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27<sup>th</sup> May 2025

ref: A12342-2/250521/L2

Archie Korrie  
**Foreman Homes**  
Yarmouth House  
1300 Parkway  
Whiteley  
PO15 7AX

**By Email only:** [Archie.Korrie@foremanhomes.co.uk](mailto:Archie.Korrie@foremanhomes.co.uk)

Dear Archie,

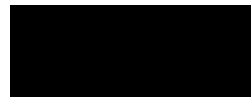
**RE: Goodwillies Timber Yard, 154 London Road, Purbrook, Waterlooville, PO7 5SR – Additional Infiltration Testing**

Omnia were commissioned by Foreman Homes to undertake infiltration testing in full accordance with BRE Digest 365 – Soakaway Design at the above referenced site. Please find set out below a summary of on-site observations from site works undertaken from Tuesday 6<sup>th</sup> May 2025 to 9<sup>th</sup> May 2024, including presentation of infiltration rates.

Yours sincerely,



Olivia Maxwell  
**Principal Geo-Environmental Consultant**



William Bennett  
**Principal Geo-Environmental Consultant**

**Attachments:**

Appendix I: Limitations

Appendix II: Figures

Appendix III: Logs

Appendix IV: In-situ Soakaway Certificates

## Quality Assurance

| Project Number: A12342-2                                                                               |                                    |             |       |            |            |  |
|--------------------------------------------------------------------------------------------------------|------------------------------------|-------------|-------|------------|------------|--|
| May 2025                                                                                               |                                    |             |       |            |            |  |
| <br>Geo-Environmental | Infiltration Testing Letter Report |             |       |            |            |  |
|                                                                                                        | Prepared by:                       | O. Maxwell  | Date: | 21/05/2025 | Signature: |  |
|                                                                                                        | Reviewed and authorised by:        | W. Bennett  | Date: | 27/05/2025 | Signature: |  |
| Updated to include updated proposed development                                                        | Prepared by:                       | H. Spurling | Date: | 04/02/2026 | Signature: |  |

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|                         |                                                                             |
|-------------------------|-----------------------------------------------------------------------------|
| Site Address            | Goodwillie's Timber Yard, 154 London Road, Purbrook, Waterlooville, PO7 5SR |
| National Grid Reference | 467688, 108563                                                              |
| Site Area               | 3.41 ha                                                                     |

## 1.0 BACKGROUND

The area of investigation is located in the north of Purbrook and was irregularly shaped covering an area of 3.41ha. with an access route from the northern boundary which exits onto London Road (A3) to the north. The site at the time of the investigation (May 2025) was a derelict former timber yard which generally comprised areas of hardstanding, buildings, and associated infrastructure in the north, centre and east of the site with an area considered to comprise a former outdoor storage area in the west and areas of dense vegetation in the south and southwest.

It is understood that the proposed development comprises an outline planning application for a residential development comprising approximately one hundred and eleven (111no.) houses. It is understood the application has not currently been made.

Omnia have previously completed infiltration testing at the above referenced site over two separate occasions. The first was detailed within the Infiltration Testing Letter Report (A12342/241218/L1) dated 2<sup>nd</sup> January 2025. During this phase of works seven (7no.) soakaways were undertaken in full accordance with BRE DG365. This testing provided infiltration rates of  $1.90 \times 10^{-6}$  to  $1.19 \times 10^{-5}$  m/s within four (4no.) locations, however a further three (3no.) locations were considered unsuccessful.

The second phase of soakaway testing was detailed within the Infiltration Testing Letter Report (A12342-1/250205/L1) dated 12<sup>th</sup> February 2025. During this phase of works six (6no.) soakaways were undertaken in full accordance with BRE DG365. This testing provided infiltration rates of  $6.84 \times 10^{-7}$  to  $1.60 \times 10^{-5}$  m/s within all locations.

Infiltration testing for this round of testing was undertaken from Tuesday 6<sup>th</sup> May 2025 to Friday 9<sup>th</sup> May 2025. The soakaway test locations were specified by the client (S. Carrington) on email dated 08/04/25, to determine if the ground is suitable for conventional soakaway testing. Locations are presented as Figure 3.0 in Appendix II.

## 2.0 GEOLOGY & HYDROGEOLOGY

The British Geological Survey (BGS) map for the site, Fareham (Sheet 316, Fareham, Solid and Drift Edition at a scale of 1:50,000, 1998) indicates that the site is underlain by the following geological sequence:

Table 2-1 Geological sequence on-site

| Geological Unit | Formation Name                   | Description |
|-----------------|----------------------------------|-------------|
| Superficial     | No Superficial Deposits recorded |             |

|         |                                                 |                     |
|---------|-------------------------------------------------|---------------------|
| Bedrock | Wittering Formation<br>(Majority of site)       | Sand, silt and clay |
|         | London clay Formation<br>(Most northern extent) | Clay, silt and sand |

### 3.0 GROUND CONDITIONS ENCOUNTERED

#### 3.1 Made Ground

Made Ground was encountered within six (6no.) exploratory hole locations (SA301 – SA303, SA306 – SA308), to a maximum depth of 0.77m bgl (SA302), and an average Made Ground thickness of 0.45m. The Made Ground generally comprised:

- Macadam over Natural soils
- Macadam over dark brown sandy/gravelly fine to coarse GRAVEL/SAND. Gravel is angular to subangular fine to coarse macadam, brick, mortar, tile and concrete
- Cream silty subangular to subrounded fine to coarse GRAVEL of chalk
- Soft dark brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to subangular fine to coarse brick, tile, concrete, wood and plastic

#### 3.2 Topsoil

Topsoil was encountered within two (2no.) exploratory hole locations (SA304 & SA305) to a maximum depth of 0.40m bgl. Topsoil typically comprised soft brown sandy silty CLAY. Sand was fine to coarse.

#### 3.3 Bedrock Deposits – Wittering Formation

Soils attributed to the Wittering Formation were encountered within all locations (SA301-SA308) directly beneath the Made Ground or Topsoil to a maximum observed depth of 2.70m bgl although the base of the strata was not proven within any of the locations.

Typically, the bedrock deposits comprised either:

- Soft to firm orangish brown, sometimes mottled greenish grey/grey and orange gravelly/sandy CLAY. Gravel was angular to subrounded fine to coarse flint. Sand was fine to coarse.
- Dark brown/orangish brown/yellowish orange (slightly gravelly) clayey fine to coarse SAND with low cobble content. Gravel was angular to subrounded fine to coarse flint. Cobbles were subangular flint

The base of the bedrock deposits was not encountered during this investigation.

#### 3.4 Groundwater Conditions

Groundwater was not encountered within any intrusive location.

Exploratory hole logs are included within Appendix III of this report.

## 4.0 BRE DG365 Soakaway Testing

Soakaway testing was undertaken in general accordance with BRE DG365 between 06<sup>th</sup> May and 12<sup>th</sup> May 2025 within SA301-SA308.

The soakaway test certificates, including full time and depth data, are included within Appendix IV with the test results summarised in Table 4-1.

Table 4-1 Summary of Infiltration rate

| Location | Test Number | Pit Dimensions (L x W x D) | Depth to fill (m bgl) | Strata Type | Duration of Test (hrs:mins) | Infiltration Rate (m/s) |
|----------|-------------|----------------------------|-----------------------|-------------|-----------------------------|-------------------------|
| SA301    | 1           | 2.20 x 0.40 x 2.70         | 1.48                  | SAND        | 21:57                       | N/A                     |
|          | 2           |                            | 1.46                  |             | 24:00                       | N/A                     |
| SA302    | 1*          | 2.20 x 0.40 x 2.50         | 1.35                  | SAND        | 01:08                       | 1.14x10 <sup>-5</sup>   |
|          | 2           |                            | 1.33                  |             | 01:48                       | 7.17x10 <sup>-6</sup>   |
|          | 3           |                            | 1.35                  |             | 02:48                       | 4.81x10 <sup>-6</sup>   |
| SA303    | 1           | 2.26 x 0.40 x 2.50         | 1.31                  | CLAY        | 24:00                       | N/A                     |
| SA304    | 1           | 2.20 x 0.40 x 2.50         | 1.38                  | SAND        | 20:00                       | 6.66x10 <sup>-7</sup>   |
|          | 2           |                            | 1.10                  |             | 18:20                       | 6.99x10 <sup>-7</sup>   |
|          | 3           |                            | 1.39                  |             | 17:10                       | 8.21x10 <sup>-7</sup>   |
| SA305    | 1           | 2.30 x 0.40 x 2.50         | 1.33                  | SAND        | 01:25                       | 8.80x10 <sup>-6</sup>   |
|          | 2           |                            | 1.33                  |             | 03:20                       | 3.77x10 <sup>-6</sup>   |
|          | 3           |                            | 1.34                  |             | 03:45                       | 3.52x10 <sup>-6</sup>   |
| SA306    | 1           | 2.20 x 0.40 x 2.50         | 1.43                  | SAND        | 08:00                       | 2.14x10 <sup>-6</sup>   |
|          | 2           |                            | 1.44                  |             | 13:45                       | 1.17x10 <sup>-6</sup>   |
|          | 3           |                            | 1.44                  |             | 19:00                       | 8.33x10 <sup>-7</sup>   |
| SA307    | 1           | 2.30 x 0.45 x 2.50         | 1.46                  | SAND        | 04:00                       | 3.45x10 <sup>-6</sup>   |
|          | 2           |                            | 1.46                  |             | 05:40                       | 2.27x10 <sup>-6</sup>   |
|          | 3           |                            | 1.45                  |             | 05:55                       | 2.47x10 <sup>-6</sup>   |
| SA308    | 1           | 2.30 x 0.40 x 2.50         | 1.45                  | SAND        | 00:46                       | 1.69x10 <sup>-5</sup>   |
|          | 2           |                            | 1.44                  |             | 01:20                       | 1.01x10 <sup>-5</sup>   |
|          | 3           |                            | 1.44                  |             | 01:20                       | 1.01x10 <sup>-5</sup>   |

\* Over the course of the test, the water level within the soakaway had fallen below the base of the level logger recording the continuous monitoring data before reaching the required 75% intercept. As a result, the time taken to reach the 75% intercept has been determined through extrapolation based on the rate of change in water level prior to water level falling below the base of the level logger.

Testing was undertaken within SA301 and SA303 over durations of between 21:57 and >24:00 (hours: minutes), during this period, the required 25% and 75% effective storage depth intercepts were not reached and therefore these locations are considered to be unsuccessful.

Testing was undertaken within SA302 and SA304-SA308 over durations of between 01:08 and 20:00 (hours: minutes). During these periods, the required 25% and 75% effective storage depth intercepts

were reached such that the tests were considered to be successful, providing soil infiltration rates ranging from  $6.66 \times 10^{-7}$  to  $1.69 \times 10^{-5}$  m/s.

## 5.0 DISCUSSION & CONCLUSIONS

During the soakaway testing, three (3no.) successful tests were undertaken in each of the successful trial pits (SA302 and SA304-SA308) in succession to ensure full saturation of surrounding soils, with all reaching the 25% and 75% effective storage depth intercepts. As a result, soil infiltration rates were able to be calculated and ranged from  $6.66 \times 10^{-7}$  to  $1.69 \times 10^{-5}$  m/s indicating low to medium permeability soil with poor to good drainage conditions.

Given the poor to good infiltration rates within the near surface granular Wittering Formation the site is likely to prove suitable for conventional soakaway design within locations SA302 and SA304-SA308.

It is recommended that the calculated infiltration rates are provided to a suitably qualified drainage engineer. The application of soakaway drainage will ultimately be dependent on the specific requirements of the development. All soakaways should be designed in accordance with BRE Special Digest 365-Soakaway Design.

However, two (2no.) locations (SA301 and SA303) failed to reach the 25% and 75% effective storage depths and as a result soil infiltration rates could not be calculated. This is attributed to the cohesive nature of the fine-grained material of the Wittering Formation.

It is considered that the site may be suitable for conventional soakaway design, and it is recommended that a qualified drainage engineer is provided with the results of this testing for further discussion.

The application of soakaway drainage will ultimately be dependent on the specific requirements of the development. All soakaways should be designed in accordance with BRE Special Digest 365-Soakaway Design.

