



LOCATION: CAMBUSLANG, GLASGOW



The project

Previously using electric storage heaters exclusively, the residents of West Whitlawburn were suffering from high heating and hot water bills across the estate. Situated in the bottom five per cent band of the Scottish Index of Multiple Deprivation, the West Whitlawburn Housing Co-operative (WWHC) faced a challenge in implementing a cheaper, more sustainable fuel source.

Initially, the WWHC invested £22.4 million to improve the energy efficiency of these buildings, work which included cladding, insulation, new windows and re-roofing as well as enclosing exposed balconies in six high-rise blocks. The project, part funded through the Warm Homes Fund, involved the construction of a new energy centre.

PROPERTY CHARACTERISTICS:

HOUSING CO-OPERATIVE

432 FLATS IN SIX TOWER BLOCKS

11 LOW RISE FLATS

14 TENEMENT CLOSES

PREVIOUS FUEL:

ELECTRIC STORAGE HEATERS

TECHNOLOGIES USED:

- BIOMASS ✓
- LOW TEMPERATURE GAS ✓
- BOILERS ✓
- COMMUNAL THERMAL STORE ✓

Specification

The new energy centre contains a 740 kW Pyrotec biomass boiler and 50,000 litre thermal store. The system burns woodchips or pellets at up to 92% efficiency and is fed via an automated charging screw from an underground store beneath the energy centre. Due to the combustion manager within the boiler, a greater variety of wood fuel can be used to heat the system.

The energy from the fuel is transferred from the thermal store to each property via a network of insulated underground pipes. This heats each unit's individual heating system, comprising of a heat exchanger, radiators and hot water tank.

The West Whitlawburn scheme also uses three 1300 kW Vitoplex low temperature gas boilers to provide backup heat, providing a highly resilient system. With wide water galleries and large water content, the Vitoplex boilers require no minimum flow rate, and cater for both high and low energy demands from the estate.

Benefits

This large scheme, completed in December 2014, is expected to bring hundreds of residents out of fuel poverty, with an expected saving of 20% on heating and hot water bills compared to the previous system. The Community project will save 1600 tonnes of CO₂ each year, equating to 48,600 tonnes of CO₂ over its 30 year lifespan.



“The new biomass district heating scheme is a true community energy project. We are delighted to be making a real difference to the West Whitlawburn Community.” Stephanie Marshall, Deputy Director of West Whitlawburn Housing Co-operative