



Committee Name: Cabinet

Committee Date: 08/12/2021

Report Title: To award a contract for the installation of a new air source heat pump system at City Hall, Norwich

Portfolio:	Councillor Kendrick - Resources
Report from:	Executive director of development and city services
Wards:	Mancroft
OPEN PUBLIC ITEM	

Purpose

To consider delegating authority to award a contract for the installation of a new air source heat pump system at City Hall, Norwich.

Recommendation

To delegate approval to the Executive director of development and city services in consultation with the Portfolio holder for resources to award a contract for the installation of a new air source heat pump system at City Hall, Norwich on the provision that it is fully funded from the SALIX grant.

Policy Framework

The Council has three corporate priorities, which are:

- People living well
- Great neighbourhoods, housing, and environment
- Inclusive economy

This report meets the Great neighbourhoods, housing, environment corporate priority

This report addresses the 'CO2 emissions from the local area' strategic action in the Corporate Plan

This report helps to meet the 'Environmental Strategy 2020 to 2025' adopted policy of the Council

Report Details

Identification of need and background

1. This report seeks the support of Cabinet for the procurement of Air Source Heat Pumps (ASHP) at City Hall, Norwich.
2. The air source heat pumps are to be located on the roof within a louvred screen, colour matched to the existing roof. The necessary pipework will also be coloured grey to minimize visual impact. A planning application has been submitted and is in the process of being considered; installation will only proceed if the application is successful.
3. During the design stage, a number of different options were tested including a ground level solution, but this proved impractical. The roof solution has been subject to structural surveys and pre-planning considerations.
4. The ASHP will pre-heat water which will be used to provide space heating within City Hall, supplementing the existing boilers which have recently been replaced with more efficient models. This will provide a significant improvement to the energy efficiency of City Hall, contributing to the Council's target to be carbon neutral by 2030.

The Benefits

5. This entire scheme is funded by a SALIX Public Sector Decarbonization Scheme Grant (PSDS) awarded to the Council on the condition that the work will need to be invoiced by 31 March 2022. The approved Salix grant amounts £626,000. The sum requested for this project includes construction costs to the value of £516,000. and £40,000 for costs incurred in site investigation, scheme design, structural reports and associated fees.
6. This scheme will provide significant reductions in CO₂ emissions per annum. It is calculated that annually 94 tons of carbon will **not** be emitted into the atmosphere. A mature tree can absorb up to 21 kg's of CO₂ per year. This saving is the equivalent to the work of 4,476 trees fixing CO₂ every year. As one ton of carbon has a volume of 556.2/m³ this scheme equates to 52,280 m³ of carbon reduction per annum.
7. The Display Energy Certificate for City Hall building will be significantly improved which is key to achieving the council's 2030 commitment to carbon neutrality.
8. Electricity used to power the ASHP's is from a renewable source.
9. When the ASHP's are in full working mode, they will reduce the load on the gas boilers and therefore further reductions of carbon-based fossil fuel.

10. There are no products of combustion or discharge of particulates into the courtyard area as the Plant Room will not require a flue outlet.
11. The ASHP system needs to be considered in the context of the entire boiler replacement programme being undertaken by the Council. Recently, the old gas boilers were replaced with more efficient model, and the ASHP supplements these. The old gas boiler plant has a rated output of 1200kW, and the air source heat pump will provide 240kW of heat at an external air temperature of -3C with a 45C water flow temperature during the coldest conditions (the new gas boilers have not been operating long enough to provide equivalent output figures). The heat pump would be estimated to provide 25% of the heating demand in very cold (sub-zero) conditions. However, over a typical heating season the average external air temperature will be significantly higher than this, and the output from the heat pump will increase to around 450kW at a typical average external air temperature for the whole heating season. The heat pump could therefore reasonably be expected to provide around 40% of the buildings space heating energy requirements, when considering the average external temperature over the whole heating season. The building has an annual heating energy requirement of 1,325,302kWh and it is predicted that the annual saving in natural gas consumption could be around 567,873kWh.

Procurement

12. The procurement team in consultation with NPSN, have deemed this to be a Works contract under Class 45.3 – Plumbing (heating, ventilation, refrigeration or air-conditioning equipment and ducts) of the Public Contract Regulations 2015. This has been confirmed by Nplaw.
13. Procurement for Housing, a specialist tendering service, undertook three separate competition processes on behalf of the Council to identify a potential supplier, with a total of 35 suppliers approached. However, this is presently a congested market, with demand exceeding supply, with the net result that only one supplier, Constructa, a company based in Suffolk, willing to bid.
14. This presents the risk that the Council is not obtaining value for money. Therefore, the following action was taken to try to understand whether the council could achieve better value:
 - a. We have approached Salix to identify whether funding for the scheme could be extended to beyond the present deadline, potentially giving longer for suppliers to complete the scheme, however this was not an option due to changes in their funding approach;
 - b. The indicative budget was lower than the tender submitted by Constructa. We have re-approached the market to consider whether a higher budget may entice greater competition, but this did not result in any additional contractors submitting tenders.

