

**Report of Head of Strategy & Investment**

**Report to Director of Resources and Housing**

**Date: 20 April 2020**

**Subject: Approval to procure a contractor to replace heating & hot water systems in The Heights East and The Heights West, with a ground source heat pump system (GSHP).**

Are specific electoral wards affected?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, name(s) of ward(s): Farnley & Wortley	
Has consultation been carried out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Will the decision be open for call-in?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If relevant, access to information procedure rule number:	
Appendix number:	

**Summary**

**1. Main issues**

- As part of the council's plans to address fuel poverty, the climate emergency and to support the Affordable Warmth Partnership, works are planned to replace the existing electric storage heating and hot water systems in two council high rise blocks. These are The Heights East and The Heights West in Wortley. The current heating systems in these blocks are near or at the end of their life, and their replacement provides an opportunity to pilot renewable technology not previously used in Leeds.
- Feasibility activities carried out have confirmed that installation of ground source heat pumps (GSHP) is a viable and suitable option for the site. Works will be of a specialist nature and, following consultation with the internal service provider and a procurement options appraisal, it is planned to tender the works to an external contractor by direct award under a competitively procured framework.
- The works involve the supply and installation of new ground source heat pumps (GSHP), along with removal of existing electric storage heaters and their replacement by a wet radiator system in each of the flats.
- The council is working closely with Leeds Beckett University on this pilot scheme in relation to measurement of heating system performance and tenant's views to provide evidence of benefits to support future decision making by the council.

- The estimated contract value for the works is approximately £1.94m. Works are planned to start in summer 2020 and be completed early 2021 with an expected site duration of seven months.

## **2. Best Council Plan Implications** (click [here](#) for the latest version of the Best Council Plan)

- The programme will contribute to the Best Council Plan outcomes of tackling poverty, and the climate emergency by improving energy performance in homes and support residents to live in good quality, affordable homes.
- Key benefits are expected be:
  - Average energy bills reduced by a third for each home.
  - Carbon emissions reduced by estimated 77% (392 tonnes per block) each year.
  - Heating & hot water systems more efficient and more controllable for residents.
  - Energy efficiency (SAP rating) is improved so all flats will be at or above rating D.

## **3. Resource Implications**

- The estimated cost of the works is £1.94m, to be spent in the 2020/21 financial year. This will be funded via the Housing Capital Refurbishment Programme from the Housing Revenue Account (HRA).
- If a planned application for revenue funding of renewable heating incentive is successful, it is anticipated the scheme will become cost neutral in 18.5 years time.
- Estimated annual service and maintenance costs will be reduced by estimated £5.5k per flat by using the new GSHP system over a 40 year expected life and maintenance costs.

## **Recommendations**

The Director of Resources and Housing is requested to:

- a) Approve this pilot scheme to replace heating and hot water systems in two high rise blocks, The Heights East and The Heights West, and install ground source heating pumps (GSHP).
- b) Authorise spend of £1.94m from the capital programme over the financial year of 2020/21 for these capital works.
- c) Approve the proposed procurement of an external contractor, for these specialist works via a direct award, under a competitively procured framework called Procurement for Housing (PFH).

## **1. Purpose of this report**

- 1.1. The purpose of this report is to provide information on this pilot scheme and gain approval to progress it, including authority to spend £1.94m in 2020/2021, and to seek approval of the procurement route to engage an external contractor to deliver these specialist works.

## **2. Background information**

- 2.1. Leeds City Council has 118 high rise housing blocks (of 5 stories and above, including private finance initiative managed stock). Up to 40 blocks have been identified as needing new heating solutions to improve energy efficiency for residents by replacing existing old storage heating & hot water systems.
- 2.2. The Heights East and The Heights West are two of these 40 blocks, and identified for a pilot scheme. They are 10 storeys high with 60 flats in each block.
- 2.3. The aim of the pilot is to benefit residents by reducing their fuel costs and improving their ease and ability to control heating; and to reduce carbon emissions.
- 2.4. The pilot will also help inform decision making for any future roll out of new heating systems to other blocks; in particular if a ground source heat pump (GSHP) approach achieves its anticipated benefits, and improving our knowledge and expertise of this type of renewable energy system.
- 2.5. To support evidence based decision making, the council has been collecting baseline data from the 2019 winter heating season to compare against data after the new system is installed. This has been through working closely with Leeds Beckett University's Sustainability Institute, which have specific experience of working on this type of pilot and has been contracted separately by the council, to install meter readers and sensor equipment into 20 flats (10 flats each block) to monitor and analyse the energy used, together with resident feedback.
- 2.6. The monitoring work done by the University will record; energy output, temperature, humidity and other criteria to evaluate the heating type and use presently installed. This analysis will be repeated during winter 2020, after the GSHP works, as a comparison.

