



Communal Heating Options Appraisal

Client's objectives

Bristol & Anchor Almshouse is a charity focused on reducing social isolation and connecting communities within the city of Bristol. They operate a community centre (known as The Beehive Centre) and a collection of almshouse cottages which accommodate older people in need of safe and secure housing.

The cottages were served with electric space heating, which is costly to run. Meanwhile, the Beehive Centre was heated with gas space heating and was approaching the end of its serviceable lifespan.

All heating and hot water bills are paid for by the charity therefore their objective was to explore different options to replace the existing heating arrangements.

The project

The current heating and domestic hot water consumption was modelled using energy bills, SAP modelling and CIBSE Guide F Energy Benchmarks to provide a 'base case' of total annual energy consumption, fuel cost and carbon dioxide emissions.

We then forecasted the energy consumption, CO₂ emissions, fuel costs and capital costs for installation of each of the following four scenarios:

- Mains gas for the Beehive Centre and cottages
- Mains gas for the cottages only
- Biomass for the Beehive Centre and cottages
- Biomass for the cottages only

Finally, we calculated the total cost savings over a 20 year period and provided a simple payback calculation.

Key services delivered

- Site visits
- SAP surveys
- Options appraisal

Key project outputs

- Based on the results of each scenario, the option which represented the smallest investment, was to install a new mains gas communal boiler for the cottages only. This also provided the shortest payback.
- Better fuel cost savings at a similar payback could be achieved by including the Beehive Centre in the upgrade.
- The best CO₂ emissions savings were achieved by the biomass heating systems. However, higher biomass fuel, maintenance and capital costs lead to longer payback periods.

Project impact

Bristol & Anchor Almshouse Charity decided that for simplicity and ease of ongoing maintenance they would keep the heating systems for the cottages and the Beehive Centre separate.

Following our findings they opted for the option which represented the smallest capital investment and quickest pay back which was to install a new communal gas boiler for the cottages only.

In addition, we were able to provide a small amount of Energy Company Obligation (ECO) funding towards the installation of the new boiler which further reduced the capital cost of the project for the charity.

What our client said

"Your report was exactly what we required. It informed us and enabled us to make a better decision that wouldn't have been possible without it. Your response was everything we could have expected - polite, timely and professional."

– Richard Jarratt
Bristol and Anchor Almshouse Charity

For further information

Pete Best, Senior Associate
pete.best@anthesisgroup.com
+44 (0)7887 986 470