

## Customer Requirement:

One Manchester requested a new system which reduced CO<sub>2</sub> and fuel bills to the resident after seeing a Ground Heat installation at a neighbouring housing association. They required funding towards the installation in order to prove viability to the business, which Ground Heat was happy to provide in the form of a feasibility study and educational training to the Housing association. The existing electric storage heaters were removed in favour of a mix of tried and tested heat pump used at another site and the innovative new Heliotherm system. This allowed for a direct comparison between old and new heat pump technology allowing the housing association to better understand the difference.



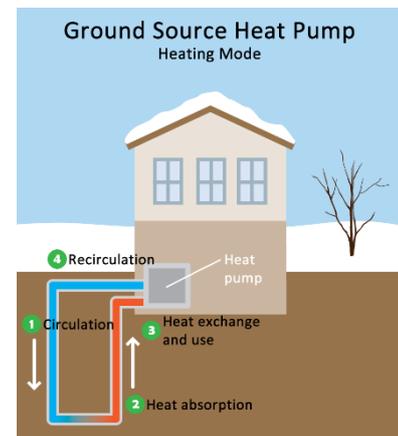
## Specifying the Solution:

Ground Heat installed 10x Vaillant Geotherm mini heat pumps and worked with Heliotherm, Austria to develop a brand new 1 to 6kw inverter driven ground source heat pump specifically designed to supply individual apartment heat generation for multi occupancy dwellings. Through thorough testing and development specifically designed around the requirements for this type of installation, the Heliotherm system is able to provide a fully controllable remote access system reducing the need for engineer attendance in 99% of queries about the new system. Making the whole process more efficient. The Heliotherm SMS has a data bank recording all parameters for up to three years. The first radiators had to be designed to account for lower run temperatures and simple to use controls were paramount for the residents.

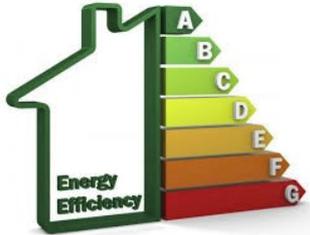


## Bore Field:

This installation was delivered with traditional individual bore homes (one hole bore collector per heat pump) This allowed the Vaillant heat pump the opportunity to run as it was intended on individual supply. It also gave a great baseline comparison between the older Vaillant fixed speed compressor technology and the newer Heliotherm inverter technology.



## Consideration for Energy and Environment:



The residents at Electric storage heaters fitted which would give them a bill in the region of £800-1000 per year to heat the apartment. But during our feasibility study we found that residents were not heating most rooms due to the cost. This is not only detrimental to the resident but also the property, as these conditions promote damp and mould. Our new system can expect fuel bills in the region of £250-300/yr ensuring every resident can heat their home. One Manchester housing association also benefit from a huge CO<sub>2</sub> save for the block is 10.83 tonnes per year, improving their overall stock credentials.

## Financial Benefits:

The Non Domestic RHI returns in the region of £???? to the landlord. The residents will see a fuel save of up to 80% to that of their existing storage heater costs.



## Customer Satisfaction:



We have had excellent feedback from residents regarding the installation of the systems into apartments. We go out of our way to provide a friendly and efficient service. Our engineers have received thank you notes for their efforts in causing a minimum of disruption to residents and keeping the apartments spotless.

## Built to Last:

Both the Vaillant and the Heliotherm units on the project have provided heating at a reduced cost from the previous storage heater system. The heliotherm systems also benefit from a 365 day monitoring service. This gives the client the additional security that if an issue should occur, we will know about it before the resident. Should we also note any resident using their system inefficiently then we can also call, email or text either the resident or the housing association to ask if we can assist.

