

## THE LANCASTERS - A CASE STUDY



Iain & Andy Howley were engaged directly by the developer to carry out the design and management of one of the largest Open Loop schemes in the UK as part of a hotel and residential development.

The scheme demand was 1,400 kW of heating with a desired groundwater flow rate of 60 l/sec to be pumped from the Chalk aquifer via two abstraction and two recharge wells.

### Scope of Work

Working closely with Woolf Construction Ltd, The Howley brothers assessed the feasibility of the scheme,

designed the wells and worked with the drilling contractors to sink and test the wells. Initially the

target flow rate was 40 l/sec, however, after analysing temperature data, the groundwater was closer to 14°C in this area. After scrutinising all of the test pumping data, we were able to determine that the wells had further capacity and recommended that the production be increased by 30% to reduce  $\Delta T$  to allow the system to deliver the level of energy required at the slightly elevated groundwater temperature.

We negotiated the changes with the Environment Agency and testing was successfully carried out at 60 l/sec.

The drilling and testing operation was completed on time and to budget.

As is the case with many ground coupled schemes, the successful way forward is determined by reaction to the way the drilling and testing operations unfold.

It takes skill and experience by the design teams, drilling engineers and the drilling contractor to get

the right results. This is what Ground Source Consult Ltd can do for you on your project.

