

Figure E-3 Borehole B5 Cuttings



D-1 Borehole B5 cuttings 0.50-0.60 mbgl



D-2 Borehole B5 cuttings 0.60-0.70 mbgl



D-3 Borehole B5 cuttings 0.70-1.80 mbgl



D-4 Borehole B5 cuttings 1.80-2.20 mbgl



D-5 Borehole B5 cuttings 2.75-3.40 mbgl



D-6 Borehole B5 cuttings 3.40 - 4.10 mbgl

E-4 BGS Archive Logs**SP 10 SE 4 [1625 0089], near Beaumoor Farm, Fairford Block C**

Surface level [+82.0 m] +269 ft, Water struck at [+79.6 m]

Shell and auger [modified] 152 mm [6. in] diameter

June 1971

Overburden 0.6 m [2.0 ft]

Mineral 4.2 in [14.0 ft]

Bedrock 0.1 m+ [0.5 ft+]

Soil, dark brown, Thickness/ Depth 0.1, 0.1

Terrace 1 deposits Clay, silty, pebbly, dark brown. Thickness/ Depth 0.5, 0.6

Sandy gravel, with a silty calcareous matrix to 1.7 m; Thickness/ Depth 4.2, 4.8m

Gravel: fine with some coarse to 2.6 in passing into fine with coarse. Predominantly sub-rounded, platy and tabular, grey and brown oolitic limestone, with some shelly oolitic limestone.

Sand: coarse and medium with a little fine, silty in the upper part. Limestone grains and quartz, buff to 1.7 m, passing into yellowish-brown matrix to 1.7 m

Kellaways Beds Mudstone, sandy and shelly, hard, brown passing into greyish-blue, 0.1, 4.9m

SW22/SW34 GL 88.95 mAOD [SP10-85]

0 - 6.5 Cornbrash
 6.5 - 14.5 Wychwood FM mudstone
 14.5 - 36.5 Kemble Beds FM limestone
 36.5 - 48.0 White Limestone
 48 - 50 Marl
 50 - 59.0 Taynton Stone
 59 - 67 Stonefield Suite
 67 - 79 Fullers Earth

SW13 The Retreat [near Marlborough Arms].

Groundwater found in FM at 6.4 mbgl, tested 1.14 l/s

0-1.5 Gravel
 1.5-2.7 Cornbrash
 2.7-13.1 FM mudstone
 13.1-31.7 FM limestone

SE114 RWL 2.4 mbgl Fairford football club [SP10-105 EA]

RWL at 3.0 mbgl, drilling depth 4.6 mbgl. GL 83.31 mOD, 82.95 mOD, drilled 7-May-2002

0-0.1 top soil
 0.1-0.4 brown clay
 0.4-1.9 sandy gravelly clay
 1.9-4.6 coarse sand and gravel [limestone boulder at 4 mbgl]

SP 10 SW 4 Burdocks

Dry, drilling depth 4.6 mbgl. GL 88.7 mOD, 82.95 mOD, drilled July-1971

0-0.2 top soil / overburden
 0.2-4.1 Terrace 2 [sand and gravel]
 4.1-4.5 Kellaway Beds
 4.5-4.6 Cornbrash [sandy-rubbly limestone with shell debris, yellow-brown]

Appendix F NP Policy Example

This appendix provides a small extract from the Benson Neighbourhood Plan, in which WRA members are also involved, and suggests that, while the Fairford NP text is correct and fit-for-purpose, it would be made more robust by including firm policies at the end of the “Geology, Topography and Hydrology” section.

The following examples may be useful.

Extracts from Benson’s fully adopted Neighbourhood Plan [‘Made’ in 2018]

Drainage and Flood Risk Management

- 14.12.1 Thames Water’s Benson Drainage Strategy [2013, and updated for 2015-2020] indicates that Benson has a significant problem with the foul sewerage system being overloaded by both surface water and groundwater infiltration. The Strategy states that both urban creep [more building and loss of permeable surfaces] and climate change [which is predicted to increase the number of adverse weather events] are expected to exacerbate the problem. Thames Water quantified the rate of urban creep in Benson as ‘average’ in 2013 at 0.0879%, but flagged that their intention to escalate with the County Council if that figure increased. Furthermore, the Water Cycle Study for South Oxfordshire District Council [2016] confirmed that there is minimal or no Wastewater treatment works capacity at Benson.
- 14.12.2 Developers must work with statutory bodies to plan for the necessary wastewater management infrastructure to accommodate growth in Benson to avoid unacceptable deterioration of water quality in parish watercourses and quality of life for residents.
- 14.12.3 Flows in Benson Brook are influenced by the level of winter rainfall infiltrating down into the chalk aquifer and flowing out from late winter onwards, mainly entering the brook in a series of springs in Ewelme. During periods of peak flow, some residents along Brook Street reporting water rising up through their floors.
- 14.12.4 Developers must take account of these specific flood risks in Benson and avoid exacerbating the issue by providing adequate on-site drainage proposals. The detail of Sustainable Drainage System proposals must take account of advice from RAF Benson on the need to manage the risk of bird strike.

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Development proposals should include Sustainable Drainage Systems within their boundaries designed to manage the risk of surface water flooding and foul water sewer overload, and that they will not increase flood risk elsewhere in Benson.

Sustainable Drainage Systems should be designed to maximise the benefits of the features, taking account where possible of the Benson’s Strategy for Nature and People [See Appendix L].

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Built development within areas which provide flood capacity for the built settlements will not be supported.