- c. We have undertaken value engineering to identify potential savings based on a revised proposal. This has reduced the potential construction costs to £516k.
15. The original proposal was for a maximum of £475k of grant funding to be allocated to the project, with a further £150k allocated for an LED lighting project within City Hall. The ASHP project offers more significant benefits to the Council in terms of energy efficiency and cost improvements than the LED lighting project.
16. Whilst it is unfortunate that the costs associated with the ASHP have risen, meaning it would not be possible to fund the LED lighting project, if the Council does not proceed in awarding the contract now, it would mean losing the SALIX funding that expires at the end of March (further details set out in the financial section below). The Council has taken the action it can at this stage to try to achieve the best outcome to deliver the project.

Consultation

17. Nplaw have also been consulted to clarify legal aspects of the Procurement processes.
18. Pre-consultation with NCC planners and the submission of an application to NCC for full planning permission for the scheme. This included the Heritage, Supporting and Sustainability and Noise Statements as well as elevation plans, roof plans etc.
19. Frequent communication with SALIX has been made since the tender process began.
20. This scheme is not subject to Leaseholder consultation.
21. The process of designing the scheme has involved detailed discussion with NCC Heads of Service, NCC Environmental Strategy Manager, NCC Planning Department, NCC Finance, NPS Norwich Ltd, NPS Property Consultants.

Implications

Financial and Resources

22. As set out above, the Council has received grant (Public Sector Decarbonization Scheme) from Salix of £626,000, initially to undertake two projects – provision of the Air Source Heat Pumps (ASHP) with a budget estimate of £475,000 and an LED Lighting project for City Hall with a budget estimate of £151,000, it is a condition of the grant that it is spent before the end of the 2021/22 financial year. Unless the works are completed before that date it will not be possible to certify as such and in those circumstances, there is a risk that some of the grant may be repayable with a consequent funding risk to the council having to make good that funding deficit.

23. It is also clear that there are insufficient resources remaining to undertake the LED lighting scheme originally envisaged to be funded from the overall level of the Salix grant unless additional council resources are available; the envisaged environmental benefits from both projects are therefore also at risk.
24. The decarbonization grants will not be offered in the future. Grants from 22/23 onwards will require that the renewable system is replacing a gas system which will not be possible at City Hall. As such the ability to fund such a scheme in the future from Salix grant will not be possible.
25. The lead in time for the air source units have been confirmed for delivery in February which is key to this project but provide reassurance and a low risk to the council for the project completion before the expiry of the grant.
26. Salix have confirmed that the terms and conditions are subject to Force Majeure, and as long as the Council has done what it can to proceed, then funding would not be withdrawn if there were unforeseeable events. The project will be invoiced on a weekly basis with key upfront costs invoiced at an early stage to minimise the risks to the Council not meeting the Salix deadline.
27. Nonetheless, to deliver the ASHP project, the Council will not be able to benefit from the SALIX grant to support the LED lighting project in City Hall. Officers will be reviewing the feasibility of taking this project forwards as part of future capital programmes.
28. The replacement of the boilers and the implementation of the Air Source Heat Pumps are expected to have an impact on the usage of gas, resulting in potential savings from utility costs. These savings will need to be estimated and feed into the Council's current budget setting process for 2022/23.

Legal

29. The contract will utilise the Procurement for Housing (PfH) standard works contract and will also incorporate the Council's standard terms and conditions.
30. Nplaw have been consulted throughout the procurement process. The tendered sum from Constructa, as highlighted above, was above the indicative budget provided for suppliers. In order to minimise the likelihood of challenge, as set out above, the potential suppliers were re-approached to inform them that the budget could be increased for the project, but the timescales for completion remained the same. No suppliers indicated a desire to re-tender for the project and as such it is considered that the risks of a procurement challenge are low.

Statutory Considerations

Consideration:	Details of any implications and proposed measures to address:
Equality and Diversity	Neutral
Health, Social and Economic Impact	The numerous benefits to health relating to Climate Change and the provision of a system that will be cheaper to run.
Crime and Disorder	Neutral
Children and Adults Safeguarding	The supplier and all associated sub-contractors must adhere to the councils Safeguarding Policy statement.
Environmental Impact	<p>This scheme is of a renewables nature and therefore has a significant impact on the environment.</p> <ul style="list-style-type: none"> • climate change using technology to de-carbonise • sustainability using renewable energy • the significant reduction of pollution • the reduction of a fossil fuel as an energy source • the reduction in heating bills

Risk Management

Risk	Consequence	Controls Required
Operational problems during the Construction Phase	Impact upon contractor. Impact upon tenants/leaseholders	This scheme has been carefully designed in association with NPS Norwich Ltd. A detailed construction phase programme is being developed to enable an effective delivery of this scheme. This scheme is a notifiable scheme with regards to the CDM regulations. A Construction Phase Plan will be put in place to manage health and safety during the works.

