

REPORT TO: Cabinet

LEAD CABINET MEMBER: Cllr Neil Gough

LEAD OFFICER: Director of Corporate Services

05 February 2020

Greening South Cambridgeshire Hall – Investment Grade Proposal

1. This report presents Investment Grade Proposal details for a range of measures to reduce the emissions from our South Cambridgeshire Hall office building, generate savings on energy bills and a long-term revenue stream for the organisation.
2. This is a key decision.

Recommendations

3. Cabinet is requested to:
 - a) review the Investment Grade Proposal (IGP) key points contained within this report and the IGP Executive Summary document at **Appendix A**
 - b) provide approval for the full business case as detailed within this report and **Appendix A**, and to progress the project to the implementation phase.

Reasons for Recommendations

4. 'Being Green to Our Core' has been identified as a key priority within the council's 2019-24 Business Plan. As part of this priority South Cambridgeshire District Council has declared a Climate Emergency and is committed to reaching zero carbon by 2050.
5. South Cambridgeshire Hall is the main base from which the Council operates. It is the landmark from which we want to show how the Council is responding to zero carbon agenda. As such, the greening of South Cambridgeshire Hall forms a central part of our 'Green to our Core' programme.
6. These recommendations are required to enable this project to progress to implementation stage, which would see the installation of a range of measures to reduce the emissions from the South Cambridgeshire Hall office building, achieving savings on energy bills and revenue from generation of heat and electricity.

7. The recommendation is for Cabinet to provide approval for all seven 'energy conservation measures' included within the IGP. These include both energy efficiency and renewable energy generation measures. The successful completion of all seven measures is integral to the achievement of overall return on investment and emissions savings.
8. This project will be delivered through an energy performance contract with our procured contractor Bouygues. The energy performance contract will guarantee the cost saving, payback and carbon reduction outlined within the IGP document. The contract is based on an integrated programme of energy conservation measures. The removal of any individual energy conservation measure would have a detrimental impact on the overall guaranteed financial business case and guaranteed emissions savings.

Project Summary

9. A summary of the key project details is included for quick reference below:
 - Guaranteed maximum capital cost - £1,870,000
 - Guaranteed maximum payback period - 16 years
 - Average annual payback over 16 years - £116,500 per year
 - Average savings and revenue over 20 year project term - £130,549
 - Guaranteed minimum carbon emissions savings – 171 tonnes CO2 per year (49%*)
 - Guaranteed renewable energy generation - 617,000 kWh per year (42%*)
 - Minimum energy savings guarantee – 827,000 kWh per year (57%*)

*of existing baseline levels for South Cambs Hall.

Details

Energy Conservation Measures

10. As detailed within Appendices A and B, seven Energy Conservation Measures (ECMs) are proposed. These are:

ECM1 – Solar Carport

420 solar PV modules providing partial coverage of our staff carpark and delivering on-site electricity.

ECM2 – Ground Source Heat Pump

A heat pump and system of bore holes in the car park connecting to the main heating and hot water system of the building, reducing our natural gas usage.

ECM3 – LED Lighting Upgrade

The replacement of internal office lighting with high-efficiency LED lighting to deliver energy savings.

ECM4 – Building Energy Management System (BEMS) renewal
A new Building Energy Management System that will be programmed to avoid excessive energy demands associated with heating and cooling of the building.

ECM5 – Chiller Efficiency Improvements
Modifications to increase the efficiency and lifespan of our Chiller unit and delivery energy savings.

ECM6 – Air Handling Unit Fan Replacement
Replacement of fans on Air Handling Unit to increase efficiency and deliver energy savings.

ECM7 – Electric Vehicle Chargers
20 Electric Vehicle Chargers integrated into solar carports allowing staff and Members to charge during the day.

Project Costs

11. The maximum cost of the implementation of all of these measures is £1,920,000 (made up of the costs set out in paragraph 9 above and detailed at Appendix A plus the estimated additional expenditure to cover potential costs, e.g. additional off-site parking and planning related investigations).
12. The IGP has been developed to include further technical options to maximise wider benefits. These benefits include:
 - Reduction in ongoing maintenance costs associated with statutory monthly emergency lighting tests. At present this equates to approximately £12,000 per year.
 - Enhanced staff comfort and productivity to achieve optimal working conditions, through individual lighting controls.
 - Increased commercial attractiveness of the South Cambridgeshire Hall building for potential tenants and building hire.
 - A streamlined solar carport design to minimise visual and physical impact.

