

STRUCTURAL ENGINEER'S REPORT ON GROUND CONDITIONS

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Project no. 18M333
Client/Architect Paul Constable/Mike Tippins
Project Title: **18M333 - ARIYA NEURO CARE, 70, VERNON ROAD, WORSBOROUGH, BARNSELY**
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Date inspection 26/02/19
Time of visit Approx 11:00
Weather Dry and bright

01.00 SITE INSPECTION & INVESTIGATION

At the time of my visit a number of trial holes had been excavated across the site, positioned to suit the location of future buildings. Excavations had been carried out using a conventional back-acting excavator on land which had been previously stripped of vegetation.

All trial holes revealed the same ground strata being:

- Made ground, topsoil, bricks and other debris for a depth of 300mm
- Stiff silty brown clay at a mean depth of 300mm. At one trial hole the excavation was taken down through the clay to the maximum reach of the excavator. This proved difficult as the clay was consistent and increased in stiffness with depth
- No root growth was found below a level of 300mm
- No ground water was encountered

Other observations on ground conditions and foundation design:

- A tree stump on the northern side of the site, the tree having been removed some years earlier.

02.00 SUB-STRUCTURE DESIGN PROPOSALS

- By inspection, the natural clays provide an adequate formation for a conventional strip or trench fill construction to a minimum depth of 1000mm from new ground levels in the same material providing a Safe Ground Bearing Pressure of 150 KN/m².
- In the unlikely event of any soft pockets or inconsistency in the ground pressures, excavations to be down to the required stratum and backfilled in mass concrete.
- All foundations must be cast at a minimum of 150mm into the clay stratum.
- Locally excavate and backfill deeper in the vicinity of the tree stump (which is to be removed) to achieve a level outside the water absorption influence bulb of the roots to avoid any effects of heave. The exact formation depth to be determined on site by Building Control.
- To avoid the removal of ground materials in order to find an approved formation for a ground floor slab with associated soil removal from site, it is recommended that a proprietary, Beam & Block suspended concrete floor is adopted. A nominal void to be created beneath the floor. This will also allow for any ground heave conditions.

03.00 OTHER SITE OBSERVATIONS

- The site is bounded on 3no. elevations by brick retaining walls which extend above the road and pathways.
- Although in a generally adequate condition, the brickwork to these walls requires a degree of repair, re-pointing and tidying-up on both sides perhaps including lowering the top level of the walls of the Northern and Eastern sides to a consistent level.
- Care to be taken to ensure the wall foundations are not compromised by new excavations for foundations and drainage, or by lowering site levels.

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