## **3. Main issues**

- 3.1. Installing GSHP in our housing stock is a first for Leeds City Council, though this new type of sustainable heating has been successfully installed elsewhere in the UK for us to learn from. For example, we have met with Together Housing to better understand what they have been doing in Halifax for a similar two high rise block scheme, including the challenges and benefits of the activities they have taken.
- 3.2. We separately commissioned feasibility activities to understand whether the site was suitable for installing GSHP and any design implications, the scale of the potential benefits, and impact on residents and surrounding land. This involved the surveying of site and flats, plus technical design activity and specification. This work has confirmed that GSHP is feasible for the site.
- 3.3. The proposed GSHP work activities includes the contractor's full system design, delivery and installation of the GSHP system, including new piling holes in

surrounding grassland, with connecting pipework to the blocks and individual flats, and the replacement heating and hot water system in each flat.

- 3.4 Engaging with Leeds Beckett and residents in time to install monitoring equipment for winter 2019 start was challenging but successful. There is a challenge to ensure GSHP is installed for the start of winter 2020 monitoring.
- 3.5 Government funding is available to encourage the take up of using renewable energy through a revenue incentive, but requires a successful application to be submitted in spring 2020 as the current scheme closes in April 2021.
- 3.4. Annual service and maintenance is planned to be supported by Leeds Building Services (LBS) through training given by the installation contractor, during handover.
- 3.5. A range of procurement options have been considered in relation to the approach to procure a contractor for these works. A summary of the options considered are:
- 3.6 Option 1 – Leeds Building Services deliver in house.

The internal service provider was consulted as required by Contracts Procedure Rule 3.1.4 with regards to the scope of works. The Head of LBS has indicated that they do not have the specialist level of expertise to carry out these works.

- 3.7 Option 2 – Procure a Leeds City Council Contract through Competition.

This route would provide an opportunity to test the market through a competitive exercise. Due to the complex and specialist nature of the works, a 2 stage tender would be used as this method helps to maximise the robustness of the tender process and encourages early contract involvement / engagement. This would include initially advertising to the open market via YORtender. Then carrying out a pre-qualification process (PAS91) to shortlist the suitably qualified and experienced contractors. Finally shortlisted contractors would be evaluated through a price / quality evaluation methodology.

It is estimated that this route would take approximately a further 3-4 months in order to receive, evaluate and shortlist applications from the PAS91. Whilst this can be done, this route is not recommended as the preferred procurement option as this additional time would severely jeopardise the council's ability to secure external funding for which the deadline is April 2021.

- 3.8 Option 3 – External Frameworks – Recommended

A number of externally procured OJEU Compliant frameworks have been considered. These include YORBuild2, Efficiency North, Fusion 21, Northern Housing Consortium and the specific more energy efficient specialist framework such as Better Homes Yorkshire and Procurement for Housing. Each has been considered since they have suitable lots with relevant contractors on them. Bidders appointed to the framework have already been assessed through an OJEU compliant competitive tendering exercise and have been deemed as best value in this. They have already had their technical capacity and ability evaluated. Timescales for the procurement can be reduced as the frameworks are already established therefore there is no need for pre-qualification (PAS91) or shortlisting is required.

- 3.9 In choosing between the framework options, we particularly looked at and focused on factors of a requirement to carry out these priority works quickly, coupled with the availability of using a contractor, who has successfully delivered similar works recently, to a high quality and standard, providing value for money and ability to

deliver on time. Following this, it was recommended on this occasion that the Procurement for Housing framework (PFH) is used, with a direct call off. It should be noted that other framework options were considered such as, the Better Homes Yorkshire Framework, however this was not able to provide the same services for the budget provision when considered against the PFH factors described.

- 3.10 The GSHP construction works under a new contract, would be planned to start from June 2020 and be completed by Jan/Feb 2021.
- 3.11 Timescales for the overall pilot being delivered is forecasted to finish in August 2021, with Leeds Beckett Sustainable team helping to conclude with comparative analysis results, between the existing heating verses the new heating system. Note that the monitoring work will continue after the installation of the new GSHP heating system, to enable a comparison of heating performance and resident feedback to be analysed during spring/summer 2021.
- 3.12 Maintenance arrangements will be required from 2021 and after the completion of the defect period of 12 months. The maintenance activities are being explored with our internal service provider Leeds Building Services (LBS). Note that resource will be made to engage at the handover period for any remedial maintenance training given from the contractor.

