YEX4948
7 Greenland Road, BN13 2RR
February 23

**7 Greenland Road, Worthing, BN13 2RR – Infiltration Testing Report**
Date Issued: 24th February 2023

Dear David Green,

Please find below the results of your Infiltration testing. The information contained below is a summary of the site works carried out on 19th January 2023.

## Geology

The relevant British Geological Survey (BGS) online mapping information indicates that the site is directly underlain by River Terrace superficial deposits (sand, silt and clay). These are in turn underlain by solid Palaeogene strata of the Lambeth Group (clay, silt and sand).

## Fieldworks

The programme of this investigation included the excavation of one (1no.) trial pit. The location of the soakaway test was selected by the client. During this work, the soils encountered were logged in general accordance with BS5930: 1990, as amended in 2007.

## Percolation Testing

During the excavation of the trial pit (TP01), a groundwater strike was encountered at 1.40mbgl, rising to 1.15mbgl after 60 minutes. The results obtained from the trial pit and groundwater level monitoring are summarised below:

| WS | Dimensions (m) | Depth (m) | Soil Description | Groundwater level | Drainage Characteristics |
|---|---|---|---|---|---|
| TP01 | 1.5 x 0.5 | 1.5 | Topsoil. [0-0.25m]<br><br>Light brown silty CLAY. [0.25-1.10m]<br><br>Light brown gravelly CLAY. [1.10-1.50m] | 1.40mbgl | N/A |

## Conclusion

A groundwater strike was encountered in the trial pit (TP01) at 1.40mbgl, rising to 1.15mbgl after 60 minutes. The natural strata comprised low permeability clays to at least 1.5mbgl. As a result of the confirmed high groundwater table, it is considered that the use of soakaways is not suitable for this site.

## References


- Building Research Establishment (BRE) Digest 365, *Soakaway Design*, September 1991.
- British Standards Institution (1999) BS5930: *Code of practice for site investigations*, B.S.I., London.
- British Standards Institution (2007), Amendment No 1, BS5930: *Code of practice for site investigations*, B.S.I., London.


Please do contact me on 01243 787150 should you have any questions.

