

PRADA - A CASE STUDY

With the Howley Brother's growing reputation for designing and installing ground source systems in challenging environments, it came as no surprise that Prada, probably one of the most iconic brands in the world of high class fashion, had learned of the pioneering open loop ground source system installed by them at Scott's of Mayfair restaurant in 2006. Prada wanted to understand more about how they could potentially install a system that would allow them to service their soon to be refurbished flagship store in Old Bond Street, London. With a challenging timeframe ahead of them Iain and Andy Howley set to work with Prada's engineering team (ESA Engineering of Milan) and architects Gregori Chiarotti.



The Prada building had an initial estimated colling demand of ~ 380KW. ESA were

looking for a flow demand of approx 12l/sec to service the facility. On investigation it was discovered that there was a potential to expand the site and so the team were advised to test the wells at a higher demand to "future-proof" the system.

A site survey showed that it was going to be extremely difficult to install wells on the site. At the front of the property, there was scope to drill through old coal vaults that extended from the building façade, which whilst a challenge, was something that we had done on a number of occasions previously for other clients.

The second location was one to really test our Engineer's mettle. A stairwell at the back of the building which was open

to the atmosphere was the only place to realistically place a well. We devised an entry route to take the rig and equipment through the front of the shop by removing a 2.8m wide plate glass window. The basement void beneath the shop floor traversed by the plant had to be fully propped to take the weight of the equipment. A specialised platform was designed and constructed to take the weight of the drilling rig to allow the work to take place.

Much like Scott's, because there was limited space between the wells and a reasonably sizeable load to be services, the Prada team were advised that our aquifer thermal modelling work would almost certainly show intolerable thermal interference between wells at some point in the future. Our Designers therefore using the most advanced 3D numerical modelling software, modelled the system with and without the inclusion of a "bleed off" facility to identify the potential volumes to be discharged off site to make the system sustainable. The final design incorporated a motorised valve automatically activated by controls acting on a signal showing increased abstraction water temperature. This system would allow the groundwater temperatures to stabilise and switch back when it had done so.

With the Prada team fully up to speed with our intentions and all enabling and design works complete, the drillers moved in to start the main phase of the onsite works. Casing was engineered in short lengths to allow them to be handled inside the building. The work area had to be kept to an absolute minimum to allow other trades to do their works – including Italian craftsmen laying marble floors whilst the wells were being tested!. The wells were acidised and successfully tested at the target flow rate of 18l/sec.

The project was completed in early 2012 and serves as our most complex open loop project by a country mile. A challenge that was met by Our skilled and experienced team.

Iain Howley commented "Little did I know what lay ahead for the design team after taking the initial call from Paolo Chiarotti. With a very tight programme and an even tighter site to be accessed this was right up our street! I would be lying if I said there weren't odd nights lying in bed staring at the ceiling but it is engineering challenges like this that we really like to get our teeth into. It was great to work directly for an organisation like Prada and off the back of this project we are now progressing with another world famous fashion label just up the road. Iain joked... we are quickly asserting ourselves as the most fashionable ground source designers in Britain. Seriously though, Prada really is one to be proud of."