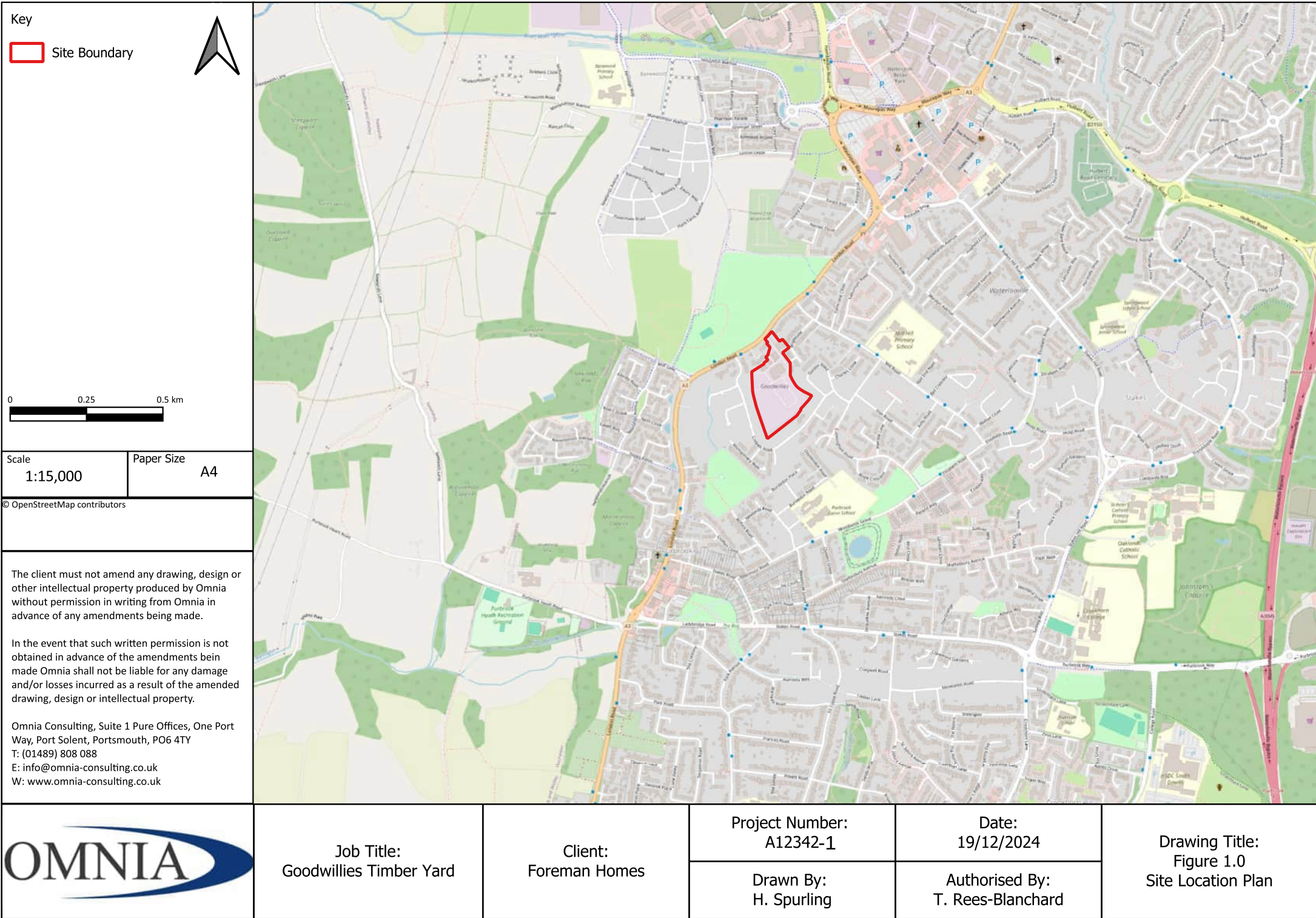
**END OF REPORT**

**APPENDIX I**  
**LIMITATIONS**

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between OE Ltd and the Client as indicated in Section 1.2.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination, which are enforced, by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.
8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
9. OE cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by OE is owned by them and no such plans or documents may be reproduced, published, or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by OE in this connection without their explicit written agreement there to by OE.
10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

## **APPENDIX II**

### **FIGURES**



Key

 Site Boundary



0 25 50 m

Scale

1:1,400

Paper Size

A4

Contains information provided by the client (Ref: 23.128  
Goodwillies Timber Yard Extract 220126)

The client must not amend any drawing, design or other intellectual property produced by Omnia without permission in writing from Omnia in advance of any amendments being made.

In the event that such written permission is not obtained in advance of the amendments being made Omnia shall not be liable for any damage and/or losses incurred as a result of the amended drawing, design or intellectual property.

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Project Number:  
A12342-2

Client:  
Foreman Homes

Drawn By:  
H. Spurling

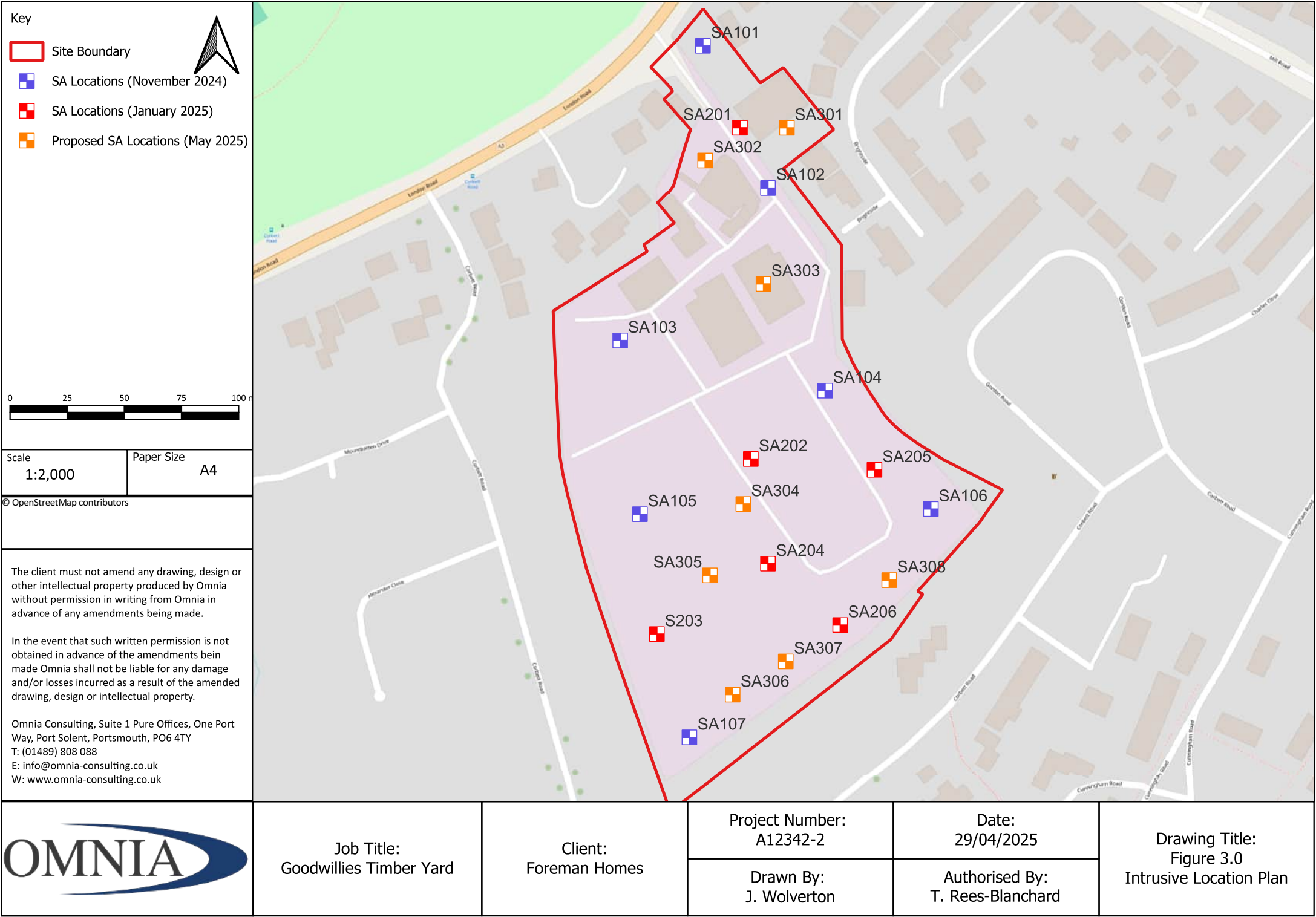
Drawing Title:

Job Title:  
Goodwillies Timber  
Yard

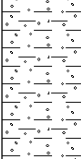
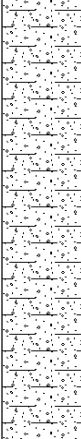
Date:  
04/02/2026

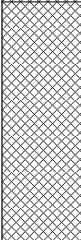
Authorised By:  
O. Maxwell

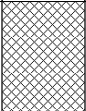
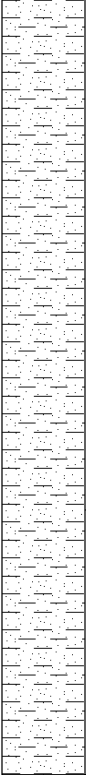
Figure 2.0  
Proposed Development  
Plan



**APPENDIX III**  
**INTRUSIVE LOGS**

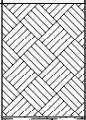
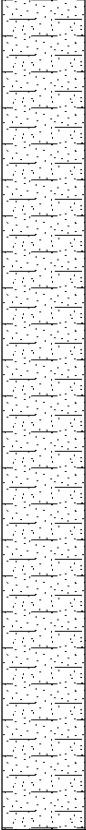
|                                                                                                               |                             |      |                      |                        |              |                                                                                     |                                                                                                                                       |                                                                                       |                                                     |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|----------------------|------------------------|--------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|
|                              |                             |      |                      | <h1>Trial Pit Log</h1> |              |                                                                                     | Trialpit No<br><b>SA301</b><br>Sheet 1 of 1                                                                                           |                                                                                       |                                                     |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |                      | Project No. A12342-2   |              | Co-ords: 467710.00 - 108700.00                                                      |                                                                                                                                       | Date<br>06/05/2025                                                                    |                                                     |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |                      | Dimensions (m):        |              | 2.2                                                                                 |                                                                                                                                       | Scale<br>1:20                                                                         |                                                     |
| Client: Foreman Homes                                                                                         |                             |      |                      | Depth 2.70             |              | <div>0.4</div> <div></div>                                                          |                                                                                                                                       | Logged<br>JR                                                                          |                                                     |
| Water<br>Strike                                                                                               | Samples and In Situ Testing |      |                      | Depth<br>(m)           | Level<br>(m) | Legend                                                                              | Stratum Description                                                                                                                   |                                                                                       |                                                     |
|                                                                                                               | Depth                       | Type | Results              |                        |              |                                                                                     |                                                                                                                                       |                                                                                       |                                                     |
|                                                                                                               |                             |      |                      | 0.15                   |              |    | Macadam. [MADE GROUND]                                                                                                                |                                                                                       | <div>1</div> <div>2</div> <div>3</div> <div>4</div> |
|                                                                                                               |                             |      |                      |                        |              |    | Firm orangeish brown gravelly CLAY. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION]                      |                                                                                       |                                                     |
|                                                                                                               |                             |      |                      | 0.80                   |              |    | From 0.60m bgl becoming very gravelly with low cobble content of sub-angular flint.                                                   |                                                                                       |                                                     |
|                                                                                                               |                             |      |                      |                        |              |   | Dark brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION] |                                                                                       |                                                     |
|                                                                                                               |                             |      |                      | 2.00                   |              |  | Orangeish brown clayey fine to coarse SAND with low cobble content of sub-angular flint. [WITTERING FORMATION]                        |                                                                                       |                                                     |
| 2.70                                                                                                          |                             |      | End of pit at 2.70 m |                        |              |                                                                                     |                                                                                                                                       |                                                                                       |                                                     |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |                      |                        |              |                                                                                     |                                                                                                                                       |                                                                                       |                                                     |
| Stability: STABLE                                                                                             |                             |      |                      |                        |              |                                                                                     |                                                                                                                                       |                                                                                       |                                                     |
|                                                                                                               |                             |      |                      |                        |              |                                                                                     |                                                                                                                                       |  |                                                     |

|                                                                                                               |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|---------|-------------------------------|--------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|
|                              |                             |      |         | <h1>Trial Pit Log</h1>        |              |                                                                                     | Trialpit No<br><b>SA302</b><br>Sheet 1 of 1                                                                                                  |                               |  |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |         | Project No. A12342-2          |              | Co-ords: 467674.00 - 108686.00<br>Level:                                            |                                                                                                                                              | Date<br>06/05/2025            |  |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |         | Dimensions (m):<br>Depth 2.50 |              | 2.2<br><div><div>0.4</div><div></div></div>                                         |                                                                                                                                              | Scale<br>1:20<br>Logged<br>JR |  |
| Client: Foreman Homes                                                                                         |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |
| Water<br>Strike                                                                                               | Samples and In Situ Testing |      |         | Depth<br>(m)                  | Level<br>(m) | Legend                                                                              | Stratum Description                                                                                                                          |                               |  |
|                                                                                                               | Depth                       | Type | Results |                               |              |                                                                                     |                                                                                                                                              |                               |  |
|                                                                                                               |                             |      |         | 0.12                          |              |    | Macadam. [MADE GROUND]                                                                                                                       | 1                             |  |
|                                                                                                               |                             |      |         |                               |              |    | Dark brown gravelly fine to coarse SAND. Gravel is angular to sub-angular fine to coarse macadam, brick, mortar and concrete. [MADE GROUND]  |                               |  |
|                                                                                                               |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |
|                                                                                                               |                             |      |         | 0.77                          |              |    | Dark brown clayey fine to coarse SAND with occasional gravel of angular to sub-angular medium to coarse flint. [WITTERING FORMATION]         |                               |  |
|                                                                                                               |                             |      |         | 1.10                          |              |    | Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to sub-angular medium to coarse flint. [WITTERING FORMATION] |                               |  |
|                                                                                                               |                             |      |         | 2.50                          |              |  | End of pit at 2.50 m                                                                                                                         | 2                             |  |
|                                                                                                               |                             |      |         |                               |              |                                                                                     |                                                                                                                                              | 3                             |  |
|                                                                                                               |                             |      |         |                               |              |                                                                                     |                                                                                                                                              | 4                             |  |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |
| Stability: STABLE                                                                                             |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |
|                          |                             |      |         |                               |              |                                                                                     |                                                                                                                                              |                               |  |