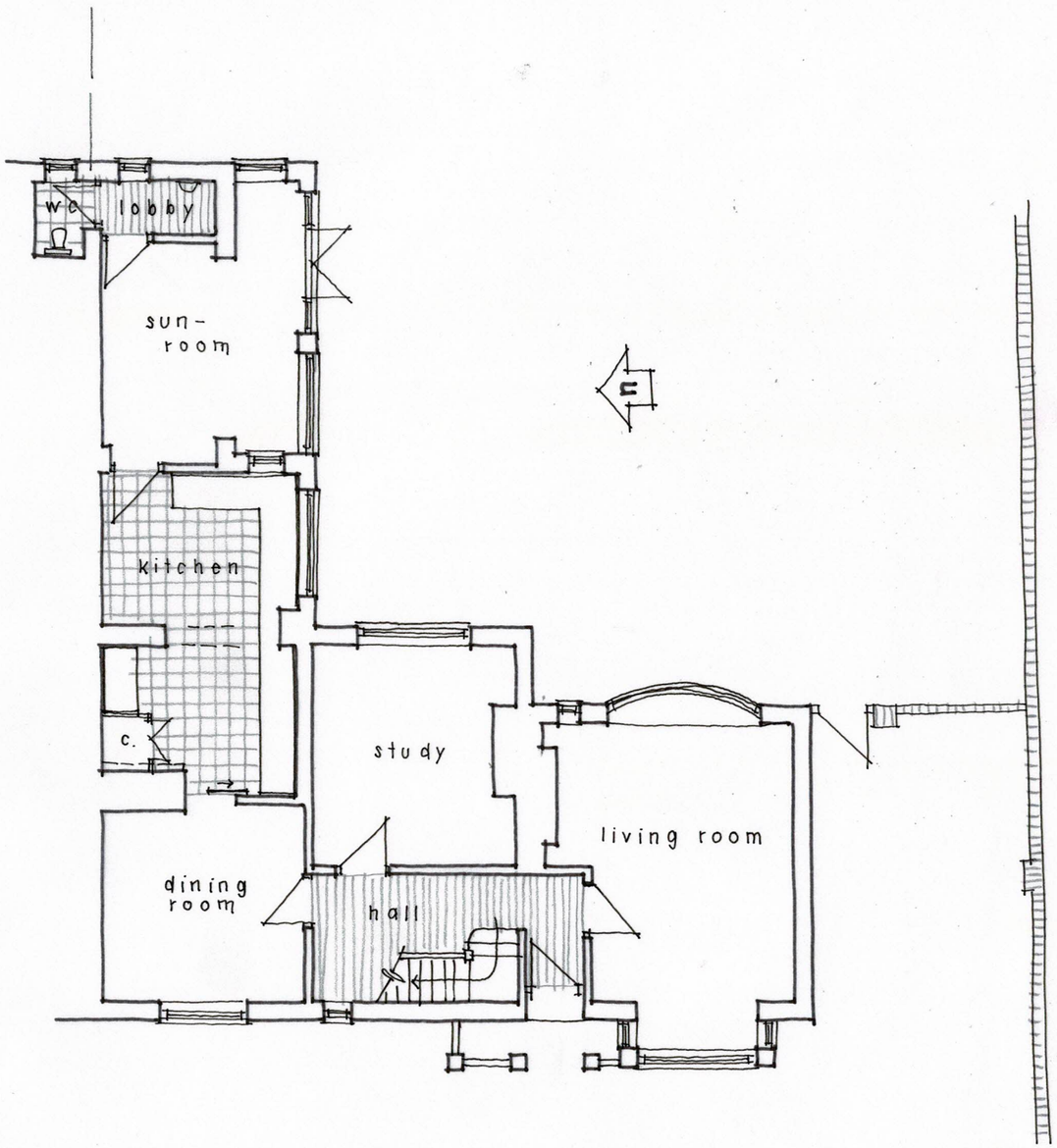
Regards



Liam Barton
Geo-Environmental Engineer

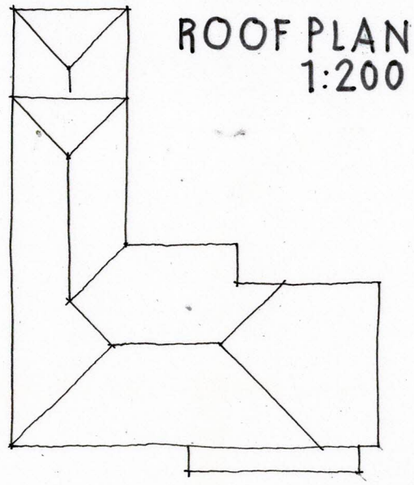
YEX4948
7 Greenland Road, BN13 2RR
February 23

