Trinity Green
Environmental Consultants

Clonfert
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Co. Kildare
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Vat No. 3251411B

Soil Infiltration Test for Design of Soakaway

At

15 Woodview Heights, Lucan

Prepared by

Dr. Eugene Bolton
Senior Consultant
Trinity Green

Report on Soil Infiltration Test

1.0 Introduction

To manage the surface water from the development it is proposed to construct Soakaways in accordance with BRE Digest365 As part of this, the infiltration capacity of the soil was assessed. Dr. Eugene Bolton of Trinity Green Environmental Consultants was commissioned to carry out soil Infiltration Tests in accordance with BRE Digest365 to establish the suitability of the site for disposal of water.

2.0 Visual assessment of Site

The site is located in a suburban setting where the landscape is relatively flat and on the day of the tests there was no surface water present .There is no vegetation on the site or in adjoining sites that would give any indication of likely soil permeability.

3.0 *Sub-soil profile*

A test pit was excavated to 2.0m bgl. There is a layer of brown clayey topsoil to 300mm bgl. The subsoil is a CLAY down to 600mm and is SILT/CLAY thereafter with few cobbles of varying size. At 1.7m a large boulder was encountered – not likely to be bedrock. There was no evidence of bedrock

4.0 Infiltration Tests

The Infiltration rate, generally expressed as metres per second, is the volume of water that enters the soil over a unit area and unit time. In order to obtain this measurement a pit is excavated and filled with water. The fall in the level of the water is recorded over time. The test pit had dimensions

Length 1.3m
Width 0.3m
Depth 1.5m

The base of the pit was filled with water to a depth of 1000mm and the drop in the water level was followed over time

4.1 Results

The time required for the level to fall from 75% full to 25% full (ie 50% drop) – from a water depth of 0.75m to a water depth of 0.2 5m is estimated to be 1300min.

Table 1 – Time taken for water level to fall

Elapsed Time (Mins)	Depth of Water (mm)
0	1000
5	990
28	940
52	910
65	900
88	870
111	850
130	840
205	790
273	750
367	700
556	610
972	420
1640	230

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

Volume = pit length (m) x Width (m) x Drop in water level (m)
= 1.3 x 0.3 x 0.5
= 0.195m3

Exposed area = (Length x Half the effective height x 2) + (Width x Half the effective height x 2) + Base area
= (1.3 x 0.5 x 2) + (0.3 x 0.5 x 2) + (1.3 x 0.3)
= 1.99m2

Time = 1300min

Infiltration rate (f) = 0.195/1.99/1300

= 7.5E-05 m/min

f = 1.25E-06 m/sec

5.0 *Conclusions*

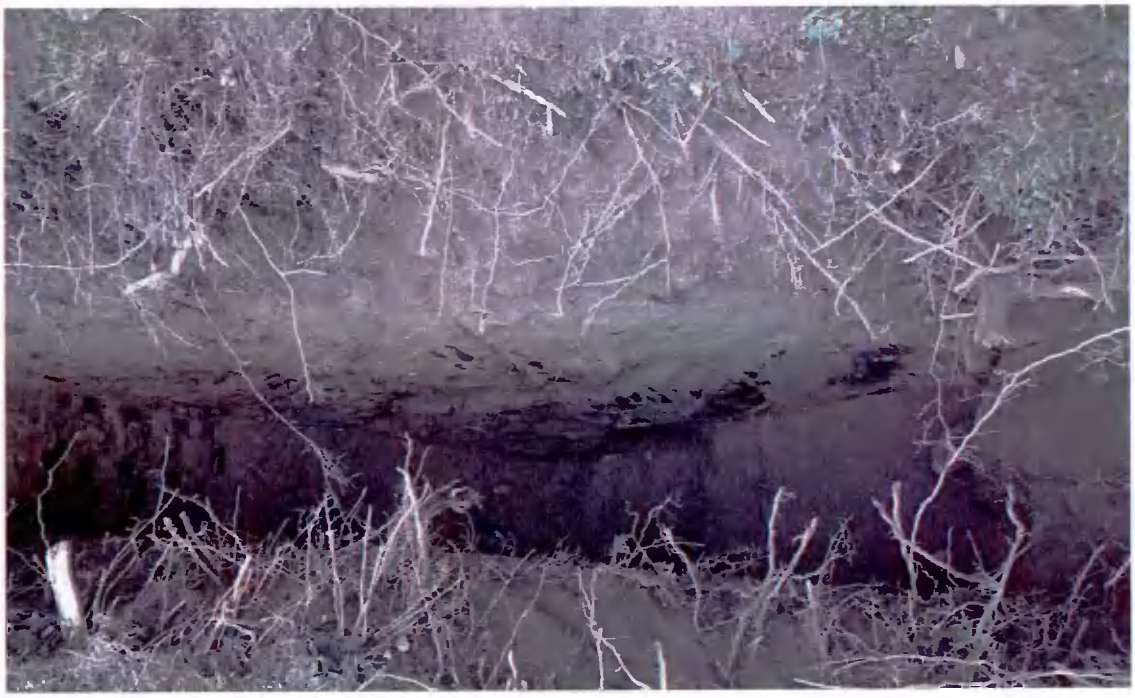
From the above observation it is concluded that the soakage is slow but the watertable is at least 2m bgl.

