

This Local Authority did it, when will you?



Target group:
**Local Authorities,
Building Managers**

Tillydrone Flats – District Heating Installation

Aberdeen, Scotland

Year of construction:
1970s

Number of units:
360

Current retrofit status:
completed

Overview

Aberdeen City Council has 4,500 flats in 59 multi storey blocks spread across the city. In 1999 these blocks were surveyed and were found to have very low energy ratings and consequently classed as difficult and expensive to heat. Many tenants were living in 'fuel poverty' conditions in under heated properties. A study of all 59 blocks was commissioned with the following objectives

- Investigating the possibility of affordable heating
- Affordable for tenants
- Reduction in CO2 emissions
- Safe
- Sustainable energy

Tillydrone has seven multi storey buildings in the area, five are in a cluster with the other two on separate sites. The cluster of five was chosen for the case study, each multi storey has 18 floors with 4 flats per floor and a communal drying room.

Scope of Works

This project connected flats within 5 multi storey blocks to the district heating network. The network is supplied with hot water for heating and domestic hot water via a Combined Heat and Power (CHP) plant. In 2002 Aberdeen City Council created 'Aberdeen Heat & Power', a not-for-profit independent Company, to develop Combined Heat and Power schemes for the city. Aberdeen City Council contracted Aberdeen Heat & Power to deliver this project. The project involved external works and internal works. External works to lay pipes connecting the flats to the CHP plant. Internal works to install pipes within the communal areas of the housing blocks and works within individual flats to install pipes and fit new radiators.



Most important results

- Carbon emissions from these buildings have reduced by 45%
- Typical fuel costs to tenants have been reduced by up to 50% over the previous electric heating systems
- Energy reduction
- Improved comfort



Advice to others

- Communication with residents is key to a successful project. Allow sufficient time and resources to liaise with residents
- To ensure that you engage with all residents use varied methods of communications e.g. meetings, letters, posters, social media.
- Promote the benefits of the projects to residents and maintain good communication throughout the project.



Retrofitting focus

The focus for this retrofit was combined heat and power. To remove the inefficient old storage heating and replace it with a more energy efficient method of heating.

The main drivers for this retrofit were energy and carbon savings, improving comfort levels and reducing energy costs. These types of buildings are hard to heat and are often draughty due to the nature of their construction.



Main Challenges

Before Retrofit: Multi storey blocks are often made up of a mixture of tenures from owner occupiers, private lets and council tenants. This can make it difficult to get the necessary multiple consents to carry out remedial works on communal areas of the building.

Getting owners on board with the project proved to be time consuming. We sent letters to the target audience advising them of the project and inviting them to contact us for further information. Open days were held where residents were encouraged to attend. We also, in conjunction with our appointed contractor Aberdeen Heat and Power, carried out home visits to reassure residents and answer any questions.

Each council tenant that wished to have the CHP installed in their flat was required to sign a tenancy variation because the charge for this service would be collected alongside their rent. This proved to be challenging as in some cases we found that the person living in the property was not the registered tenant. Also, those tenants who had rent arrears were not allowed to sign up for the CHP until their arrears were reduced to within a month's rent.

For the CHP to be installed the contractors would require access to the communal drying rooms to install the service pipe which would deliver the hot water to each floor. These rooms were often full of household items or rubbish. We had to clear all drying rooms prior to the commencement of the works.

During Retrofit: Despite the drying rooms been cleared out, often when the contractor arrived to carry out the installation works the rooms were full again, and works were put on hold until the area was emptied again.

The contractor would report that when they arrived to fit the CHP within the flat the residents would not be in for fixed appointments and wouldn't respond to cards left. Often flats had to be bypassed to keep the whole schedule of works running on time. These properties had the CHP installed once the remaining flats had been complete.

any question?



Sara Cameron, Senior Domestic Energy Officer,
Aberdeen City Council
sarcameron@aberdeencity.gov.uk

Information



Interreg ACE Retrofitting project:

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

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