# Appendix A – Current and Proposed Development Plans

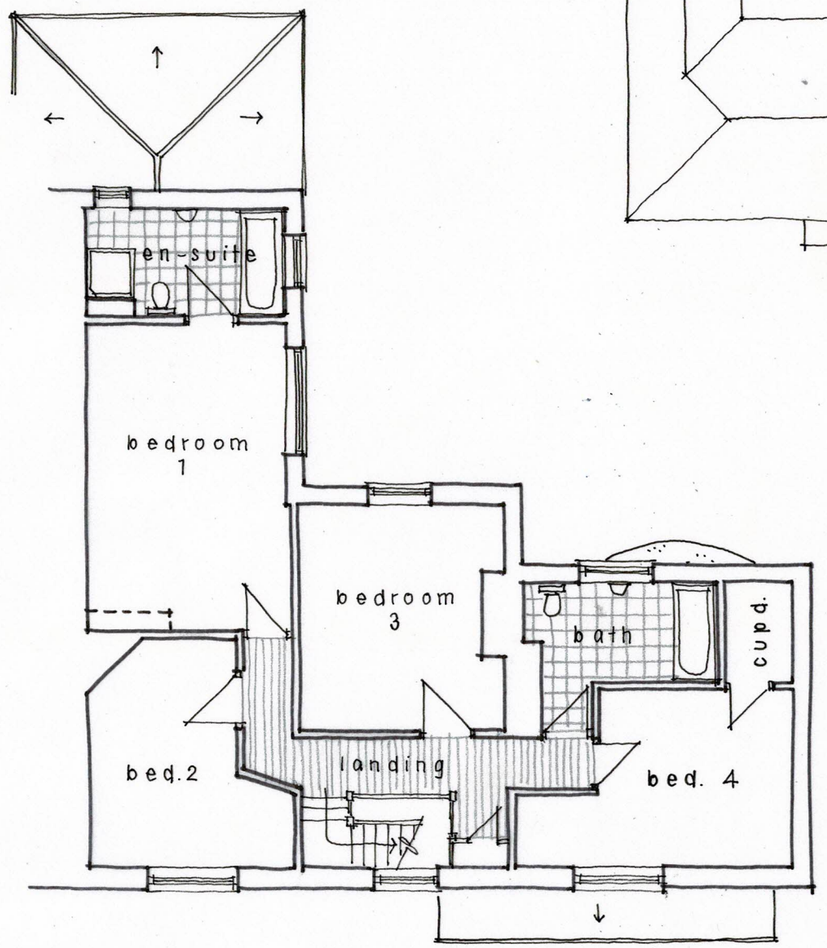



GROUND FLOOR PLAN 1:100 @ A3 / 1:50 @ A1

0 1 2 3 4 5m
metres



ROOF PLAN
1:200