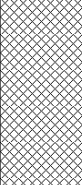
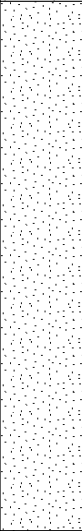
|                                                                                                               |                             |      |         |                        |              |                                                                                    |                                                                                                                                                                      |                    |  |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|---------|------------------------|--------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|
|                              |                             |      |         | <h1>Trial Pit Log</h1> |              |                                                                                    | Trialpit No<br><b>SA303</b><br>Sheet 1 of 1                                                                                                                          |                    |  |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |         | Project No. A12342-2   |              | Co-ords: 467699.00 - 108632.00                                                     |                                                                                                                                                                      | Date<br>07/05/2025 |  |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |         | Dimensions (m):        |              | 2.26                                                                               |                                                                                                                                                                      | Scale<br>1:20      |  |
| Client: Foreman Homes                                                                                         |                             |      |         | Depth 2.50             |              | <div>0.4</div>                                                                     |                                                                                                                                                                      | Logged<br>JR       |  |
| Water<br>Strike                                                                                               | Samples and In Situ Testing |      |         | Depth<br>(m)           | Level<br>(m) | Legend                                                                             | Stratum Description                                                                                                                                                  |                    |  |
|                                                                                                               | Depth                       | Type | Results |                        |              |                                                                                    |                                                                                                                                                                      |                    |  |
|                                                                                                               |                             |      |         | 0.30                   |              |   | Dark brown sandy angular to sub-angular fine to coarse GRAVEL of brick, concrete, macadam and tile with medium cobble content. Sand is fine to coarse. [MADE GROUND] |                    |  |
|                                                                                                               |                             |      |         | 0.44                   |              |   | Cream silty sub-angular to sub-rounded fine to coarse GRAVEL of chalk. [MADE GROUND]                                                                                 |                    |  |
|                                                                                                               |                             |      |         |                        |              |  | Soft to firm orangeish brown mottled greenish grey sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                         |                    |  |
|                                                                                                               |                             |      |         | 2.50                   |              |                                                                                    | From 1.80m bgl becoming very sandy.                                                                                                                                  |                    |  |
|                                                                                                               |                             |      |         |                        |              |                                                                                    | End of pit at 2.50 m                                                                                                                                                 |                    |  |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |         |                        |              |                                                                                    |                                                                                                                                                                      |                    |  |
| Stability: STABLE                                                                                             |                             |      |         |                        |              |                                                                                    |                                                                                                                                                                      |                    |  |

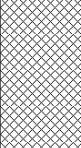
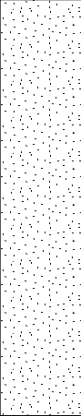




|                                                                                                               |                             |      |         |                        |              |                                                                                    |                                                                      |                                             |  |                               |                                                                                       |   |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|---------|------------------------|--------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------|--|-------------------------------|---------------------------------------------------------------------------------------|---|
|                              |                             |      |         | <h1>Trial Pit Log</h1> |              |                                                                                    | Trialpit No<br><b>SA305</b><br>Sheet 1 of 1                          |                                             |  |                               |                                                                                       |   |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |         | Project No. A12342-2   |              | Co-ords: 467676.00 - 108505.00<br>Level:                                           |                                                                      | Date<br>07/05/2025                          |  |                               |                                                                                       |   |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |         | Client: Foreman Homes  |              | Dimensions (m):<br>Depth 2.50                                                      |                                                                      | 2.3<br><div><div>0.4</div><div></div></div> |  | Scale<br>1:20<br>Logged<br>JR |                                                                                       |   |
|                                                                                                               |                             |      |         |                        |              |                                                                                    |                                                                      |                                             |  |                               |                                                                                       |   |
| Water<br>Strike                                                                                               | Samples and In Situ Testing |      |         | Depth<br>(m)           | Level<br>(m) | Legend                                                                             | Stratum Description                                                  |                                             |  |                               |                                                                                       |   |
|                                                                                                               | Depth                       | Type | Results |                        |              |                                                                                    |                                                                      |                                             |  |                               |                                                                                       |   |
|                                                                                                               |                             |      |         | 0.30                   |              |   | Soft brown sandy silty CLAY. Sand is fine to coarse.<br>[TOPSOIL]    |                                             |  |                               |                                                                                       | 1 |
|                                                                                                               |                             |      |         |                        |              |                                                                                    | Orangeish brown clayey fine to coarse SAND.<br>[WITTERING FORMATION] |                                             |  |                               |                                                                                       |   |
|                                                                                                               |                             |      |         |                        |              |  | From 2.00m bgl becoming yellowish orange.                            |                                             |  |                               |                                                                                       | 2 |
|                                                                                                               |                             |      |         | 2.50                   |              |                                                                                    | End of pit at 2.50 m                                                 |                                             |  |                               |                                                                                       | 3 |
|                                                                                                               |                             |      |         |                        |              |                                                                                    |                                                                      |                                             |  |                               |                                                                                       | 4 |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |         |                        |              |                                                                                    |                                                                      |                                             |  |                               |  |   |
| Stability: STABLE                                                                                             |                             |      |         |                        |              |                                                                                    |                                                                      |                                             |  |                               |                                                                                       |   |



|                                                                                                               |                             |      |         |                               |           |                                                                                   |                                                                                                                                                                                                |                    |                                                                                       |                      |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|---------|-------------------------------|-----------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|----------------------|
|                              |                             |      |         | <h1>Trial Pit Log</h1>        |           |                                                                                   | Trialpit No<br><b>SA307</b><br>Sheet 1 of 1                                                                                                                                                    |                    |                                                                                       |                      |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |         | Project No. A12342-2          |           | Co-ords: 467709.00 - 108467.00<br>Level:                                          |                                                                                                                                                                                                | Date<br>08/05/2025 |                                                                                       |                      |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |         | Dimensions (m):<br>Depth 2.50 |           | 2.3                                                                               |                                                                                                                                                                                                | Scale 1:20         |                                                                                       |                      |
| Client: Foreman Homes                                                                                         |                             |      |         |                               |           | 0.45                                                                              |                                                                                                                                                                                                | Logged JR          |                                                                                       |                      |
| Water Strike                                                                                                  | Samples and In Situ Testing |      |         | Depth (m)                     | Level (m) | Legend                                                                            | Stratum Description                                                                                                                                                                            |                    |                                                                                       |                      |
|                                                                                                               | Depth                       | Type | Results |                               |           |                                                                                   |                                                                                                                                                                                                |                    |                                                                                       |                      |
|                                                                                                               |                             |      |         | 0.50                          |           |  | Soft dark brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse brick, tile, concrete and plastic. [MADE GROUND] |                    |                                                                                       |                      |
|                                                                                                               |                             |      |         |                               |           |                                                                                   | Soft to firm orangeish brown mottled grey and orange sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                 |                    |                                                                                       |                      |
|                                                                                                               |                             |      |         |                               |           |                                                                                   | Yellowish orange fine to coarse SAND with rare clay lenses. [WITTERING FORMATION]                                                                                                              |                    |                                                                                       |                      |
|                                                                                                               |                             |      |         |                               |           |                                                                                   | 2.50                                                                                                                                                                                           |                    |     | End of pit at 2.50 m |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |         |                               |           |                                                                                   |                                                                                                                                                                                                |                    |  |                      |
| Stability: STABLE                                                                                             |                             |      |         |                               |           |                                                                                   |                                                                                                                                                                                                |                    |                                                                                       |                      |

|                                                                                                               |                             |      |         |                        |              |                                                                                     |                                                                                                                                                       |                    |  |                                                                                       |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------|---------|------------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|---------------------------------------------------------------------------------------|
|                              |                             |      |         | <h1>Trial Pit Log</h1> |              |                                                                                     | Trialpit No<br><b>SA308</b><br>Sheet 1 of 1                                                                                                           |                    |  |                                                                                       |
| Project Name: Goodwillies Timber Yard                                                                         |                             |      |         | Project No. A12342-2   |              | Co-ords: 467754.00 - 108503.00<br>Level:                                            |                                                                                                                                                       | Date<br>08/05/2025 |  |                                                                                       |
| Location: 154 London Road, Purbrook, Waterlooville, Portsmouth, PO7 5SR                                       |                             |      |         | Dimensions (m):        |              | 2.3                                                                                 |                                                                                                                                                       | Scale<br>1:20      |  |                                                                                       |
| Client: Foreman Homes                                                                                         |                             |      |         | Depth 2.50             |              | <div>0.4</div> <div></div>                                                          |                                                                                                                                                       | Logged<br>JR       |  |                                                                                       |
| Water<br>Strike                                                                                               | Samples and In Situ Testing |      |         | Depth<br>(m)           | Level<br>(m) | Legend                                                                              | Stratum Description                                                                                                                                   |                    |  |                                                                                       |
|                                                                                                               | Depth                       | Type | Results |                        |              |                                                                                     |                                                                                                                                                       |                    |  |                                                                                       |
|                                                                                                               |                             |      |         | 0.40                   |              |    | Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse wood and plastic. [MADE GROUND] |                    |  | 1                                                                                     |
|                                                                                                               |                             |      |         |                        |              |                                                                                     | Soft brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                  |                    |  |                                                                                       |
|                                                                                                               |                             |      |         |                        |              |                                                                                     | Soft to firm orangeish brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                |                    |  |                                                                                       |
|                                                                                                               |                             |      |         |                        |              |                                                                                     | Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                               |                    |  |                                                                                       |
|                                                                                                               |                             |      |         | 2.50                   |              |  | End of pit at 2.50 m                                                                                                                                  |                    |  | 4                                                                                     |
| Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No Groundwater Encountered |                             |      |         |                        |              |                                                                                     |                                                                                                                                                       |                    |  |  |
| Stability: STABLE                                                                                             |                             |      |         |                        |              |                                                                                     |                                                                                                                                                       |                    |  |                                                                                       |

**APPENDIX IV**  
**SOAKAWAY TESTING CERTIFICATES**

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 06/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA301 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.70  |
| Groundwater Level (m bgl): | N/A   |

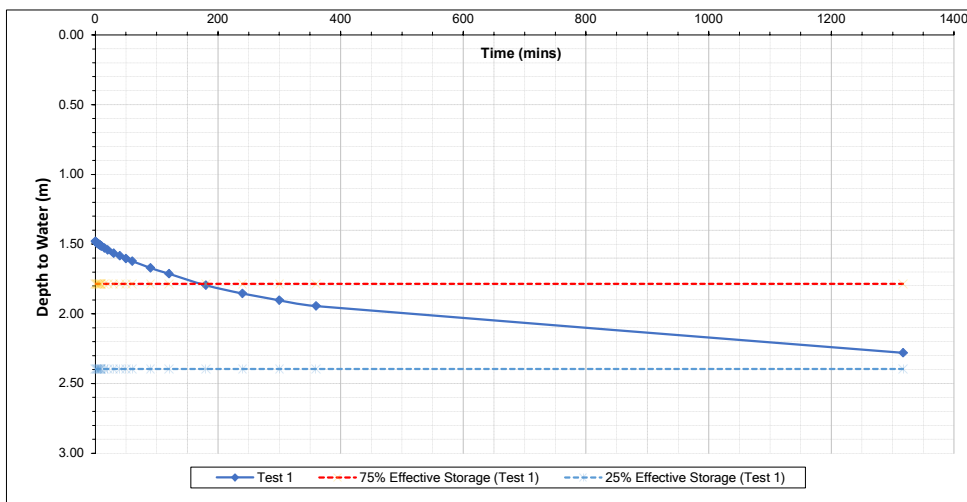
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.15m bgl: Macadam. [MADE GROUND]                                                                                                          |
| 0.15-0.80m bgl: Firm orangeish brown gravelly CLAY. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION]                |
| 0.80-2.00m bgl: Dark brown sl gravelly clayey fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION] |
| 2.00-2.70m bgl: Orangeish brown clayey fine to coarse SAND with low cobble content of sub-angular flint. [WITTERING FORMATION]                  |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.22                                          | 0.00       | 1.48      |
|                                               | 1.00       | 1.49      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.49      |
| 0.92                                          | 3.00       | 1.49      |
|                                               | 4.00       | 1.50      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.50      |
| 1.79                                          | 6.00       | 1.50      |
|                                               | 7.00       | 1.51      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.51      |
| 0.31                                          | 9.00       | 1.51      |
|                                               | 10.00      | 1.51      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.53      |
| 2.40                                          | 20.00      | 1.54      |
|                                               | 30.00      | 1.57      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.58      |
| 0.61                                          | 50.00      | 1.60      |
|                                               | 60.00      | 1.62      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.67      |
|                                               | 120.00     | 1.71      |
|                                               | 180.00     | 1.80      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.85      |
|                                               | 300.00     | 1.90      |
| N/A                                           | 360.00     | 1.94      |
| 30%(Vp75%-25%) (m3):                          | 1317.00    | 2.28      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 4.05                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| N/A                                           |            |           |

|                                         |     |
|-----------------------------------------|-----|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | N/A |
|-----------------------------------------|-----|

|                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comments:                                                                                                                                               |
| <b>NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.</b> |



|                |                          |                          |            |          |
|----------------|--------------------------|--------------------------|------------|----------|
| Site Engineer: | Date:                    | Checked and Approved By: | Date:      | Location |
| JR             | 06/05/2025<br>09/05/2025 | OM                       | 21/05/2025 | SA301    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 06/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA301 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.70  |
| Groundwater Level (m bgl): | N/A   |

