

Phase I/II Site Investigation at Former Steelworks



Location:
RDD Development,
River Don District,
Sheffield, South
Yorkshire



Client:
Fox Lloyd Jones



Value:
£8k



Civil Engineering

Structural
Engineering

Building Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

River Don District is a large area of land located within the wider Meadowhall area of Sheffield.

Three parcels of land have been outlined for commercial development, located on land formerly used for steel manufacturing. The site is directly adjacent to the River Don.

Engineering and Design Factors

Given the former land use as a steel works, a number of remnant foundations, including buildings, machine bases and tram lines, are present below the site. Deep made ground is also present associated with infilled basements and a drainage structure known as 'The Goyt' – a buried brick lined culvert skirting around the northern and eastern edges of the site. The site also lies within a Coal Authority Development High Risk Area, with the potential for shallow coal mine workings to be present below the site.

Description of the Works

Alan Wood and Partners undertook a Phase I desk-top study of the site which included a review of all historical ground investigations undertaken on the site by others. From this, the Phase II investigation could be designed to target features of interest from a geotechnical and geoenvironmental risk perspective. A combination of deep boreholes, trial pitting and trial trenching were undertaken to form a better understanding of the ground below the site, including the potential coal mining risk, the nature of obstructions and voids, and risk to ground workers and end-users from soil contamination, including asbestos, hydrocarbons and ground gas.

Evidence of potential coal workings was found on the eastern and southern portions of the site and following production of a Phase II report detailing the works undertaken, outlining proposed risks to the development and recommendations to be adopted, a drilling and grouting specification was produced. This provided information as to drill hole locations, the requirements of the grout to be used, and the information required to validate the works. Alan Wood and Partners also provided a detailed Remediation Strategy for addressing potential risks associated with soil and groundwater contamination.

Core services

Geotechnical and Geoenvironmental Engineering

Sectors

Commercial, Retail and Leisure