

**Reside Developments c/o Paul Basham Associates**

F.A.O Rob Wilson

Via email only: [rob@paulbashamassociates.com](mailto:rob@paulbashamassociates.com)

21<sup>st</sup> September 2020

Our Ref.: 18158/addendum report Rev. 2.

Dear Rob

**Re: Land West of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX**

Reside Developments commissioned Soils Limited to undertake supplementary intrusive works in the form of windowless sampler boreholes to confirm ground conditions and assist in finalising the drainage scheme for the site. The supplementary trial holes were intended to confirm geology in the area of proposed crate soakaways to assess viability of the alternative drainage proposal presented in drawing 020.5360 SK4 prepared by Paul Basham Associates Ltd.

**Ground Conditions**

On 27<sup>th</sup> August 2020, six windowless sampler boreholes (WS-A, WS-B, WS-C, WS-E, WS-G & WS-H) were drilled to depths ranging between 2.00m and 5.60m below ground level (bgl) at locations approximate to their corresponding catchment (Catchment A – Catchment G) as indicated on drainage proposal drawing 020.5360 SK4 prepared by Paul Basham Associates Ltd. Catchments D and F are informed by SA2 and SA1, respectively, excavated as part of previous intrusive works reported in Soils Limited report reference 18158/FLR Rev 1.02, dated February 2020.

All windowless sampler boreholes were terminated on contact with dense soils at depth which could not be safely penetrated with the equipment available.

The locations of all trial holes referenced in this report have been appended in Figure 1.

The ground conditions encountered have been summarised in Table 1 and the full engineers logs have been appended to this report.

**Table I – Summary of Ground Conditions**

| Strata  | Depth Encountered<br>(m bgl) |                                         | Typical Description                                                                                                                                                                                                                                                    |
|---------|------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Top                          | Base                                    |                                                                                                                                                                                                                                                                        |
| Topsoil | 0.00                         | 0.15 – 0.35                             | Turf over brown slightly gravelly slightly sandy SILT with frequent roots/rootlets. Gravel was medium to coarse subangular clasts of flint.                                                                                                                            |
| Head    | 0.15 – 0.35                  | >2.00 <sup>1</sup> – >5.10 <sup>1</sup> | Orange and brown slightly sandy gravelly CLAY over calcareous light grey and orange brown gravelly CLAY, clayey sandy GRAVEL and silty SAND & GRAVEL with occasional nodular flint cobbles. Gravel was fine to medium angular to subrounded clasts of flint and chalk. |

**Notes:** <sup>1</sup> Encountered to base of trial hole. 0.00 denotes ground level.

## Discussion

In light of the wider dataset now available on the site, it is now possible to conclude that bedrock chalk is absent across the site and the underlying ground conditions are more in-line with the BGS 1:50,000 geology maps for the site.

The soils of the Head were demonstrated to be persistent across the site to depths exceeding 5.60m bgl as encountered in the depth of investigation of the supplementary windowless sampler boreholes and are anticipated to be underlain by soils of the Lambeth Group at greater depth, based on the geology maps and local historical borehole information.

The soils described as chalk within the initial three windowless sampler boreholes undertaken in December 2017 for the purpose of installing monitoring wells, whilst including a significant chalk component, have now been confirmed to instead comprise part of the superficial Head material encountered based on the findings from the supplementary investigation and the wider dataset now available.

Trial holes SA1 – SA3 excavated in February 2020 to undertake infiltration testing further demonstrate the absence of bedrock chalk underlying the site. The findings of this investigation were reported in Soils Limited report reference 18158/FLR Rev 1.02, dated February 2020, and appended to this report.

## Conclusion

Based on the newly available information on the ground conditions underlying the site, soakaway bases located at depths of up to 2.50m bgl according to the drawing mentioned above will not penetrate the bedrock chalk as this has now been proven to be absent across the site to depths of at least 5.60m bgl and are anticipated to be underlain by predominantly cohesive soils of the Lambeth Group at depth. The requirement to keep soakaway depths to <1.40m bgl on this basis should be no longer applicable as the risk of dissolution is removed and no additional contamination pathway is being created into the chalk aquifer.

Furthermore, given the absence of bedrock chalk within the depths investigated across the site, a minimum offset distance of 5m from building foundations in-line with NHBC Clause

5.3.11 and current Building Regulations is considered applicable for this site, subject to approval by Building Control.

The following attachments make up the remainder of this letter report.

*Figure 1. Trial Hole Location Plan*

*Appendix A. Field Logs*

*Appendix B. Infiltration Testing Factual Letter Report*

Should you have any further questions please do not hesitate to contact the undersigned.

Yours sincerely,



Tim Rudkin BSc. (Hons.), MSc., FGS.

**Geo-Environmental Engineer**





Figure number

1

Title

Trial Hole Location Plan

Project

Land west of Fontwell Avenue

Date

September 2020

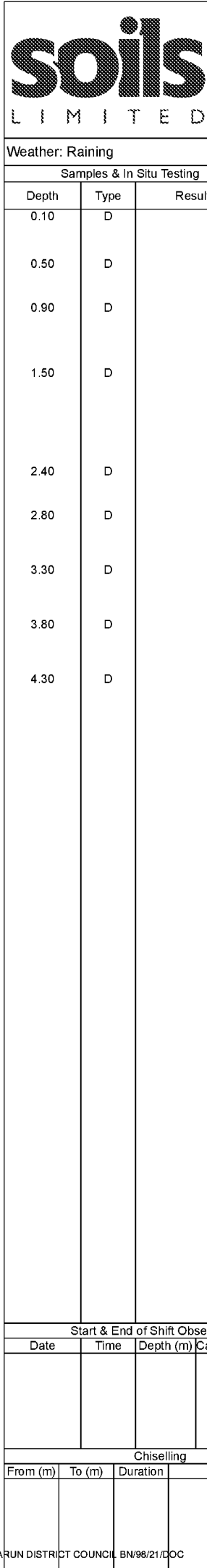
Client

Reside Developments

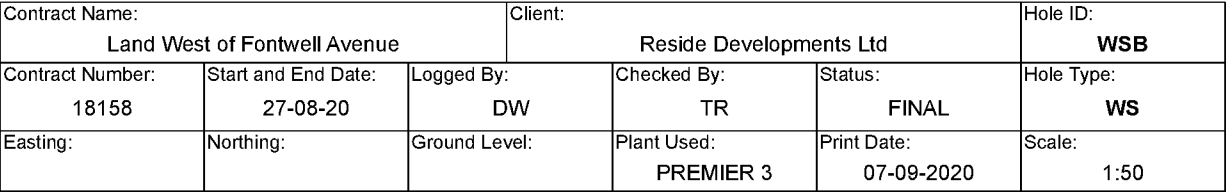
Reference

18158/addendum report

## Appendix A. Field Logs

|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       |             |  |
|----------------------------------------------------------------------------------|--------|-----------|--------------|------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------|---------------|--------------------------|------------|---------------------------|--------------|-----------------------|-------------|--|
|  |        |           |              | Contract Name:<br>Land West of Fontwell Avenue |                                                                                   |                                                                                                                                                                             |                 | Client:<br>Reside Developments Ltd |               |                          |            | Hole ID:<br>WSA           |              |                       |             |  |
|                                                                                  |        |           |              | Contract Number:<br>18158                      |                                                                                   | Start and End Date:<br>27-08-20                                                                                                                                             |                 | Logged By:<br>TR                   |               | Checked By:<br>TR        |            | Status:<br>FINAL          |              | Hole Type:<br>WS      |             |  |
|                                                                                  |        |           |              | Easting:                                       |                                                                                   | Northing:                                                                                                                                                                   |                 | Ground Level:                      |               | Plant Used:<br>PREMIER 3 |            | Print Date:<br>07-09-2020 |              | Scale:<br>1:50        |             |  |
| Weather: Raining                                                                 |        |           |              | Termination: Hole backfilled                   |                                                                                   |                                                                                                                                                                             |                 |                                    |               | Sheet 1 of 1             |            |                           |              |                       |             |  |
| Samples & In Situ Testing                                                        |        |           |              |                                                | Strata Details                                                                    |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       | Groundwater |  |
| Depth                                                                            | Type   | Results   | Level (mAOD) | Depth (m) (Thickness)                          | Legend                                                                            | Strata Description                                                                                                                                                          |                 |                                    |               |                          |            |                           | Water Strike | Backfill/Installation |             |  |
| 0.10                                                                             | D      |           |              | 0.20                                           |  | Brown slightly gravelly slightly sandy SILT with frequent rootlets. Gravel is medium to coarse subangular clasts of flint. TOPSOIL                                          |                 |                                    |               |                          |            |                           |              |                       |             |  |
| 0.50                                                                             | D      |           |              | (0.55)                                         |  | Light brown very silty sandy GRAVEL. Gravel is fine to medium occasionally coarse subangular to angular clasts of flint. Occasional rootlets.                               |                 |                                    |               |                          |            |                           |              |                       |             |  |
| 0.90                                                                             | D      |           |              | 0.75                                           |  | Dark brown slightly sandy gravelly CLAY. Gravel is fine to medium occasionally coarse subangular clasts of flint. Occasional rootlets.                                      |                 |                                    |               |                          |            |                           | 1            |                       |             |  |
|                                                                                  |        |           |              | (0.45)                                         |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       |             |  |
| 1.50                                                                             | D      |           |              | 1.20                                           |  | Light brown calcareous silty sandy GRAVEL with occasional cobbles. Cobbles are subangular nodular rimmed flints. Gravel is subrounded to angular clasts of flint.           |                 |                                    |               |                          |            |                           |              |                       |             |  |
|                                                                                  |        |           |              | (1.30)                                         |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 2            |                       |             |  |
| 2.40                                                                             | D      |           |              | 2.50                                           |  | Light brown silty SAND & GRAVEL with occasional inclusions of dark brown gravelly CLAY. Gravel was recovered as fine to medium occasionally coarse angular clasts of flint. |                 |                                    |               |                          |            |                           |              |                       |             |  |
| 2.80                                                                             | D      |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 3            |                       |             |  |
| 3.30                                                                             | D      |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 4            |                       |             |  |
| 3.80                                                                             | D      |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 5            |                       |             |  |
| 4.30                                                                             | D      |           |              | 4.50                                           |  |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 6            |                       |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 7            |                       |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 8            |                       |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 9            |                       |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           | 10           |                       |             |  |
| Start & End of Shift Observations                                                |        |           |              |                                                | Borehole Diameter                                                                 |                                                                                                                                                                             | Casing Diameter |                                    | Remarks:      |                          |            |                           |              |                       |             |  |
| Date                                                                             | Time   | Depth (m) | Casing (m)   | Water (m)                                      | Depth (m)                                                                         | Dia (mm)                                                                                                                                                                    | Depth (m)       | Dia (mm)                           |               |                          |            |                           |              |                       |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       |             |  |
| Chiselling                                                                       |        |           |              |                                                | Installation                                                                      |                                                                                                                                                                             |                 |                                    | Water Strikes |                          |            |                           |              |                       |             |  |
| From (m)                                                                         | To (m) | Duration  | Remarks      |                                                | Top (m)                                                                           | Base (m)                                                                                                                                                                    | Type            | Dia (mm)                           | Strike (m)    | Casing (m)               | Sealed (m) | Time (mins)               | Rose to (m)  | Remarks               |             |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       |             |  |
| Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.     |        |           |              |                                                |                                                                                   |                                                                                                                                                                             |                 |                                    |               |                          |            |                           |              |                       |             |  |