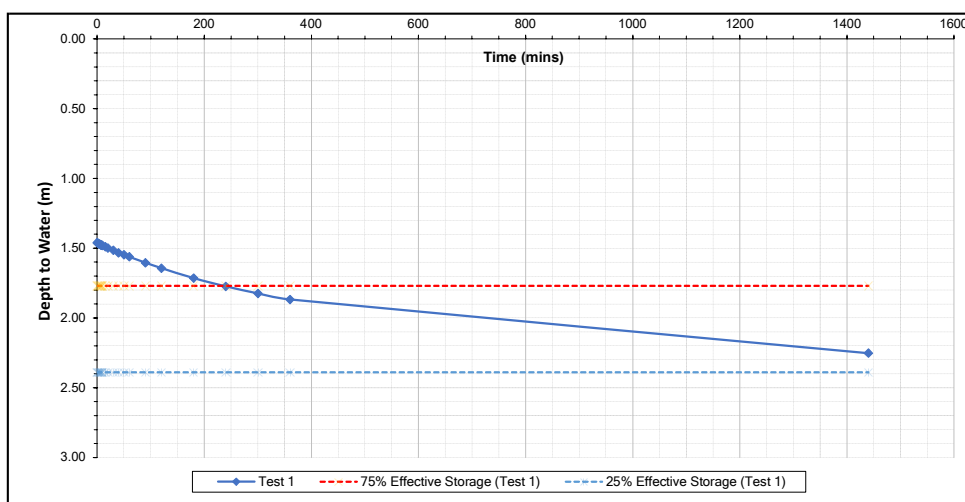
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.15m bgl: Macadam. [MADE GROUND]                                                                                                          |
| 0.15-0.80m bgl: Firm orangeish brown gravelly CLAY. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION]                |
| 0.80-2.00m bgl: Dark brown sl gravelly clayey fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse flint. [WITTERING FORMATION] |
| 2.00-2.70m bgl: Orangeish brown clayey fine to coarse SAND with low cobble content of sub-angular flint. [WITTERING FORMATION]                  |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.24                                          | 0.00       | 1.46      |
|                                               | 1.00       | 1.46      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.47      |
| 0.93                                          | 3.00       | 1.47      |
|                                               | 4.00       | 1.47      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.47      |
| 1.77                                          | 6.00       | 1.47      |
|                                               | 7.00       | 1.48      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.48      |
| 0.31                                          | 9.00       | 1.48      |
|                                               | 10.00      | 1.48      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.49      |
| 2.39                                          | 20.00      | 1.50      |
|                                               | 30.00      | 1.51      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.53      |
| 0.62                                          | 50.00      | 1.55      |
|                                               | 60.00      | 1.56      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.60      |
|                                               | 120.00     | 1.64      |
|                                               | 180.00     | 1.71      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.77      |
|                                               | 300.00     | 1.82      |
| N/A                                           | 360.00     | 1.87      |
| 30%(Vp75%-25%) (m3):                          | 1440.00    | 2.25      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 4.10                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| N/A                                           |            |           |

|                                         |     |
|-----------------------------------------|-----|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | N/A |
|-----------------------------------------|-----|

| Comments:                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.</b> |



|                |                          |
|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 06/05/2025<br>09/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| OM                       | 21/05/2025 |

|          |
|----------|
| Location |
| SA301    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 06/05/2025 - 07/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA302 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

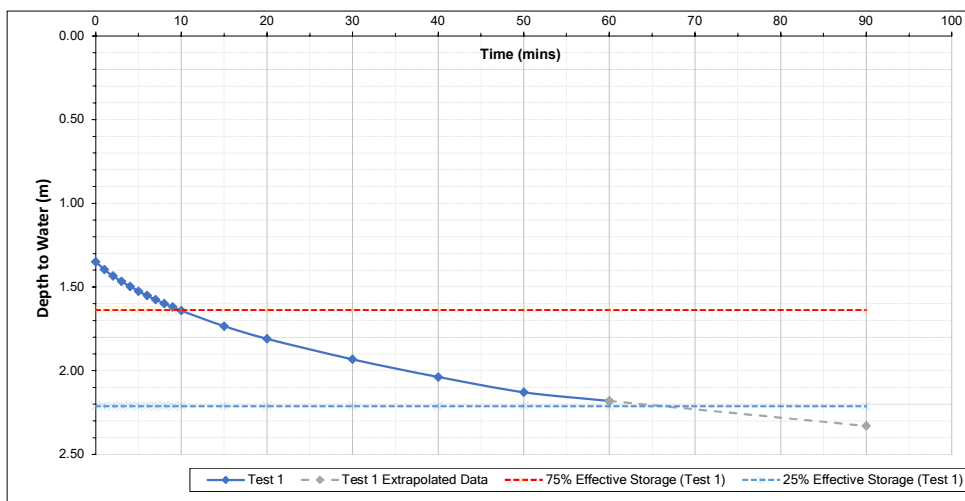
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.12m bgl: Macadam. [MADE GROUND]                                                                                                                       |
| 0.12-0.77m bgl: Dark brown gravelly fine to coarse SAND. Gravel is angular to sub-angular fine to coarse macadam, brick, mortar and concrete. [MADE GROUND]  |
| 0.77-1.10m bgl: Dark brown clayey fine to coarse SAND with occasional gravel of angular to sub-rounded medium to coarse flint. [WITTERING FORMATION]         |
| 1.10-2.50m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to sub-angular medium to coarse flint. [WITTERING FORMATION] |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.15                                          | 0.00       | 1.35      |
|                                               | 1.00       | 1.40      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.43      |
| 0.86                                          | 3.00       | 1.47      |
|                                               | 4.00       | 1.50      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.53      |
| 1.64                                          | 6.00       | 1.55      |
|                                               | 7.00       | 1.57      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.60      |
| 0.29                                          | 9.00       | 1.62      |
|                                               | 10.00      | 1.64      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.73      |
| 2.21                                          | 20.00      | 1.81      |
|                                               | 30.00      | 1.93      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 2.04      |
| 0.58                                          | 50.00      | 2.13      |
|                                               | 60.00      | 2.18      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 2.33      |
| 10                                            |            |           |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 67.5                                          |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.87                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 57.5                                          |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 1.14E-05 |
|-----------------------------------------|----------|

| Comments: |
|-----------|
|           |



|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 06/05/2025 - 07/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA302    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 06/05/2025 - 07/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA302 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

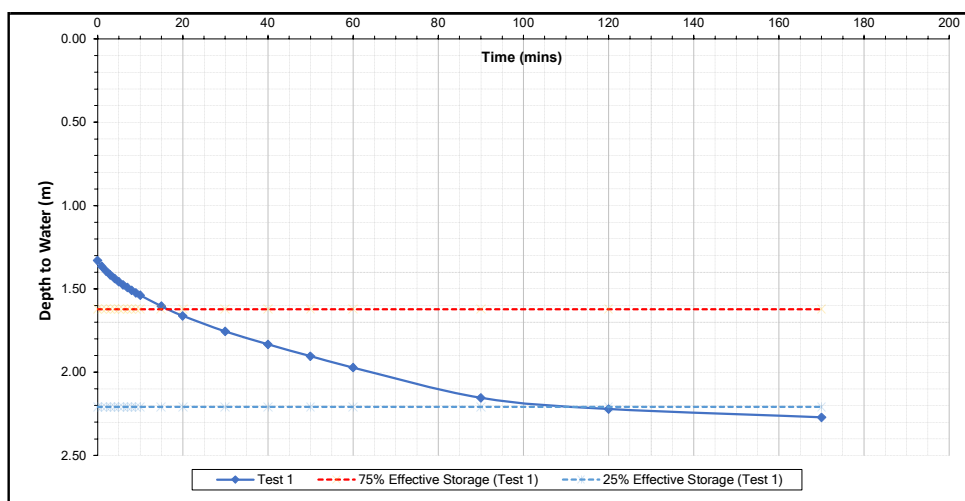
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.12m bgl: Macadam. [MADE GROUND]                                                                                                                       |
| 0.12-0.77m bgl: Dark brown gravelly fine to coarse SAND. Gravel is angular to sub-angular fine to coarse macadam, brick, mortar and concrete. [MADE GROUND]  |
| 0.77-1.10m bgl: Dark brown clayey fine to coarse SAND with occasional gravel of angular to sub-rounded medium to coarse flint. [WITTERING FORMATION]         |
| 1.10-2.50m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to sub-angular medium to coarse flint. [WITTERING FORMATION] |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.17                                          | 0.00       | 1.33      |
|                                               | 1.00       | 1.36      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.39      |
| 0.88                                          | 3.00       | 1.42      |
|                                               | 4.00       | 1.44      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.46      |
| 1.62                                          | 6.00       | 1.47      |
|                                               | 7.00       | 1.49      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.51      |
| 0.29                                          | 9.00       | 1.52      |
|                                               | 10.00      | 1.54      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.60      |
| 2.21                                          | 20.00      | 1.66      |
|                                               | 30.00      | 1.75      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.83      |
| 0.59                                          | 50.00      | 1.90      |
|                                               | 60.00      | 1.97      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 2.15      |
| 16.00                                         | 120.00     | 2.22      |
|                                               | 170.00     | 2.27      |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 107.50                                        |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.92                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 91.50                                         |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 7.17E-06 |
|-----------------------------------------|----------|

| Comments: |
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|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 06/05/2025 - 07/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA302    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 06/05/2025 - 07/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA302 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

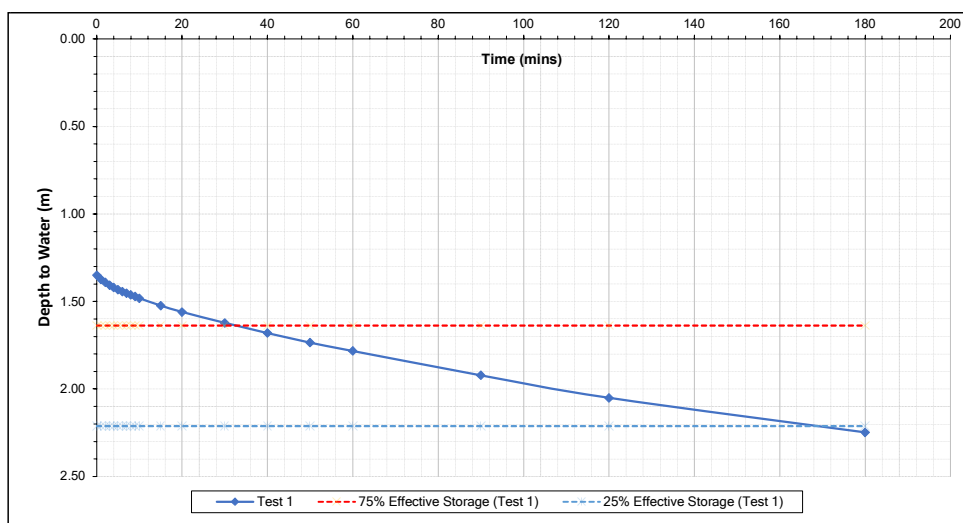
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.12m bgl: Macadam. [MADE GROUND]                                                                                                                       |
| 0.12-0.77m bgl: Dark brown gravelly fine to coarse SAND. Gravel is angular to sub-angular fine to coarse macadam, brick, mortar and concrete. [MADE GROUND]  |
| 0.77-1.10m bgl: Dark brown clayey fine to coarse SAND with occasional gravel of angular to sub-rounded medium to coarse flint. [WITTERING FORMATION]         |
| 1.10-2.50m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to sub-angular medium to coarse flint. [WITTERING FORMATION] |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.15                                          | 0.00       | 1.35      |
|                                               | 1.00       | 1.37      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.39      |
| 0.86                                          | 3.00       | 1.41      |
|                                               | 4.00       | 1.42      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.43      |
| 1.64                                          | 6.00       | 1.44      |
|                                               | 7.00       | 1.45      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.46      |
| 0.29                                          | 9.00       | 1.47      |
|                                               | 10.00      | 1.48      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.52      |
| 2.21                                          | 20.00      | 1.56      |
|                                               | 30.00      | 1.62      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.68      |
| 0.575                                         | 50.00      | 1.73      |
|                                               | 60.00      | 1.78      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.92      |
| 32                                            | 120.00     | 2.05      |
|                                               | 180.00     | 2.25      |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 168                                           |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.87                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 136                                           |            |           |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 4.81E-06 |
|-----------------------------------------|----------|

| Comments: |
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|                |                          |
|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 06/05/2025<br>07/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA302    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA303 |
| Trial Pit Length (m):      | 2.26  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