Signed .....

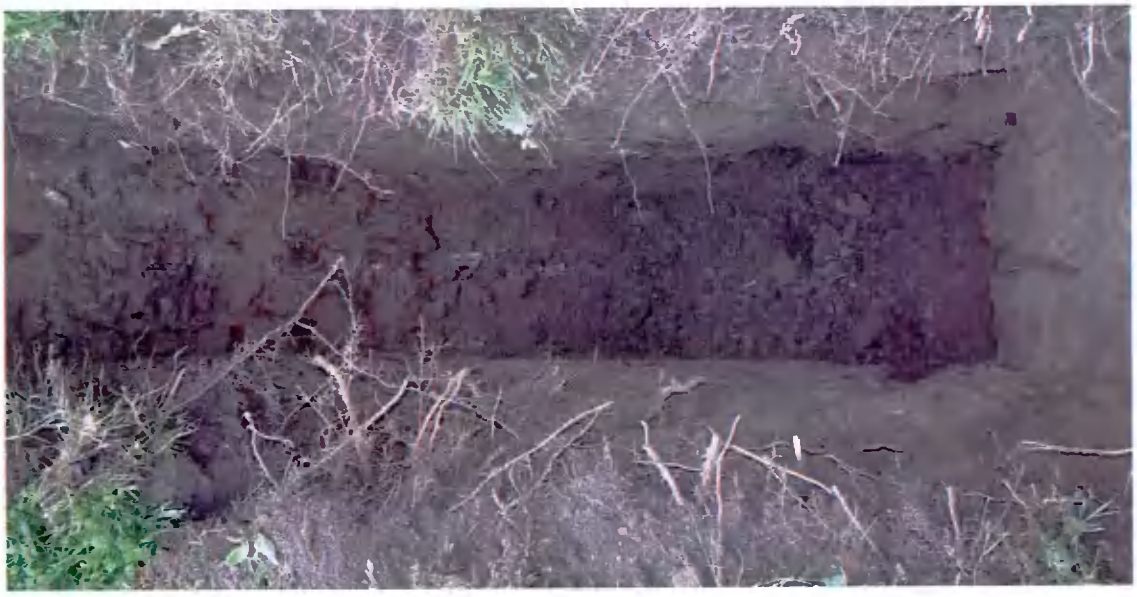
Dr. Eugene Bolton
Senior Consultant
Trinity Green
29/06/2020