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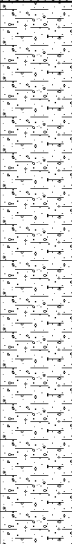
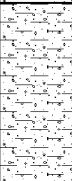
|                  |                              |              |
|------------------|------------------------------|--------------|
| Weather: Raining | Termination: Hole backfilled | Sheet 1 of 1 |
|------------------|------------------------------|--------------|

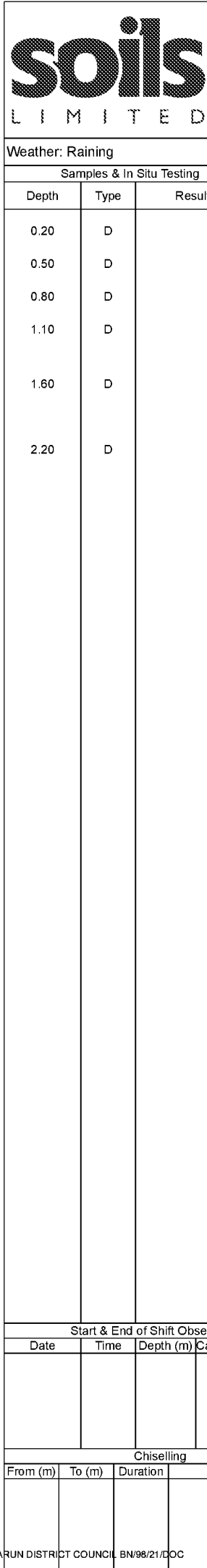
| Start & End of Shift Observations |  |  |  |  | Borehole Diameter |  | Casing Diameter |  | Remarks:<br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br>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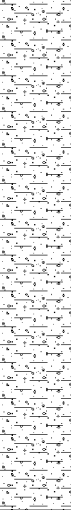
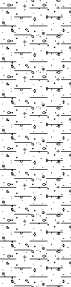
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.

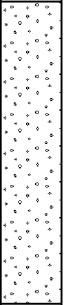
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  |              |                       |         |
|---------------------------------------------------------------------------------|------------------------------------------------|-----------|---------------------------------|------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|---------------------------|------------|------------------|--------------|-----------------------|---------|
|  | Contract Name:<br>Land West of Fontwell Avenue |           |                                 |                              | Client:<br>Reside Developments Ltd                                                 |                                                                                                                                                                                                                          |                          | Hole ID:<br>WSC |                           |            |                  |              |                       |         |
|                                                                                 | Contract Number:<br>18158                      |           | Start and End Date:<br>27-08-20 |                              | Logged By:<br>TR                                                                   |                                                                                                                                                                                                                          | Checked By:<br>TR        |                 | Status:<br>FINAL          |            | Hole Type:<br>WS |              |                       |         |
|                                                                                 | Easting:                                       |           | Northing:                       |                              | Ground Level:                                                                      |                                                                                                                                                                                                                          | Plant Used:<br>PREMIER 3 |                 | Print Date:<br>07-09-2020 |            | Scale:<br>1:50   |              |                       |         |
| Weather: Raining                                                                |                                                |           |                                 | Termination: Hole backfilled |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | Sheet 1 of 1 |                       |         |
| Samples & In Situ Testing                                                       |                                                |           |                                 |                              | Strata Details                                                                     |                                                                                                                                                                                                                          |                          |                 |                           |            |                  |              | Groundwater           |         |
| Depth                                                                           | Type                                           | Results   | Level (mAOD)                    | Depth (m) (Thickness)        | Legend                                                                             | Strata Description                                                                                                                                                                                                       |                          |                 |                           |            |                  | Water Strike | Backfill/Installation |         |
| 0.10                                                                            | D                                              |           |                                 | 0.15                         |   | Brown slightly gravelly slightly sandy SILT with frequent rootlets. Gravel is medium to coarse subangular clasts of flint. TOPSOIL                                                                                       |                          |                 |                           |            |                  |              |                       |         |
| 0.50                                                                            | D                                              |           |                                 | (0.45)                       |   | Light brown very silty sandy GRAVEL. Gravel is fine to medium occasionally coarse subangular to angular clasts of flint. Occasional rootlets.                                                                            |                          |                 |                           |            |                  |              |                       |         |
| 0.90                                                                            | D                                              |           |                                 | 0.60                         |   | Dark brown slightly sandy gravelly CLAY. Gravel is fine to medium occasionally coarse subangular clasts of flint. Occasional rootlets.                                                                                   |                          |                 |                           |            |                  | 1            |                       |         |
| 1.50                                                                            | D                                              |           |                                 | 1.20                         |   | Dark brown gravelly CLAY. Gravel subangular to angular clasts of rinded flints.                                                                                                                                          |                          |                 |                           |            |                  |              |                       |         |
| 2.50                                                                            | D                                              |           |                                 | (1.75)                       |   |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 2            |                       |         |
| 3.20                                                                            | D                                              |           |                                 | 2.95                         |   | Light brown and off white silty SAND & GRAVEL with occasional inclusions of dark brown gravelly CLAY. Gravel was recovered as fine to medium occasionally coarse angular clasts of flint and fine intact clasts of chalk |                          |                 |                           |            |                  | 3            |                       |         |
| 4.00                                                                            | D                                              |           |                                 | (2.65)                       |   |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 4            |                       |         |
| 5.00                                                                            | D                                              |           |                                 | 5.60                         |  |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 5            |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    | End of Borehole at 5.60m                                                                                                                                                                                                 |                          |                 |                           |            |                  | 6            |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 7            |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 8            |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 9            |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  | 10           |                       |         |
| Start & End of Shift Observations                                               |                                                |           |                                 |                              | Borehole Diameter                                                                  |                                                                                                                                                                                                                          | Casing Diameter          |                 | Remarks:                  |            |                  |              |                       |         |
| Date                                                                            | Time                                           | Depth (m) | Casing (m)                      | Water (m)                    | Depth (m)                                                                          | Dia (mm)                                                                                                                                                                                                                 | Depth (m)                | Dia (mm)        |                           |            |                  |              |                       |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  |              |                       |         |
| Chiselling                                                                      |                                                |           |                                 |                              | Installation                                                                       |                                                                                                                                                                                                                          |                          |                 | Water Strikes             |            |                  |              |                       |         |
| From (m)                                                                        | To (m)                                         | Duration  | Remarks                         |                              | Top (m)                                                                            | Base (m)                                                                                                                                                                                                                 | Type                     | Dia (mm)        | Strike (m)                | Casing (m) | Sealed (m)       | Time (mins)  | Rose to (m)           | Remarks |
|                                                                                 |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  |              |                       |         |
| Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.    |                                                |           |                                 |                              |                                                                                    |                                                                                                                                                                                                                          |                          |                 |                           |            |                  |              |                       |         |