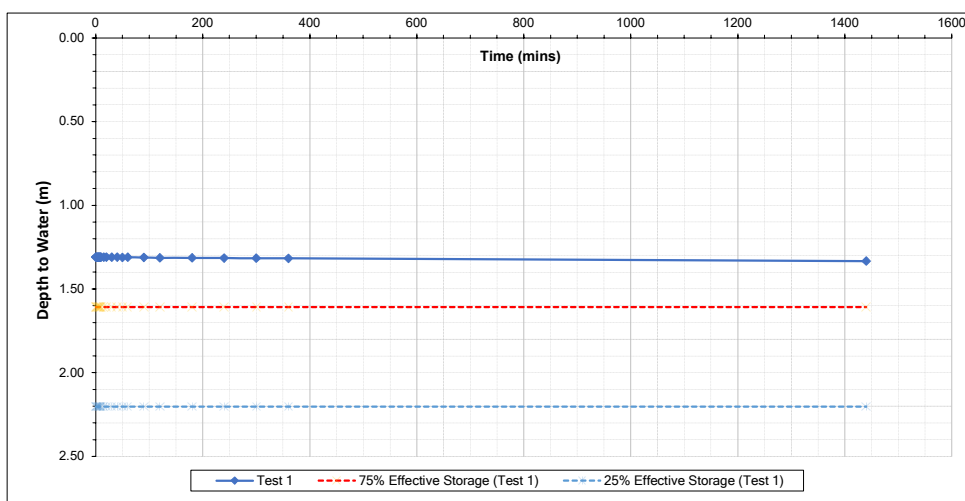
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.30m bgl: Dark brown sandy angular to sub-angular fine to coarse GRAVEL of brick, concrete, macadam and tile with medium cobble content. Sand is fine to coarse. [MADE GROUND] |
| 0.30-0.44m bgl: Cream silty sub-angular to sub-rounded fine to coarse GRAVEL of chalk. [MADE GROUND]                                                                                 |
| 0.44-2.50m bgl: Soft to firm orangeish brown mottled greenish grey sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                         |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.19                                          | 0.00       | 1.31      |
|                                               | 1.00       | 1.31      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.31      |
| 0.89                                          | 3.00       | 1.31      |
|                                               | 4.00       | 1.31      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.31      |
| 1.61                                          | 6.00       | 1.31      |
|                                               | 7.00       | 1.31      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.31      |
| 0.30                                          | 9.00       | 1.31      |
|                                               | 10.00      | 1.31      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.31      |
| 2.20                                          | 20.00      | 1.31      |
|                                               | 30.00      | 1.31      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.31      |
| 0.60                                          | 50.00      | 1.31      |
|                                               | 60.00      | 1.31      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.31      |
| N/A                                           | 120.00     | 1.31      |
|                                               | 180.00     | 1.31      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.32      |
| N/A                                           | 300.00     | 1.32      |
|                                               | 360.00     | 1.32      |
| 30%(Vp75%-25%) (m3):                          | 1440.00    | 1.33      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 4.07                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| N/A                                           |            |           |

|                                         |     |
|-----------------------------------------|-----|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | N/A |
|-----------------------------------------|-----|

| Comments:                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.</b> |



|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 09/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA303    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA304 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

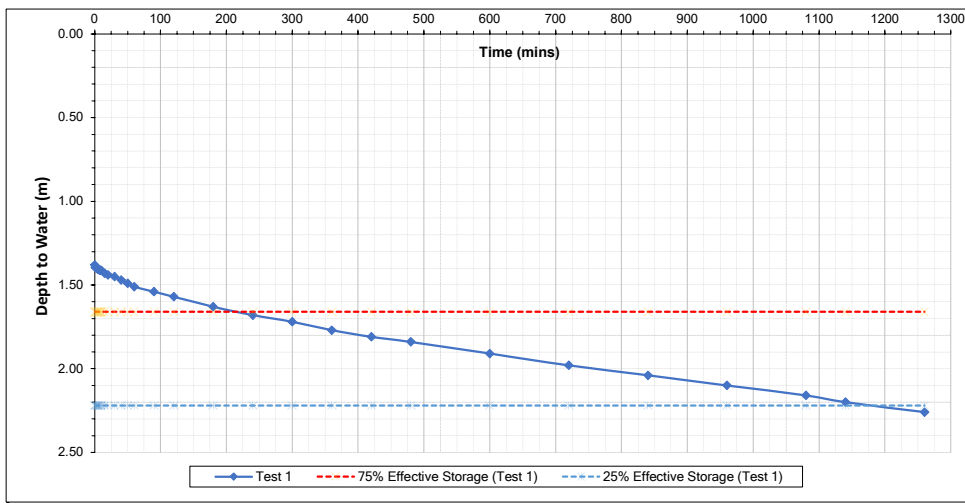
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                    |
| 0.00-0.40m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]                                                                                 |
| 0.40-0.80m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [WITTERING FORMATION] |
| 0.80-2.50m bgl: Yellowish orange clayey fine to coarse SAND. [WITTERING FORMATION]                                                                             |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.12                                          | 0.00       | 1.38      |
|                                               | 1.00       | 1.39      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.40      |
| 0.84                                          | 3.00       | 1.40      |
|                                               | 4.00       | 1.40      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.41      |
| 1.66                                          | 6.00       | 1.41      |
|                                               | 7.00       | 1.41      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.41      |
| 0.28                                          | 9.00       | 1.41      |
|                                               | 10.00      | 1.41      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.43      |
| 2.22                                          | 20.00      | 1.44      |
|                                               | 30.00      | 1.45      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.47      |
| 0.56                                          | 50.00      | 1.49      |
|                                               | 60.00      | 1.51      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.54      |
|                                               | 120.00     | 1.57      |
| 225                                           | 180.00     | 1.63      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.68      |
|                                               | 300.00     | 1.72      |
| 1200                                          | 360.00     | 1.77      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 1.81      |
| 0.15                                          | 480.00     | 1.84      |
|                                               | 600.00     | 1.91      |
| As50% (m2):                                   | 720.00     | 1.98      |
| 3.79                                          | 840.00     | 2.04      |
|                                               | 960.00     | 2.10      |
| Tp75%-25% (mins):                             | 1080.00    | 2.16      |
| 975                                           | 1140.00    | 2.20      |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 6.66E-07 |
|-----------------------------------------|----------|

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| Comments: |
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|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA304    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA304 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

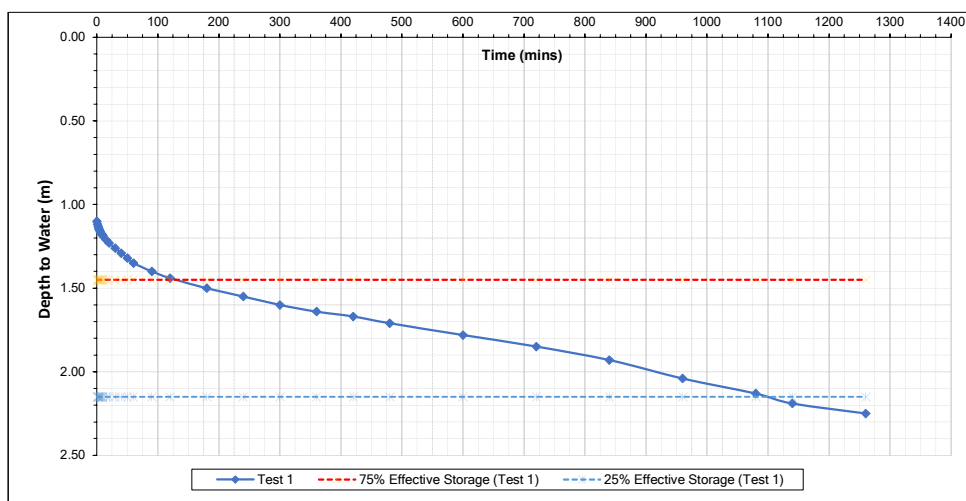
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.40m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]                                                                                 |
| 0.40-0.80m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [WITTERING FORMATION] |
| 0.80-2.50m bgl: Yellowish orange clayey fine to coarse SAND. [WITTERING FORMATION]                                                                             |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.40                                          | 0.00       | 1.10      |
|                                               | 1.00       | 1.12      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.13      |
| 1.05                                          | 3.00       | 1.14      |
|                                               | 4.00       | 1.15      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.16      |
| 1.45                                          | 6.00       | 1.17      |
|                                               | 7.00       | 1.17      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.18      |
| 0.35                                          | 9.00       | 1.18      |
|                                               | 10.00      | 1.19      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.21      |
| 2.15                                          | 20.00      | 1.23      |
|                                               | 30.00      | 1.26      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.29      |
| 0.70                                          | 50.00      | 1.32      |
|                                               | 60.00      | 1.35      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.40      |
|                                               | 120.00     | 1.44      |
| 125.00                                        | 180.00     | 1.50      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.55      |
|                                               | 300.00     | 1.60      |
| 1100.00                                       | 360.00     | 1.64      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 1.67      |
| 0.18                                          | 480.00     | 1.71      |
|                                               | 600.00     | 1.78      |
| As50% (m2):                                   | 720.00     | 1.85      |
| 4.52                                          | 840.00     | 1.93      |
|                                               | 960.00     | 2.04      |
| Tp75%-25% (mins):                             | 1080.00    | 2.13      |
|                                               | 1140.00    | 2.19      |
| 975.00                                        | 1260.00    | 2.25      |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 6.99E-07 |
|-----------------------------------------|----------|

| Comments: |
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|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
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| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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|----------|
| Location |
| SA304    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA304 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

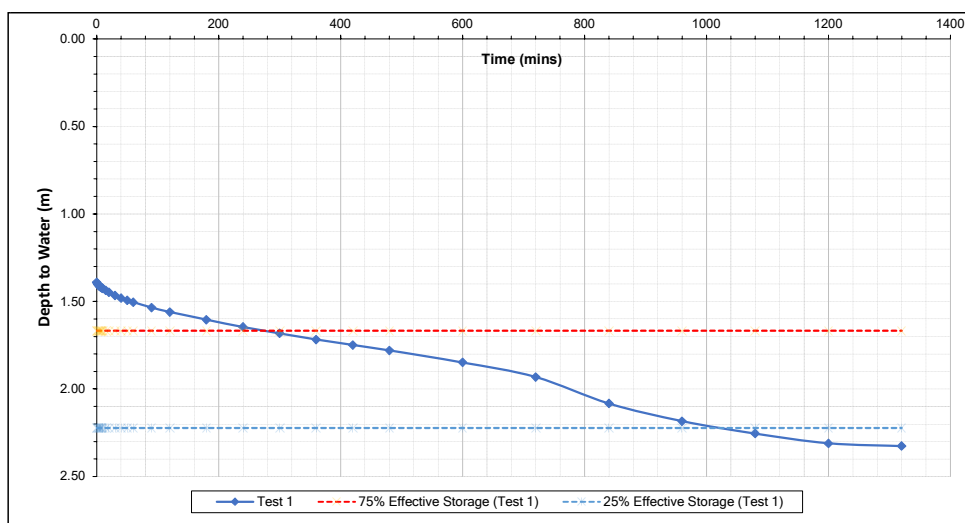
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.40m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]                                                                                 |
| 0.40-0.80m bgl: Orangeish brown slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [WITTERING FORMATION] |
| 0.80-2.50m bgl: Yellowish orange clayey fine to coarse SAND. [WITTERING FORMATION]                                                                             |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.11                                          | 0.00       | 1.39      |
|                                               | 1.00       | 1.40      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.40      |
| 0.83                                          | 3.00       | 1.41      |
|                                               | 4.00       | 1.41      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.41      |
| 1.67                                          | 6.00       | 1.42      |
|                                               | 7.00       | 1.42      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.42      |
| 0.28                                          | 9.00       | 1.42      |
|                                               | 10.00      | 1.43      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.44      |
| 2.22                                          | 20.00      | 1.45      |
|                                               | 30.00      | 1.47      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.48      |
| 0.555                                         | 50.00      | 1.49      |
|                                               | 60.00      | 1.50      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.53      |
| 240                                           | 120.00     | 1.56      |
|                                               | 180.00     | 1.60      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.65      |
| 1030                                          | 300.00     | 1.68      |
|                                               | 360.00     | 1.72      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 1.75      |
| 0.15                                          | 480.00     | 1.78      |
|                                               | 600.00     | 1.85      |
| As50% (m2):                                   | 720.00     | 1.93      |
| 3.766                                         | 840.00     | 2.08      |
|                                               | 960.00     | 2.18      |
| Tp75%-25% (mins):                             | 1080.00    | 2.25      |
| 790                                           | 1200.00    | 2.31      |
|                                               | 1320.00    | 2.33      |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 8.21E-07 |
|-----------------------------------------|----------|

| Comments: |
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|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 07/05/2025<br>08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA304    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA305 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