Payback and Carbon Savings

13. The primary objective of this project is to reduce emissions from the South Cambridgeshire Hall office building. The installation of these measures will enable the Council to achieve savings on energy bills, operational costs and revenue from generation of heat and electricity.
14. The payback for the capital cost of £1,870,000 outlined in paragraph 9 above is 16 years. This is based only on the guaranteed income and savings as outlined in the IGP. Upon implementation of all measures listed at paragraph 10, the project will achieve a minimum combined annual savings and income of £94,473 in the first year. This will increase annually in line with inflation. The project will achieve a 20 year IRR of 2.8%.

15. This payback period does not include wider cost-related benefits that can be taken into consideration, including:
 - Potential to generate income through the adoption of a charging strategy for Electric Vehicle charging.
 - Decreased maintenance costs (e.g. emergency light testing as detailed above and ability to utilise the BEMS at new commercial buildings).
 - Potential to review our pool car and fleet arrangements with the availability of charging facilities on-site.
 - Potential increased commercial attractiveness and value of the building asset.
16. In total the measures outlined above would be guaranteed to achieve 171 tonnes of carbon per year. This equates to 49% of the building's current carbon footprint; however, carbon savings increase to a 90% reduction on 2019 levels by 2050 if decarbonisation of the electricity grid is taken into account (at the rates forecast by the Department for Business, Energy and Industrial Strategy (BEIS) - see 'Carbon Emissions Reduction' section of **Appendix A** for further details).
17. If a cost equivalent was applied to these emissions savings, then using the Greater London Authority's (GLA) approach of £60 per tonne, this would equate to in excess of £200,000 over the next 15 years (see 'Carbon Cost Savings' section of **Appendix A** for further details).
18. The Ground Source Heat Pump underpins this carbon reduction by significantly reducing our reliance on the mains gas supply. Undertaking this aspect of the project now allows us to register the installation to the Renewable Heat Incentive ahead of the April 2021 reform, which may mark the end of the subsidy.

Other Considerations

19. The implementation of the energy conservation measures detailed within this proposal will result in some inevitable disruption to the Council's carparking arrangements. We are exploring options to mitigate disturbance and to avoid disruption to the democratic process, including:
 - Scheduling of works to avoid periods of high usage of the building and carpark.
 - Working with local partners to identify alternative parking within the vicinity of the building.
 - Exploring possibilities to use land assets for additional carparking.
 - Devising an engagement programme with staff to consider how we travel to work and make decisions on when to travel into the office.

Implications

20. In the writing of this report, taking into account financial, legal, staffing, risk, equality and diversity, climate change, and any other key issues, the following implications have been considered:

Financial

21. If approved the costs of this budget will be allocated from the Renewables Reserve. A budget bid was originally submitted for this project, for a total of £1.3 million. This was based on information and costs that were provided within the initial High-Level review completed by Bouygues.
22. The costs have increased since this point primarily due to the additional costs relating to the lighting (difficulties identifying retrofit for existing bespoke installation) and the Ground Source Heat Pump (30% increase in the number of boreholes required due to geothermal properties of the carpark) elements of the project, plus agreed enhancements.

Legal

23. Our obligations are outlined within the Energy Performance Contract, due to be reviewed by 3C Legal and Local Partnerships (Re:fit framework owners).

Staffing

24. This project is being resourced from existing staff and budgets.

Risks/Opportunities

25. There is a strict programme and project management structure in place which reviews risk and issues logs on a fortnightly basis at the project board, with escalation to the Green to Our Core Cluster Board and the Transformation Board (EMT).

Equality and Diversity

26. A full Equalities Impact Assessment will be undertaken prior to implementation. No accessible parking bays will be lost as a result of this project.

Climate Change

27. The primary purpose of this project is to address climate change and the guaranteed to be achieved emissions savings are set out above.

Consultation responses

28. The Project Brief was developed in collaboration with key members of the Climate and Environment Advisory Committee. Following submission of the High Level Assessment Document, this was shared with this committee and circulated to all members of Cabinet. The draft IGP document has been presented to EMT and Lead Cabinet Member.

Effect on Council Priority Areas

29. The Greening of South Cambridgeshire Hall has been identified as a key action within the Council's 2019-24 Business Plan, forming a key component of the 'Being Green to Our Core' Business Plan priority. It is also relevant to the 'Modern and Caring Council' priority in that it will deliver savings and income to the organisation.

Background Papers

None.

Appendices

Appendix A: Investment Grade Proposal Executive Summary

Report Author:

Kevin Ledger – Project Manager and Senior Policy and Performance Officer
Telephone - (01954) 713018

Phil Bird - Project Sponsor and Corporate Programme Manager
Telephone - (01954) 713309

Alex Snelling-Day – Project Team Member and Green Energy Investment Officer
Telephone – (01954) 713240