



Land Adj 2 Reservoir Place Lewes Road Ashurst Wood

East Grinstead West Sussex RH19 3TB

Ref: SKZ\_2620/25\_October 2025

Your ref:

Our ref: SKZ\_2620/25 - Rev1

October 2025

For attention of Mr Scott Weller

By email only

Dear Scott,

## **SITE AT THE LAND ADJ 2 RESERVOIR PLACE ASHURST WOOD RH19 3TB**

### **INTRODUCTION**

AVZGeoEng Limited have been commissioned by Mr Scott Weller, to carry out borehole soakaway at the above site in accordance with the AVZ quotation ref: SKZ\_2620\_2/25 dated 17<sup>th</sup> July 2025.

As part of the new proposed development, it was proposed to drill and install soakaway borehole to discharge the surface run-off water into the bedrock formation.

The scope of work is advised by the client's engineer and AVZGeoEng is acting as contractor following the instructions from the client, however, cannot take responsibility about suitability of the soakaways to the scheme that it is proposed to serve. Environment Agency or local authorities consent for construction of a deep borehole soakaway to discharge the surface run-off into the ground if required, is beyond the scope included in the commission.

### **THE SITE**

The site, which may be located by approximate National Grid reference 541198E, 137005N is situated at the Land Adj. 2 Reservoir Place Lewes Road Ashurst Wood, East Grinstead, West Sussex RH19 3TB, as shown on **Figure 1**.

The published 1:50,000 scale geological map of the area indicates that the site is underlain by Grinstead Clay Member - Mudstone over Lower Tunbridge Wells Formation and Wadhurst Clay Formation - Mudstone from the bedrock geology.

### **SITE WORK**

The agreed scope of works comprised sinking 200mm rotary borehole using Comacchio MC 305 rotary drilling rig to a provisional of 25.0mbgl., with installation of 125mm UPVC pipe with appropriate filter zone and bentonite seal in accordance with BS 5930:2015.



On completion of the borehole, soakaway infiltration test was carried out in accordance with BS 5930: 2015 and various parts of BS EN ISO 22282.

The borehole (SKW) as shown on the location plan **Figure 2** was advised by the consultant to provide maximum possible distance from the proposed structure and highway. It is worth mentioning that all relevant standards refer to minimum distance for traditional pit or trench soakaway where discharge occurs close to the surface, borehole soakaways discharge the water deep below the ground, in this case below 7.5mbgl., therefore it is unlikely to have adverse effect to the proposed structure or the existing highway. The drilling encountered a ground profile comprising clay, overlying sandstone and siltstone interbedded with thin layers of clay and sand. The borehole log is attached in **Appendix A** of this report.

This appears to confirm the stratigraphical succession suggested by the published geological records.

The ground conditions are summarised in **Table 2** below.

**Table 2. General succession of strata encountered**

| Brief Description                | Depth to top of stratum m.bgl | Thickness (m) |
|----------------------------------|-------------------------------|---------------|
| Made Ground/Superficial Deposits | G.L.                          | 0.2           |
| Grinstead Clay Member - Mudstone | 0.2                           | 3.7           |
| Lower Tunbridge Wells Formation  | 3.9                           | Not proven    |

### **SOAKAWAY TEST**

2No standard IBC tanks with 1000 litres capacity and gravity feed into the borehole soakaway were provided as means of water supply to carry out the infiltration test. The constant head infiltration test method was attempted into the completed soakaways by continuous flow from both tanks (discharge of each tank at average rate of 2.5 litres/second), that could only feel the borehole to approximately 9.2mbgl. Based on the information collected from the test the infiltration capacity exceeded the supply from the tank and the infiltration rates are estimated to be greater of 5 litres/second.

We consider that the infiltration rates obtained by the test would be sufficient for the SuDS scheme for the proposed development. Alternatively additional test using 10,000 litres tank equipped with pump and flow meter may confirm the accurate infiltration rates that are currently considered to be greater than 5 litres/second.

The value of soakage rate is normally factored to account for the 'silting-up' of the fissures in the adjacent soil. This is done to enable the soakaway to function at a design rate for a period of time rather than quote a maximum which may deteriorate with time.