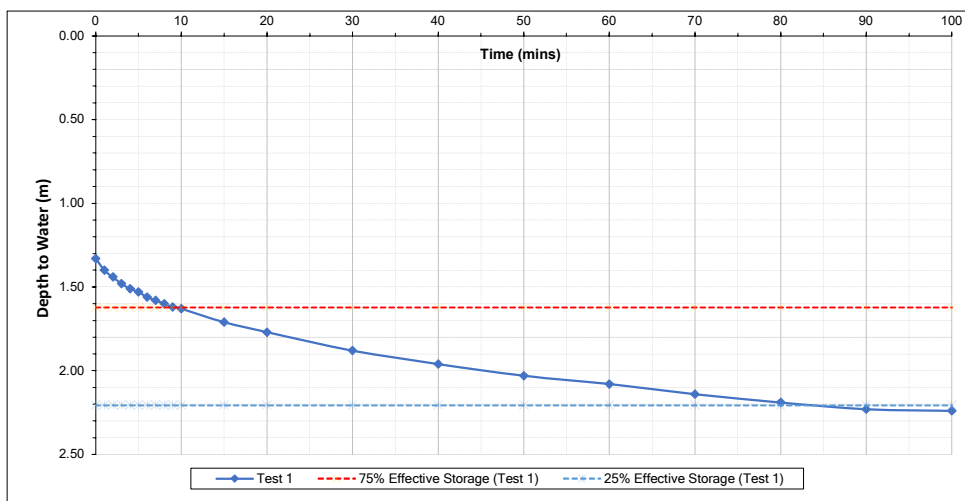
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                   |
|-----------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                       |
| 0.00-0.30m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]    |
| 0.30-2.50m bgl: Orangeish brown clayey fine to coarse SAND. [WITTERING FORMATION] |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.17                                          | 0.00       | 1.33      |
|                                               | 1.00       | 1.40      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.44      |
| 0.88                                          | 3.00       | 1.48      |
|                                               | 4.00       | 1.51      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.53      |
| 1.62                                          | 6.00       | 1.56      |
|                                               | 7.00       | 1.58      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.60      |
| 0.29                                          | 9.00       | 1.62      |
|                                               | 10.00      | 1.63      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.71      |
| 2.21                                          | 20.00      | 1.77      |
|                                               | 30.00      | 1.88      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.96      |
| 0.59                                          | 50.00      | 2.03      |
|                                               | 60.00      | 2.08      |
| Time to Fall to 75% Effective Depth (min):    | 70.00      | 2.14      |
| 10                                            | 80.00      | 2.19      |
|                                               | 90.00      | 2.23      |
| Time to Fall to 25% Effective Depth (min):    | 100.00     | 2.24      |
| 85                                            |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 4.08                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 75                                            |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 8.80E-06 |
|-----------------------------------------|----------|

|           |
|-----------|
| Comments: |
|-----------|



|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA305    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA305 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

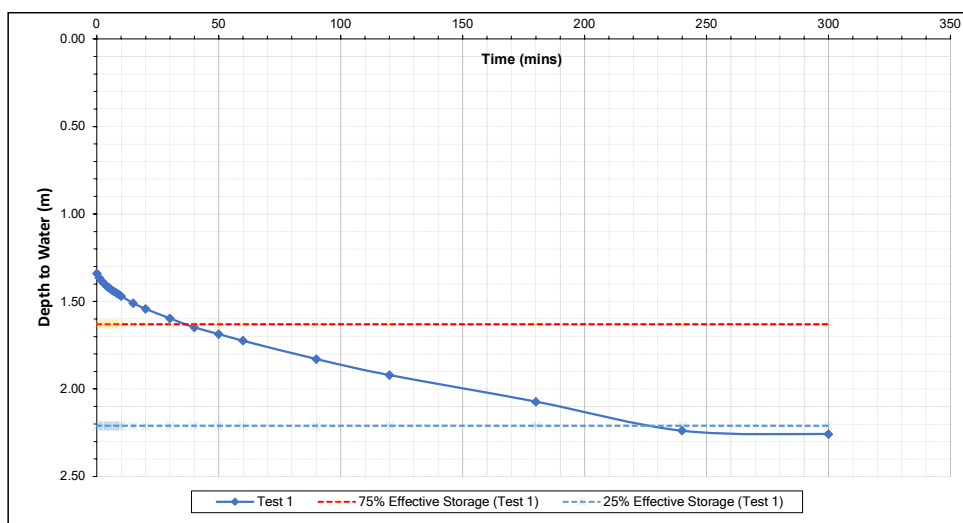
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                   |
|-----------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                       |
| 0.00-0.30m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]    |
| 0.30-2.50m bgl: Orangeish brown clayey fine to coarse SAND. [WITTERING FORMATION] |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.16                                          | 0.00       | 1.34      |
|                                               | 1.00       | 1.36      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.38      |
| 0.87                                          | 3.00       | 1.40      |
|                                               | 4.00       | 1.41      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.42      |
| 1.63                                          | 6.00       | 1.43      |
|                                               | 7.00       | 1.44      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.45      |
| 0.29                                          | 9.00       | 1.46      |
|                                               | 10.00      | 1.47      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.51      |
| 2.21                                          | 20.00      | 1.54      |
|                                               | 30.00      | 1.60      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.65      |
| 0.58                                          | 50.00      | 1.69      |
|                                               | 60.00      | 1.72      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.83      |
| 38                                            | 120.00     | 1.92      |
|                                               | 180.00     | 2.07      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 2.24      |
| 225                                           | 300.00     | 2.26      |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 4.052                                         |            |           |
| Tp75%-25% (mins):                             |            |           |
| 187                                           |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 3.52E-06 |
|-----------------------------------------|----------|

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|-----------|
| Comments: |
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|                |                          |
|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 07/05/2025<br>08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA305    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA305 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

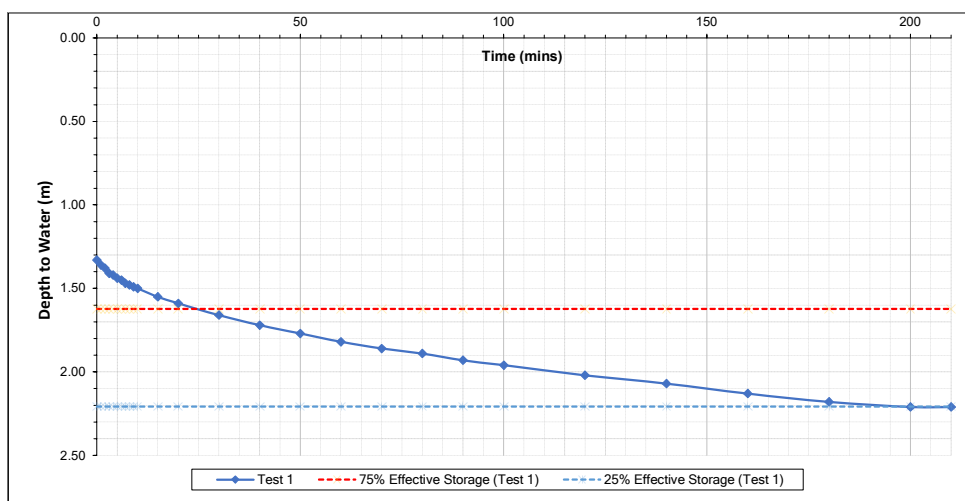
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                              |
|-----------------------------------------------------------------------------------|
| 0.00-0.30m bgl: Soft brown sandy silty CLAY. Sand is fine to coarse. [TOPSOIL]    |
| 0.30-2.50m bgl: Orangeish brown clayey fine to coarse SAND. [WITTERING FORMATION] |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.17                                          | 0.00       | 1.33      |
|                                               | 1.00       | 1.36      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.38      |
| 0.88                                          | 3.00       | 1.41      |
|                                               | 4.00       | 1.42      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.44      |
| 1.62                                          | 6.00       | 1.45      |
|                                               | 7.00       | 1.47      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.48      |
| 0.29                                          | 9.00       | 1.49      |
|                                               | 10.00      | 1.50      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.55      |
| 2.21                                          | 20.00      | 1.59      |
|                                               | 30.00      | 1.66      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.72      |
| 0.59                                          | 50.00      | 1.77      |
|                                               | 60.00      | 1.82      |
| Time to Fall to 75% Effective Depth (min):    | 70.00      | 1.86      |
| 25.00                                         | 80.00      | 1.89      |
|                                               | 90.00      | 1.93      |
| Time to Fall to 25% Effective Depth (min):    | 100.00     | 1.96      |
| 200.00                                        | 120.00     | 2.02      |
|                                               | 140.00     | 2.07      |
| 30%(Vp75%-25%) (m3):                          | 160.00     | 2.13      |
| 0.16                                          | 180.00     | 2.18      |
|                                               | 200.00     | 2.21      |
| As50% (m2):                                   | 210.00     | 2.21      |
| 4.08                                          |            |           |
|                                               |            |           |
| Tp75%-25% (mins):                             |            |           |
| 175.00                                        |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 3.77E-06 |
|-----------------------------------------|----------|

| Comments: |
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|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA305    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA306 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

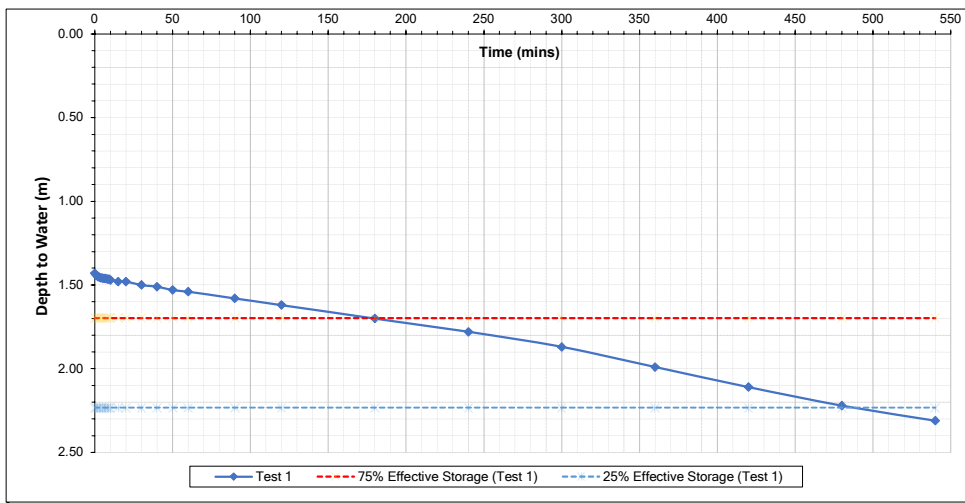
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                    |
| 0.00-0.36m bgl: Brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse flint and brick. [MADE GROUND] |
| 0.36-0.60m bgl: Brown clayey fine to coarse SAND. [WITTERING FORMATION]                                                                                        |
| 0.60-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                        |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.07                                          | 0.00       | 1.43      |
|                                               | 1.00       | 1.44      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.45      |
| 0.80                                          | 3.00       | 1.45      |
|                                               | 4.00       | 1.46      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.46      |
| 1.70                                          | 6.00       | 1.46      |
|                                               | 7.00       | 1.46      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.46      |
| 0.27                                          | 9.00       | 1.46      |
|                                               | 10.00      | 1.47      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.48      |
| 2.23                                          | 20.00      | 1.48      |
|                                               | 30.00      | 1.50      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.51      |
| 0.54                                          | 50.00      | 1.53      |
|                                               | 60.00      | 1.54      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.58      |
| 180                                           | 120.00     | 1.62      |
|                                               | 180.00     | 1.70      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.78      |
| 480                                           | 300.00     | 1.87      |
|                                               | 360.00     | 1.99      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 2.11      |
| 0.14                                          | 480.00     | 2.22      |
|                                               | 540.00     | 2.31      |
| As50% (m2):                                   |            |           |
| 3.66                                          |            |           |
|                                               |            |           |
| Tp75%-25% (mins):                             |            |           |
| 300                                           |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 2.14E-06 |
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| Comments: |
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|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA306    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA306 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

