HAMBLETON DISTRICT COUNCIL

Report To: Cabinet
4 December 2018

Subject: **CAPITAL SCHEME - GROUND SOURCE HEAT PUMPS**

All Wards

Portfolio Holder for Economic Development and Finance: Councillor P R Wilkinson

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1.0 PURPOSE AND BACKGROUND:

1.1 To seek approval for investment in the installation of Ground Source Heat Pumps at Civic Centre and the Council's four leisure centres at Bedale, Northallerton, Stokesley and Thirsk Sowerby during 2019.

1.2 Cabinet previously approved a capital allocation for 2018/19 to assess current energy usage and investigate energy efficiency measures which could be introduced at the Council's facilities and to its infrastructure, with the aim of reducing energy consumption, using energy more efficiently, reducing our carbon footprint and securing Renewable Heat Incentive funding from the UK Government.

1.3 An initial assessment has been undertaken of Ground Source Heat Pump technology and how it might be utilised at the Council's five largest facilities , the Civic Centre and four leisure centres. This assessment indicates that the Council can through the introduction of Ground Source Heat Pump technology gain an income from the UK Government's Renewable Heat Incentive Scheme over a 20 year period and make revenue savings on expenditure on gas and electric energy consumption for the 20 years of the Renewable Heat Incentive and beyond.

2.0 GROUND SOURCE HEAT PUMP TECHNOLOGY AND RENEWABLE HEAT INCENTIVE

2.1 A Ground Source Heat Pump is an alternative means to provide heating and potentially cooling to buildings. It is a renewable heat source and a low carbon technology and can be used to replace traditional gas boilers. There is also potential to provide cooling from the same technology which could replace air conditioning units.

2.2 Ground Source Heat Pumps extract heat from the ground, the extracted heat is used to heat swimming pool water and circulating water in heating systems. A by-product of the process is cold water, there is potential for this to be used in a cooling system to provide cool air where currently air conditioning units are used.

2.3 The Renewable Heat Incentive is a UK Government Scheme to encourage uptake of renewable heat technologies amongst householders, communities and businesses. It is the first of its kind in the world and the UK Government expects the Renewable Heat Incentive to contribute towards the 2020 ambition of 12% of heating coming from renewable sources. The Renewable Heat Incentive provides owners of eligible installations, which includes Ground Source Heat Pump technology, with guaranteed quarterly payments based on heat produced for a period of 20 years.

2.4 The current Renewable Heat Incentive is time limited with projects under the scheme to be delivered by January 2020. There is some flexibility with a short overrun period available where schemes are delayed during installation due to unforeseen circumstances.

2.5 The financial terms of the current Renewable Heat Incentive are relatively generous and on the basis of the initial assessment provide good value to the Council. Based on previous renewable energy incentives offered by the UK Government, over time funding has reduced or been withdrawn.

2.6 Ground Source Heat Pump technology is more efficient and attached at Annex A is an assessment of associated risks with preventative action. Further updates will be provided to Members as the detail of the project develops. The technology allows less energy to be used than traditional gas boilers which provides the same amount of heat and results in a saving on expenditure to add to the income from the Renewable Heat Incentive.

2.7 Over the 20 year period of the Renewable Heat Incentive income from the scheme will cover the cost of the capital installation of the Ground Source Heat Pumps and there is projected to be a net surplus of Renewable Heat Incentive income and energy savings compared to capital expenditure and revenue operating expenditure, which meets the Council's invest to save criteria.

3.0 CURRENT POSITION AND NEXT STEPS:

3.1 The UK Government's Office for Gas and Electricity Markets in Great Britain (OFGEM) manages the Renewable Heat Incentive Scheme (RHI). OFGEM has indicated that the Council's proposed installation of Ground Source Heat Pumps at Civic Centre and the four leisure centres would be supported by the RHI scheme and currently they envisage that there will be sufficient budget to finance the RHI payments should the Council progress their applications for funding.

3.2 To secure the award of a tariff guarantee notice, that is a confirmed allocation of funding, the Council must submit to OFGEM the details of the proposed installations, a guarantee of availability of capital funding and information relating to the implementation and future maintenance of the GSHP installations.

3.3 The issue of a Tariff Guarantee Notice gives certainty to the Council that the Renewable Heat Incentive funding is available and will allow the Council to develop the detail of the Ground Source Heat Pump installation scheme without the uncertainty of possible changes in funding levels or withdrawal of funding.