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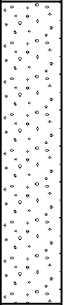
|  |                           | <b>Soils Limited</b><br>Newton House, Cross Road, Tadworth KT20 5SR<br>Tel: 01737 814221 Email: admin@soilslimited.co.uk |         |                         | <h1>Trial Pit Log</h1> |                                                                                     | Trial Pit No.<br><h2>SA2</h2><br>Sheet 1 of 1                                                                                      |                                                                     |
|----------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------|---------|-------------------------|------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Project Name: Land West of Fontwell Avenue                                       |                           |                                                                                                                          |         | Project No.: 18158      |                        | Method:                                                                             |                                                                                                                                    | Hole Type<br>TP                                                     |
| Location: Eastergate, Chichester, West Sussex, PO20 3RX                          |                           |                                                                                                                          |         |                         |                        | Plant: 5t                                                                           |                                                                                                                                    |                                                                     |
| Client: Reside Developments Ltd                                                  |                           |                                                                                                                          |         | Trial Pit Length: 1.80m |                        | Trial Pit Width: 0.60m                                                              |                                                                                                                                    | Scale<br>1:25                                                       |
| Dates: 03-02-2020                                                                |                           |                                                                                                                          |         | Level:                  |                        | Co-ords:                                                                            |                                                                                                                                    | Logged By<br>GB                                                     |
| Water<br>Strike                                                                  | Samples & In Situ Testing |                                                                                                                          |         | Depth<br>(m)            | Level<br>(mAOD)        | Legend                                                                              | Stratum Description                                                                                                                |                                                                     |
|                                                                                  | Depth                     | Type                                                                                                                     | Results |                         |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 0.20                      | D                                                                                                                        |         | 0.30                    |                        |    | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint. |                                                                     |
|                                                                                  | 0.50                      | D                                                                                                                        |         |                         |                        |   | Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.                     |                                                                     |
|                                                                                  | 1.00                      | D                                                                                                                        |         |                         |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 1.50                      | D                                                                                                                        |         | 2.10                    |                        |  | Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.    |                                                                     |
|                                                                                  | 2.00                      | D                                                                                                                        |         |                         |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 2.50                      | D                                                                                                                        |         |                         |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  |                           |                                                                                                                          |         | 2.70                    |                        | End of Pit at 2.700m                                                                |                                                                                                                                    |                                                                     |
| General Remarks:<br>Pit walls unstable                                           |                           |                                                                                                                          |         |                         |                        |                                                                                     |                                                                                                                                    | <b>Sample Type</b><br>D: Disturbed<br>B: Bulk<br>J: Jar<br>W: Water |
| Groundwater Remarks:                                                             |                           |                                                                                                                          |         |                         |                        |                                                                                     |                                                                                                                                    |                                                                     |

|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |
|----------------------------------------------------------------------------------|--------|-----------|--------------|------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------|--------------------------------|--------------------------|------------|---------------------------|-----------------------|------------------|--|
|  |        |           |              | Contract Name:<br>Land West of Fontwell Avenue |                                                                                   |                                                                                                                                                                                                                                               |                 | Client:<br>Reside Developments Ltd |                                |                          |            | Hole ID:<br>WSE           |                       |                  |  |
|                                                                                  |        |           |              | Contract Number:<br>18158                      |                                                                                   | Start and End Date:<br>27-08-20                                                                                                                                                                                                               |                 | Logged By:<br>DW                   |                                | Checked By:<br>TR        |            | Status:<br>FINAL          |                       | Hole Type:<br>WS |  |
|                                                                                  |        |           |              | Easting:                                       |                                                                                   | Northing:                                                                                                                                                                                                                                     |                 | Ground Level:                      |                                | Plant Used:<br>PREMIER 3 |            | Print Date:<br>07-09-2020 |                       | Scale:<br>1:50   |  |
| Weather: Raining                                                                 |        |           |              | Termination: Hole backfilled                   |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | Sheet 1 of 1              |                       |                  |  |
| Samples & In Situ Testing                                                        |        |           |              | Strata Details                                 |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | Groundwater               |                       |                  |  |
| Depth                                                                            | Type   | Results   | Level (mAOD) | Depth (m) (Thickness)                          | Legend                                                                            | Strata Description                                                                                                                                                                                                                            |                 |                                    |                                |                          |            | Water Strike              | Backfill/Installation |                  |  |
| 0.20                                                                             | D      |           |              | (0.30)                                         |  | Very soft, greyish brown, slightly sandy, gravelly desiccated SILT. Gravel is angular to sub-angular, fine to coarse flint. Frequent rootlets. TOPSOIL.                                                                                       |                 |                                    |                                |                          |            |                           |                       |                  |  |
| 0.50                                                                             | D      |           |              | 0.30                                           |  | Greyish brown to brown with depth, slightly sandy, silty/clayey, angular to sub-angular, fine to coarse flint GRAVEL. Silt is desiccated. Occasional rootlets. Rare sub-angular flint cobbles.<br><i>Becomes slightly clayey at 0.7m bgl.</i> |                 |                                    |                                |                          |            |                           |                       |                  |  |
| 0.80                                                                             | D      |           |              | (0.65)                                         |  |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |
| 1.10                                                                             | D      |           |              | 0.95                                           |  | Soft to firm, light brown, slightly sandy, very gravelly SILT/very silty GRAVEL. Gravel is angular to sub-rounded, fine to coarse flint. Frequent coarse sand sized chalk fragments.                                                          |                 |                                    |                                |                          |            | 1                         |                       |                  |  |
| 1.60                                                                             | D      |           |              | (1.35)                                         |  |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |
| 2.20                                                                             | D      |           |              | 2.30                                           |  |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 2                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   | End of Borehole at 2.30m                                                                                                                                                                                                                      |                 |                                    |                                |                          |            |                           |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 3                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 4                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 5                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 6                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 7                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 8                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 9                         |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            | 10                        |                       |                  |  |
| Start & End of Shift Observations                                                |        |           |              |                                                | Borehole Diameter                                                                 |                                                                                                                                                                                                                                               | Casing Diameter |                                    | Remarks:                       |                          |            |                           |                       |                  |  |
| Date                                                                             | Time   | Depth (m) | Casing (m)   | Water (m)                                      | Depth (m)                                                                         | Dia (mm)                                                                                                                                                                                                                                      | Depth (m)       | Dia (mm)                           | Rootlets observed to 0.8m bgl. |                          |            |                           |                       |                  |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |
| Chiselling                                                                       |        |           |              |                                                | Installation                                                                      |                                                                                                                                                                                                                                               |                 |                                    | Water Strikes                  |                          |            |                           |                       |                  |  |
| From (m)                                                                         | To (m) | Duration  | Remarks      |                                                | Top (m)                                                                           | Base (m)                                                                                                                                                                                                                                      | Type            | Dia (mm)                           | Strike (m)                     | Casing (m)               | Sealed (m) | Time (mins)               | Rose to (m)           | Remarks          |  |
|                                                                                  |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |
| Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.     |        |           |              |                                                |                                                                                   |                                                                                                                                                                                                                                               |                 |                                    |                                |                          |            |                           |                       |                  |  |

|                                                                                  |                           |                                                                                                                          |                         |                    |                        |                                                                                     |                                                                                                                                    |                                                                     |
|----------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------|------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  |                           | <b>Soils Limited</b><br>Newton House, Cross Road, Tadworth KT20 5SR<br>Tel: 01737 814221 Email: admin@soilslimited.co.uk |                         |                    | <b>Trial Pit Log</b>   |                                                                                     | Trial Pit No.<br><b>SA3</b><br>Sheet 1 of 1                                                                                        |                                                                     |
|                                                                                  |                           | Project Name: Land West of Fontwell Avenue                                                                               |                         | Project No.: 18158 |                        | Method:                                                                             |                                                                                                                                    | Hole Type<br>TP                                                     |
| Location: Eastergate, Chichester, West Sussex, PO20 3RX                          |                           | Support:                                                                                                                 |                         | Scale<br>1:25      |                        | Logged By<br>GB                                                                     |                                                                                                                                    |                                                                     |
| Client: Reside Developments Ltd                                                  |                           |                                                                                                                          | Trial Pit Length: 2.50m |                    | Trial Pit Width: 0.60m |                                                                                     |                                                                                                                                    |                                                                     |
| Dates: 03-02-2020                                                                |                           | Level:                                                                                                                   |                         | Co-ords:           |                        |                                                                                     |                                                                                                                                    |                                                                     |
| Water Strike                                                                     | Samples & In Situ Testing |                                                                                                                          |                         | Depth (m)          | Level (mAOD)           | Legend                                                                              | Stratum Description                                                                                                                |                                                                     |
|                                                                                  | Depth                     | Type                                                                                                                     | Results                 |                    |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 0.20                      | D                                                                                                                        |                         | 0.30               |                        |    | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint. |                                                                     |
|                                                                                  | 0.50                      | D                                                                                                                        |                         |                    |                        |   | Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.                     |                                                                     |
|                                                                                  | 1.00                      | D                                                                                                                        |                         |                    |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 1.50                      | D                                                                                                                        |                         | 2.00               |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 2.00                      | D                                                                                                                        |                         |                    |                        |  | Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.    |                                                                     |
|                                                                                  | 2.50                      | D                                                                                                                        |                         |                    |                        |                                                                                     |                                                                                                                                    |                                                                     |
|                                                                                  | 3.00                      | D                                                                                                                        |                         | 3.00               |                        | End of Pit at 3.000m                                                                |                                                                                                                                    |                                                                     |
| General Remarks:<br>Pit walls unstable                                           |                           |                                                                                                                          |                         |                    |                        |                                                                                     |                                                                                                                                    | <b>Sample Type</b><br>D: Disturbed<br>B: Bulk<br>J: Jar<br>W: Water |
| Groundwater Remarks:                                                             |                           |                                                                                                                          |                         |                    |                        |                                                                                     |                                                                                                                                    |                                                                     |

