By delivering Phase 1 of the district heating network, this initial project will pave the way for an expansion of the heat network to the wider Torry area and beyond.

The project is critical for the utilisation of heat from the EfW Plant which is to be completed in East Altens in the city by June 2017.

What triggered it?

The opportunity to develop a district heating network in Torry area has arisen from the need for the Council to provide an alternative to the current practice of landfilling non-recyclable waste. Following an extensive site selection and assessment process, planning permission was granted for a facility in East Tullos that would use the non-recyclable waste from Aberdeen City, Aberdeenshire and Moray Councils to generate heat and power.

As mentioned previously, the utilisation of heat from the EfW plant is one of the conditions for the permit to build the facility.

What are the business drivers and the current business situation?

- The business drivers are to deliver lower cost heat to residents, especially those in fuel poverty and potentially to businesses operating in the area.
- The potential to generate surplus heat that could be reinvested in the improved efficiency, maintenance and expansion of the heat network and reducing energy costs to customers throughout Aberdeen as a whole .

What strategic objectives does it help deliver?

The investment in large scale low carbon heat infrastructure projects such as this one contributes to the Council and Scottish Govt's long term strategic objectives and targets for carbon reduction.

The project also helps deliver the Council's Local Housing strategy to help alleviate fuel poverty in the City and within the Torry area as part of the Torry Locality Plan.

What are the risks to the Council if the project does not go ahead?

The biggest risk is that the EfW plant may be at risk of not achieving its heat utilisation

condition under the permit and therefore not be able to operate.

Other risks are

Customer/ Political - The heat from the EfW plant is not used to benefit the local residents of Torry.

Strategic - The Council fails to secure a low carbon heat supply for the wider heat network to meet its energy efficiency and carbon reduction targets .

Reputational- The Council does not take advantage of an opportunity to secure a low cost heat supply for the heat network.

What kind of tangible measurable benefits will the project provide?

The project will provide tangible measures in:

Reduced carbon emissions from utilising low carbon heat supply from the EfW plant.

Reduced cost of heating to residents of Torry, as a replacement to existing heating fuel sources and current comparative costs.

Providing a secure, long term heat supply to the expanding and strategic heat network being developed throughout the City. The full capacity from the EfW plant is potentially 10 times greater than that currently anticipated in phase 1 (800 houses).

3 Options

Describe any of the currently identified options of how the project will be delivered.

The project is the delivery of heat from the EfW plant to meet the requirements of the permit for the plant's operation.

An options appraisal completed by Ramboll, the energy consultancy employed to deliver a feasibility report which was attached to the committee report to CHI on the project in January 24th 2017, clearly indicated that the most suitable location to focus the heat network was the local community of Torry, and an immediate effect could be structured around the 800 houses closest to the plant.

This is now known as phase 1 and the option has been expanded to consider 800 potential heat connections including 4 public buildings, 553 Council properties and 85 Housing Association properties. Phase 1 has been developed following desk top and initial feasibility studies.

Further phases may potentially include the wider Torry area, Tullos Industrial Estate, Kincorth, the RGU (Robert Gordon University) campus and across the river to connect to the existing city centre heat network.

4 Costs

Outline the total costs if known.

The initial feasibility study carried out by Ramboll identified the estimated cost of design, build and delivering Phase 1 to be up to £9.5 million.

Is the project already fully funded? If so, what is the source of the funding?

The funding for this has already been identified and is accounted for.

Additional European funding of £600k was secured to be a contribution towards some of the initial installation of heat pipes in Phase 1, and this funding has to be spent by end 2018.

If the project is not fully funded where will the additional money come from?

The project is fully funded as above.

5 Time

Detail any planned or agreed dates, milestones, completion dates, required delivery deadlines or other time constraints on the project or the affected business areas.

Establish Project Board, appoint Project Manager and Project Team	May 2017
Appoint Consultant for full technical appraisal and design of the heat network	May 2017
Develop Full Business Case (FBC) including full design specification for both heat network and internal works for each properties, feasibility reports for each property type included in Phase 1, acquire asbestos reports, seek out planning and wayleave requirements, permissions for roadworks, formal meeting with Network Rail for accessibility, full technical and financial risk modelling, detailed project plan	June/July 2017
Present FBC with recommendation for approval and proceed to procurement in August CHI committee	July 2017
CHI Committee	August 2017
Establish Communication and Engagement Plan and set up Stakeholder Group for the project to include representation for residents, businesses and communities from Torry area.	September 2017
Assuming approval granted, proceed to preparation to procure according to design specification, budget and project plan	September/October 2017
Assuming approval granted by committee, seek for tenant/householder, housing association and Council agreements for heat connection, through continuous communication and engagement	September 2017 – December 2017
Appoint main contractor to design and build heat network infrastructure.	November 2017
Seek permissions for roadworks, Network rail accessibility, finalise route for phase 1.	December 2017/January 2018

