



Withybed



As members of INTEGER, Westlea Housing Association take a proactive role in designing energy efficient and environmentally friendly homes. By designing houses with high levels of insulation, they were able to reduce heating loads to around 5kW_(TH) for each of the six houses at their new development at Withybed in Bushton.

Due to the nature of local geology each house had two boreholes drilled at an angle within the footprint of the building and a U-Tube was installed in each. Each borehole was drilled to a depth of around 50 metres.

As the top of each borehole and associated flow and return header pipework is under the buildings there are no external visible signs of the installation.

There are several benefits to the tenants, landlords and environment associated with this installation. Based on current oil prices the tenants should save between £100 to £200 per year on fuel for heating and domestic hot water. Westlea Housing trust will probably save on annual maintenance costs, (ground source heat pumps require minimal maintenance). And compared to oil CO₂ emissions are reduced by almost 40 tonnes per annum.

Ground Loop	<i>2 x 50 metre deep boreholes per property</i>
Heat Pump	<i>5 kilowatt Calorex 5000DT – one per property</i>
Distribution System	<i>Wet Underfloor</i>
Client	<i>Westlea Housing Association</i>
Mechanical & Electrical	<i>E G Carter & Co Ltd</i>
Commissioned	<i>June 2004</i>