

These professionals did it, when will you?



Target group:
Developers,
Local Authorities

Granitehill House, District Heating Installation

Aberdeen, United Kingdom

Year of construction:
1977

Number of units:
53

Current retrofit status:
completed

Overview

Aberdeen City Council have several multi-storey properties that provide sheltered housing, one of which is Granitehill House located in the west of Aberdeen. The property comprises of 53 one-bedroomed flats, which have a warden service and are installed with community alarm services.

Aberdeen City Council explored lowering the carbon dioxide emissions of the sheltered housing block whilst ensuring the vulnerable residents would be provided with optimum thermal comfort in the property. They explored district heating due to its success in similar multi-storey properties around the city and contacted Aberdeen Heat & Power, a local not for profit company, to deliver the project utilizing a connection to their nearby Stockethill Energy Centre.

The block was built in 1977 and prior to installation of district heating contained inefficient electric storage heating that was costly and in many cases did not provide adequate warmth to the property, this led to poor comfort for the tenants and high maintenance costs for the building through damp and condensation etc. District heating was selected as it has been demonstrated to provide low cost affordable heating in buildings of similar construction within Aberdeen and had been installed in circa 50 previous multi-storey projects.

Most important results

Fully controllable heating for residents

Cost savings for residents and local authority – property uses a heat with rent model

Annual estimated reduction in Carbon dioxide emissions 55.3 tonnes

Advice to others

- Use companies that have experience in retrofitting
- Be prepared for the unexpected when working with older buildings
- Ensure a thorough construction survey is undertaken for the property and that all re-burrs are located and identified.

“
Residents can
access low cost
instant heat
and hot water
at an
affordable
price”

Retrofitting focus

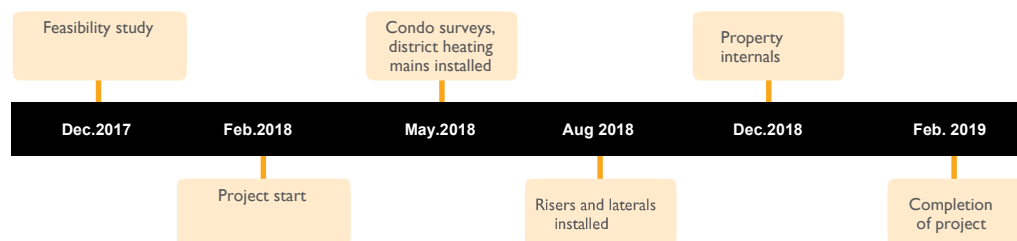
- District heating in 10 storey block containing sheltered housing facilities.

District Heating

- **Main challenges:** Ensuring that vulnerable residents had minimal disruption to their heating whilst installations progressed.
- **Consideration for choosing among the alternative approaches:** limited in other approaches due to height of property, options were to fit new electric heating or use a district heating scheme, district heating scheme improved affordability and safety for residents, also acts to protect the housing envelope which is of benefit to the Local Authority
- **Methodology:** Feasibility study of options considered. Individual surveys to assess required works full plan of works to carry out works ensuring minimal disruption to vulnerable residents
- **Result – key figures:** The vast majority of residents installed district heating leading to lowered annual bills, reduced carbon emissions, and increased thermal comfort.
- **Any unexpected nice side effects:** Residents are happier as they have greater control of the warmth of their properties

Planning scheme

How long did it take to use this method as compared to conventional methods





Supply chain cooperation

- The project was managed by Aberdeen Heat & Power, on behalf of Aberdeen City Council, who employed a team of skilled contractors to deliver the project on time and on budget. This included, designers, civils contractors, electricians, plumbers, welders and project managers all sourced from the local area.



Cost savings

- Cost savings are derived from instantaneous hot water, rather than the use of an immersion system for hot water supply and the use of gas as a primary fuel rather than electricity. Installation of district heating compared with the existing heating can be as great as 40% reduction in fuel and energy costs to the consumer.

any question?



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Information



Interreg ACE Retrofitting project:

<https://www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/>

Aberdeen Heat & Power

<https://www.aberdeenheatandpower.co.uk/>

Saving Energy Aberdeen web platform

<https://www.savingenergyaberdeen.co.uk/>

Aberdeen City Council energy efficiency web pages:

<https://www.aberdeencity.gov.uk/services/housing/home-energy-efficiency>

You too are facing the challenge of the energy retrofitting of privately-owned condominiums in your city?

The ACE-Retrofitting project aims to develop a governance model facilitated by cities linking owners and building professionals to accelerate condominium energy retrofitting. The French CoachCopro tool will be upgraded and adapted to other countries.

The consortium is composed of Agence Parisienne du Climat (France), Maastricht University (the Netherlands), Energy House Antwerp (Belgium), the City of Liège (Belgium), Aberdeen City Council (UK), Frankfurt Energy Agency (Germany), the City of Maastricht (the Netherlands), Changeworks (UK) and Energy Cities (coordinator). Study visits are organised in the partner cities of the consortium.
www.nweurope.eu/ace-retrofitting

