# SUTCLIFFE INVESTIGATIONS

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**BRE 365**
**Soil Infiltration Test**

| | | | | | |
|---|---|---|---|---|---|
| **Job No.:** | 34338LG | **Job Name:** | Grey Mare Lane (2 Sites), Beswick | | |
| **Position Ref.:** | SA101 | **Date:** | 11/12/2024 | **Site Team:** | MW |

**Pit Dimensions**

| | | | | | |
|---|---|---|---|---|---|
| **Depth (m)** | 2.00 | **Width (m)** | 0.70 | **Length (m)** | 2.50 |
| **Depth to Water (m bgl)** | 1.20 | **Effective Depth (m)** | | | 0.80 |

**Soil Infiltration Test Data**

| Time (mins) | Depth (m bgl) |
|---|---|
| **0.0** | 1.20 |
| **0.5** | 1.20 |
| **1.0** | 1.20 |
| **2.0** | 1.20 |
| **3.0** | 1.20 |
| **4.0** | 1.20 |
| **5.0** | 1.20 |
| **15.0** | 1.20 |
| **30.0** | 1.21 |
| **60.0** | 1.21 |
| **90.0** | 1.21 |
| **120.0** | 1.22 |
| **150.0** | 1.22 |
| **180.0** | 1.22 |
| **210.0** | 1.23 |
| **240.0** | 1.23 |
| **270.0** | 1.23 |

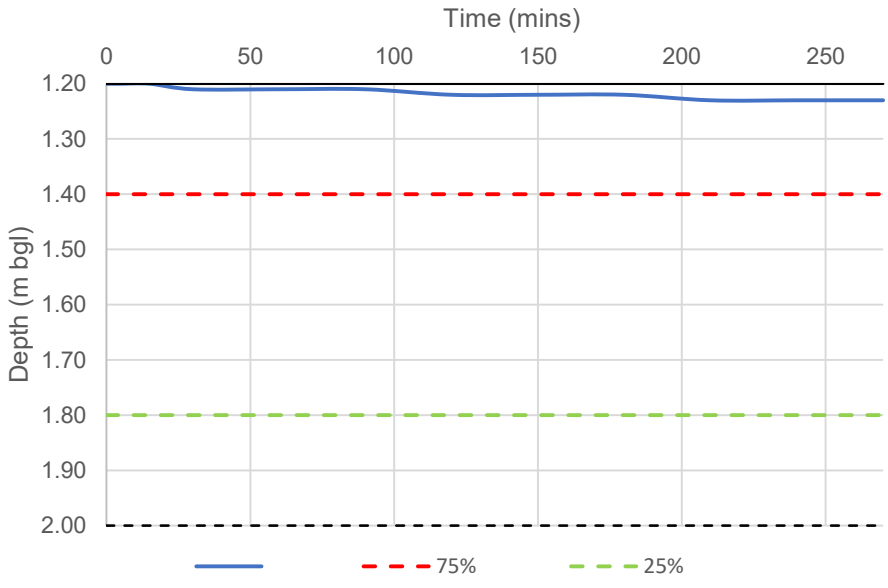
**Volume Outflowing between 75% and 25% of effective depth**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **$V_{p75-25}$** | = | **L** | x | **B** | x | **$D_{75-25}$** |
| | = | 2.50 | x | 0.70 | x | 0.40 |
| | = | 0.21 | $m^3$ | (30% Void Allowance Made) | | |

**Mean surface area through which outflow occurs, taken to be pit sides to 50% effective depth and including the base of the pit**

| | | | | | | |
|---|---|---|---|---|---|---|
| **$a_{p50}$** | = | **$L_{side}$ Area** | + | **$B_{side}$ Area** | + | **Base Area** |
| | = | 2.00 | + | 0.56 | + | 1.75 |
| | = | 4.31 | $m^2$ | | | |

**Soil Infiltration Test Graph**




| | | | |
|---|---|---|---|
| **Depth at 75% (m bgl)** | 1.40 | **Depth at 25% (m bgl)** | 1.80 |

**Infiltration Rate Calculation**

| | | | | | | |
|---|---|---|---|---|---|---|
| **$t_{p75-25}$** | = | **Time at 25%** | - | **Time at 75%** | | |
| | = | | - | | = | - |

**Soil Infiltration Rate** = **$V_{p75-25}$ / ($a_{p50}$*$t_{p75-25}$*60)**

= - **m/s** = - **mm/hr**

**Comments**

Test Failed - The test results did not provide an infiltration rate due to the inefficiencies of the ground to infiltrate. Infiltration testing has been undertaken and failed, therefore alternative drainage solutions will be required.