1st FLOOR PLAN

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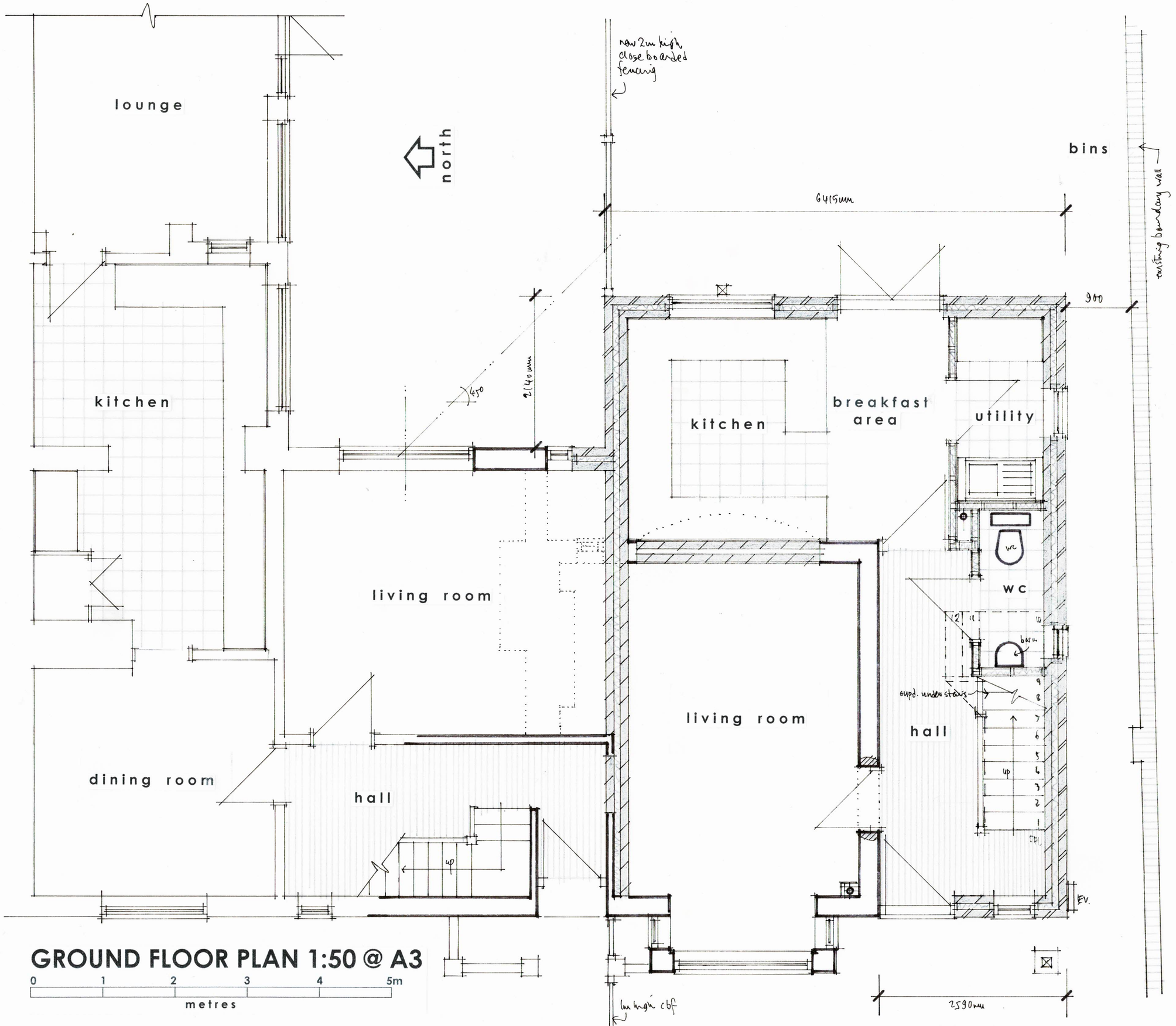
7 GREENLAND ROAD, DURRINGTON, WORTHING
Existing details 01
April 2022