## **4 Corporate considerations**

### **4.1 Consultation and engagement**

- 4.1.1 This report has been developed by Strategy and Investment lead by the planned works team and the project team who have been involved throughout the process. Advice has been secured from Procurement, Commercial and Legal Services, all of which have reviewed all proposals and supported the planned decisions.
- 4.1.2 Consultation has been undertaken with the three local Ward Councillors, as well as Housing Management teams at Housing Leeds and all have been fully engaged and supportive of the planned proposals.
- 4.1.3 The Executive Member for Communities is also in support of the project.
- 4.1.4 The residents have been engaged with and received letters in October and December 2019 to confirm planned proposals for the feasibility activity in January 2020; and are aware that our aim is to pilot a more efficient and sustainable heating replacement in their blocks from summer 2020.
- 4.1.5 By May 2020, Strategy and Investment are planned to inform the residents on the feasibility results and planned decisions for the pilot, with an open invitation to contact the dedicated support available via the planned works Technical Officer and resident liaison support.
- 4.1.6 Upon approval to this decision and after the contract award to pilot a new heating replacement using GSHP, the residents and leaseholders will be further engaged via letters (and if possible, as appropriate given Covid19 challenges) local consultation workshops supported by our dedicated liaison officers, who will be able to be contacted as needed by residents. These are planned to support residents understanding of the site work benefits and provide reassurance for any concerns they may have.
- 4.1.7 The works activities will include contractor engagement with residents and also through provision of a 'show flat' or equivalent, help to explain the works and provide a support surgery.

4.1.8 There is one leaseholder from across both of the blocks, and they will be given the option to buy into the scheme. As such, a formal consultation period does therefore not apply, as they have this option to buy into the heating replacement works.

## **4.2 Equality and diversity / cohesion and integration**

4.2.1 An Equality, Diversity, Cohesion and Integration (EDCI) impact assessment has been undertaken and is attached as Appendix 1. Key points include;

4.2.2 Firstly in the short term, during the works the time needed in residents flats will be kept to a minimum as much as possible and is estimated being up to two days for the changeover of the heating and hot water systems.

4.2.3 Secondly; with most residents being around 60 years in age, additional support is planned to be provided for the residents, to help their understanding of the heating system operation and also transferring to any new energy providers where appropriate.

4.2.4 Thirdly; extra support and communication will be offered to all residents and particularly any vulnerable residents. This support will be from housing officers and the contractor alike, as needed.

4.2.5 Please also see the wider positive impacts of the proposed scheme highlighted in section item 2.0.

## **4.3 Council policies and the Best Council Plan**

4.3.1 The programme will contribute to the Best Council Plan priority by tackling fuel poverty through improving energy performance in homes, supporting the outcome of everyone living in good quality, affordable homes; everyone to be safe and feel safe.

4.3.2 This work is strongly aligned to the Best Council Plan Housing Priorities and our ambitions to:

- Supporting communities and tackling poverty.
- Promoting sustainable and inclusive economic growth. Improve housing quality and standards.

4.3.3 Employment & skills; given the short term nature of the contract period and spend there are limitations in scope for any opportunities to be explored.

4.3.4 The pilot will also offer evidence via Leeds Beckett University to confirm if the planned benefits have been realised that supports the using of sustainable energy GSHP system, as an investment and most importantly, benefits our residents.

### Climate Emergency

4.3.5 The Elected Members of Leeds City Council declared a Climate Change Emergency, committing to becoming carbon neutral by 2030. With this pilot being a vested interest in meeting this target, the contractor will be working with us to reduce the impact of the construction works on the environment.

- The benefits highlighted from this pilot that contribute to meeting the Climate Emergency are estimated below as found from the pilot feasibility study: average energy performance of flats improves by 30%.

- Carbon emissions reduced by estimated 70%, 392 tonnes per block, each year.  
Energy efficiency (SAP rating) is improved so flats will be at or above above rating D.

4.3.6 It should also be noted there will be some limited but unavoidable negative effects during construction activities. For example the release of embedded carbon involved with transporting of materials, construction traffic etc.

4.3.7 The council will work with the contractor to explore opportunities to mitigate or reduce carbon emissions. For example, by coordinating route planning and delivery schedules, and will work jointly to reduce fuel consumption and lower exhaust emissions.

4.3.8 The contractor will be required to meet all legislation, guidance and good industry practice in regards to environmental management; and to ensure non-hazardous material is disposed of at a tip approved by a Waste Regulation Authority.

