

Glasgow Hutchesontown

New community heating system cuts heating bills



- new community heating system for over 1,000 homes

- dramatic reductions in heating costs for consumers

- £3,200 cost per dwelling

Estate profile

Hutchesontown is a development of over 1,000 homes built in the 1960s and located a mile south east of Glasgow city centre. Around half of the residents live in four 23 storey tower blocks, together containing 552 one and two bedroom flats; the remainder in four storey deck-access flats. The estate is owned and managed by Scotland's national housing agency, Scottish Homes.

Like many multi-storey housing developments built at the time, the Hutchesontown homes suffered from poor thermal performance, made worse by their open balconies, very exposed position and expensive-to-run off-peak electric storage heating systems. The resulting cold and damp conditions led to widespread condensation and mould related problems in the homes and considerable discomfort for residents.

Eventually, the area was designated an Estate Based Strategy Area and Scottish Homes began a programme of investing in the regeneration of the estate. This Project Profile describes the work carried out on the first of the four tower blocks.

Adding community heating

An earlier feasibility study had demonstrated that community heating would reduce energy use and give tenants more control than electric heating. So a new, gas-fired community heating system formed the

centrepiece of the refurbishment. A new boilerhouse was built with capacity to serve all the housing in Hutchesontown. Initially, just two boilers were installed to serve the first block. Underground heating mains were installed to carry hot water from the boiler house to the base of the block. The steel pipes are insulated with foam and incorporate a further protective layer and an automatic leak detection system.

Another, small plant room has been created at the base of the block. This houses a heat exchanger to transfer heat from the primary water circuit to water circulating within the block. Hot water is then pumped to supply the new wet radiator heating systems installed in each flat.

Individual heating systems are controlled by a card-operated payment device which also incorporates a programming facility for heating and domestic hot water. Room and cylinder thermostats are also installed, as in conventional central heating systems. Each dwelling has a heat meter which records the amount of heat and hot water being used and which forms the basis of the payment system. The payment units are installed in all flats and allow residents to pay for their heating as and when required.

In addition to the new community heating system, the entire block was overclad with a new weatherproof skin incorporating extra insulation. Windows were replaced with double glazing and open balconies enclosed to form conservatories.

Tenant involvement has been a major feature of the whole operation, from initial survey through design and installation work.

Scottish Homes is now evaluating the option of installing one or more combined heat and power (CHP) units in the central boilerhouse as future phases of the work progress.

Glasgow

Hutchesontown

Cost

The total cost of the heating system refurbishment amounted to £3,200 per dwelling.

Savings

Average heating bills for the new community heating system are estimated to be £3.50 per week (£182 a year) - a dramatic reduction from charges of up to £700 a year incurred by some residents for partial electric heating.

Homes with the new system are also much more comfortable.

Work programme

Installation work

- new, central boilerhouse housing two gas-fired boilers
- external and internal heating mains
- new plant room within the block
- consumer controls and meters

Resident consultation

- discussions with residents over the selection of contractors and design of heating systems within homes
- regular meetings during the contract period
- exhibitions of the proposed new system

Cost of upgrade per dwelling: £3,200

Dramatic reductions in heating costs for consumers

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