Appoint sub contractors for the project	January 2018
Order and procure materials for the first stage of Phase 1	January/ February 2018
Start on site to install heat pipework connection for HEATNET project, preparatory works	February 2018
Start on trenching and installing heat network pipes along main routes for Phase 1	March 2018 (2 year project)
Complete connection of 4 council properties to temporary heat station for HEATNET	April 2018
Start connecting heat pipework (external) to council and housing association properties housing properties according to routes agreed	May 2018 (3 year project)
Finalise design for Energy Centre at EfW	June/July 2020
Build and fit out Energy Centre at EfW	July/August 2020
Final connection to EfW	Summer 2021
Start on internal works/connection to housing properties	Summer 2021

6 Dependencies

List those projects, initiatives, key decisions or other activities outside the control of the project that may influence the project or present a risk to its success.

- Until a Project Manager is appointed, the Energy Manager will have to provide project management support and lead the project. The PMO has been asked for provision of project support. This will have impact on other priorities.
- The delay in appointing Project Manager/Team and Consultant for developing full business case will have an impact on project delivery.
- Issues with physical route for the proposed heat network, including technical constraints by existing infrastructure such as roads, rail tracks and buildings.
- The agreement of the council tenants, housing association to connect to the district heating.
- The section of Phase 1 needs to be completed by end 2018 for the HEATNET funding, otherwise Council loses funding.
- Uncertainty on energy price forecasts adds risk to the financial benefits to connecting to district heating.
- The procurement and build programme of the EfW is linked to the project plan of the heat network.

7 Next Stage – Full Business Case

Define time, costs and resources to develop the Full Business Case for the project.

Consider any knock-on effects of this new work on existing priorities.

It is proposed that the FBC is developed June – July 2017.

The Energy Manager in conjunction with Waste Recycling Manager will have to lead on the FBC and other priorities may be affected.

Costs associated with the development of the FBC has been included in the project cost of Phase 1 Heat Network in Torry.

8 Support Services Consulted

Service	Who Consulted	Their Comments	Date
City Centre Director	Marc Cole	Needs to ensure that there is clear understanding on the EfW and the relationship to the heat network project. Clear identification of the capital budget for the project. Clarification on the technical consultants appointed and justification for Project Manager. More detail to be included in FBC.	17/4/2017
Waste and Recycling	Pete Lawrence	Clarity on the reason for the heat network and how it links with the EfW.	12/4/2017
Housing Capital Programme	Ian Perry	Clear responsibility on the maintenance of the heat network and consideration of the heating maintenance of the addresses connected to the heat network, whether it is Council owned or private householders.	13/4/2017
Land & Property Asset	John Quinn	The risk of not acquiring the permit from SEPA for the EfW would jeopardise the success of building the EfW .The development of heat network project is critical to meet the requirements of the permit. The FBC will contain the relevant financial, technical and risks identified for an options appraisal and to make an informed decision on the heat network project going forwards.	17/4/2017
Asset Management Service Manager	Stephen Booth	No comments at this time. Fully informed of the project proposal.	

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Asset Management	Alastair Reid	Cost of connection to public buildings need to be clear in FBC and buildings chosen to be connected to the heat network to have a long term future. Also some clarity on the revenue cost of the project in terms of resource and management.	17/4/2017
Communities and Partnerships Service Manager	Jo Mackie	Consideration of Torry Locality Plan and improving household income should be integrated in the benefits of the project.	13/4/2017
Senior Finance Officer	Scott Paterson	No specific comments for the project proposal but seek to scrutinise the FBC.	12/4/2017
Senior Commercial Solicitor	Carlo Grilli	No comments at this time. Fully aware of the Torry Heat network project.	
Commercial Procurement Services	Alison Gallacher	Would seem a sensible option for further investigation at least to ensure we maximise the benefits of the EfW programme. Not sure the order of events within the timeline is necessarily correct but this can be researched further as part of the full BC.	13/4/2017

9 Document Revision History

Version	Reason	By	Date