#### 4.4 **Resources, procurement and value for money**

4.4.1 The feasibility results provided information on the proposed GSHP heating system to demonstrate value for money in respect of the construction works and system benefits by installing it. The estimated cost for the construction works as a total contract value is £1.94m which includes extra overheads and contingency. The costs have been estimated by our commercial team working with several contactors to generate the pre tender estimate.

4.4.2 The procurement will be carried out in an open and transparent manner in line with the Council's Contract Procedure Rules and as required by the Public Contract regulations 2015 to identify best value. Resulting from the work on the procurement options of external frameworks that have been considered, it is felt that the option to procure from the Procurement for Housing framework by a direct award, will offer both the best opportunity both in terms of price cost certainty and to achieve the timescales of the programme.

4.4.3 Council funding for the works will be provided via the Housing Capital Refurbishment Programme from the Housing Revenue Account (HRA) and all costs of the contract will fall into financial year 2020/21, where £1.94m of funding has already been allocated for this pilot.

4.4.4 Investment planning and budget estimated costs are within the 10 year Housing Leeds Investment Plan which is reported annually to the Executive Board. Authority to spend as part of the Capital Programme approval would be secured through a key decision approval in May.

Capital funding and cash flow table (capital scheme 32022/GC1/000) as below;

Previous total Authority to Spend on this scheme	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2020/21 £000's	2021/22 £000's	2022/23 £000's	2023/24 £000's	2024 on £000's
CONSTRUCTION (3)	0.0						
INTERNAL DESIGN FEES (6)	0.0						
OTHER FEES / COSTS (7)	96.0	96.0					
<b>TOTALS</b>	<b>96.0</b>	<b>96.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Authority to Spend required for this Approval	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2020/21 £000's	2021/22 £000's	2022/23 £000's	2023/24 £000's	2024 on £000's
CONSTRUCTION (3)	1944.0		1944.0				
INTERNAL DESIGN FEES (6)	0.0						
OTHER FEES / COSTS (7)	0.0						
<b>TOTALS</b>	<b>1944.0</b>	<b>0.0</b>	<b>1944.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Total overall Funding (As per latest Capital Programme)	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2020/21 £000's	2021/22 £000's	2022/23 £000's	2023/24 £000's	2024 on £000's
Housing Revenue Account	2040.0	96.0	1944.0				
Renewable Heat Incentive	442.4			110.6	110.6	110.6	110.6
<b>Total Funding</b>	<b>2482.4</b>	<b>96.0</b>	<b>1944.0</b>	<b>110.6</b>	<b>110.6</b>	<b>110.6</b>	<b>110.6</b>
<b>Balance / Shortfall =</b>	<b>442.4</b>	<b>0.0</b>	<b>0.0</b>	<b>110.6</b>	<b>110.6</b>	<b>110.6</b>	<b>110.6</b>

#### Revenue effects table

REVENUE EFFECTS	2020/21 £000's	2021/22 SUBSEQUENT YEARS £000'S
EMPLOYEES		
PREMISES COSTS		
SUPPLIES & SERVICES		-16.3
EXTERNAL INCOME GENERATED		

- 4.4.5 In relation to revenue impact the council will need to pay annual servicing and repair and maintenance after the 12 month defect liability period expires in 2021/2. The estimated saving maintenance cost using GSHP is £137.00 per flat per year.
- 4.4.6 Funding; the combined total estimated external funding eligible for this pilot is £2,537,813 from the Renewable Heat Incentive initiative (RHI) and ECO 3. This is an external funding scheme the pilot is eligible for as the Government programme encourages the using of renewable heating. An application to the non-domestic RHI, is planned to be submitted before March 2021 deadline when this current scheme closes.
- 4.4.7 If RHI funding is successful and on the basis of current assumptions on the number of homes eligible for RHI, we estimate a revenue income stream of approx. £2.2m over 20 years from Q2, 2021. This would mean that we could expect the pilot scheme to have paid for itself within an estimated 18.5 years with a total install cost offset by + £172,813 or £1.4k per flat.
- 4.4.8 ECO 3 external funding based on flats showing below a rating of E EPC rating is also eligible for this pilot scheme and can provide an estimated revenue income stream of £325,000.in total for both blocks. This calculation is based on 12 flats per block (6 bottom, 6 top floor) is a one off payment drawn down each month upon the completion of each flat receiving its new heating system. The planned approach is



for the specialist contractor to source this funding directly and therefore reduce the Council's upfront cost effectively saving us £325k.