Photo

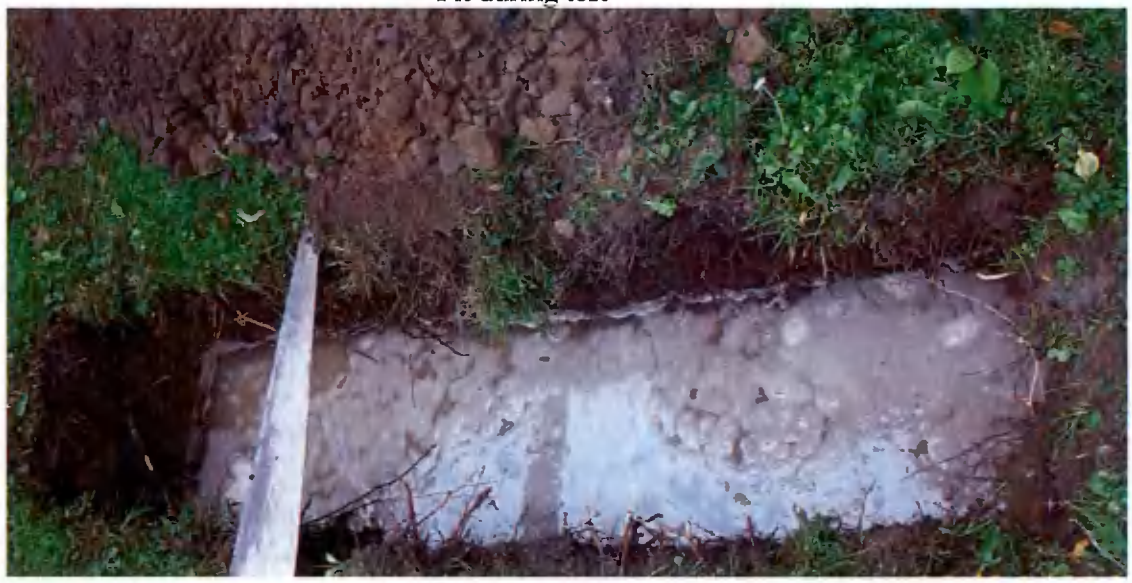
Trial Pit – Depth 2.0m – no watertable



Test Pit before water added – Depth 1.5m



Pit during test



Appendix F: Irish Water PCE email confirmation

John Bonass
15 Woodview Heights
Lucan
Dublin

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Thiar
Cathair Chorcaí

Irish Water
PO Box 448,
South City
Delivery Office,
Cork City

www.water.ie

28 April 2020

Dear John Bonass,

Re: Connection Reference No CDS20002597 pre-connection enquiry -
Subject to contract | Contract denied

Connection for Housing Development of 2 unit(s) at 15 Woodview Heights, Lucan, Dublin.

Irish Water has reviewed your pre-connection enquiry in relation to a water connection at 15 Woodview Heights, Lucan, Dublin. Based upon the details you have provided with your pre-connection enquiry and on the capacity currently available as assessed by Irish Water, we wish to advise you that, subject to a valid connection agreement being put in place, your proposed connection to the Irish Water network can be facilitated.

You are advised that this correspondence does not constitute an offer in whole or in part to provide a connection to any Irish Water infrastructure and is provided subject to a connection agreement being signed at a later date.

A connection agreement can be applied for by completing the connection application form available at **www.water.ie/connections**. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities.

If you have any further questions, please contact us on **1850 278 278** or **+353 1 707 2828, 8.00am-4.30pm, Mon-Fri** or email **newconnections@water.ie**. For further information, visit **www.water.ie/connections.**

Yours sincerely,

M O'Dwyer

Maria O'Dwyer

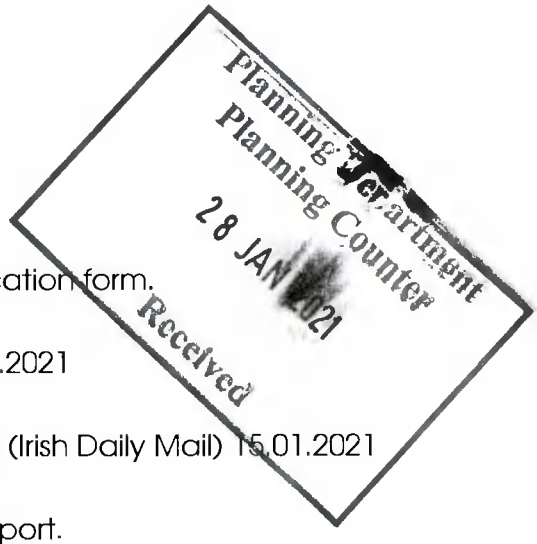
Connections and Developer Services

Appendix E: Trinity Green Report

BRIGHT DESIGN ARCHITECTS

SCHEDULE OF ENCLOSURES

Job No. 18073: **No.15 Woodview Heights, Lucan, Co.Dublin, K78 W8C7**



- 1 copy of this schedule of enclosures.
- Application Fee cheque
- 1 copy of Cover Letter.
- 1 copy of completed planning application form.
- 1 copy of the site notice dated 16.01.2021
- 1 copy of original newspaper notice - (Irish Daily Mail) 15.01.2021
- 6no. copies of Engineer's drainage report.
- 6 no. copies of the following A3 Architect's drawings:

O.S. Site Location Map		1.1000@A4
18073-100	Existing Site Plan / Cont. Elevations	1.250@A3
18073-101	Existing Plans	1.100@A3
18073-110	Existing Elevations	1.100@A3
18073-111	Existing Elevations	1.100@A3
18073-112	Existing Section / Gate Elevation	1.100@A3
18073-200	Proposed Site Plan / Cont. Elevations	1.250@A3
18073-201	Proposed Plans	1.100@A3
18073-202	Proposed Plans	1.100@A3
18073-210	Proposed Elevations	1.100@A3
18073-211	Proposed Elevations	1.100@A3
18073-212	Proposed Section / Gate Elevation	1.100@A3
1083-01	Site survey	

NOTE:

- Certificate of exemption from the provisions of Section 96 of the Planning and Development Act 2000 issued for previous planning application – REF: SD19A/0386

Registered Address : 4 Seafield Park, Booterstown, Blackrock, Co. Dublin
Directors : A. Burns / M. Frain