### **GROUNDWATER MONITORING**

Groundwater monitoring visit was carried out on 18<sup>th</sup> October, and there was no groundwater recorded in the standpipe.

## **SOAKAWAY DESIGN**

Required storage volume in the soakaway, must equal or be greater than inflow minus outflow, and is the required effective volume available between the syphon head and the invert of the drain discharging to the soakaway.

Schematic drawing showing deep borehole soakaway standard details is presented in **Appendix B**.

The storage volume could be provided by a cylindrical or square chamber lined with brickwork, pre-cast concrete or polyethylene rings into which the surface run-off from the catchment area is collected. The chamber is usually formed from precast cylindrical rings approximately 1 metre high which are stacked upon each other to produce the required height to achieve the required effective storage volume. Typical diameters of soakaway rings are 1.2m, 1.5m, 1.8m, 2.1m and 2.4m, but the dimensions could vary for different manufacturers. The rings are located upon a concrete base to prevent the soil being washed away and eventually undermining the bottom rings. If this should occur the soakaway and associated inlet pipework is likely to become unstable. The concrete base also assists cleaning out of the debris that collect in the chamber. All joints, soakaway holes and lifting eyes in the precast concrete rings located in unsuitable strata should be sealed with mortar or other approved sealing materials. This shall prevent perched groundwater ingress into the chamber or seepage of water by any other means than through the deep bored liner.

Capping the liner which protrudes 1 metre above the base of the chamber is a syphon head placed to prevent the blockage of the deep bore. This also helps to inhibit the ingress of silt into the liner. The chamber needs regular maintenance and cleaning to prevent debris entering the pipe and reducing the capacity by siltation. Access into the soakaway chamber to install the syphon head must be treated as a confined space and can only be undertaken with the necessary safety precautions (Gas detector, safety harness, tripod winch, backup crew etc).

Yours Sincerely,  
For AVZGeoEng Ltd

**Author:**  
**BSc (Hons) Silvanka Kadieva-Zarkovska**  
Senior Geotechnical Engineer

**Approved:**  
**Dipl. Ing. Boban Zarkovski CEng MICE**  
Director



Enc:

|                    |  |
|--------------------|--|
| <b>Figure 1:</b>   | Site Location Plan                     |
| <b>Figure 2:</b>   | Borehole Location Plan                 |
| <b>Figure 3:</b>   | Photographic Logs                      |
| <b>Appendix A:</b> | Borehole Logs                          |
| <b>Appendix B:</b> | Deep Borehole Soakaway Standard Detail |