3.4 The Renewable Heat Incentive applications will be made by the Council on the basis of its initial assessment. That assessment indicated that there are viable GSHP schemes for the Civic Centre and four leisure centres which meet the Council's invest to save criteria and which support the Council's priorities. Subject to the approval of Cabinet and Council information will be submitted to OFGEM to secure the award of a tariff guarantee notice. Subject to acceptance by OFGEM this will allow the Council to seek to procure specialist services to prepare the detail of each installation in relation to its design, purchase and, ultimately, its installation. The staged approach will allow assessment at key stages of the scheme preparation to ensure the continuing financial viability of the Ground Source Heat Pump installations and the scheme will only be progressed where it continues to meet those criteria.

3.5 To assist the Council in preparing to procure this specialist support it is necessary at this stage to appoint a consultant to advise the Council to ensure that all relevant matters (technical and otherwise) are addressed both before going out to tender and in the tender documents themselves. The costs of such advice and support are likely to be in the region of £30,000.

3.6 The Council's Procurement Procedure Rules generally require that a minimum of three quotes are sought for procurements of this value. However, there is provision in the Procurement Procedure Rules (as set out in the Procurement Manual) for Cabinet to

provide an exemption to those rules in exceptional circumstances. A waiver of the Procurement Rules may be agreed by Cabinet if they are satisfied, after considering a written report, that the waiver is justified because:

(i) The nature of the market for the works to be carried out for the goods or services to be provided has been investigated and is demonstrated to be such that a departure from the requirements of the Procurement Procedure Rules is justified;
(ii) The contract is for works, goods and services that are required in circumstances of extreme urgency that could not reasonably have been foreseen;
(iii) The circumstances of the proposed contract are covered by legislative exemptions;
(iv) The goods are proprietary items and no satisfactory alternative is available;
(v) Requirements are needed to match a partial replacement or an addition to existing goods or installation;
(vi) There are other circumstances which are genuinely exceptional.

3.7 Any exemption must be justified on the basis that in the particular circumstances of the case it will deliver Best Value for the Council.

3.8 In this case the Council is seeking very specific technical advice and support. Given the speciality of the market in this area there are limited options available to the Council. What is more the Council has to move quickly in appointing a consultant as it needs to ensure that the whole project (i.e. from the initial design work, subsequent procurements, contractor appointments and installation of the respective Heat Pumps) is completed by January 2020 in order to benefit from the tariffs set out in the Renewable Heat Incentive Scheme.

3.9 In the circumstances, and for the reasons set out at paragraph 3.8 above (which are consistent with the first two grounds for justifying a waiver set out in the Procurement Manual) it is proposed that Cabinet approves a waiver of the Council's Procurement Procedure Rules on the basis that there are circumstances which are genuinely exceptional. In the particular circumstances of this project the appointment will deliver best value for the Council.

4.0 LINK TO COUNCIL PRIORITIES:

4.1 Installation of Ground Source Heat Pumps with its low carbon technology and reduced energy consumption will support the Councils priority of caring for the environment supporting energy efficiency and sustainability and improving our environmental footprint.

4.2 The scheme will also support the Councils priority of financial sustainability contributing to income generation for 20 years from the UK Governments Renewable Heat Incentive and contributing revenue savings on energy expenditure on gas and electric for the lifetime of the installations.

4.3 The Council with North Yorkshire County Council are undertaking a study to assess whether Northallerton is a suitable location to support a District Heating Scheme. The aim of the scheme, which is focused on larger energy consumers for example public sector and business organisations, is to provide reduced cost energy, reduce carbon emissions and centralise heat generation. This initial study is to assess whether Northallerton represents a potential opportunity for District Heating and determine if a further more detailed study is undertaken. The outcome of the study is expected in the early part of 2019.

5.0 RISK ASSESSMENT:

5.1 Risks in approving the recommendation(s)

Risk	Implication	Prob*	Imp*	Total	Preventative action
Further assessment of the scheme reveals it is not economically viable resulting in unrecoverable expenditure	Scheme not progressed, with expenditure on a scheme, income generation and revenue expenditure savings on energy not achieved.	3	4	12	Manage project with assessment and review at each key stage to minimise financial exposure and ensure scheme does not progress unless continuing economic viability is demonstrated.
The size and scope of project is undeliverable within such a tight timescale.	The scheme does not meet agreed deliverables for the Renewable Heat Incentives and the Council fails to attract RHI payments.	3	4	12	A full project management approach will be followed with appropriate assistance from experts in the implementation of this technology.

5.2 The key risk is in not approving the recommendation(s) as shown below:-

Risk	Implication	Prob*	Imp*	Total	Preventative action
The provisional tariff guarantees expire and the opportunity to assess further the installation of Ground Source Heat Pumps at the current generous Renewable Heat Incentive terms is lost.	The Council loses an opportunity to generate income and make revenues savings on its energy expenditure.	4	4	16	Accept the recommendations and allow further development of the scheme.

Prob = Probability, Imp = Impact, Score range is Low = 1, High = 5

5.3 The overall risk of approving the recommendations outweighs the risks of not agreeing them and is considered acceptable.

