

Phase I/II Site Investigation & Earthworks Design / Supervision



Location:
Brough South
Development, East
Riding of Yorkshire



Client:
Horncastle Group Plc



Civil Engineering

Structural
Engineering

Building Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

The Brough South development is a low lying area of land located on the former BAE Systems Brough Airfield Site, to the north of the River Humber.



The site is to be developed with a mix of residential and commercial properties, but to meet the requirements of planning, the levels on site have to be raised mitigate future flood risk. This is achieved by importing chalk aggregate from local quarries and surplus natural excavated material from other development sites in the area. The material needs to be validated once placed to ensure it meets the requirements of the earthwork's specification to enable shallow reinforced strips to be adopted as the foundation solution.

Engineering and Design Factors

Large areas of the site are underlain by soft cohesive soils. Detailed settlement analysis was required to demonstrate settlement would not be a risk to the proposed development. External boundary slopes also required assessment to ensure their stability was not compromised by the proposed structures. Shallow groundwater reduced the competency of the natural soils at formation resulting in the requirement for a starter layer at the base of the fill of coarse as-dug chalk.

Description of the Works

Alan Wood and Partners has been responsible for ground investigation undertaken prior to development of the site along with preparation of the Materials Management Plan, Earthworks Specification, Designed the engineered platform and provided cut and fill design. Prior to importation, all fill is tested at source in line with the earthwork's specification to demonstrate suitability for import, both from a geoenvironmental and geotechnical perspective.

Regular visits to site were undertaken during the earthworks to supervise validation testing undertaken on the fill. AWP validated the works met the requirements of the specification and where necessary addressed issues with performance on site. All information is presented within a validation report, and geotechnical design report, for submission and approval by the NHBC.

Core services

Geotechnical and Geoenvironmental Engineering

Sectors

Commercial, Retail and Leisure / Residential / Utilities and Infrastructure

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