

Client: Hutchinson 3G
Site: 3G Node Site
Location: Church Farm, Aylesbury

Project Description

GTL Partnership were employed by Hutchinson 3G to design, supply and install their Rapid Deployment Site (RDS). The main objective was to create a complete compound by utilising the Helical (screw) piled grillage foundation. This design incorporated security fencing, equipment and electrical cabinets whilst providing capacity for the forces generated by the 18m high timber monopole.



Geotechnical Ground Conditions

The soils investigation indicated superficial deposits overlaying stiff sandy gravelly clay.

The site investigation of a borehole with SPT and Dynamic Probes Super Heavy were used for the design of the piles.

Helical Pile Design and Testing

GTL designed the helical piled foundation compound with loads of 9kN in compression, 10kN in Tension and 86kNm moment force.

GTL carried out a static analysis using a combination of end bearing and shaft friction to generate the required pile capacity in tension and compression.

Development

Subsequent to the success of this generic site model GTL in partnership with H3G went on to develop various other RDS solutions that have been rolled out throughout the United Kingdom.



Generally the GTL RDS solution is designed to be installed within 48 hours and is defined as both a permanent and temporary structure. The concept is that the GTL RDC replaces traditional concrete foundations and construction methods

There are three options available for installing the RDS

- Helical pile solution
- Gravity solution
- Structural anchoring