# GROUND FLOOR PLAN 1:50 @ A3

0 1 2 3 4 5m

metres

Revisions A - staircase amended, WC window added 8/9/22

Figured dimensions to take precedence over scaled dimensions. The contractor is to verify all dimensions on site before commencing any works.

Any discrepancies whatsoever to be brought to the attention of the client immediately.

The copyright of this drawing is reserved and the drawing must not be disclosed without authority.

Project

**7 GREENLAND ROAD, DURRINGTON, WORTHING**

**Proposed two storey side extension to create additional new dwelling**

Client

**Mr J Green**

Drawing no. **WT/GR/03** A

Scale **AS SHOWN** Date **May 2022**

Drawn By **WG**


**WAYNE GANDER MCIAT**

**Chartered Architectural Technologist**

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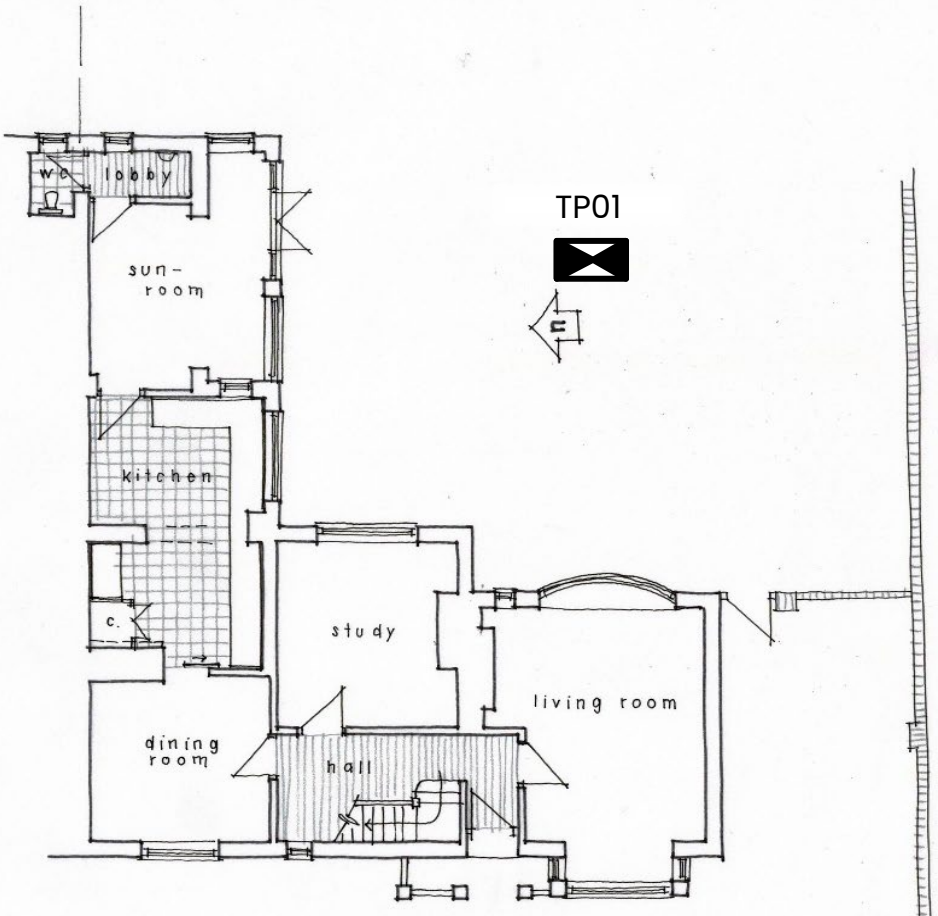
# Appendix B – Trial Pit Investigation Plan




GROUND FLOOR PLAN 1:100 @ A3 / 1:50 @ A1

0 1 2 3 4 5m
metres

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# Site Investigation Plan

YOUR ENVIRONMENT

7 Greenland Road, Worthing, BN13 2RR
YEX4948
19/01/2023

# Appendix C – Trial Pit Log

# Trial Pit Log

| | | | |
|---|---|---|---|
| | | | TrialPit No TP01 Sheet 1 of 1 |
| Project Name: 7 Greenland Road | Project No. YEX4948 | Co-ords: - Level: | Date 20/01/2023 |
| Location: Worthing, West Sussex, BN13 2RR | | Dimensions (m): Depth 1.50 (1.50 × 0.50) | Scale 1:25 |
| Client: David Green | | | Logged CC |

| Water Strike | Samples & In Situ Testing: Depth | Type | Results | Depth (m) | Level (m) | Legend | Stratum Description |
|---|---|---|---|---|---|---|---|
| | | | | 0.25 | | | TOPSOIL |
| | | | | 1.10 | | | Light brown silty CLAY |
| ▼ | | | | 1.50 | | | Light brown gravelly CLAY |
| | | | | | | | End of Pit at 1.50m |