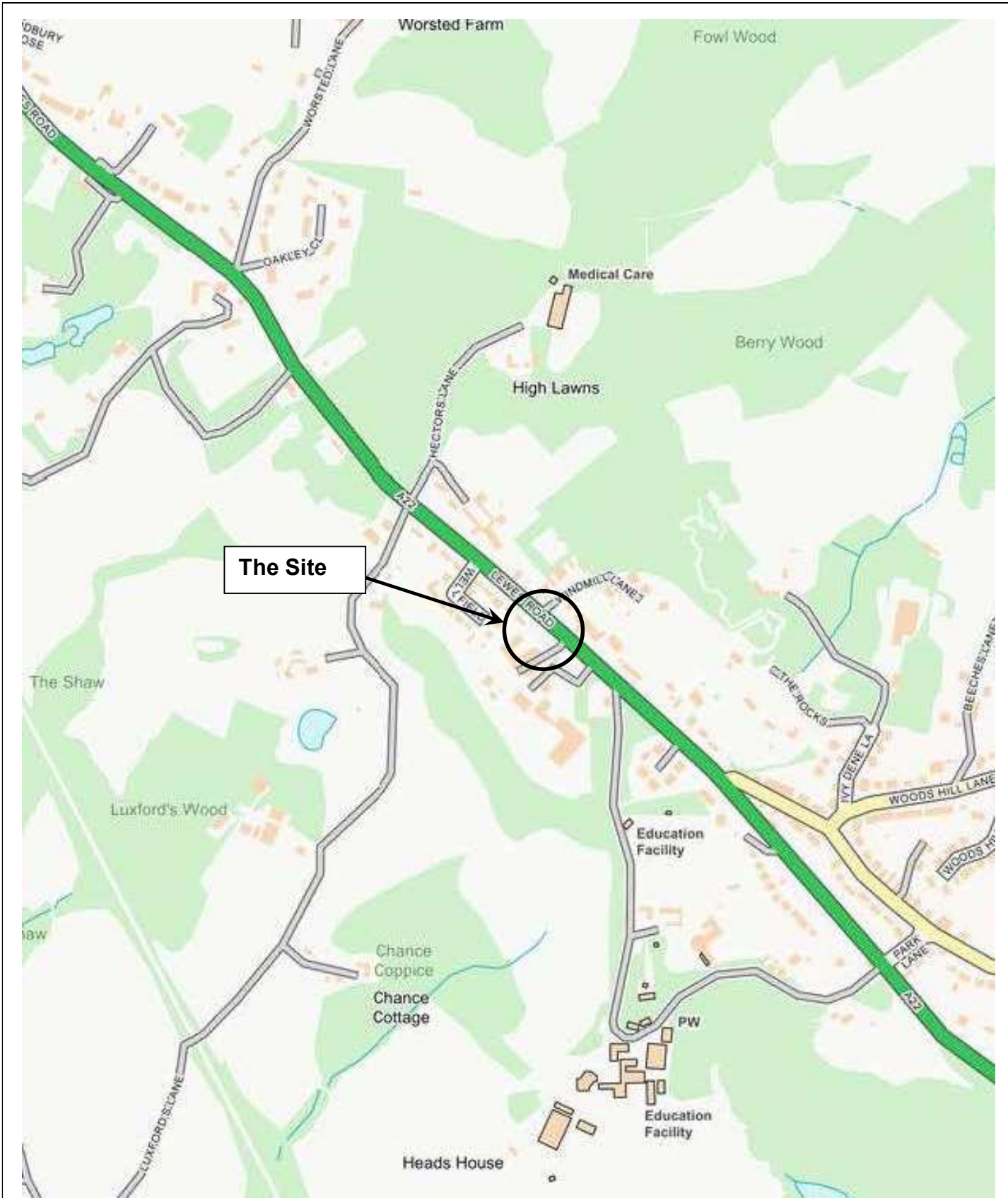


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East Grinstead West Sussex RH19 3TB