|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|---------------------------------------------------------------------------------|------------------------------------------------|-----------|---------------------------------|------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------|--------------------------------------------|------------|------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
|  | Contract Name:<br>Land West of Fontwell Avenue |           |                                 |                              | Client:<br>Reside Developments Ltd                                                |                                                                                                                                                                                                                          |                          |          | Hole ID:<br>WSG                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 | Contract Number:<br>18158                      |           | Start and End Date:<br>27-08-20 |                              | Logged By:<br>DW                                                                  |                                                                                                                                                                                                                          | Checked By:<br>TR        |          | Status:<br>FINAL                           |            | Hole Type:<br>WS |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 | Easting:                                       |           | Northing:                       |                              | Ground Level:                                                                     |                                                                                                                                                                                                                          | Plant Used:<br>PREMIER 3 |          | Print Date:<br>07-09-2020                  |            | Scale:<br>1:50   |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Weather: Raining                                                                |                                                |           |                                 | Termination: Hole backfilled |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | Sheet 1 of 1 |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Samples & In Situ Testing                                                       |                                                |           |                                 | Strata Details               |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | Groundwater  |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Depth                                                                           | Type                                           | Results   | Level (mAOD)                    | Depth (m) (Thickness)        | Legend                                                                            | Strata Description                                                                                                                                                                                                       |                          |          |                                            |            |                  | Water Strike | Backfill/Installation                                                               |                                                                                                                                                             |  |  |  |  |  |
| 0.10                                                                            | D                                              |           |                                 | (0.30)                       |  | Very soft, greyish brown, slightly sandy, gravelly desiccated SILT. Gravel is angular to sub-angular, fine to coarse flint. Frequent rootlets. TOPSOIL.                                                                  |                          |          |                                            |            |                  |              |  |                                                                                                                                                             |  |  |  |  |  |
| 0.40                                                                            | D                                              |           |                                 | 0.30<br>(0.30)               |  |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     | Brown, slightly sandy, silty, angular to sub-angular, fine to coarse flint GRAVEL. Silt is desiccated. Occasional rootlets. Rare sub-angular flint cobbles. |  |  |  |  |  |
| 0.80                                                                            | D                                              |           |                                 | 0.60                         |  |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| 1.30                                                                            | D                                              |           |                                 | (1.25)                       |  | Stiff to very stiff, brown to greyish brown with depth, slightly sandy, clayey GRAVEL/very gravelly CLAY. Gravel is angular to rounded, fine to coarse flint. Occasional rootlets. Occasional sub-angular flint cobbles. |                          |          |                                            |            |                  | 1            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| 1.90                                                                            | D                                              |           |                                 | 1.85<br>2.00                 |  |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   | Soft, light brown, slightly sandy, very gravelly SILT. Gravel is angular to sub-rounded, fine to coarse flint. Frequent coarse sand sized chalk fragments.                                                               |                          |          |                                            |            |                  | 2            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   | End of Borehole at 2.00m                                                                                                                                                                                                 |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 3            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 4            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 5            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 6            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 7            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 8            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 9            |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  | 10           |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Start & End of Shift Observations                                               |                                                |           |                                 |                              | Borehole Diameter                                                                 |                                                                                                                                                                                                                          | Casing Diameter          |          | Remarks:<br>Rootlets observed to 1.6m bgl. |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Date                                                                            | Time                                           | Depth (m) | Casing (m)                      | Water (m)                    | Depth (m)                                                                         | Dia (mm)                                                                                                                                                                                                                 | Depth (m)                | Dia (mm) |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Chiselling                                                                      |                                                |           |                                 |                              | Installation                                                                      |                                                                                                                                                                                                                          |                          |          | Water Strikes                              |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| From (m)                                                                        | To (m)                                         | Duration  | Remarks                         |                              | Top (m)                                                                           | Base (m)                                                                                                                                                                                                                 | Type                     | Dia (mm) | Strike (m)                                 | Casing (m) | Sealed (m)       | Time (mins)  | Rose to (m)                                                                         | Remarks                                                                                                                                                     |  |  |  |  |  |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |
| Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.    |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                          |                          |          |                                            |            |                  |              |                                                                                     |                                                                                                                                                             |  |  |  |  |  |

ARUN DISTRICT COUNCIL BN/98/21/DOC

|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
|---------------------------------------------------------------------------------|------------------------------------------------|-----------|---------------------------------|------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------|--------------------------------|------------|------------------|--------------|-------------------------------------------------------------------------------------|---------|
|  | Contract Name:<br>Land West of Fontwell Avenue |           |                                 |                              | Client:<br>Reside Developments Ltd                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          | Hole ID:<br>WSH                |            |                  |              |                                                                                     |         |
|                                                                                 | Contract Number:<br>18158                      |           | Start and End Date:<br>27-08-20 |                              | Logged By:<br>DW                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Checked By:<br>TR        |          | Status:<br>FINAL               |            | Hole Type:<br>WS |              |                                                                                     |         |
|                                                                                 | Easting:                                       |           | Northing:                       |                              | Ground Level:                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Plant Used:<br>PREMIER 3 |          | Print Date:<br>07-09-2020      |            | Scale:<br>1:50   |              |                                                                                     |         |
| Weather: Raining                                                                |                                                |           |                                 | Termination: Hole backfilled |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | Sheet 1 of 1 |                                                                                     |         |
| Samples & In Situ Testing                                                       |                                                |           |                                 | Strata Details               |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | Groundwater  |                                                                                     |         |
| Depth                                                                           | Type                                           | Results   | Level (mAOD)                    | Depth (m) (Thickness)        | Legend                                                                            | Strata Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |          |                                |            |                  | Water Strike | Backfill/Installation                                                               |         |
| 0.20                                                                            | D                                              |           |                                 | (0.35)                       |  | Very soft, greyish brown, slightly sandy, very gravelly desiccated SILT. Gravel is angular to sub-angular, fine to coarse flint. Frequent rootlets. Rare coarse sand sized brick fragments. TOPSOIL.<br>Brown, slightly sandy, silty, angular to sub-angular, fine to coarse flint GRAVEL. Silt is desiccated. Occasional rootlets. Rare sub-angular flint cobbles.<br>Firm, slightly black speckled, brown to greyish brown with depth, slightly sandy, very gravelly CLAY. Gravel is angular to rounded, fine to coarse flint. Occasional sub-angular flint cobbles. Rare rootlets.<br><small>Light brown mottled from 0.9 m bgl.</small> |                          |          |                                |            |                  | 1            |  |         |
| 0.50                                                                            | D                                              |           |                                 | 0.35                         |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| 0.60                                                                            | D                                              |           |                                 | 0.60                         |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| 0.80                                                                            | D                                              |           |                                 | (0.70)                       |  | Soft, light brown, slightly sandy, very gravelly SILT. Gravel is angular to sub-rounded, fine to coarse flint. Frequent coarse sand sized chalk fragments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |          |                                |            |                  | 2            |                                                                                     |         |
| 1.20                                                                            | D                                              |           |                                 | 1.30                         |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| 1.50                                                                            | D                                              |           |                                 | (0.70)                       |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| 1.90                                                                            | D                                              |           |                                 | 2.00                         |                                                                                   | End of Borehole at 2.00m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |          |                                |            |                  | 3            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 4            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 5            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 6            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 7            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 8            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 9            |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  | 10           |                                                                                     |         |
| Start & End of Shift Observations                                               |                                                |           |                                 |                              | Borehole Diameter                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Casing Diameter          |          | Remarks:                       |            |                  |              |                                                                                     |         |
| Date                                                                            | Time                                           | Depth (m) | Casing (m)                      | Water (m)                    | Depth (m)                                                                         | Dia (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Depth (m)                | Dia (mm) | Rootlets observed to 1.2m bgl. |            |                  |              |                                                                                     |         |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| Chiselling                                                                      |                                                |           |                                 |                              | Installation                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          | Water Strikes                  |            |                  |              |                                                                                     |         |
| From (m)                                                                        | To (m)                                         | Duration  | Remarks                         |                              | Top (m)                                                                           | Base (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Type                     | Dia (mm) | Strike (m)                     | Casing (m) | Sealed (m)       | Time (mins)  | Rose to (m)                                                                         | Remarks |
|                                                                                 |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |
| Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.    |                                                |           |                                 |                              |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |          |                                |            |                  |              |                                                                                     |         |

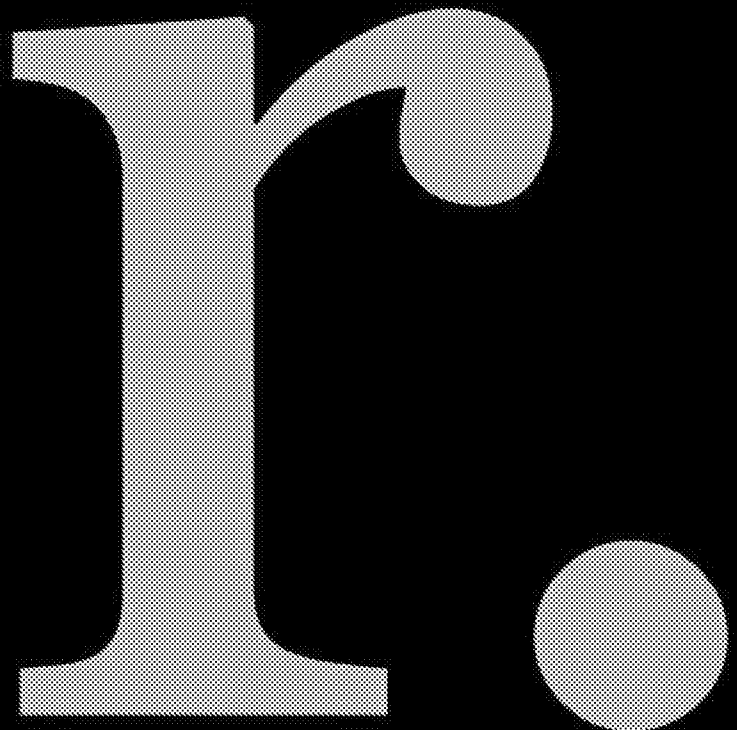
ARUN DISTRICT COUNCIL BN/98/21/DOC

## **Appendix B. Infiltration Testing Factual Letter Report**

reside.

