

CARES CASE STUDY



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ABERLADY COMMUNITY ASSOCIATION

BACKGROUND

Aberlady Community Association applied for CARES funding to help them identify a low-carbon alternative to their village hall's existing gas-powered heating system.

Project name: Aberlady Community Association

Technology: Air Source Heat Pump (air-to-air), renewable energy appraisal

Location: Aberlady, East Lothian EH32 0SD

CARES funding: Enablement grant £5,997

Date: October 2019 to February 2020

Aberlady Village Hall is a traditional stone building with slate roof and is around 130 years old. The village hall is a well-used community asset and hosts weekly activities and events. It is also a popular venue for weddings and celebrations.

The hall is maintained and operated by Aberlady Community Association (ACA), a registered charity



run by volunteers and funded by income from hall lettings and donations.

The building comprises a main hall, small hall, a kitchen, three toilets and stores. The roof of its main hall is 9m high at its apex and is not well insulated.

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PROJECT AIMS AND OBJECTIVES

ACA applied for a CARES enablement grant to pay for an appraisal of options to replace the hall's existing heating system of 20-year-old gas fired radiant heaters and an electric storage heater, which are nearing the end of life. The appraisal would also investigate the financial and technical feasibility of improving the hall's insulation and installing a sustainable form of heating.

OUTCOMES AND ACHIEVEMENTS

After tendering from three shortlisted consultants, ACA appointed Locogen Ltd to conduct the options appraisal. Locogen Ltd is an independent company specialising in energy and environmental consultancy from low carbon technology.

The appraisal identified a range of sustainable heating options and highlighted an air source heat pump (ASHP) as a possible option. Further analysis showed that that an air-to-air ASHP system would be more effective and cheaper to install than an air-to-water ASHP system.

After visiting other halls that had ASHP systems installed, ACA confirmed an air-to-air ASHP as its preferred solution. Locogen Ltd provided an outline specification for this preferred system, which ACA will use as the basis for competitive quotes for installation.

In addition, the appraisal recommended installing 50mm of roof level insulation and fan-driven heaters at intermediate height to improve the building's energy efficiency. The appraisal also highlighted that costs for installing the roof insulation will greatly depend on the method of installation: by using a cherry picker instead of erecting internal scaffolding, ACA are likely to save thousands of pounds.

The improved insulation should reduce the space heating requirement of the main hall by about one-third. It is estimated that these combined measures should reduce their carbon emissions by about 50% and reduce their heating costs by about £1,000 each year.

At the time of writing (March 2020), ACA are in the process of seeking grant funding to assist with installation costs.

LESSONS LEARNED

A spokesperson for ACA identified several key lessons from the options appraisal process:

- Receiving financial support from CARES allowed them to “think big” when searching for a practical and long-term low-carbon alternative to the existing gas-powered heating system.
- Before the appraisal they were unsure about installing better insulation. The appraisal process, however, convinced them that improving the building's insulation was an essential long-term investment. The report also suggested practical steps to tackle any difficulties of installing it.

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- Competition amongst consultants and clearly setting out their requirements in the invitation to tender was crucial in getting the best proposal for the feasibility study.
- In addition to the expert advice received from Locogen Ltd, ACA arranged site visits to two similar completed projects. These visits helped ACA to understand the different types of ASHP systems available and choose their preferred option.

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