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Our ref JD/C15007A

For the attention of Scott Broadbent

Summary of Phase 1 & 2 Site Investigations – Land at Low Road, Crowland

Following your request for a summary of our previous Phase 1 & 2 Geoenvironmental site investigation reports (C14335, 2017 and C15007, 2020):

Phase 1 Desk Study Information and Phase 2 Ground Investigation

Historical and environmental database research indicated that in 1888 the site comprised two fields. By 1904 a house was constructed midway along the north-western site margin and barns were located within the south-western corner. The site has since remained apparently unchanged except for the removal of the barns in 2017/2018.

No significant historical or current sources of contamination were indicated on the site or in the immediate surroundings. There was a 1973 record of a closed household waste site located within the field directly to the west of the site. However, no other details are listed for this 'landfill' which must be over 47 years old and is likely to be an area of land raising (above flood level), rather than an actual landfill site. Drainage ditches are adjacent the site boundaries. The River Welland is located some 750m to the north-west of the site. The site lies within an area that benefits from flood defences (Corporation Bank) and has a low risk of flooding. The land 50m to the north, which is outside the flood defences, has a high risk of flooding area. There is a moderate risk of groundwater flooding due to the naturally high groundwater levels beneath the site. The site was indicated to be underlain by superficial deposits comprising Abbey Sand and Gravel (Secondary (A) Aquifer), which rest on the solid geology of the Oxford Clay Formation (Unproductive).

The ground investigation comprised three boreholes, seven trial pits, monitoring of standpipe installations and laboratory geotechnical and chemical testing. The ground conditions comprised a 0.30m to 1.15m thick surface layer of made ground/topsoil, mantling the anticipated Crowland Bed over the Abbey Gravels. The solid geology of the Oxford Clay was met below the superficial deposits at depths between 2.30m and 3.00m. The deepest borehole was completed within the Oxford Clay at 15.00m depth. Standpipe water levels were recorded at depths between 1.49m and 1.64m. Our previous reports should be referenced for details including comments on foundation design.

Comments on Ground Contamination in Relation to Proposed Development

Chemical tests on ten samples of surface soils found that all elements and compounds tested statistically fell below the respective soil screening values for a residential with home grown produce end use, considered representative of the proposed end use (private housing). A sample of groundwater was also tested and contained no concentrations of contaminants that exceeded UK drinking water standards.

No special precautions would be required during the development of the site by workers who may come into contact with the soil during groundworks, providing standard precautions are adopted

which should generally include the procedures given by the Health and Safety Executive (The Blue Book).

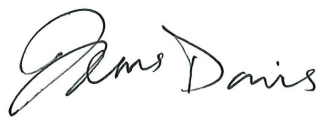
No specific scheme of remediation is considered necessary in relation to the creation of any new soft landscaping/gardens.

It is considered unlikely that the proposed development would impact the quality of the water environment.

The results of three return gas monitoring visits fell into Characteristic Situation 1 as defined by BS8485:2015+A1:2019 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'. No special precautions are required to protect the proposed development from ingress of soil gases.

The property is not in a Radon Affected Area, as between less than 1% of properties are above the action level. The site lies within an area where no radon protection measures are necessary.

Yours faithfully,



J. DAVIES
Senior Geotechnical Engineer