

Rivermead House, Derby



Case study Social housing

Building type:

Multi-storey building comprising of 54 flats, built in 1965

Technology used:

aroTHERM 5kW air source heat pump
VRC 700 system control
150-litre slimline cylinder

Housing association:

Derby Homes

Installer:

Derby Homes

The challenge

Derby Homes is an arm's length management organisation (ALMO) created by Derby City Council to manage, maintain and improve its social housing. As a non-profit entity, it received extra government support to carry out a major programme of repairs and improvement work. Having undergone a process of assessing all the properties in its portfolio, Rivermead House was identified as requiring a more efficient heating system to reduce carbon emissions and lower fuel bills for tenants.

The organisation initially considered running a micro-district heat pump, using energy from the ground or the local river. However, these options were ruled out as potential costs were coming in at over £13,500 per flat. A solution which could be easily installed with as little disruption for tenants as possible, at an affordable price, was needed.



Project background

- 54 residential flats in an off-gas grid location
- Expensive and ageing electric storage heaters
- A programme of thermal improvements, including wall and loft insulation had already been carried out

The energy concept

- aroTHERM 5kW is compact in size for easy siting
- Quiet operation with sound power as low as 58dB(A) with permitted planning available as low as three metres
- uniSTOR slimline cylinder with a capacity of 150 litres has compact dimensions to fit into small cupboards
- VRC 700 system control has been designed using a familiar menu structure to make controlling the system easy and efficient

The solution

Upon surveying the site, the Vaillant team immediately recognised that the balconies of each flat would be an ideal space to house an air source heat pump. However, with pressure on budgets, savings needed to be made wherever possible. To do this, Derby Homes undertook the system fitting, as opposed to using a contractor. Vaillant supported their in-house team of installers every step of the way, offering full training on the air source heat pumps, and visiting the site at least once a week to give continued assistance and guidance to the installers.

Each flat was installed with its own aroTHERM 5kW air source heat pump, VRC 700 weather compensating system control and a 150-litre slimline hot water cylinder. Costs were successfully kept to a minimum, with each flat fitted for £6,000 - a huge 30 per cent saving against a comparable quote.

The outcome

Tenants have seen a huge reduction in their fuel bills. With the previous storage heating system, the average energy consumption of 13068 kwh equated

to costs of around £1,250 a year. With aroTHERM heat pumps in place, bills have been slashed to £730 per annum, providing a typical saving of £520 a year per household.

The installation also means that Derby Homes can take advantage of the domestic Renewable Heat Incentive (RHI).

It is projected that over the next seven years, over £196,000 will be claimed by Derby Homes. What's more, the training and professional qualifications that Derby Homes installers have now obtained can be applied to other projects in the future.

Why Vaillant?

David Pickering, Gas Supervisor, Derby Homes:

"Thanks to Vaillant's help throughout the process, the feedback and support of the tenants has been excellent, there have been no problems whatsoever. The new heat pump systems are a major improvement on the electric storage heaters, and now the residents can enjoy affordable control of their heating throughout the entire flat."



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