

DATE *May 2008*

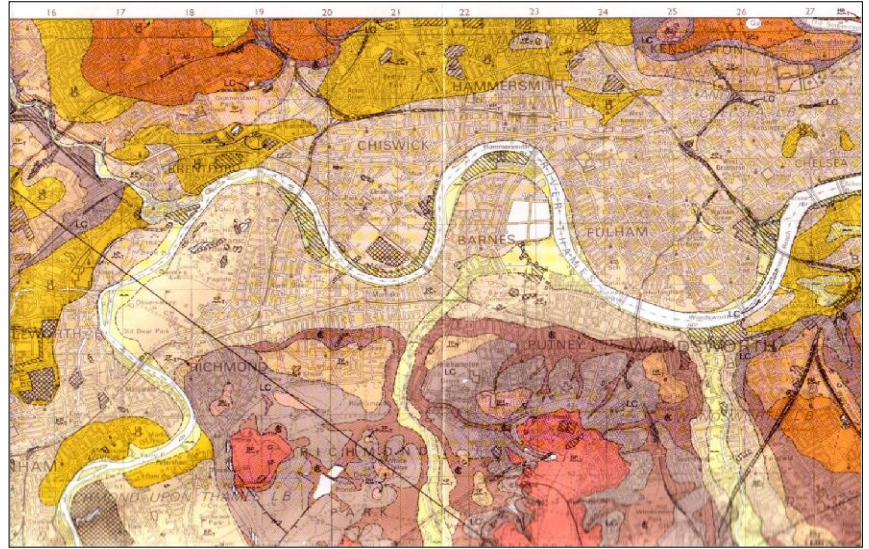
GROUND SOURCE

PROJECT *Open loop; London*

HEATING & COOLING

SUBJECT *Ground Source Heating and Cooling*

OPEN LOOP



Open Loop design & installation:

- **Single borehole scheme in Chalk aquifer, London**

Carbon Zero Consulting (CZC) has had major involvement with many of the UK's larger commercial open loop ground-source heating schemes. We have the largest team of 'thermogeologists' in the UK dedicated to the design and development of this technology.

It is estimated that there are approximately 50 commercial schemes in the UK in various stages of design and development, with many more to follow.

A scheme on London's Baker Street has now been commissioned. CZC was asked to provide the initial hydrogeology, thermogeology and design input to determine whether a 2 borehole scheme (abstraction and re-injection) would be suitable.

It was concluded that due to the probability of rapid thermal breakthrough, a single borehole pumping to a heat pump was the only viable option. Water would then be used as a grey water supply and disposed-of to waste. CZC supervised the drilling and testing of the borehole.

A single borehole option is likely to be a common situation in London due to the characteristics of the chalk aquifer and the limit on

separation of boreholes. However, this single borehole will supply ~200kW of heating and/or cooling.

Although many schemes have been successfully located in London, CZC strongly believe that the major growth in open-loop technology will be in much of the midlands and north where the hydrogeology is more suitable.

