



Whyte Planning Consultants Ltd.
Great Connell, Newbridge, Co. Kildare. 086 6001194, info@derekwhyte.ie

Name of Applicant: RONAN AND EMMA BEIRNE

PLANNING COMPLIANCE CONDITION NO.4 OF PLANNING REFERENCE SD21B/0544

As engineer for the above project, we visited the site on 9th September 2023 to undertake an BRE 365 Soak hole test. On arrival at the site, we found that the site was waterlogged, and we proceeded to excavate a small trial hole but abandoned the excavation due to an entirely unsuitable site. The topsoil layer and subsoil layer were completely saturated, and we encountered the water table at 750mm below ground.

A BRE Digest 365 test cannot be accommodated on site.





1.0 FIELDWORK

A pit (SA1) was excavated in the proposed soakaway location, to assess the ground conditions.

2.0 DESIGN

Please refer to Drawing No. RB/COM-002 for surface water connection proposal.

3.0 RECOMMENDATIONS

It is recommended that a surface water sewer connection be made to the public system.

It was noted on the day of inspection that the existing house currently has a surface water connection to the public surface water and therefore the only additional surface water discharge to the public sewer would be from the proposed extension which is approximately 32.5 sq.m of additional development.

The additional development will not contribute significantly to the surface water discharge on site with a 1 in 100 storm event adding a maximum of 1 cubic metres of surface water discharge, please refer to calculations attached.



Signed:

Derek Whyte.

Planning Consultant and Civil Engineer.

Cert Tech Eng BEng, MSc Spatial Planning., Dip Law, Dip. Planning and Environmental Law, MIEI, MIPI.



APPENDIX.

- Surface Water Calculations.
- Soil Profile
- Site Layout Plan

Job No:

Derek Whyte Design & Planning

Great Connell, Newbridge, Co. Kildare

Site location: 43 FORTFIELD PARK, D6W

Pit No: SA1

Client: BEIRNE

Page No: 1 of 1

Architect: Derek Whyte

Date: 09/09/2023

Depth (m)	Geotechnical Description	Depth	Sample Number	Sample Type	Sample Depth
	Compacted TOPSOIL	0.3			
- 0.5	highly compacted sticky laxy CLAY				
- 1.0	WATER TABLE ENCOUNTERED	1.105			
- 1.5					
- 2.0					
- 2.5					
- 3.0					
- 3.5					
- 4					
- 4.5					

Depth to groundwater: Not encountered at 1.1m

Depth to bedrock: Not encountered at 1.1m

Notes:

Site Name :							
43 FORTFIELD PARK							
Summary Site Data:							
Total Site Area :	0.057		Each Site Area(approx)				
Equivalent Impermeable Site Area :	33	m ²	Area of Impermeable roof and hardstanding area				
Allowable Storm Runoff Rate :	2.5	l/s per hA of Total site Area (ref.Dublin City Council Stormwater Management Policy)					
Allowable Site Runoff :	0.1	l/s					
Storm Table 1. Calculation of site runoff characteristics							

Total Site Area : **0.057**
 Equivalent Impermeable Site Area : **33 m2**
 Allowable Storm Runoff Rate : **2.5 l/s per hA of Total site Area**
 Allowable Site Runoff : **0.1 l/s**

Extreme Rainfall Event "M10-0"				Runoff		Attenuation
Duration	Duration	depth	rate	Total	Excess	Volume
minutes	hrs	mm	mm/hr	l/s	l/s	m3
5	0.08	7.90	94.80	0.87	0.73	0.22
10	0.17	11.70	70.20	0.64	0.50	0.30
15	0.25	14.00	56.00	0.51	0.37	0.33
30	0.50	18.50	37.00	0.34	0.20	0.35
	1	23.80	23.80	0.22	0.08	0.27
	2	29.50	14.75	0.14	-0.01	-0.05
	4	37.00	9.25	0.08	-0.06	-0.83
	6	42.00	7.00	0.06	-0.08	-1.69
	10	49.60	4.96	0.05	-0.10	-3.49
	24	65.90	2.75	0.03	-0.12	0.00

Required Attenuation Volume for extreme Storm Event :

0 m3

Storm Table 2alt. Calculation of 10 year attenuation volume requirement - M10 Storm.