Risk	Consequence	Controls Required
Financial Risk	Cost increases due to overruns, increase in project costs, unforeseen costs arising etc.	<p>Total cost of scheme includes an allowance for Covid 19 and Brexit related issues. In addition, the Total Cost of the scheme includes Contingency and Provisional Sums to mitigate as best as possible against unforeseen costs arising.</p> <p>The funding is in place by means of a one-off Grant to which if this scheme does not take place will have to be given back. £40,000 has already been spent in fees.</p>
Compliance	Faulty or non-compliant installation that could affect the supply of hot water/space heating etc.	The scheme will be Contract Administrated by NPS Norwich Ltd. All installations will be carried out strictly in accordance with the provisions of the Building Regulations, Planning permission etc. Regular site meetings will take place to ensure that service is always maintained
Security	Risk to staff and their possessions during the works. Risk to contractor/sub-contractors and plant/materials etc. during the works.	Security will be a significant component in forming the CDM Construction Phase Plan to ensure that the consequences detailed are mitigated.
Legal	Non-compliance with legislation could result in a sub-standard installation. In addition, legal non-compliance may result in delays	Nplaw have been consulted regarding the proposed scheme. All works will be compliant with current construction/ planning regulations.
Political, Reputational	The installation of a sub-standard, poorly	As detailed above this scheme has been

Risk	Consequence	Controls Required
	executed installation that has a negative impact would be detrimental politically and reputationally to the council.	carefully and thoroughly planned, designed, and procured. All works will be carried out in accordance with construction, planning recommendations.

Other Options Considered

31. **Do nothing:** If the work is not carried out, we will miss opportunities to contribute towards our 2030 Carbon neutrality objectives. The council has benefited from SALIX Public Sector Decarbonisation Scheme Grant (PSDS) grant funding to deliver this project. As part of the conditions of the funding, the grant will be returned if we do not deliver the ASHP proposal.
32. **In house provision:** The council does not currently have any existing in-house resources.
33. **Joint venture provision:** Norwich City Services Limited does not have the expertise to deliver this project.
34. **Identify a single supplier to award the contract to without competition:** This route would be contrary to Contract Procedures as the value is approximately £516,000.00
35. **Establish competitively tendered contract with one supplier:** Run a competitive procurement exercise advertised as an 'open' procedure to look for a single supplier to meet the council's requirements. Although timescales allowed for the requirement to be fulfilled by this method, the Procurement for Housing (PfH) framework and Dynamic Purchasing System options were already in existence still promoting value for money.
36. **To deliver the LED lighting but not the ASHP:** The energy efficiency delivered by the project would be less overall compared to the ASHP project; we would not be utilising the SALIX funding as effectively, and SALIX have also indicated that as the energy efficiency would not be as high if the ASHP project was not undertaken, we would only be able to utilise part of their funding to support the LED lighting project.
37. **Utilise an existing framework/dynamic purchasing system:** [Procurement for Housing](#) (PfH) deliver professional procurement services for private and public sector organisations. Their expertise in procurement and technology solutions have led to two nominations for CIPS Purchasing and Supply Management Awards and they are supported by the National Housing Federation (NHF) and the Chartered Institute of Housing (CIH). The frameworks and Dynamic Purchasing Systems they offer promote value for

money for the council and although their frameworks mainly include national suppliers, their Dynamic Purchasing Systems include SMEs and local suppliers.

Following no returns on a mini-competition exercise with five suppliers through the Renewables & Energy Efficiency Works and Associated Consultancy Services framework (Lot 1C – Air Source Heat Pumps), the Capital Works and Associated Services Dynamic Purchasing System (Lot 4 – Heating) dynamic purchasing system was found to be the best solution for the contract requirements and was explored with a further 30 suppliers.

Reasons for the decision/recommendation

38. To meet the 31 March deadline there is a need to award the contract Urgently. Lead in time for the air source units are key to this but can be delivered in February 2022.
39. Salix have been approached around flexibility on timescales. The response is that it must be spent in this financial year, but they have confirmed that they will be flexible on a practical project completion date and that this can tip over the end of March deadline.
40. If the council decides to abandon the tender and the work is not carried out, we will miss opportunities to contribute towards our 2030 Carbon neutrality objectives and may need to fully fund the project itself.
41. The timescales are practical, the council has benefited from SALIX Public Sector Decarbonisation Scheme Grant (PSDS) grant funding to deliver this project and as part of the conditions of the funding, the grant will be returned if we do not deliver the ASHP proposal.
42. If the project does not get approval there is risk of reputational damage with Salix.
43. 'THE BENEFITS' referred to in the Report Detail above will mean improved energy efficiency to the building. The use of heat generated from a renewable source to provide hot water/space heating will cause a substantial reduction in the release of CO₂ into the atmosphere and will contribute towards the de-carbonisation of NCC'S assets by 2030.
44. Such grants will not be offered in the future. Grants from 22/23 onwards will require that the renewable system is replacing a gas system which will not be possible at City Hall. As such the ability to fund such a scheme in the future from Salix grant will not be possible.

Appendices: None

Contact Officers:

Name: Neil Watts - Major Works and Services Manager, NPS Norwich Ltd.

Telephone number: 01603 227172

Email address: neil.watts@nps.co.uk

Name: Mark Speller – Mechanical Team Lead, Compliance Manager, NPS Norwich Ltd.

Telephone: 01603 227922 / 07512 716243

Email address: mark.speller@nps.co.uk