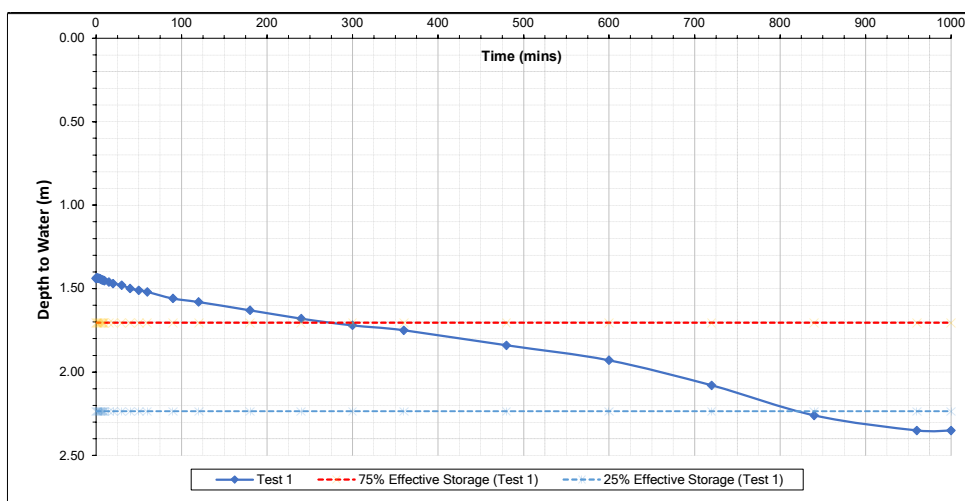
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                    |
| 0.00-0.36m bgl: Brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse flint and brick. [MADE GROUND] |
| 0.36-0.60m bgl: Brown clayey fine to coarse SAND. [WITTERING FORMATION]                                                                                        |
| 0.60-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                        |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.06                                          | 0.00       | 1.44      |
|                                               | 1.00       | 1.43      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.44      |
| 0.80                                          | 3.00       | 1.44      |
|                                               | 4.00       | 1.44      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.44      |
| 1.71                                          | 6.00       | 1.45      |
|                                               | 7.00       | 1.45      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.45      |
| 0.27                                          | 9.00       | 1.45      |
|                                               | 10.00      | 1.45      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.46      |
| 2.24                                          | 20.00      | 1.47      |
|                                               | 30.00      | 1.48      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.50      |
| 0.53                                          | 50.00      | 1.51      |
|                                               | 60.00      | 1.52      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.56      |
|                                               | 120.00     | 1.58      |
| 275.00                                        | 180.00     | 1.63      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.68      |
|                                               | 300.00     | 1.72      |
| 825.00                                        | 360.00     | 1.75      |
| 30%(Vp75%-25%) (m3):                          | 480.00     | 1.84      |
| 0.14                                          | 600.00     | 1.93      |
|                                               | 720.00     | 2.08      |
| As50% (m2):                                   | 840.00     | 2.26      |
| 3.64                                          | 960.00     | 2.35      |
|                                               | 1000.00    | 2.35      |
| Tp75%-25% (mins):                             |            |           |
| 550.00                                        |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 1.17E-06 |
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| Comments: |
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|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 07/05/2025 - 08/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA306    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 07/05/2025 - 08/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA306 |
| Trial Pit Length (m):      | 2.20  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

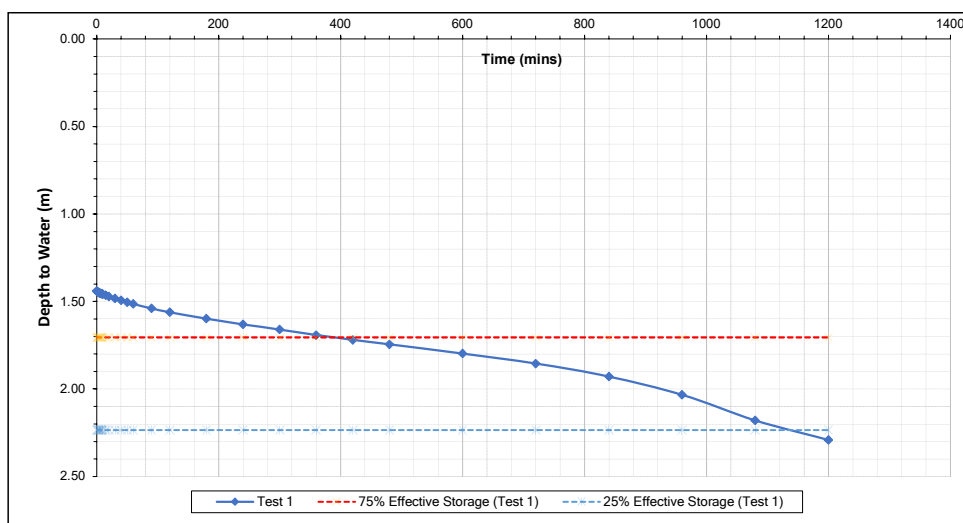
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                    |
| 0.00-0.36m bgl: Brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse flint and brick. [MADE GROUND] |
| 0.36-0.60m bgl: Brown clayey fine to coarse SAND. [WITTERING FORMATION]                                                                                        |
| 0.60-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                        |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.06                                          | 0.00       | 1.44      |
|                                               | 1.00       | 1.44      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.44      |
| 0.80                                          | 3.00       | 1.45      |
|                                               | 4.00       | 1.45      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.45      |
| 1.71                                          | 6.00       | 1.45      |
|                                               | 7.00       | 1.45      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.45      |
| 0.27                                          | 9.00       | 1.46      |
|                                               | 10.00      | 1.46      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.46      |
| 2.24                                          | 20.00      | 1.47      |
|                                               | 30.00      | 1.48      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.49      |
| 0.53                                          | 50.00      | 1.50      |
|                                               | 60.00      | 1.51      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.54      |
| 370                                           | 120.00     | 1.56      |
|                                               | 180.00     | 1.60      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 1.63      |
| 1140                                          | 300.00     | 1.66      |
|                                               | 360.00     | 1.69      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 1.72      |
| 0.14                                          | 480.00     | 1.75      |
|                                               | 600.00     | 1.80      |
| As50% (m2):                                   | 720.00     | 1.85      |
| 3.636                                         | 840.00     | 1.93      |
|                                               | 960.00     | 2.03      |
| Tp75%-25% (mins):                             | 1080.00    | 2.18      |
| 770                                           | 1200.00    | 2.29      |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 8.33E-07 |
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| Comments: |
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|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 07/05/2025<br>08/05/2025 |

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|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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|----------|
| Location |
| SA306    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA307 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.45  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

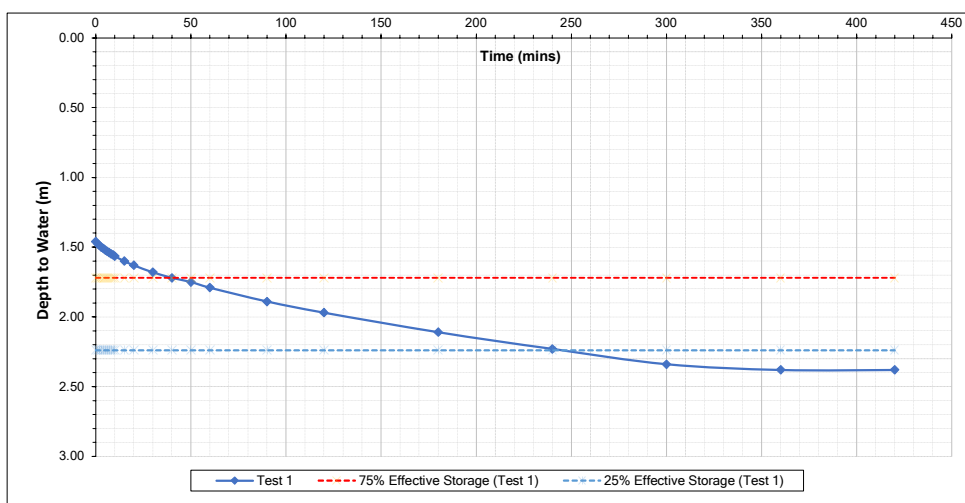
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.50m bgl: Soft dark brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse brick, tile, concrete and plastic. [MADE GROUND] |
| 0.50-1.10m bgl: Soft to firm orangeish brown mottled grey and orange sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                 |
| 1.10-2.50m bgl: Yellowish orange fine to coarse SAND with rare clay lenses. [WITTERING FORMATION]                                                                                                              |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.04                                          | 0.00       | 1.46      |
|                                               | 1.00       | 1.48      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.49      |
| 0.78                                          | 3.00       | 1.50      |
|                                               | 4.00       | 1.51      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.52      |
| 1.72                                          | 6.00       | 1.53      |
|                                               | 7.00       | 1.54      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.55      |
| 0.26                                          | 9.00       | 1.56      |
|                                               | 10.00      | 1.56      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.60      |
| 2.24                                          | 20.00      | 1.63      |
|                                               | 30.00      | 1.68      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.72      |
| 0.52                                          | 50.00      | 1.75      |
|                                               | 60.00      | 1.79      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.89      |
|                                               | 120.00     | 1.97      |
| 40                                            | 180.00     | 2.11      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 2.23      |
|                                               | 300.00     | 2.34      |
| 240                                           | 360.00     | 2.38      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 2.38      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.90                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 200                                           |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 3.45E-06 |
|-----------------------------------------|----------|

| Comments: |
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|                |                         |
|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 08/05/2025 - 09/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

|          |
|----------|
| Location |
| SA307    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA307 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.45  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

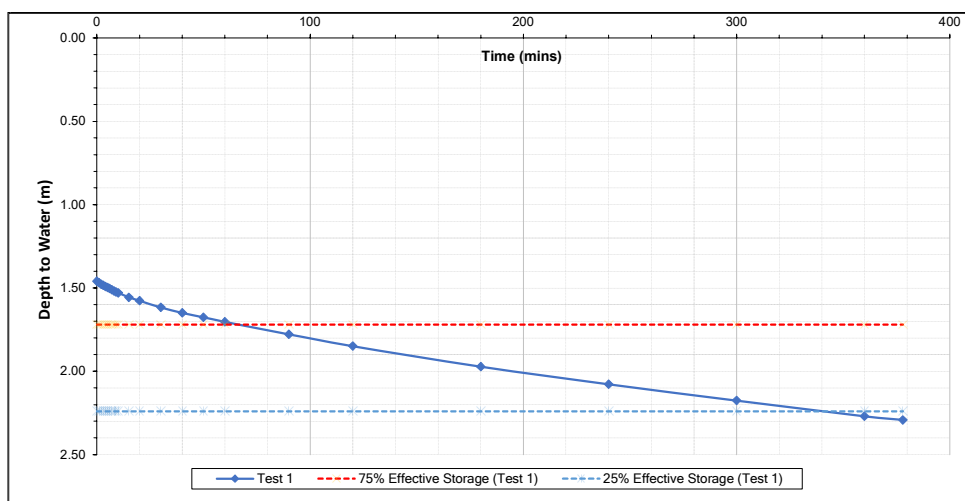
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                                                                    |
| 0.00-0.50m bgl: Soft dark brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse brick, tile, concrete and plastic. [MADE GROUND] |
| 0.50-1.10m bgl: Soft to firm orangeish brown mottled grey and orange sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                 |
| 1.10-2.50m bgl: Yellowish orange fine to coarse SAND with rare clay lenses. [WITTERING FORMATION]                                                                                                              |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.04                                          | 0.00       | 1.46      |
|                                               | 1.00       | 1.47      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.48      |
| 0.78                                          | 3.00       | 1.48      |
|                                               | 4.00       | 1.49      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.50      |
| 1.72                                          | 6.00       | 1.50      |
|                                               | 7.00       | 1.51      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.52      |
| 0.26                                          | 9.00       | 1.52      |
|                                               | 10.00      | 1.53      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.56      |
| 2.24                                          | 20.00      | 1.58      |
|                                               | 30.00      | 1.62      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.65      |
| 0.52                                          | 50.00      | 1.68      |
|                                               | 60.00      | 1.70      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.78      |
| 35.00                                         | 120.00     | 1.85      |
|                                               | 180.00     | 1.97      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 2.08      |
| 340.00                                        | 300.00     | 2.18      |
|                                               | 360.00     | 2.27      |
| 30%(Vp75%-25%) (m3):                          | 378.00     | 2.29      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.90                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 305.00                                        |            |           |

|                                         |          |
|-----------------------------------------|----------|
| DESIGN SOIL INFILTRATION RATE, f (m/s): | 2.27E-06 |
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| Comments: |
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|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 08/05/2025 - 09/05/2025 |

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| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA307    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA307 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.45  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

