

## Hanover Housing Association Woodfuel Project

### Introduction

Hanover (Scotland) Housing Association, established in 1979, provides a variety of housing ranging from general needs family housing to sheltered housing for the elderly.

One of their developments is Walter Cameron Way, near Fort William. This is a 25 unit sheltered housing development for the elderly, comprised of 16 flats spread over 3 blocks, 8 cottages and a Sheltered Housing Manager's house. Within the main block there are communal toilets, a common room, a laundry, a Manager's office and a guest bedroom.

The development was previously served by 2 x 219kw Hamworthy Broadstone oil-fired boilers which provided both heating and hot water to the complete development. The system was proving expensive and becoming inefficient, and the volatile price of oil was placing some of the residents at risk of fuel poverty. The association were considering upgrading their heating system, and after much research, decided to install a biomass heating system.

### Equipment: Woodchip: Froeling Turbomatic 100kW boiler

Based on the space available on site, the required boiler output, and to minimise on-site disruption, it was agreed that a pre-fabricated wood fuel heating station installed adjacent to the existing oil fired boiler room would be the best solution.

The pre-fabricated unit, pictured on the right, contains a Froeling Turbomatic 100kW wood fuel boiler (sufficiently sized to meet the base load), a wood fuel storage area and associated controls. The woodfuel boiler is connected to the existing boiler room via pre-insulated underground heating pipe work. The older system was retained to provide peak load and back up when needed.



The Froeling unit is able to use both chip and pellet (through blown delivery) however as there is local woodchip supplier, chip biomass was the preferred choice. The housing association and local woodfuel supplier have a heat supply contract meaning that fuel, maintenance and servicing are carried out by the supplier, reducing to a minimum the contribution required from the housing association.

### Cost and Grant Funding

Total Project cost	£112,855	The remaining funding was obtained through:  Hanover Housing Association Own Funds
CARES grant	£ 33,856.50	
CARES grant Percentage	30%	

### Fuel Bill Savings

Savings are estimated to represent £10,199 p.a. Any and all savings are passed on to the residents at Walter Cameron Way through a reduction in fuel element of the service charge.

### Emission Savings

Annual CO <sub>2</sub> savings (kg)	134,461
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### Project Monitoring

The local woodchip supplier has provided the association with a Heat Supply Contract where the Housing Association pay a rate per kWh of heat produced: this is measured through a heat meter so monitoring occurs through this process.

### Local Impact

This project has provided the residents of the complex more affordable heating so addresses issues surrounding fuel poverty. In addition, the use of a local wood source strengthens the woodfuel sector in the area which has benefits in relation to the local economy, and also environmental benefits through utilising renewable energy.

### Lessons Learned

One of the main lessons Hanover Housing Association learnt was the need to optimise the heating controls to give the biomass unit every opportunity to meet the heat demand of the building before allowing the oil boilers to come on line. In hindsight they feel they could have had the controls installer and biomass installer round the table at an earlier stage

Investigate your options. Hanover Housing Association have a heat supply contract with the local biomass installer and feel this has helped to ensure that the plant is running at optimum performance.

### For further information, contact:

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