6.0 FINANCIAL IMPLICATIONS:

6.1 OFGEM rules require that schemes under the Renewable Heat Incentive are delivered by January 2020.

6.2 The capital expenditure on the scheme based on the initial assessment is estimated at £2,113,198; this is all costs associated with the scheme including the costs for appointing the consultant to advise and support the Council. The combined projected income from the Renewable Heat Incentive and savings from reduced energy consumption is estimated at £8,195,345 over the initial 20 year period of the scheme. This represents a payback period of an average 6.6 years over the five facilities, a net present value of £2,680,378 and an internal rate of return 14.10%.

6.3 By proceeding with the scheme, after the initial cost of £2,113,198, income will be generated by the receipt of renewable heat incentive payments over 20 years at £6,932,702 and savings on the cost of utilities at £1,262,643. After accounting for the councils costs of borrowing, the scheme will generate income over 20 years of £5,467,523.

6.4 Overall the revenue effects of the Ground Source Heat Pumps are detailed in the table below. This includes the cost of borrowing for the capital expenditure of £2,113,198, the income generated from renewable heat incentive receipts and the associated utility savings. The revenue position for the initial 4 years will be as follows:-

Revenue Effects	**2018/19 £**	**2019/20 £**	**2020/21 £**	**2021/22 £**
Cost of borrowing	(2,353)	(56,1947)	(164,196)	(164,196)
Financed by: Current budget Increase in in base budget Renewable heat incentive payments Utility savings	 2,353	 56,194	 271,395 49,429	 278,180 50,665
(Cost) / surplus budget position	**(2,341)**	**(56,194)**	**156,629**	**164,649**

6.5 The costs of borrowing in 2018/19 will be absorbed into the existing budget and in 2019/20 funding will be allocated from the Income Generating Fund reserve. The table also shows that the income generated in 2020/21, and continued in future years, covers the borrowing costs and also generates income for the council each year of around £156,629, increasing with inflation on Renewable Heat Incentive receipts.

6.6 Utility savings from gas consumption net of electricity costs will vary depending on the price of gas and electricity, the cost of individual units used and the demand. These are estimates and are subject to vary in line with the variation of energy charges; this will affect the savings generated over the life of the model.

6.7 It should also be noted that the following assumptions have been made when calculating the income to be generated from the scheme:

- Costs of annual maintenance works and significant works after 10 years have been taken into account
- The discount rate at 4% has been used to calculate the net present value
- The gas and electric consumption has been based on current usage at the five locations
- Industry averages have been used to confirm the viability of ground source heat pumps reduction in costs related to the Councils energy usage
- Borrowing has been calculated over 20 years using a 20 year public works loan board maturity interest rate loan

6.8 Further work will occur around the financial position and be reported back along with all subsequent updates on the scheme to stress test the financial model using different scenarios.

6.9 The primary aim of the Ground Source Heat Pumps renewable Incentive Initiative tariff is to provide low carbon heat generation technology, which will improve energy efficiency, reducing energy consumption resulting in income generation and energy expenditure savings. As part of the development of installations at individual facilities, there will be assessment of opportunities to introduce cooling from the Ground Source Heat Pumps to replace air conditioning, which in the longer term could also potentially generate savings.

7.0 LEGAL IMPLICATIONS:

7.1 Cabinet approval is required for any waiver of the Council's Procurement Procedure Rules. These matters are addressed in paragraphs 3.6 – 3.9 of this report.

8.0 EQUALITY/DIVERSITY ISSUES

8.1 Equality and Diversity Issues have been considered however there are no issues associated with this report.

9.0 HEALTH AND SAFETY ISSUES

9.1 Health and Safety will be managed as part of the implementation at each facility, the project delivery will fully comply with the Construction Design and Management Regulations 2015 (CDM 2015).

10.0 RECOMMENDATIONS:

10.1 That Cabinet approves and recommends to Council that:

(1) the Ground Source Heat Pump Scheme is allocated Capital budget of £2,113,198 for the implementations of installations at:

(i) Civic Centre
(ii) Northallerton Leisure Centre
(iii) Bedale Leisure centre
(iv) Stokesley Leisure Centre
(v) Thirsk Sowerby Leisure Centre

(2) delegated authority is given to the Director of Finance (Section 151 Officer), in conjunction with the Deputy Leader, to authorise expenditure of the capital allocation on the Ground Source Heat Pump scheme to OFGEM;

10.2 That Cabinet approves:

(1) a waiver of the Council's Procurement Procedure Rules for the reasons set out in this report;

(2) the allocation of the sum of £30,000 for the provision of consultancy services as set out in this report;

(3) that further updates be provided to Cabinet as the project develops.

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Background papers: None
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