Land west of Fontwell Avenue, Eastergate

Factual Letter Report 18158/FLR Rev 1.02 February 2020



## Reside Developments

F.A.O Andrew Munton  
Via email only: amunton@residedevelopments.co.uk

February 2020  
Our Ref.: 18158/FLR Rev 1.02

Dear Andrew

**Re: Land west of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX**

We are writing regarding the intrusive investigation undertaken at the above-named site.

### Brief

Soils Limited quotation (Q22341/rev102, dated 17<sup>th</sup> January 2020) set the scope of the investigation. The investigation was to comprise the machine excavation of trial pits with subsequent infiltration testing in accordance with the principles of BRE DG 365:2016 and to produce a Factual Letter Report. 4No. rounds of soil gas and groundwater monitoring were also requested, undertaken using monitoring standpipes previously installed onsite in December 2017 (Soils Limited report ref.: 16695/LR, dated June 2018).

This letter report has been updated to include the final results of the soil gas and groundwater monitoring, which concluded March 2020.

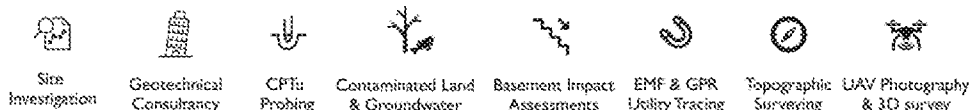
### General

The site was located west of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX and has an OS Land Ranger Grid Reference of SU 947 062.

A site location plan has been included as Figure 1.

### Anticipated Geology

1:50 000 BGS geology maps showed the site to be located on Lambeth Group over undifferentiated Lewes Nodular, Seaford and Newhaven Chalk Formation, with superficial deposits of Head overlying.



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**Head**

Head deposit are drifts produced by solifluxion, the downslope movement of debris outwash during the periglacial period, and characteristically comprise poorly sorted sands gravels and chalk of local derivation

**Lambeth Group**

Woolwich and Reading Beds, occurs in the London and Hampshire Basins, where it directly overlies the Chalk or Thanet Sand Formation, and is succeeded by the Harwich and London Clay Formations. Although generally less than 50 metres thick, it's lithological variability and position beneath much of London has concerned tunnelling engineers since the early 19th century.

The relationship between the different depositional environments is seen in central and south-east London, where deposits of fine-grained sand, flint gravel beds, mottled clay, shell beds and altered beds form a complex interdigitating sequence, which is divided into three formations, the Woolwich and the Reading Formation, depending on the local succession, both overlying the Upnor Formation.

Vertically and laterally variable sequences mainly of clay, some silty or sandy, with some sands and gravels, minor limestones and lignites and occasional sandstone and conglomerate.

The top of the Lambeth Group is marked by the eroded or interburrowed surface at the base of the overlying Thames Group. The uppermost part of the Lambeth Group can be the Reading Formation or the Woolwich Formation, depending on the local succession, or the Upnor Formation, depending on the depth of pre-Thames Group erosion. The Lambeth Group is overlain by sands, silts, clays or gravel beds of the Harwich Formation, depending on the local sequences, or gravelly sandy clays at the base of the London Clay Formation.

In the Hampshire Basin and the west of the London Basin, the Lambeth Group overlies the Chalk Group.

**Lewes Nodular, Seaford and Newhaven Chalk Formation (undifferentiated)**

Lewes Nodular Chalk Formation is composed of hard to very hard nodular chalks and hardgrounds (which resist scratching by finger-nail) with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks. The softer chalks become more abundant towards the top. Nodular chalks are typically lumpy and iron-stained (usually marking sponges). Brash is rough and flaggy or rubbly, and tends to be dirty. First regular seams of nodular flint, some large, commence near the base and continue throughout

Seaford Chalk Formation can be described as firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.

The Newhaven Chalk Formation is a soft white friable microporous limestone composed of coccolith biomicrites with a varying proportion of larger shell fragments.

At various levels clay sized material occurs as marl seams and partings. Close to the surface the upper few metres are invariably discoloured brown, due to leaching from the overlying strata. The interface with any overlying stratum is invariably extremely irregular as a result of localised weathering and general solution. Weathering by frost action may extend to a depth of several metres.

Chalk is a weak rock and as such it should be noted that the drilling, excavating and sampling process is detrimental to its fabric and structure. Chalk samples that have been machine sampled will therefore appear to be of a lower descriptive grade, as given in CIRIA C574, than the in-situ chalk. Soil sampling and visual observations from open excavations i.e. trial pits would allow chalk description and classification in accordance with CIRIA 574 including commenting for any aperture and discontinuities in the chalk structure.

Occasional erosional features, such as pipes, swallow holes and solution cavities, usually in-filled with drift deposits, are found in the chalk. The features sometimes manifest themselves at the surface as shallow circular depressions. Solution features may be reactivated by the concentrated ingress of water from leaking drains or soakaways. Reactivation may lead to surface collapse.

### **Site Works**

Site Works were undertaken on 3<sup>rd</sup> February 2020 and comprised the machine excavation of three trial pits (SA1 – SA3), using 5 tonne tracked 360 excavator, to depths ranging between 2.10m and 3.00m below ground level (bgl) at locations selected by the client.

Following construction of the trial holes, infiltration testing accordance with the principles of BRE DG 365:2016 were performed in each trial pit, with the exception of SA1, whereby pit wall instability rendered it unsafe to complete the testing.

On completion, all trial holes were backfilled with arisings with excess mounded over to allow for future settlement.

A trial hole location plan is included as Figure 2.

### **Ground Conditions**

The ground conditions encountered during the site investigation have been summarised in Table 1. Please note that the chalk was not encountered within the test holes. Full field logs are presented in Appendix A.

**Table 1 – Summary of Ground Conditions**

| Strata  | Depth Encountered<br>(m bgl) |                                       | Typical Description                                                                                                                                                                        |
|---------|------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Top                          | Base                                  |                                                                                                                                                                                            |
| Topsoil | 0.00                         | 0.30                                  | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel was fine to medium subangular clasts of flint.                                                        |
| Head    | 0.30                         | 2.10 <sup>1</sup> – 3.00 <sup>1</sup> | Orange and brown slightly sandy gravelly CLAY over light grey and orange brown gravelly highly calcareous CLAY. Gravel was fine to medium angular to subangular clasts of flint and chalk. |

**Notes:** <sup>1</sup> Encountered to base of trial hole. 0.00 denotes ground level.

### Infiltration Testing

Infiltration testing comprised piping water via water tanker and bowser into an open trial hole, the drop in water level is measured over time was then recorded to give an indication of soakage potential.

BRE DG365, 2016 states that for an accurate infiltration rate to be obtained a soakage pit needs to be filled three times in quick succession. Each test was completed once 75% of the water present has drained away, in order to determine whether the underlying ground conditions may be suitable for surface water drainage.

Pit walls of all three trial pits were highly unstable and was observed to influence the head within each pit during the test.

The results from the infiltration testing are summarized in Table 2. Full results are presented in Appendix B.

**Table 2 – Summary of Infiltration Test Results**

| Trial Hole<br>(Test No.) | Test<br>Stratum | Trial Pit<br>Depth<br>(m bgl) | Water Level<br>Start of Test<br>(m bgl) | Infiltration<br>Rate<br>(m/sec) | Comments                                                                                                                        |
|--------------------------|-----------------|-------------------------------|-----------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| SA2(1)                   | HEAD            | 2.40                          | 1.90                                    | $3.29 \times 10^{-5}$           | Pit walls collapsing during test.                                                                                               |
| SA1(2)                   | HEAD            | 2.40                          | 1.60                                    | n/a                             | Pit walls collapsing during test. Test did not complete within observation period. 300mm fall in head observed over 78 minutes. |
| SA3(1)                   | HEAD            | 2.50                          | 2.10                                    | $2.65 \times 10^{-4}$           | Pit walls collapsing during test.                                                                                               |
| SA3(2)                   | HEAD            | 2.44                          | 1.60                                    | $1.07 \times 10^{-4}$           | Pit walls collapsing during test.                                                                                               |
| SA3(3)                   | HEAD            | 2.40                          | 1.52                                    | $8.57 \times 10^{-5}$           | Pit walls collapsing during test.                                                                                               |

It should be noted that the Environment Agency must be consulted on any works which may impact groundwater sources.

### Soil Gas and Groundwater Monitoring

Four rounds of soil gas and groundwater monitoring were requested, using monitoring standpipes (WS1 – WS3) installed onsite in December 2017. In addition to this, water levels were taken from each standpipe at the time of this intrusive investigation.

