

21st December 2016
Our Ref: 16.9369 Rev 1

Hanbury Properties
17 Northgate
Chichester
West Sussex
PO19 1BJ

FAO James Fox

Anticipated Ground Conditions at Pagham South

Dear James,

I write further to the receipt of information relating to the proposed development of the parcel of land known as Phase 2, Pagham South; the area of land to which this refers is shown in the 'red line' drawing contained in Appendix A. On the basis of development plans provided, the development includes low rise housing with private gardens and associated infrastructure, a school and public open space.

Adjacent north to the site is a parcel of land, known as Phase 1, which forms the earlier portion of the same development proposal. The Phase 1 site has been subject to a Geotechnical and Geo-environmental site investigation by Ashdown Site Investigations (ASI) in 2016, report reference R16-11602, 'Land off Summer Lane, Pagham, West Sussex; Combined Geotechnical and Ground Contamination Risk Assessment'; and by Wilson Bailey Geotechnical and Environmental in May 2016, report reference J15133/DB/c02 'Summer lane Development Site, Pagham, West Sussex, Update on Groundwater Level Monitoring Winter 2015/2016'.

This letter should be read in conjunction with the ASI and Willson Bailey reports.

The purpose of this letter is to provide a summary of the anticipated ground conditions on the basis of published data and the findings of the ASI investigations.

Published Geology

The following data is derived from the ASI report and review of the BGS online map data.

Superficial / Drift Geology	
Unit Name	River Terrace Deposits
Geology Description	Sand, Silt And Clay. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by rivers.
Aquifer Class	Secondary A
Aquifer Description	These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

Bedrock / Solid Geology	
Unit Name	London Clay Formation
Geology Description	Clay, Silt And Sand. Sedimentary Bedrock formed approximately 34 to 56 million years ago in the Palaeogene Period. Local environment previously dominated by deep seas.
Aquifer Class	Non-aquifer
Aquifer Description	Deposits with low permeability that have negligible significance for water supply or river base flow.

Ground Conditions on site Adjacent North

The table below summarises the ground conditions encountered within the ASI investigations. The investigation comprised three cable percussive boreholes to 15.00mbgl; twenty-one windowless sample boreholes to a maximum depth of 11.00mbgl and six hand auger boreholes.

Stratum	General Description	Depth Range
Topsoil / Made Ground	Local concrete cover, but generally topsoil (no description given)	GL to 0.05-0.50m
River Terrace Deposit	Generally firm consistency brown sandy and slightly gravelly Clay, gravels are of flint. Locally encountered medium thickness beds of fine to coarse grained sand.	0.05-0.50m to 1.30-3.30m (locally beyond 3.00m, hole base depth)
London Clay Formation	Stiff or locally firm dark grey clay increasing to very stiff consistency with depth.	1.30-3.30 to >15.00m

The southernmost area covered by the ASI report includes WS16-WS18 and HA1-HA6. The deepest holes in this area were terminated at 3.00mbgl and did not prove the base of the River Terrace Deposits.

Groundwater records, where identified, indicate water levels of 1.60-6.00mbgl, and have association with granular portions of the River Terrace Deposits. It is noted that groundwater in WS16-WS18 is recorded at 1.65-1.90mbgl.

Winter groundwater level monitoring conducted by Wilson Bailey, indicates groundwater levels in the northern portion of the site reach 0.53mbgl.

Geotechnical Considerations

It is anticipated that the likely bearing stratum for spread type foundations will be the River Terrace deposits, ASI offer a safe bearing pressure of 100kN/m² at a depth of 1.00mbgl. It is considered reasonable to assume this figure in preliminary design calculations, until the ground conditions on the study site are fully established.

The soils of the River Terrace Deposits are of worst case medium shrinkage potential within the ASI report. It would be advised to assume medium shrinkage potential soils in the determination of the likely impact of tree root influence.

The ASI report offers a design CBR value of no greater than 5%, this may be adopted at a preliminary stage subject to confirmation through on site testing.

Exceedances of screening criteria were minimal, limited to 2no elevated Dibenz(ah)anthracene within soil samples in the ASI report; testing by Wilson Bailey identifies determinand concentrations conducive with background soil chemistry. The history of the site, largely of apparent agricultural use. Indeed the Phase 2 site is somewhat more distal from the listed works and infilled land identified as potential sources in the ASI preliminary conceptual model.

I trust the above information is sufficient for your requirements in this matter, should you have any queries please do not hesitate to contact me.

Graham Carter BSc FGS
Engineering Geologist

Encl: Appendix A - Site Plan

APPENDICES

Appendix A – Site Plan



constructiveevaluation
site investigation • building pathology

APPENDIX A

Site Plan



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