Total Site Area : 0.057
 Equivalent Impermeable Site Area : 33 m²
 Allowable Storm Runoff Rate : 2.5 l/s per hA of Total site Area
 Allowable Site Runoff : 0.1 l/s

Return Period : 10 years

Extreme Rainfall Event				Runoff	Attenuation	
Duration	Duration	depth	rate	Total	Excess	Volume
minutes	hrs	mm	mm/hr	l/s	l/s	m ³
1	0.02	2.20	132.00	1.21	1.07	0.06
2	0.03	3.80	114.00	1.05	0.90	0.11
5	0.08	6.90	82.80	0.76	0.62	0.18
10	0.17	9.90	59.40	0.54	0.40	0.24
15	0.25	12.50	50.00	0.46	0.32	0.28
30	0.50	16.30	32.60	0.30	0.16	0.28
	1	20.70	20.70	0.19	0.05	0.17
	2	26.00	13.00	0.12	-0.02	-0.17
	4	32.00	8.00	0.07	-0.07	-1.00
	6	38.00	6.33	0.06	-0.08	-1.82
	12	48.00	4.00	0.04	-0.11	-4.57
	24	57.00	2.38	0.02	-0.12	0.00
	48	68.00	1.42	0.01	-0.13	0.00

Required Attenuation Volume for extreme 10 year Storm Event :

0 m³

Storm Table 2. Calculation of 10 year attenuation volume requirement

Total Site Area : **0.057**
 Equivalent Impermeable Site Area : **33 m²**
 Allowable Storm Runoff Rate : **2.5 l/s per hA of Total site Area**
 Allowable Site Runoff : **0.1 l/s**

Return Period : **20 years**

Extreme Rainfall Event				Runoff		Attenuation
Duration	Duration	depth	rate	Total	Excess	Volume
minutes	hrs	mm	mm/hr	l/s	l/s	m ³
1	0.02	2.70	162.00	1.49	1.34	0.08
2	0.03	4.60	138.00	1.27	1.12	0.13
5	0.08	8.30	99.60	0.91	0.77	0.23
10	0.17	12.10	72.60	0.67	0.52	0.31
15	0.25	15.40	61.60	0.56	0.42	0.38
30	0.50	19.90	39.80	0.36	0.22	0.40
	1	25.00	25.00	0.23	0.09	0.31
	2	31.00	15.50	0.14	0.00	0.00
	4	38.00	9.50	0.09	-0.06	-0.80
	6	44.00	7.33	0.07	-0.08	-1.63
	12	55.00	4.58	0.04	-0.10	-4.34
	24	66.00	2.75	0.03	-0.12	-10.13
	48	78.00	1.63	0.01	-0.13	0.00

Required Attenuation Volume for extreme 30 year Storm Event :

0 m³

Storm Table 3. Calculation of 30 year attenuation volume requirement

Total Site Area :		0.057				
Equivalent Impermeable Site Area :		33		m2		
Allowable Storm Runoff Rate :		2.5		l/s per hA of Total site Area		
Allowable Site Runoff :		0.1		l/s		
Return Period :		100		years		
Extreme Rainfall Event				Runoff	Attenuation	
Duration	Duration	depth	rate	Total	Excess	Volume
minutes	hrs	mm	mm/hr	l/s	l/s	m3
1	0.02	3.30	198.00	1.82	1.67	0.10
2	0.03	5.80	174.00	1.60	1.45	0.17
5	0.08	10.50	126.00	1.16	1.01	0.30
10	0.17	15.50	93.00	0.85	0.71	0.43
15	0.25	19.90	79.60	0.73	0.59	0.53
30	0.50	26.00	52.00	0.48	0.33	0.60
	1	32.00	32.00	0.29	0.15	0.54
	2	38.00	19.00	0.17	0.03	0.23
	4	46.00	11.50	0.11	-0.04	-0.53
	6	54.00	9.00	0.08	-0.06	-1.30
	12	67.00	5.58	0.05	-0.09	-3.95
	24	79.00	3.29	0.03	-0.11	-9.71
	48	92.00	1.92	0.02	-0.12	0.00
<i>Required Attenuation Volume for extreme 100 year Storm Event :</i>					1 m3	
Storm Table 6. Calculation of 100 year attenuation volume requirement.						



COMPLIANCE

SITE OUTLINED RED

EXISTING DEVELOPMENT

PROPOSED SW SEWER
EXISTING PUBLIC SW SEWER

Prepared by: Derek Whyte 141 St. Charles Street, Suite 200, St. John's, NL A1B 2X4 Tel: 709-462-2121 Fax: 709-462-1124 www.derekwhyte.com		Client: Great Council Cable Park St. John's Tel: 709-462-1124	
Client Name: Korun and Emma Behne		Project: Compliance	
Project: Proposed Surface Water connection at No. 43 Fenwick Park Dolan St, 100185		Site Name: SITE LAYOUT PLAN	
Date: Sept 2023	Scale: 1:2000 (A3)	Drawn: MARCOWSKI	