The locations of the standpipes are included within trial hole location plan in Figure 2.

The monitoring results have been presented in Table 3.

**Table 2 – Soil Gas and Groundwater Monitoring Results to Date**

| Date                  | Trial Hole | CH <sub>4</sub> (%)                                                              | CO <sub>2</sub> (%) | O <sub>2</sub> (%) | H <sub>2</sub> S (ppm) | CO (ppm) | LEL (%) | aP (mb) | Flow (l/h) | Dp (Pa) | H <sub>2</sub> O (m bgl) | Base of well (m bgl) |
|-----------------------|------------|----------------------------------------------------------------------------------|---------------------|--------------------|------------------------|----------|---------|---------|------------|---------|--------------------------|----------------------|
| 27/01/20 <sup>1</sup> | ATM        | 0.0                                                                              | 0.0                 | 19.7               | 0.0                    | 0.0      | 0.0     | 996     | 0.0        | 0.0     | -                        | -                    |
|                       | WS1        | 0.0                                                                              | 4.1                 | 11.9               | 0.0                    | 0.0      | 0.0     | 996     | 0.0        | 0.0     | 2.92                     | 5.00                 |
|                       | WS2        | 0.0                                                                              | 3.6                 | 17.7               | 0.0                    | 0.0      | 0.0     | 998     | 0.0        | 0.0     | 3.96                     | 5.00                 |
|                       | WS3        | 0.0                                                                              | 2.3                 | 17.0               | 0.0                    | 0.0      | 0.0     | 997     | 0.0        | 0.0     | 3.46                     | 5.00                 |
| 03/02/20              | ATM        | Only groundwater level measurements recorded at time of intrusive investigation. |                     |                    |                        |          |         |         |            |         | -                        | -                    |
|                       | WS1        |                                                                                  |                     |                    |                        |          |         |         |            |         | 2.80                     | 5.00                 |
|                       | WS2        |                                                                                  |                     |                    |                        |          |         |         |            |         | 3.87                     | 5.00                 |
|                       | WS3        |                                                                                  |                     |                    |                        |          |         |         |            |         | 3.40                     | 5.00                 |
| 12/02/20              | ATM        | 0.0                                                                              | 0.0                 | 20.2               | 0.0                    | 0.0      | 0.0     | 1013    | 0.0        | 0.0     | -                        | -                    |
|                       | WS1        | 0.0                                                                              | 3.8                 | 12.9               | 0.0                    | 0.0      | 0.0     | 1013    | 0.0        | 0.0     | 2.90                     | 5.00                 |
|                       | WS2        | 0.0                                                                              | 3.3                 | 15.0               | 0.0                    | 0.0      | 0.0     | 1013    | 0.0        | 0.0     | 3.92                     | 5.00                 |
|                       | WS3        | 0.0                                                                              | 2.4                 | 17.2               | 0.0                    | 0.0      | 0.0     | 1013    | 0.0        | 0.0     | 3.43                     | 5.00                 |
| 27/02/20              | ATM        | 0.0                                                                              | 0.0                 | 20.7               | 0.0                    | 0.0      | 0.0     | 1005    | 0.0        | 0.0     | -                        | -                    |
|                       | WS1        | 0.0                                                                              | 2.0                 | 15.6               | 0.0                    | 0.0      | 0.0     | 1005    | 0.0        | 0.0     | 2.40                     | 5.00                 |
|                       | WS2        | 0.0                                                                              | 2.1                 | 16.3               | 0.0                    | 0.0      | 0.0     | 1005    | 0.0        | 0.0     | 3.33                     | 5.00                 |
|                       | WS3        | 0.0                                                                              | 1.8                 | 16.8               | 0.0                    | 0.0      | 0.0     | 1005    | 0.0        | 0.0     | 2.78                     | 5.00                 |
| 19/03/20              | ATM        | 0.0                                                                              | 0.0                 | 19.8               | 0.0                    | 0.0      | 0.0     | 1023    | 0.0        | 0.0     | -                        | -                    |
|                       | WS1        | 0.0                                                                              | 3.5                 | 12.4               | 0.0                    | 0.0      | 0.0     | 1023    | 0.0        | 0.0     | 2.43                     | 5.00                 |
|                       | WS2        | 0.0                                                                              | 3.3                 | 13.7               | 0.0                    | 0.0      | 0.0     | 1022    | 0.0        | 0.0     | 3.25                     | 5.00                 |
|                       | WS3        | 0.0                                                                              | 0.1                 | 19.7               | 0.0                    | 0.0      | 0.0     | 1022    | 0.0        | 0.0     | 2.67                     | 5.00                 |

**Note:** reading of 0.0 = not detected (below detection level). VOC=Volatile Organic Compounds. Dp=Pressure Difference. <sup>1</sup> Strong wind conditions recorded.

The following attachments make up the remainder of this letter report.

*Figure 1. Site Location Plan*

*Figure 2. Trial Hole Location Plan*

*Appendix A. Field Logs*

*Appendix B. Field Data.*

Should you have any further questions, please do not hesitate to contact the undersigned.

Yours sincerely



T. Rudkin BSc. (Hons.), MSc., FGS.

**Geo-Environmental Engineer**



**For and on behalf of Soils Limited.**  
Enc.





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Figure number

2

Title

Trial Hole Location Plan

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Project

Land west of Fontwell Avenue

Date

February 2020

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Client

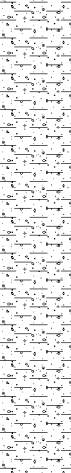
Reside Developments

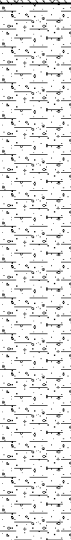
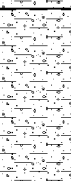
Reference

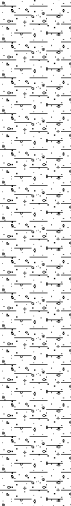
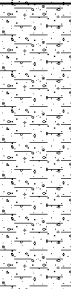
I8158/FLR

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## Appendix A. Field Logs

|                                                                                  |                           |                                                                                                                          |         |                    |                      |                                                                                    |                                                                                                                                    |                                                                     |
|----------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------|---------|--------------------|----------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  |                           | <b>Soils Limited</b><br>Newton House, Cross Road, Tadworth KT20 5SR<br>Tel: 01737 814221 Email: admin@soilslimited.co.uk |         |                    | <b>Trial Pit Log</b> |                                                                                    | Trial Pit No.<br><b>SA1</b><br>Sheet 1 of 1                                                                                        |                                                                     |
|                                                                                  |                           | Project Name: Northfield Cottages                                                                                        |         | Project No.: 18158 |                      | Method:                                                                            |                                                                                                                                    | Hole Type<br>TP                                                     |
| Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX         |                           | Support:                                                                                                                 |         | Scale<br>1:25      |                      | Logged By<br>GB                                                                    |                                                                                                                                    |                                                                     |
| Client: Reside Developments Ltd                                                  |                           | Trial Pit Length: m                                                                                                      |         | Trial Pit Width: m |                      |                                                                                    |                                                                                                                                    |                                                                     |
| Dates: 03-02-2020                                                                |                           | Level:                                                                                                                   |         | Co-ords:           |                      |                                                                                    |                                                                                                                                    |                                                                     |
| Water<br>Strike                                                                  | Samples & In Situ Testing |                                                                                                                          |         | Depth<br>(m)       | Level<br>(mAOD)      | Legend                                                                             | Stratum Description                                                                                                                |                                                                     |
|                                                                                  | Depth                     | Type                                                                                                                     | Results |                    |                      |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 0.20                      | D                                                                                                                        |         | 0.30               |                      |   | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint. |                                                                     |
|                                                                                  | 0.50                      | D                                                                                                                        |         |                    |                      |   | Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.                     |                                                                     |
|                                                                                  | 1.00                      | D                                                                                                                        |         |                    |                      |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 1.50                      | D                                                                                                                        |         |                    |                      |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 2.00                      | D                                                                                                                        |         | 1.90               |                      |  | Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.    |                                                                     |
|                                                                                  |                           |                                                                                                                          | 2.10    |                    |                      | End of Pit at 2.100m                                                               |                                                                                                                                    |                                                                     |
| General Remarks:<br>Pit collapsed, infiltration testing not possible             |                           |                                                                                                                          |         |                    |                      |                                                                                    |                                                                                                                                    | <b>Sample Type</b><br>D: Disturbed<br>B: Bulk<br>J: Jar<br>W: Water |
| Groundwater Remarks:                                                             |                           |                                                                                                                          |         |                    |                      |                                                                                    |                                                                                                                                    |                                                                     |