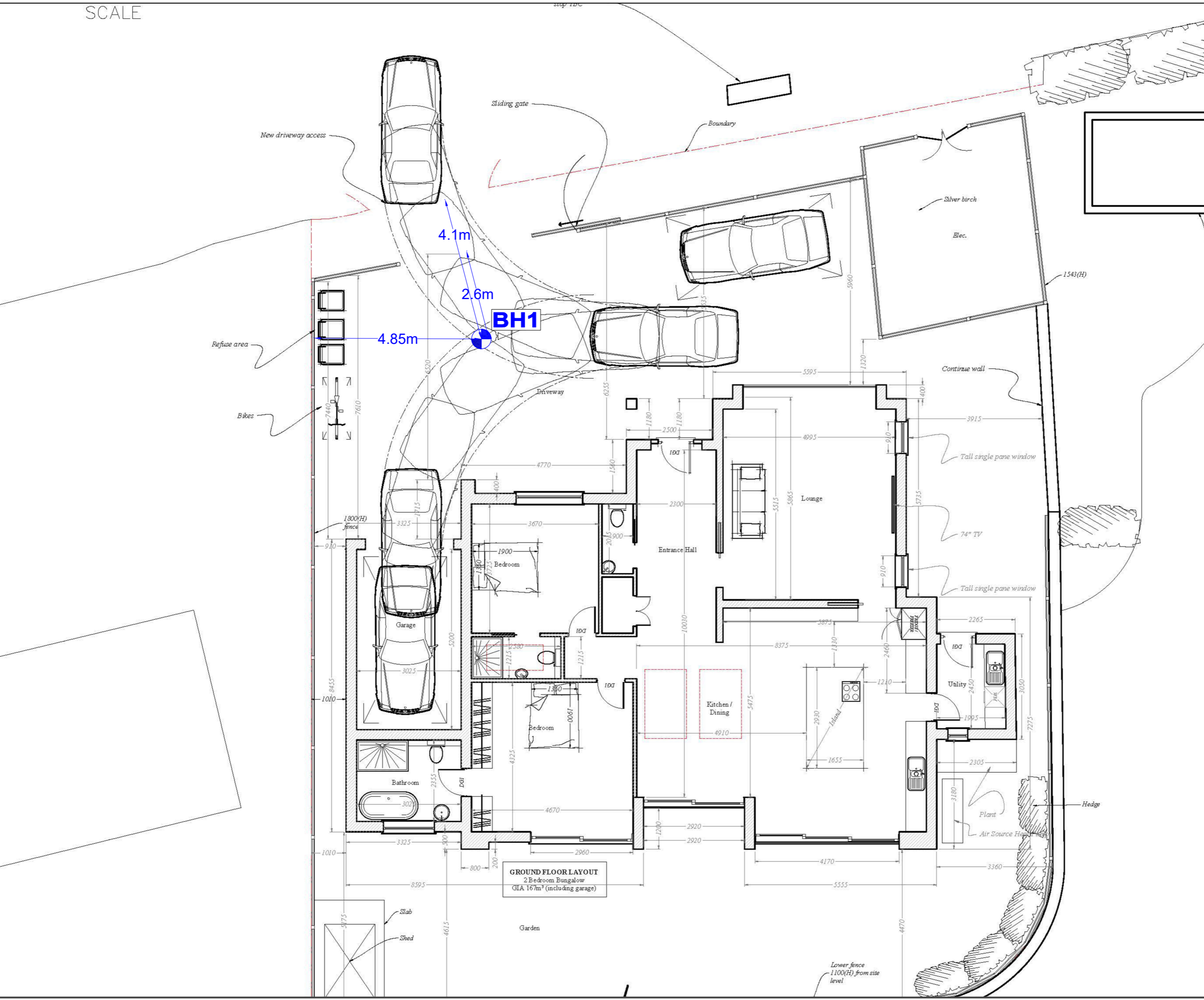
Ref: SKZ\_2620/25\_October 2025

## FIGURES



|   |   |                     |
|---|---|---------------------|
|  | <b>Client:</b> Scott Weller   | <b>Scale:</b> NTS   |
|   | <b>Site:</b> Land Adj 2 Reservoir Place Lewes Road Ashurst Wood East Grinstead West Sussex RH19 3TB |                     |
| <b>SITE LOCATION PLAN</b>   | <b>Job No:</b> SKZ_2620/25  | <b>Figure No:</b> 1 |

SCALE



**GROUND FLOOR LAYOUT**  
2 Bedroom Bungalow  
GIA 167m<sup>2</sup> (including garage)

**LEGEND:**  
BH - Borehole



Birch Grove  
70 Copthorne Road  
Felbridge, Surrey  
RH19 2NU  
United Kingdom  
Email: info@avzgeoeng.co.uk  
Web: www.avzgeoeng.co.uk  
Mob: 0788597732  
Tel: 01342457117

Client  
**Scott Weller**

Project Title  
**Land Adj 2 Reservoir Place Lewes Road  
Ashurst Wood, East Grinstead  
West Sussex RH19 3TB**

Drawing Title  
**Layout Investigation  
Points Plan**

|       |            |         |            |          |            |
|-------|------------|---------|------------|----------|------------|
| Drawn | Date       | Checked | Date       | Approved | Date       |
| SKZ   | 19/09/2025 | BZ      | 19/09/2025 | BZ       | 19/09/2025 |

|       |           |            |
|-------|-----------|------------|
| Scale | Orig Size | Dimensions |
| NTS   |           | M          |

|             |              |
|-------------|--------------|
| Project No. | Drawing File |
| SKZ_2620/25 |              |

|             |      |
|-------------|------|
| Drawing No. | Rev. |
| FIGURE_2    |      |



