

# Infiltration Test BRE Digest 365

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**STINGRAY ENVIRONMENTAL  
ENGINEERING**  
Protect Our Water

**Reference Number:** SEE-S486

**Project:** 6 Knocklyon Cottages, Knocklyon Road,  
Dublin 16, D16K5C1, X312646, Y227437

**Client:** Louise Kelly & Niall Heavin

**February 2023**

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## Introduction

This report is based on the findings of a soil infiltration tests examination as per BRE Digest 365, carried out by Stingray Environmental Engineering Ltd. on the 22<sup>nd</sup> of February 2023.

As required by South Dublin County Council, this report provides calculations for soil infiltration rate in line with test requirements of BRE365.

## 1. Site Specific Information

### Information supplied by client /architect

📍 Site Address: **No.6 Knocklyon Cottages, Knocklyon Road, Dublin 16, D16K5C1, X312646, Y227437**

📍 Client: **Louise Kelly & Niall Heavin**

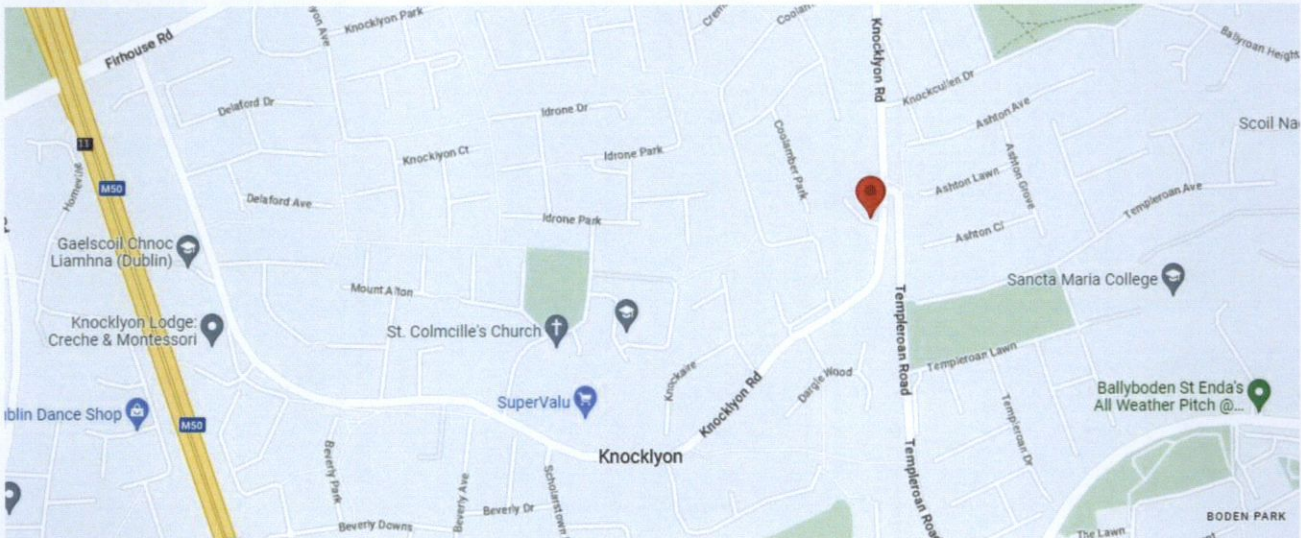


Fig 1. Site Location: D16K5C1

## 2. Infiltration Test BRE Digest 365

📍 Dimensions of the infiltration test pit: **L 1200mm x W 300mm x D 1300mm**

📍 Effective Depth adopted: **1000mm BCL.**

**Soil Infiltration rate calculated as per BRE365 soakaway test:**

### INFILTRATION TEST PIT A:

$$\text{📍 } f = V_{75-25} / (a_{50} * t_{75-25}) = 1.46628E-05 = \mathbf{0.000015m/sec}$$

where:

