

Case Study

Borehole Array for Major London Residential Development



At a glance

- **Ground Source Heat Pump to provide heating and cooling**
- **7 year warranty**
- **Water borehole for a private water supply**
- **Saving money**
- **Reducing carbon**
- **Service contract**

Objective

To install a Ground Source Heat Pump Borehole Array capable of providing enough renewable energy for the Ground Source Heat Pump system which was being installed for a new residential tower block. The client was looking for a renewable heating energy solution, rather than installing gas.

About the project

Nicholls worked alongside the main contractor to install the 48 boreholes required at the correct spacings during the construction of the building. This created significant challenges working with other sub contractors on the site. Due to our experience of drilling deep boreholes in London we were able to achieve the desired length of the overall borehole field as the area for drilling was limited. The project required a significant amount of temporary surface casing to overcome the running sands at about 85m which is fairly common in this area.

The boreholes were then drilled to depth, the probes installed and grouted in using a thermally enhanced grout. Nicholls were able to use their experience and commitment to the project to complete the works ahead of schedule.

Each borehole was recorded using our GPS locator. This information will enable future engineers to pinpoint the location of each borehole accurately.

The headering pipework which connects all the boreholes together to the manifold and back into the Plant Room was installed over multiple visits, working with the main contractor and their programme. Nicholls obtained the appropriate permission from Transport for London to drill at this location due to the proximity of Underground Tube Lines.