**Letter Report**

**PHOTOGRAPHIC LOG**

**Client:** Scott Weller

**Site:** Land Adj 2 Reservoir Place Lewes Road  
Ashurst Wood, East Grinstead West Sussex  
RH19 3TB

**Job No:**  
**SKZ\_2620/25**

**Photo  
No.1**

**Figure 3**

**Description:**  
**Comacchio rotary rig  
Drilling at the location**



**Photo  
No.2**

**Figure 3**

**Description:**  
**Borehole installation**





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## **APPENDIX A**

## BOREHOLE LOG

|   |                              |                  |                      |                                      |  |
|---|------------------------------|------------------|----------------------|--------------------------------------|--|
| Project<br>Land Adj 2 Reservoir Place Lewes Road Ashurst Wood East Grinstead RH19 3TB |                              |                  |                      | <b>BOREHOLE No</b><br><br><b>BH1</b> |  |
| Job No<br>SKZ_2620/25   | Date<br>18-09-25<br>19-09-25 | Ground Level (m) | Co-Ordinates (Local) |                                      |  |
| Contractor<br>AVZGeoEng Ltd   |                              |                  |                      | Sheet<br>1 of 3                      |  |

| SAMPLES & TESTS |         |             | Water | Reduced Level | Legend | Depth (Thickness) | STRATA  |  | Geology | Instrument/Backfill |
|-----------------|---------|-------------|-------|---------------|--------|-------------------|---|--|---------|---------------------|
| Depth           | Type No | Test Result |       |               |        |                   | DESCRIPTION   |  |         |                     |
|                 |         |             |       |               | (2.90) |                   | Brown grey Clay (Grinstead Clay Member)                                 |  |         |                     |
|                 |         |             |       |               | 2.90   |                   | Grey brown sandstone and siltstone, with thin laminas of sand and clay. |  |         |                     |
|                 |         |             |       |               |        |                   | 7.50 - 9.50 @ partial loss of drilling flush                            |  |         |                     |

| Boring Progress and Water Observations |      |      |              |                |             | Chiselling |    |       | Water Added |    | <b>GENERAL REMARKS</b><br><br>The location was CAT scanned and inspection pit excavated by hand prior the commencement of the drilling. A 125mm standpipe was installed on completion of the work. Water level could not be measured as drilling flush used for drilling. |
|--|------|------|--------------|----------------|-------------|------------|----|-------|-------------|----|---|
| Depth                                  | Date | Time | Casing Depth | Casing Dia. mm | Water Depth | From       | To | Hours | From        | To |   |
|  |      |      |              |                |             |            |    |       |             |    |   |

|  |                        |  |                          |
|--|------------------------|--|--------------------------|
| All dimensions in metres<br>Scale 1:50 | Client<br>Scott Weller | Method/<br>Plant Used<br>Comacchio MC 305 rotary rig | Logged By<br>B Žarkovski |
|--|------------------------|--|--------------------------|

Report ID: AGS4 UK.BH || Project: GINT STD.AGS 4.0.GPJ || Library: GINT STD.AGS 4.0.GLB || Date: 28 September 2025

## BOREHOLE LOG

|   |                              |                  |                      |                                      |  |
|---|------------------------------|------------------|----------------------|--------------------------------------|--|
| Project<br>Land Adj 2 Reservoir Place Lewes Road Ashurst Wood East Grinstead RH19 3TB |                              |                  |                      | <b>BOREHOLE No</b><br><br><b>BH1</b> |  |
| Job No<br>SKZ_2620/25   | Date<br>18-09-25<br>19-09-25 | Ground Level (m) | Co-Ordinates (Local) |                                      |  |
| Contractor<br>AVZGeoEng Ltd   |                              |                  |                      | Sheet<br>2 of 3                      |  |

| SAMPLES & TESTS |         |             | Water | Reduced Level | Legend           | Depth (Thickness) | STRATA   |  | Geology | Instrument/Backfill |
|-----------------|---------|-------------|-------|---------------|------------------|-------------------|--|--|---------|---------------------|
| Depth           | Type No | Test Result |       |               |                  |                   | DESCRIPTION  |  |         |                     |
| (21.10)         |         |             |       |               | [Dotted Pattern] |                   | Grey brown sandstone and siltstone, with thin laminas of sand and clay. <i>(continued)</i> |  |         | [Dotted Pattern]    |