|                                                                                  |                           |                                                                                                                          |         |                        |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
|----------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------|---------|------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|  |                           | <b>Soils Limited</b><br>Newton House, Cross Road, Tadworth KT20 5SR<br>Tel: 01737 814221 Email: admin@soilslimited.co.uk |         |                        | <b>Trial Pit Log</b>                                                                |                                                                                                                                 | Trial Pit No.<br><b>SA2</b><br>Sheet 1 of 1                                                                                        |                 |
|                                                                                  |                           | Project Name: Northfield Cottages                                                                                        |         | Project No.: 18158     |                                                                                     | Method:                                                                                                                         |                                                                                                                                    | Hole Type<br>TP |
| Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX         |                           | Support:                                                                                                                 |         | Scale<br>1:25          |                                                                                     | Logged By<br>GB                                                                                                                 |                                                                                                                                    |                 |
| Client: Reside Developments Ltd                                                  |                           | Trial Pit Length: 1.80m                                                                                                  |         | Trial Pit Width: 0.60m |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
| Dates: 03-02-2020                                                                |                           | Level:                                                                                                                   |         | Co-ords:               |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
| Water<br>Strike                                                                  | Samples & In Situ Testing |                                                                                                                          |         | Depth<br>(m)           | Level<br>(mAOD)                                                                     | Legend                                                                                                                          | Stratum Description                                                                                                                |                 |
|                                                                                  | Depth                     | Type                                                                                                                     | Results |                        |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
|                                                                                  | 0.20                      | D                                                                                                                        |         | 0.30                   |                                                                                     |                                                | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint. |                 |
|                                                                                  | 0.50                      | D                                                                                                                        |         |                        |                                                                                     |                                                                                                                                 | Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.                     |                 |
|                                                                                  | 1.00                      | D                                                                                                                        |         | 2.10                   |   |                                                                                                                                 |                                                                                                                                    |                 |
|                                                                                  | 1.50                      | D                                                                                                                        |         |                        |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
|                                                                                  | 2.00                      | D                                                                                                                        |         | 2.70                   |  | Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk. |                                                                                                                                    |                 |
|                                                                                  | 2.50                      | D                                                                                                                        |         |                        |                                                                                     | End of Pit at 2.700m                                                                                                            |                                                                                                                                    |                 |
|                                                                                  |                           |                                                                                                                          |         |                        |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |
| General Remarks:<br>Pit walls unstable                                           |                           |                                                                                                                          |         |                        |                                                                                     |                                                                                                                                 | <b>Sample Type</b><br>D: Disturbed<br>B: Bulk<br>J: Jar<br>W: Water                                                                |                 |
| Groundwater Remarks:                                                             |                           |                                                                                                                          |         |                        |                                                                                     |                                                                                                                                 |                                                                                                                                    |                 |

|  |                           | <b>Soils Limited</b><br>Newton House, Cross Road, Tadworth KT20 5SR<br>Tel: 01737 814221 Email: admin@soilslimited.co.uk |         |                         | <b>Trial Pit Log</b>                                                                |                                                                                    | Trial Pit No.<br><b>SA3</b><br>Sheet 1 of 1                                                                                        |                                                                     |
|----------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------|---------|-------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Project Name: Northfield Cottages                                                |                           |                                                                                                                          |         | Project No.: 18158      |                                                                                     | Method:                                                                            |                                                                                                                                    | Hole Type<br>TP                                                     |
| Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX         |                           |                                                                                                                          |         |                         |                                                                                     | Plant: 5t                                                                          |                                                                                                                                    |                                                                     |
| Client: Reside Developments Ltd                                                  |                           |                                                                                                                          |         | Trial Pit Length: 2.50m |                                                                                     | Trial Pit Width: 0.60m                                                             |                                                                                                                                    | Scale<br>1:25                                                       |
| Dates: 03-02-2020                                                                |                           |                                                                                                                          | Level:  |                         | Co-ords:                                                                            |                                                                                    |                                                                                                                                    | Logged By<br>GB                                                     |
| Water<br>Strike                                                                  | Samples & In Situ Testing |                                                                                                                          |         | Depth<br>(m)            | Level<br>(mAOD)                                                                     | Legend                                                                             | Stratum Description                                                                                                                |                                                                     |
|                                                                                  | Depth                     | Type                                                                                                                     | Results |                         |                                                                                     |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 0.20                      | D                                                                                                                        |         | 0.30                    |                                                                                     |   | Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint. |                                                                     |
|                                                                                  | 0.50                      | D                                                                                                                        |         |                         |                                                                                     |  | Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.                     |                                                                     |
|                                                                                  | 1.00                      | D                                                                                                                        |         |                         |                                                                                     |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 1.50                      | D                                                                                                                        |         |                         |                                                                                     |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 2.00                      | D                                                                                                                        |         | 2.00                    |  |                                                                                    | Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.    |                                                                     |
|                                                                                  | 2.50                      | D                                                                                                                        |         |                         |                                                                                     |                                                                                    |                                                                                                                                    |                                                                     |
|                                                                                  | 3.00                      | D                                                                                                                        |         | 3.00                    |                                                                                     | End of Pit at 3.000m                                                               |                                                                                                                                    |                                                                     |
|                                                                                  |                           |                                                                                                                          |         |                         |                                                                                     |                                                                                    |                                                                                                                                    | 1<br>2<br>3<br>4<br>5                                               |
| General Remarks:<br>Pit walls unstable                                           |                           |                                                                                                                          |         |                         |                                                                                     |                                                                                    |                                                                                                                                    | <b>Sample Type</b><br>D: Disturbed<br>B: Bulk<br>J: Jar<br>W: Water |
| Groundwater Remarks:                                                             |                           |                                                                                                                          |         |                         |                                                                                     |                                                                                    |                                                                                                                                    |                                                                     |

## Appendix B. Field Data

## Soakaway Calculations

|                   |                     |
|-------------------|---------------------|
| Soakaway Test No. | SA2 Test 1          |
| Contract:         | Northfield Cottages |
| Contract No.      | 18158               |

## Field Test

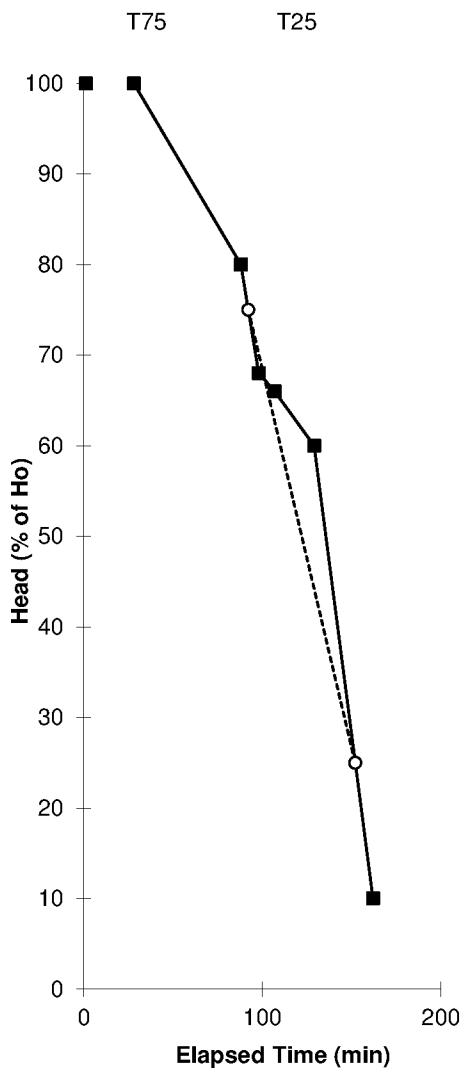
**Trial Pit Log (include details of groundwater):**  
See trial Pit record

|                     |                       |
|---------------------|-----------------------|
| Depth of Pit        | 2.40 m                |
| Width of Pit        | 0.60 m                |
| Length of Pit       | 1.80 m                |
| Depth of Pit Soaked | 0.50 m                |
| ap50                | 2.28 m <sup>2</sup>   |
| Vp75-25             | 0.27 m <sup>3</sup>   |
| e75-25              | 59.9 min              |
| water used          | 0.5400 m <sup>3</sup> |
| f                   | 3.293E-05 m/sec.      |

## Field Data

[illegible]

|        |         |                       |
|--------|---------|-----------------------|
| T75    | 92.167  | 75                    |
| T25    | 152.100 | 25                    |
| T75-25 | 59.933  | Derived from Best Fit |



## Comments

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Pit walls collapsing resulting in raise in head

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## Soakaway Calculations

|                   |                     |
|-------------------|---------------------|
| Soakaway Test No. | SA2 Test 2          |
| Contract:         | Northfield Cottages |
| Contract No.      | 18158               |

## Field Test

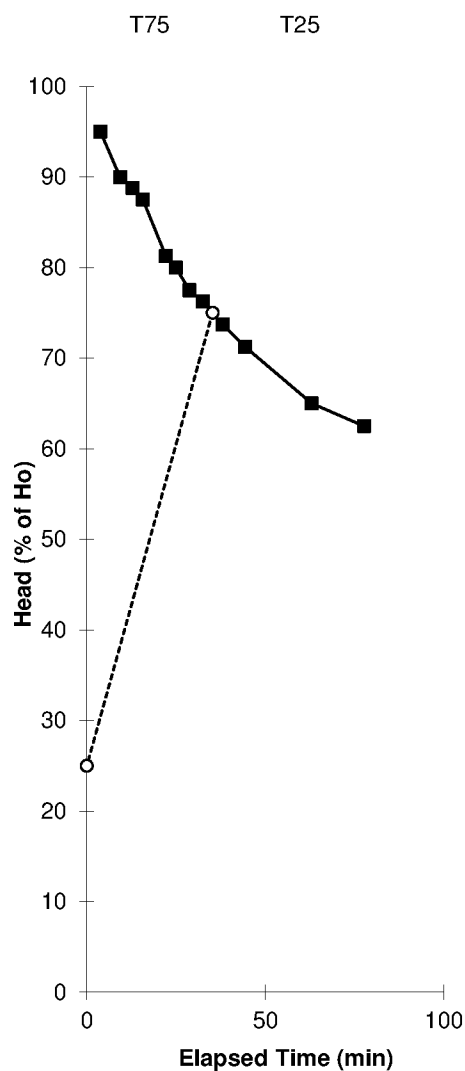
**Trial Pit Log (include details of groundwater):**  
See trial Pit record

|                     |           |
|---------------------|-----------|
| Depth of Pit        | 2.40 m    |
| Width of Pit        | 0.60 m    |
| Length of Pit       | 1.80 m    |
| Depth of Pit Soaked | 0.80 m    |
| ap50                | 3 m2      |
| Vp75-25             | 0.432 m3  |
| t75-25              | -35.2 min |
| water used          | 0.8640 m3 |
| i                   | n/a       |
|                     | m/sec.    |

## Field Data

[illegible]

|        |         |                       |
|--------|---------|-----------------------|
|        |         |                       |
|        |         |                       |
|        |         |                       |
|        |         |                       |
|        |         |                       |
|        |         |                       |
| T75    | 35.215  | 75                    |
| T25    | 0.000   | 25                    |
| T75-25 | -35.215 | Derived from Best Fit |



## Comments

Pit walls collapsing. Test not complete within observation period.