4.4.9 Note that supporting works for the pilot by way of feasibility work (£26k) has now completed in March 2020 and Leeds Beckett University monitoring work, of the existing versus new proposed heating system (£70k), is due to complete in summer 2021 and has already been allocated for in years 2019-21.

#### **4.5 Legal implications, access to information, and call-in**

4.5.1 The decision set out in this report is a key decision and subject to call-in.

4.5.2 The value of this contract is below the OJEU procurement threshold.

4.5.3 The contractor will be a data processor, and a data privacy impact assessment has been undertaken and relevant considerations will be included in the contract.

4.5.4 This report is a key decision to seek approval of the scheme, authority to spend and to agree the procurement route. Resulting decisions from this will include a further decision on the tender evaluation process, seeking the award of contract and this will be brought back to the decision maker for approval.

#### **4.6 Risk management**

4.6.1 A risk register for the project is in place and will continue to be managed to monitor and mitigate risks, as well as identify any new risks as they arise. Once a contract is in place the council and the contractor will work together to monitor and review risks on a monthly basis.

4.6.2 The contract management plan will be followed and all risks considered and mitigated to ensure robust and proactive risk management. The contract terms and conditions have also been reviewed to reduce any risk of contractual issues arising from using the PFH framework and associated design and build JCT form of Contract. This has ensured we have an appropriate specification and approach for the works to be delivered having taken into account the knowledge gained from the previous feasibility study.

4.6.3 The risk of the project going over budget has been managed by the production of robust costings based on the recent feasibility data exercise. The Commercial team will further manage this by closely monitoring the costs through design and build through monthly financial statements to maintain cost control and support the delivery of the project on time and to budget.

4.6.4 Key notable risks include:

Health & Safety Corona virus - Impact and implications of COVID-19. Given the current situation in relation to COVID-19 the health and safety of residents and contractors staff is our priority, and we will make sure that any contractors working on this scheme will be doing so in line with government and construction sector guidance to keep people safe.

The Contractor will work to an agreed method statement which will include explicit provision/conform to all government guidance to manage all risks associated with COVID-19 and contact with residents in the delivery of this scheme.

LCC onsite supervision will monitor throughout the delivery of this scheme to ensure that all aspects of the commitments made in the method statements are fully undertaken.

We will also monitor any challenges for our contractors and their supply chain, including financial ones, and work closely with them on any implications for timescales for works. Note, that before we award any contract or subsequent decision request to deliver this scheme, we will ensure the proposed works from the contractor are deliverable in respect of health and safety, access and egress and in terms of supply chain, supplier relief to enable a successful delivery.

- 4.6.5 Timescales to meet construction delivery. Achieving timescales for the works delivery. Our planned timescales for the works link to both activity to secure the RHI funding, and to get as much data as possible from the installed sensors in relation to provision of evidence about any planned benefits during the winter 2020/21 season. These are currently challenging but should be achievable. Progress against plan will be regularly monitored and any issues escalated to work to keep activity on track.
- 4.6.6 It should also be noted that we are taking into account previous lessons learnt from other planned works projects and also from the experience of other contractors to help us as we plan for this scheme. For example; lessons learnt from previous installation works recognises that training needs are to be undertaken to upskill maintenance contractors and that the RHI funding process is complicated and will require support from the contractor. Other considerations has been that the heat pump operation requires resident advice and support to maximise on its benefits.

## **5 Conclusions**

- 5.5 Works planned are to install a new renewable heating system, GHSP in two high rise blocks, The Heights East and The Heights West as a pilot to start in spring 2020 and the install works be delivered by direct appointment from a specialist contractor via the Procurement for Homes framework.
- 5.6 The work will contribute to meeting our climate emergency, reducing fuel poverty and enhancing the efficiency and quality of homes with the option to make future amendments to bathrooms.
- 5.7 The pilot will be data analysed by Leeds Beckett University's sustainability team using sensor monitoring and resident feedback in 20 flats across the two blocks which can contribute to future decision making regarding renewable heating works.

## **6 Recommendations**

The Director of Resources and Housing is requested to

- 6.1. Approve this pilot scheme to replace heating and hot water systems in two high rise blocks, The Heights East and The Heights West, and install ground source heating pumps (GSHP).
- 6.2 Authorise spend of £1.94m from the capital programme over the financial year of 2020/21 for these capital works.
- 6.3 Approve the proposed procurement of an external contractor, for these specialist works via a direct award, under a competitively procured framework called Procurement for Housing (PFH).

#### **4 Background documents<sup>1</sup>**

7.1 None.

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<sup>1</sup> The background documents listed in this section are available to download from the council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.