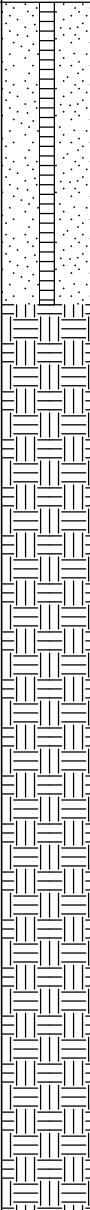
Report ID: AGS4 UK.BH || Project: GINT STD.AGS 4.0.GPJ || Library: GINT STD.AGS 4.0.GLB || Date: 28 September 2025

| Boring Progress and Water Observations |      |      |              |                |             | Chiselling |    |       | Water Added |    | <b>GENERAL REMARKS</b><br><br>The location was CAT scanned and inspection pit excavated by hand prior the commencement of the drilling. A 125mm standpipe was installed on completion of the work. Water level could not be measured as drilling flush used for drilling. |
|--|------|------|--------------|----------------|-------------|------------|----|-------|-------------|----|---|
| Depth                                  | Date | Time | Casing Depth | Casing Dia. mm | Water Depth | From       | To | Hours | From        | To |   |
|  |      |      |              |                |             |            |    |       |             |    |   |

|  |                            |  |                                 |
|--|----------------------------|--|---------------------------------|
| All dimensions in metres<br>Scale 1:50 | Client <b>Scott Weller</b> | Method/<br>Plant Used <b>Comacchio MC 305 rotary rig</b> | Logged By<br><b>B Żarkovski</b> |
|--|----------------------------|--|---------------------------------|

## BOREHOLE LOG

|   |                              |                  |                      |                                      |  |
|---|------------------------------|------------------|----------------------|--------------------------------------|--|
| Project<br>Land Adj 2 Reservoir Place Lewes Road Ashurst Wood East Grinstead RH19 3TB |                              |                  |                      | <b>BOREHOLE No</b><br><br><b>BH1</b> |  |
| Job No<br>SKZ_2620/25   | Date<br>18-09-25<br>19-09-25 | Ground Level (m) | Co-Ordinates (Local) |                                      |  |
| Contractor<br>AVZGeoEng Ltd   |                              |                  |                      | Sheet<br>3 of 3                      |  |

| SAMPLES & TESTS |         |             | Water | Reduced Level | Legend | Depth (Thickness) | STRATA   |  | Geology | Instrument/Backfill  |
|-----------------|---------|-------------|-------|---------------|--------|-------------------|--|--|---------|--|
| Depth           | Type No | Test Result |       |               |        |                   | DESCRIPTION  |  |         |  |
| 24.00           |         |             |       |               | •••••  |                   | Grey brown sandstone and siltstone, with thin laminas of sand and clay. <i>(continued)</i><br>16.00 - 18.00 @ total loss of drilling flush |  |         |  |

Report ID: AGS4 UK.BH || Project: GINT STD.AGS 4.0.GPJ || Library: GINT STD.AGS 4.0.GLB || Date: 28 September 2025

| Boring Progress and Water Observations |      |      |              |                |             | Chiselling          |    |       | Water Added                                      |    | GENERAL REMARKS   |
|--|------|------|--------------|----------------|-------------|---------------------|----|-------|--|----|---|
| Depth                                  | Date | Time | Casing Depth | Casing Dia. mm | Water Depth | From                | To | Hours | From   | To |   |
|  |      |      |              |                |             |                     |    |       |  |    | The location was CAT scanned and inspection pit excavated by hand prior the commencement of the drilling. A 125mm standpipe was installed on completion of the work. Water level could not be measured as drilling flush used for drilling. |
| All dimensions in metres<br>Scale 1:50 |      |      |              |                |             | Client Scott Weller |    |       | Method/Plant Used<br>Comacchio MC 305 rotary rig |    |   |



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**APPENDIX B**