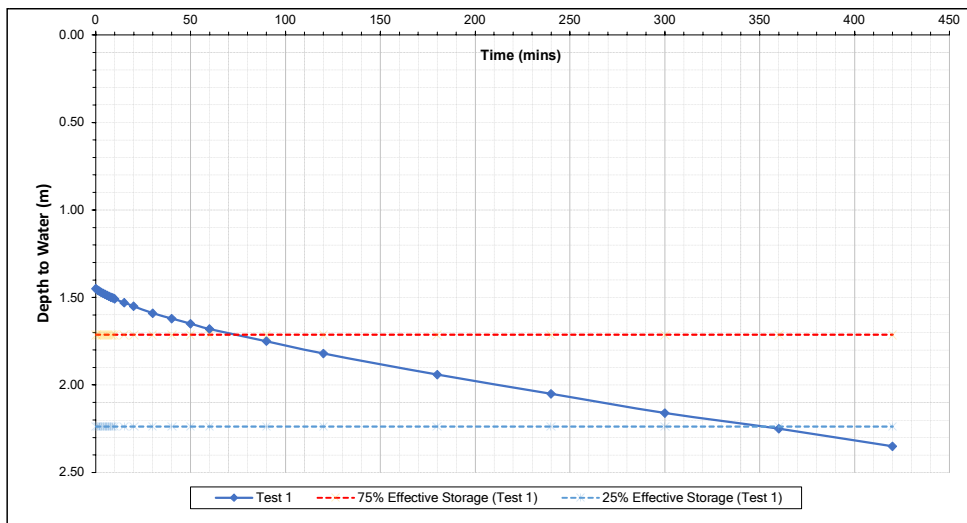
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

|                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geology Description:</b>                                                                                                                                                                                    |
| 0.00-0.50m bgl: Soft dark brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse brick, tile, concrete and plastic. [MADE GROUND] |
| 0.50-1.10m bgl: Soft to firm orangeish brown mottled grey and orange sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                 |
| 1.10-2.50m bgl: Yellowish orange fine to coarse SAND with rare clay lenses. [WITTERING FORMATION]                                                                                                              |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.05                                          | 0.00       | 1.45      |
|                                               | 1.00       | 1.46      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.46      |
| 0.79                                          | 3.00       | 1.47      |
|                                               | 4.00       | 1.48      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.48      |
| 1.71                                          | 6.00       | 1.49      |
|                                               | 7.00       | 1.49      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.50      |
| 0.26                                          | 9.00       | 1.50      |
|                                               | 10.00      | 1.51      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.53      |
| 2.24                                          | 20.00      | 1.55      |
|                                               | 30.00      | 1.59      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.62      |
| 0.525                                         | 50.00      | 1.65      |
|                                               | 60.00      | 1.68      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 1.75      |
| 75                                            | 120.00     | 1.82      |
|                                               | 180.00     | 1.94      |
| Time to Fall to 25% Effective Depth (min):    | 240.00     | 2.05      |
| 355                                           | 300.00     | 2.16      |
|                                               | 360.00     | 2.25      |
| 30%(Vp75%-25%) (m3):                          | 420.00     | 2.35      |
| 0.16                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.9225                                        |            |           |
| Tp75%-25% (mins):                             |            |           |
| 280                                           |            |           |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 2.47E-06 |
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| Comments: |
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|----------------|--------------------------|--------------------------|------------|----------|
| Site Engineer: | Date:                    | Checked and Approved By: | Date:      | Location |
| JR             | 08/05/2025<br>09/05/2025 | WB                       | 27/05/2025 | SA307    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA308 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

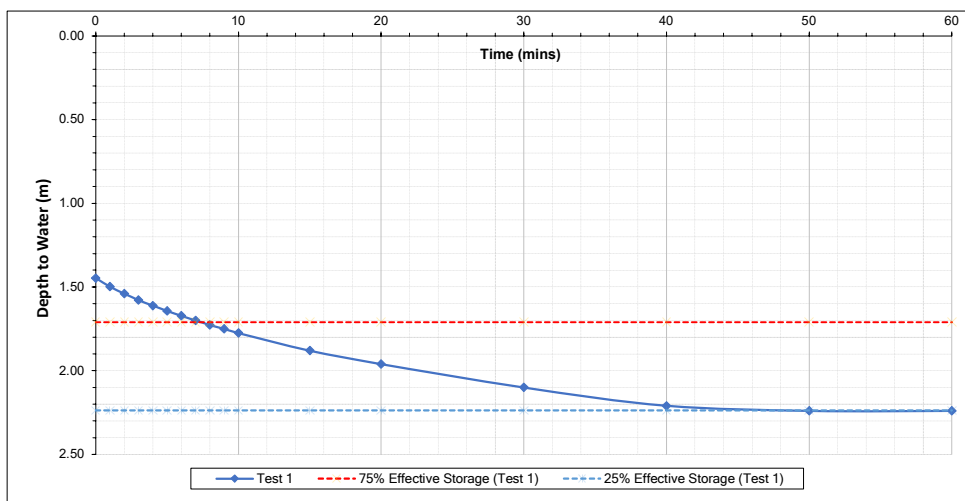
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.40m bgl: Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse wood and plastic. [MADE GROUND] |
| 0.40-0.80m bgl: Soft brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                  |
| 0.80-1.40m bgl: Soft to firm orangeish brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                |
| 1.40-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                               |

| Test Parameters                               | TEST 1     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.05                                          | 0.00       | 1.45      |
|                                               | 1.00       | 1.50      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.54      |
| 0.79                                          | 3.00       | 1.58      |
|                                               | 4.00       | 1.61      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.64      |
|                                               | 6.00       | 1.67      |
|                                               | 7.00       | 1.70      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.73      |
| 0.26                                          | 9.00       | 1.75      |
|                                               | 10.00      | 1.77      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.88      |
|                                               | 20.00      | 1.96      |
|                                               | 30.00      | 2.10      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 2.21      |
| 0.53                                          | 50.00      | 2.24      |
|                                               | 60.00      | 2.24      |
| Time to Fall to 75% Effective Depth (min):    |            |           |
| 8                                             |            |           |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 46                                            |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.76                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 38                                            |            |           |

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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 1.69E-05 |
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| Comments: |
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| Site Engineer: | Date:                   |
| JR             | 08/05/2025 - 09/05/2025 |

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| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA308    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



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|----------------------------|-------|
| Trial Pit Identification:  | SA308 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

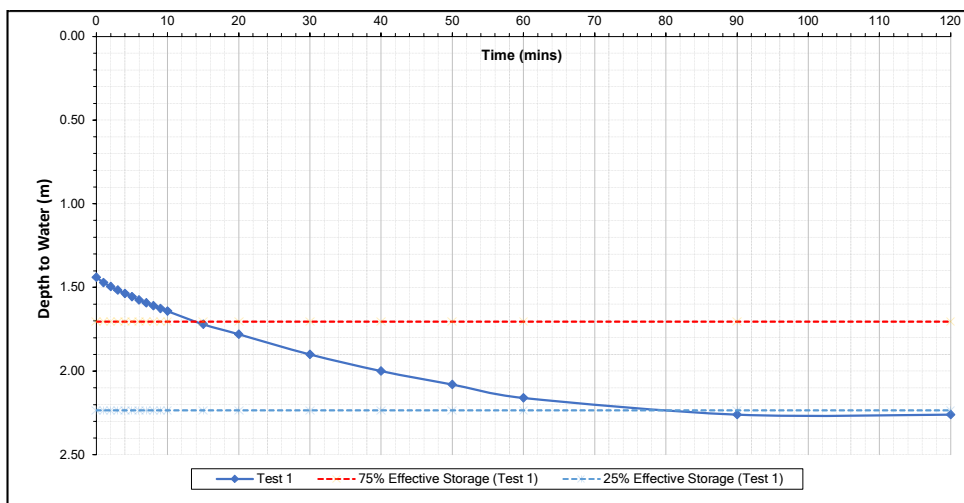
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.40m bgl: Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse wood and plastic. [MADE GROUND] |
| 0.40-0.80m bgl: Soft brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                  |
| 0.80-1.40m bgl: Soft to firm orangeish brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                |
| 1.40-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                               |

| Test Parameters                               | TEST 2     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.06                                          | 0.00       | 1.44      |
|                                               | 1.00       | 1.47      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.49      |
| 0.80                                          | 3.00       | 1.52      |
|                                               | 4.00       | 1.54      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.56      |
|                                               | 6.00       | 1.58      |
|                                               | 7.00       | 1.59      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.61      |
| 0.27                                          | 9.00       | 1.63      |
|                                               | 10.00      | 1.64      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.72      |
|                                               | 20.00      | 1.78      |
|                                               | 30.00      | 1.90      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 2.00      |
| 0.53                                          | 50.00      | 2.08      |
|                                               | 60.00      | 2.16      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 2.26      |
|                                               | 120.00     | 2.26      |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 80.00                                         |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.78                                          |            |           |
| Tp75%-25% (mins):                             |            |           |
| 64.00                                         |            |           |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 1.01E-05 |
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| Comments: |
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|----------------|-------------------------|
| Site Engineer: | Date:                   |
| JR             | 08/05/2025 - 09/05/2025 |

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| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA308    |

|                 |                         |
|-----------------|-------------------------|
| Site Name:      | Goodwillies Timber Yard |
| Site Reference: | A12342-2                |
| Test Date:      | 08/05/2025 - 09/05/2025 |



|                            |       |
|----------------------------|-------|
| Trial Pit Identification:  | SA308 |
| Trial Pit Length (m):      | 2.30  |
| Trial Pit Width (m):       | 0.40  |
| Trial Pit Depth (m):       | 2.50  |
| Groundwater Level (m bgl): | N/A   |

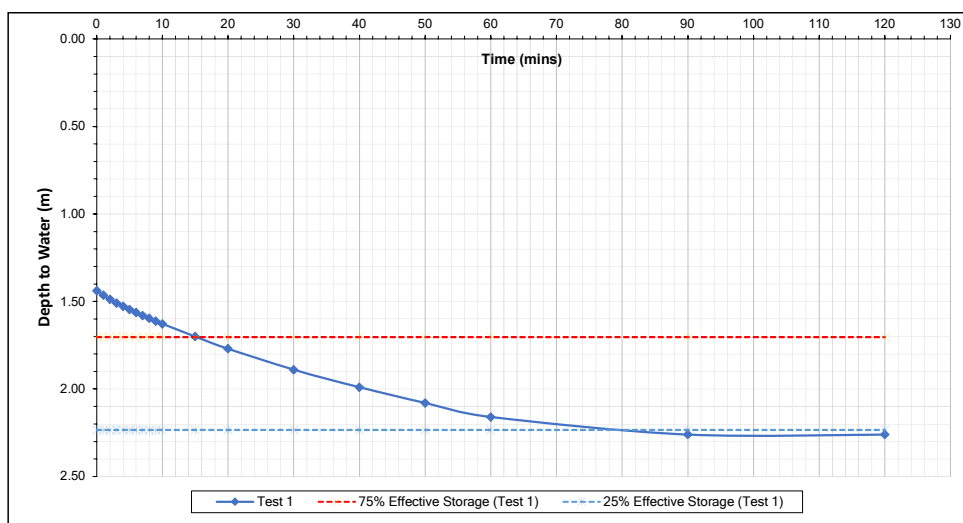
**GRAVEL FILLED SOIL INFILTRATION RATE TEST**  
20mm Clean Gravel used with 30% free void space assumed  
See BRE DG365, Soakaway Design (2016).

| Geology Description:                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.00-0.40m bgl: Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse wood and plastic. [MADE GROUND] |
| 0.40-0.80m bgl: Soft brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                                  |
| 0.80-1.40m bgl: Soft to firm orangeish brown sandy CLAY. Sand is fine to coarse. [WITTERING FORMATION]                                                                |
| 1.40-2.50m bgl: Yellowish orange fine to coarse SAND with occasional clay lenses. [WITTERING FORMATION]                                                               |

| Test Parameters                               | TEST 3     |           |
|-----------------------------------------------|------------|-----------|
| Effective Storage Depth (m):                  | Time (min) | Depth (m) |
| 1.06                                          | 0.00       | 1.44      |
|                                               | 1.00       | 1.46      |
| 75% Effective Storage Depth (m):              | 2.00       | 1.49      |
| 0.80                                          | 3.00       | 1.51      |
|                                               | 4.00       | 1.53      |
| (i.e. Depth Below Ground Level) (m):          | 5.00       | 1.55      |
| 1.70                                          | 6.00       | 1.56      |
|                                               | 7.00       | 1.58      |
| 25% Effective Storage Depth (m):              | 8.00       | 1.60      |
| 0.27                                          | 9.00       | 1.61      |
|                                               | 10.00      | 1.63      |
| (i.e. Depth Below Ground Level) (m):          | 15.00      | 1.70      |
| 2.23                                          | 20.00      | 1.77      |
|                                               | 30.00      | 1.89      |
| Effective Storage Depth Across 75% - 25% (m): | 40.00      | 1.99      |
| 0.53075                                       | 50.00      | 2.08      |
|                                               | 60.00      | 2.16      |
| Time to Fall to 75% Effective Depth (min):    | 90.00      | 2.26      |
| 16                                            | 120.00     | 2.26      |
| Time to Fall to 25% Effective Depth (min):    |            |           |
| 80                                            |            |           |
| 30%(Vp75%-25%) (m3):                          |            |           |
| 0.15                                          |            |           |
| As50% (m2):                                   |            |           |
| 3.78605                                       |            |           |
| Tp75%-25% (mins):                             |            |           |
| 64                                            |            |           |

|                                         |          |
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| DESIGN SOIL INFILTRATION RATE, f (m/s): | 1.01E-05 |
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| Comments: |
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|----------------|--------------------------|
| Site Engineer: | Date:                    |
| JR             | 08/05/2025<br>09/05/2025 |

|                          |            |
|--------------------------|------------|
| Checked and Approved By: | Date:      |
| WB                       | 27/05/2025 |

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| Location |
| SA308    |