

FURTHER INFORMATION



- SOAKAWAY TESTS
- SOAKAWAY DESIGN
- DRAINAGE DESIGN
- PERCOLATION TESTS
- SITE CHARACTERISATION TESTS

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**Factual Report on
Soakaway Test
at**

**Proposed Development at
2 Owendore Avenue, Rathfarnham, Dublin 14**

**on behalf of
John Carroll & Ann-Marie Horan**

Date : 25/02/22

1. INTRODUCTION

It is understood that it will be necessary to dispose of the storm water from the proposed Development at 2 Owendore Avenue, Rathfarnham, Dublin 14 by means of a soakaway system on site.

An investigation has been carried out to assess the suitability of the sub-soils for this purpose and to determine soakaway requirements.

2. FIELDWORK

One trial pit was excavated (see Appendix 1 for testhole location and photos) in order to ascertain subsoil conditions and the depth to groundwater. ST1 was excavated to 1.00m. Groundwater was not encountered after 48 hours.

The soakaway trial pit details are located in Appendix 2.

3. TESTING

To determine the soil infiltration rate, water was poured into the pit and records made of the fall in water level against time. Testing was continued until a constant rate of fall was established.

From the rate of fall in water level and measurement of the average internal surface area of the test pit over the test zone, the soil infiltration rate "f" was calculated.

The field data and calculations are located in Appendix 2.

The infiltration rate (f value) in the area of trial pit ST1 was determined to be 0.000344m/min.

A soakaway system should be designed by the project engineer.

Signed :



Declan Kearns
Consultant Civil / Geotechnical Engineer
for and on behalf of
Declan Kearns & Associates Ltd. t/a
Soakaway Tests

Appendix 1

Site Layout Plan & Photographs

Soakaway Test at 2 Owendore Ave.



Figure 1. Testhole ST1



Figure 2. Arisings from ST1

Soakaway Test at 2 Owendore Ave.



Figure 3. View of ST1

Appendix 2
Field Data Records & Calculations

Soakaway Design f-value from field tests

Contract: 2 Owendore Avenue, Rathfarnham, Dublin 14

Test No. ST1

Client John Carroll & Ann-Marie Horan

Date: 25/02/2022

Summary of Ground Conditions

From	To	Description	Ground water
0.00	0.30	TOPSOIL	Not met
0.30	0.50	Brown sandy gravelly CLAY	
0.50	1.00	Grey brown sandy gravelly CLAY	

Notes:

Field Data (from 3rd fill)

Depth to Water (m)	Elapsed Time (min)
0.608	0
0.617	5
0.625	10
0.632	15
0.639	20
0.653	30
0.692	60
0.730	90
0.765	120
0.798	150
0.830	180
0.861	210
0.889	240
0.914	270

Field Test

Depth of Pit (D)	1.00	m
Width of Pit (B)	0.30	m
Length of Pit (L)	0.80	m

Initial depth to Water (25%) =	0.706	m
Final depth to water (75%) =	0.902	m
Elapsed time (mins) =	203.5	

Top of permeable soil	0.70	m
Base of permeable soil	1.50	m

Base area =	0.24	m ²
*Av. side area of permeable stratum over test period =	0.4312	m ²
Total Exposed area =	0.6712	m ²

Infiltration rate (f) = Volume of water used/unit exposed area / unit time

f = 0.000344 m/min or 5.740E-06 m/sec