

*Orchard End,  
7 Finches Court,  
Finches Lane,  
Lindfield,  
West Sussex, RH16 2PG.*

Mr M Duggin,  
c/o Scandia Hus Ltd,  
Scandia Hus Business Park,  
Felcourt Road,  
Felcourt, East Grinstead,  
West Sussex, RH19 2LP

22 April 2017

Dear Mr Duggin,

**Land at Fontwell Avenue, Eastergate, Sussex**

A site at Fontwell Avenue, Eastergate, Sussex (Grid reference SU 945 058) was inspected on 15<sup>th</sup> March, 2017. Four houses are to be built on the site and Drawing No. 215818/SP01 by Scandia Hus Ltd gives details of the development. The 1/50,000 geological survey map, Sheet 317, indicates the area to be underlain by a drift of Head Gravel with a solid geology of London Clay.

The Head comprised coarse angular flint gravel with a clay matrix to a depth of 1.8m with a similar material in a chalky matrix (Coombe Deposit) below this depth. These soils were exposed in power augured boreholes being undertaken for infiltration tests. It is noted the soils on the flights of the auger were remoulded and it was difficult to be certain of the depth the material was from. Bulk samples were taken from the spoil for identification purposes. The Head contained large flint gravel and cobbles and it was not possible to drill hand augered boreholes, hence Perth penetrometer tests were undertaken to assess the properties of the Head.

Borehole No. 4 was at the southern end of the site and a thick deposit of brown silty clay overlay the Head in this area. A ground water level was also recorded in this borehole at a depth of approximately 1.5m

The blow counts ('N' values) recorded with the Perth penetrometer ranged from 16 to 19 blows/300mm in the Head. It is noted the Perth equipment is relatively light and the penetrometer will give misleading 'N' values on large flints, however, the test indicates the Head is of a medium relative density, 'N' = 10 to 30 blows/300mm. The allowable bearing capacity of such material will be at least 150 kN/m<sup>2</sup>.

The gravelly Head will not be liable to seasonal drying shrinkage and mass concrete trench fill footings bearing in the Head may be adopted for the proposed house. A

minimum depth of foundation of 0.80m will be satisfactory, however, slightly deeper foundations may be necessary in the vicinity of Borehole No. 4 to ensure the footings bear in the top of the dense Head.

Yours sincerely,

A solid black rectangular box used to redact the signature of the author.

(W K Elson)  
PhD, CEng, MICE



ARUN DISTRICT COUNCIL AL/50/17/DOC

| Project Title : FONTWELL AVENUE EASTERGATE             |        |             |       |               |               | Project No.:       |         |                    |
|--------------------------------------------------------|--------|-------------|-------|---------------|---------------|--------------------|---------|--------------------|
| TRIAL PIT RESULTS                                      |        |             |       |               |               | Pit No. & Location |         |                    |
| Date : 15 - 03 - 17                                    |        | Engineer    |       | BH3, BH4      |               |                    |         |                    |
| Ground Level                                           |        |             |       |               |               |                    |         |                    |
| Description                                            | Legend | water Level | Depth | Reduced Level | Samples       | In situ Tests      | Remarks |                    |
| <u>BH 3</u>                                            |        |             | 0m    |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    | P       | N = 16 blows/300mm |
|                                                        |        |             |       |               |               |                    | P       | N = 26 ~ ~ ~       |
|                                                        |        |             |       |               | 1m            |                    | P       | N = 38 ~ / 150mm   |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
| Orange brown silty clay<br>to 0.80m.<br>Coarse deposit |        |             | 2m    |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
| <u>BH 4</u>                                            |        |             | 3m    |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    | P       | N = 10 blows/300mm |
|                                                        |        |             |       |               |               |                    | P       | N = 11 ~ ~ ~       |
|                                                        |        |             |       |               | 4m            |                    | P       | N = 34 ~ ~ ~       |
|                                                        |        |             |       |               | 1.5m (Approx) |                    | P       | N = 49 ~ ~ ~       |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |
|                                                        |        |             |       |               |               |                    |         |                    |

KEY:-

D Disturbed sample

B Bulk sample

W Water sample

U U100 Undisturbed

INSITU TESTS :-

Shear strength in K Pa

P Penetrometer (PERTH)

V Vane test

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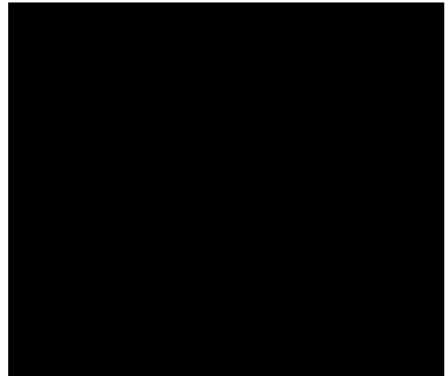
Mr M Duggin,  
C/o Scandia Hus Ltd,  
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Felcourt Road,  
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East Grinstead,  
RH19 2LP

24<sup>th</sup> April 2017

Account

Land at Fontwell Avenue, Eastergate.

1. Site investigation and report



A/c payable to W K Elson