Remarks: Groundwater strike at 1.40mbgl

Stability: Stable

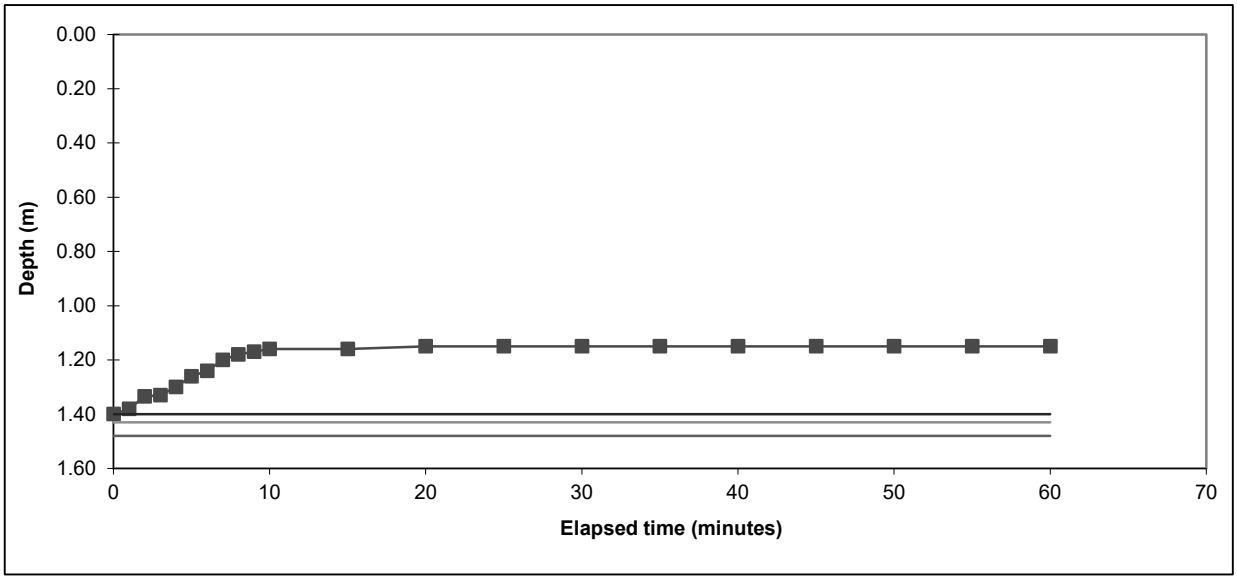
# Appendix D – Infiltration Testing Results

# Your Environment

## Soakaway Test

| | | | | | |
|---|---|---|---|---|---|
| Trial Pit No: | TP01 | Test No: | 1 | Date: | 19/01/2023 |
| Length (m): | 1.500 | | Datum Height: | 0.00 | m agl |
| Width (m): | 0.50 | | Granular infill: None | | |
| Depth (m): | 1.50 | | Porosity of infill: | 1 | (assumed) |

| Elapsed time (minutes) | Water Depth (m below datum) | Elapsed time (minutes) | Water Depth (m below datum) |
|---|---|---|---|
| 0 | 1.400 | 30 | 1.150 |
| 1 | 1.380 | 35 | 1.150 |
| 2 | 1.335 | 40 | 1.150 |
| 3 | 1.330 | 45 | 1.150 |
| 4 | 1.300 | 50 | 1.150 |
| 5 | 1.260 | 55 | 1.150 |
| 6 | 1.240 | 60 | 1.150 |
| 7 | 1.200 | | |
| 8 | 1.180 | | |
| 9 | 1.170 | | |
| 10 | 1.160 | | |
| 15 | 1.160 | | |
| 20 | 1.150 | | |
| 25 | 1.150 | | |




| | | | |
|---|---|---|---|
| Start water depth for analysis (mbgl) | 1.40 | | |
| 75% effective depth (mbgl): | 1.43 | Elapsed time (mins): | #N/A |
| 50% effective depth (mbgl): | 1.45 | | |
| 25% effective depth (mbgl): | 1.48 | Elapsed time (mins): | #N/A |
| Base of soakage zone (mbgl): | 1.50 | | |
| Volume outflow between 75% and 25% effective depth ($m^3$): | | | |
| Mean surface area of outflow ($m^2$): | | 0.95 | |
| (side area at 50% effective depth + base area) | | | |
| Time for outflow between 75% and 25% effective depth (mins): | | | |

| | |
|---|---|
| **Soil infiltration rate (m/s):** | **Test incomplete as 25% effective depth not achieved. Unable to reliably determine soil infiltration rate.** |

**Remarks** Results processed following BRE 365 (2007).

| | | |
|---|---|---|
| **Client:** | David Green | **TP01** |
| **Site:** | 7 Greenland Road, Worthing, BN13 2RR | |