

Client: Serpentine Gallery  
Site: Serpentine Pavilion 2009 – SANAA Architects  
Location: Hyde Park, London

---

### **Project Description**

GTL Partnership were appointed by the Serpentine Gallery to design, supply, install and remove the foundations to the 2009 Serpentine Gallery Pavilion designed by SANAA Architects.

The client each year requires a foundation system that can support the temporary pavilion building yet be removed at the end of the pavilions life.



### **Geotechnical Ground Conditions**

The soils investigation indicated that the ground had superficial deposits of sand and gravels over the load clay formation.

Supplementary CPT information supplied by the main consultant indicated soil stratigraphy was of 2.0 m of superficial deposits.

### **Helical Pile Design**

GTL designed the 115 individual helical piles and associated top caps to receive the CHS columns supporting the pavilions composite canopy.

GTL carried out a static analysis using end bearing 350 mm diameter plates to take the vertical compression and tension loads.



The use of GTL's innovative pile system meant that the steel piles could be rotated into the ground with minimal removal of spoil and with minimal damage to tree roots etc. After removal of the temporary structure, the helical piles were withdrawn and reused on another project, thus providing a 100% sustainable and environmentally friendly piling system.