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## Soakaway Calculations

|                   |                     |
|-------------------|---------------------|
| Soakaway Test No. | SA3 Test 1          |
| Contract:         | Northfield Cottages |
| Contract No.      | 18158               |

## Field Test

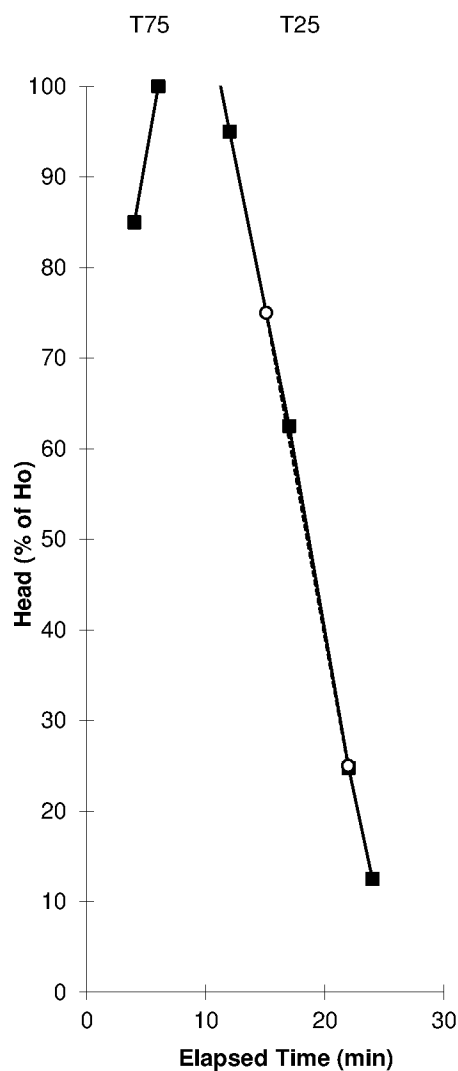
**Trial Pit Log (include details of groundwater):**  
See trial Pit record

|                     |                       |
|---------------------|-----------------------|
| Depth of Pit        | 2.50 m                |
| Width of Pit        | 0.60 m                |
| Length of Pit       | 2.50 m                |
| Depth of Pit Soaked | 0.40 m                |
| $q_{p50}$           | 2.74 m <sup>2</sup>   |
| $q_{p75-25}$        | 0.3 m <sup>3</sup>    |
| $t_{75-25}$         | 6.9 min               |
| water used          | 0.6000 m <sup>3</sup> |
| $i$                 | 2.649E-04 m/sec.      |

## Field Data

[illegible]

|        |        |                       |
|--------|--------|-----------------------|
| T75    | 15.077 | 75                    |
| T25    | 21.967 | 25                    |
| T75-25 | 6.890  | Derived from Best Fit |



## Comments

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Pit walls collapsing resulting in raise in head

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## Soakaway Calculations

|                   |                     |
|-------------------|---------------------|
| Soakaway Test No. | SA3 Test 2          |
| Contract:         | Northfield Cottages |
| Contract No.      | 18158               |

## Field Test

**Trial Pit Log (include details of groundwater):**

See trial Pit record

|                     |        |
|---------------------|--------|
| Depth of Pit        | 2.44 m |
| Width of Pit        | 0.60 m |
| Length of Pit       | 2.50 m |
| Depth of Pit Soaked | 0.84 m |

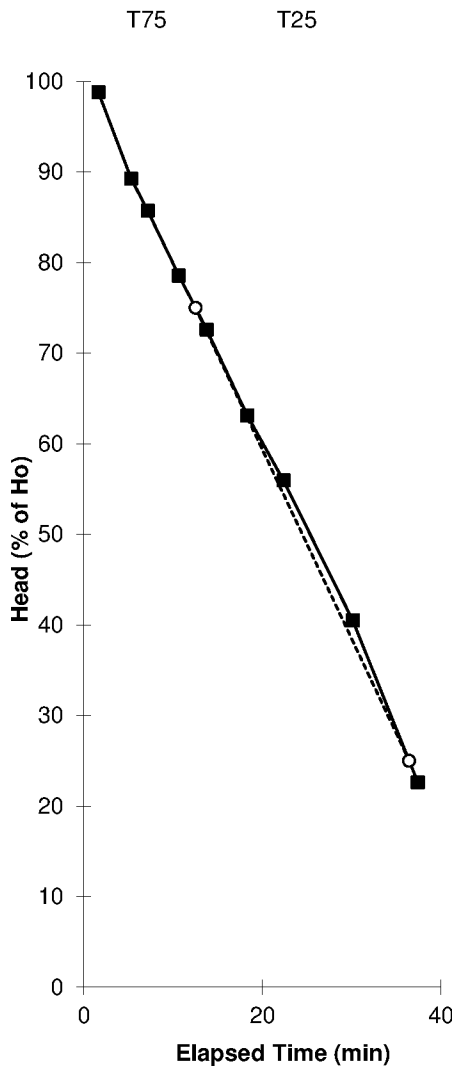
|                     |                  |
|---------------------|------------------|
| ap50                | 4.104 m2         |
| q <sub>p75-25</sub> | 0.63 m3          |
| t <sub>75-25</sub>  | 23.9 min         |
| water used          | 1.2600 m3        |
| $\dot{\epsilon}$    | 1.068E-04 m/sec. |

## Field Data

[illegible]

|        |        |                       |
|--------|--------|-----------------------|
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
| T75    | 12.510 | 75                    |
| T25    | 36.455 | 25                    |
| T75-25 | 23.945 | Derived from Best Fit |

## Comments



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## Soakaway Calculations

|                   |                     |
|-------------------|---------------------|
| Soakaway Test No. | SA3 Test 3          |
| Contract:         | Northfield Cottages |
| Contract No.      | 18158               |

## Field Test

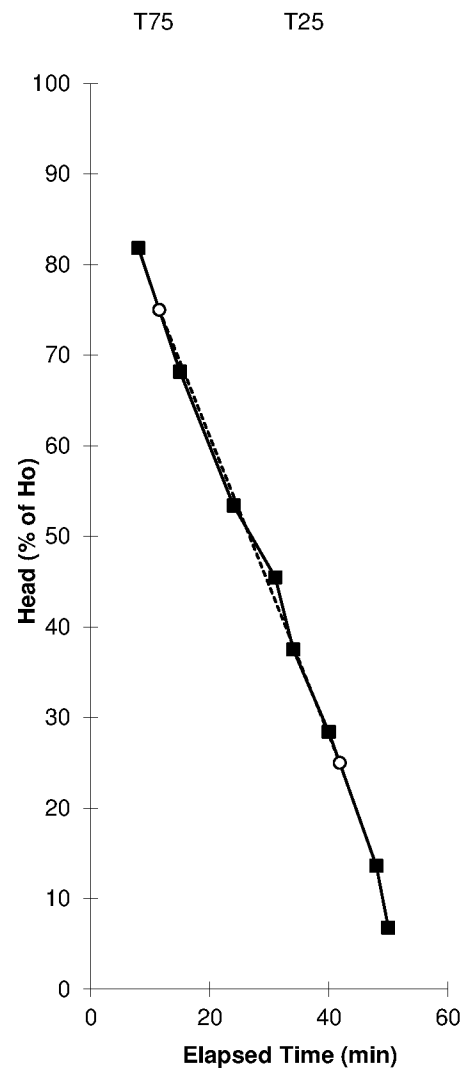
**Trial Pit Log** (include details of groundwater):  
See trial Pit record

|                     |                  |
|---------------------|------------------|
| Depth of Pit        | 2.40 m           |
| Width of Pit        | 0.60 m           |
| Length of Pit       | 2.50 m           |
| Depth of Pit Soaked | 0.88 m           |
| ap50                | 4.228 m2         |
| $\sqrt{p75-25}$     | 0.66 m3          |
| $t75-25$            | 30.3 min         |
| water used          | 1.3200 m3        |
| $\dot{t}$           | 8.573E-05 m/sec. |

## Field Data

[illegible]

|        |        |                       |
|--------|--------|-----------------------|
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
|        |        |                       |
| T75    | 11.500 | 75                    |
| T25    | 41.846 | 25                    |
| T75-25 | 30.346 | Derived from Best Fit |



## Comments

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