$$\text{📍 } V_{75-25} = 1200\text{mm} * 300\text{mm} * 500\text{mm} = 0.18\text{m}^3$$

$$\text{A}_{50 \text{ base}} = (2 * 1200\text{mm} * 500\text{mm}) + (2 * 300\text{mm} * 500\text{mm}) + (1 * 1200\text{mm} * 300\text{mm}) = 1.86\text{m}^2$$

$$\text{Fill 1 } t_{75-25} = 80\text{min} = 4800\text{sec}$$

$$\text{Fill 2 } t_{75-25} = 95\text{min} = 5700\text{sec}$$

$$\text{Fill 3 } t_{75-25} = 110\text{min} = 6600\text{sec}$$

	Date	T <sub>75</sub> =ED-250mm	T <sub>25</sub> =ED-750mm	T <sub>75-25</sub> [min]
Fill 1	22/02/2023	10:00	11:20	80
Fill 2	22/02/2023	11:30	13:05	95
Fill 3	22/02/2023	13:10	15:00	110



Fig 2. Infiltration test hole location



Fig 3. Site View North

2023/LOUISE KELLY & NIAL HEAVIN/D16K5C1/BRE365

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Fig 4. Site View South



Fig 5. Site View West



Fig 6. Site View East



Fig 7. Infiltration test location 22-02-2023



Fig 8. Infiltration test 22-02-2023



Fig 9. Infiltration test 22-02-2023



Fig 10. Infiltration test 22-02-2023

### 3. Trial Pit

✚ Dimensions of the Trial Pit: **L 1200mm x W 300mm x D 1500mm**

The main findings of the trial pit examination were as follows:

- Groundwater was not-encountered on-site at a depth of 1500mm below ground level.
- Bedrock was not-encountered on-site at a depth of 1500mm below ground level.
- Vulnerability Rating Low which would normally indicate bedrock in the area at the depth > 3m BCL.

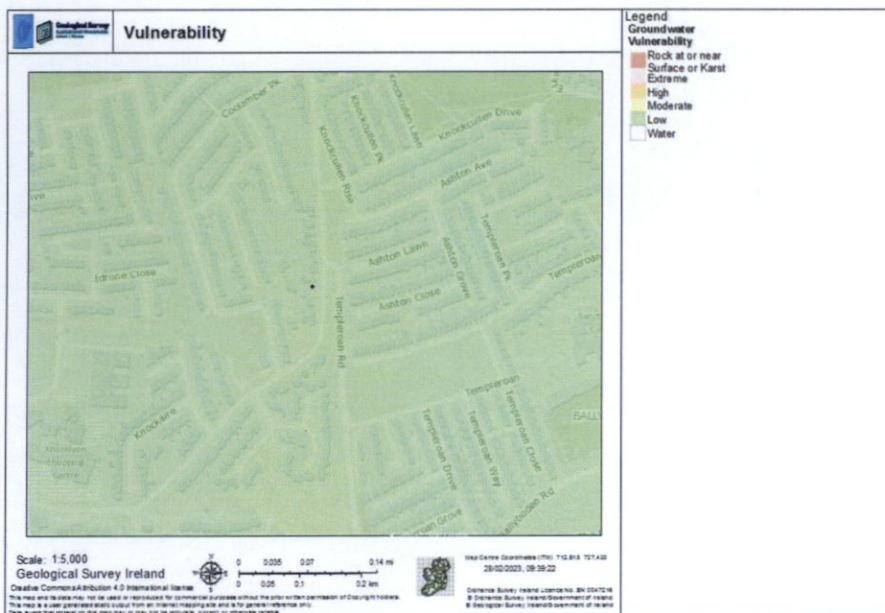


Fig 11. Vulnerability Low





Fig 12. Trial Pit 22-02-2023

Signed: *Waldemar Debowski* Date: 27 February 2023

Qualifications: B.Eng. P.Grad.Dips. FETAC Cert MIEI MIAH



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