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Planning Department
South Dublin County Council,
County Hall, Tallaght,
Dublin 24. D24 YNN5
Date: 24 September 2022

Re: Additional Information Reg Ref; SD22B/0192
19 WAINSFORT DRIVE, TERENURE DUBLIN 6W. – D6W DT88

Dear Sir/madam,

Please find enclosed additional information drawing No. 1A as requested (6 x copies). The revised drawing shows the location / layout of the existing foul and surface water drains. It is proposed to provide a soak away within the rear garden to accommodate the surface water gathered on site in compliance with BRE365. I also enclose documentation provided and prepared by David Ryan "Cilltron Limited" percolation tests. The documentation comprises of the soil percolation test carried out on site & drawing No. 1B and calculations / report in compliance with BRE365 including a site layout plan and section through the soak away tank.

Is mise le meas,

Richard McGrath



PercolationTests.ie
Planning Assessments & Land Surveys

Tel: 087 6636 757 Email: percolationtests@gmail.com Web: www.percolationtests.ie

BRE Digest 365 Report.

Prepared on behalf of:

Aoife Halligan & Gyula Toth

At:

**19 Wainsfort Drive,
Terenure,
D6W.**



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Scope of Report.

The findings of this report are the result of an on-site infiltration test. Interpretations and conclusions included in the report are based on knowledge of the ground conditions following detailed investigations, as well as the regional soils, subsoils and bedrock geology, and the experience of the author. David Ryan has prepared this report in line with the best current practice and with all reasonable skill, care and diligence in consideration of the limits imposed by the survey techniques used and resources devoted to it by agreement with the client.

David Ryan accepts no responsibility for any matters arising if any recommendations contained in this document are not carried out, or are partially carried out, without further advice being obtained from David Ryan.

Cillron Limited
 Newtownmoyaghy, Kilcock, Co. Kildare
 www.percolationtests.ie
 Tel. 087 6636757

BRE Digest 365 Test

Revision: 1.00

Job No: Soakpit 1 Page: C/01

Section: Aolfe Halligan, 19 Wainsfort Drive, Terenure, D6W Prepared By: DR Date: 11/08/2022

ALTERNATIVE SOAKAWAY SIZES			
	trench soakaways		
	width of trench [mm]:	450	600
required trench length [m]:	5.01	4.03	2.88
	ring soakaways		
	diameter of ring [mm]:	1500	2100
required pit diameter [m]:	1.55	1.55	1.55

* Based on effective depth and number of pits as in Soakaway Data table

SUMMARY OF CALCULATIONS	
critical design rainfall duration t_{crit}	= 120 min
required storage volume V_{req}	= 0.99 m ³
provided storage volume V_{prov}	= 1.14 m ³
utilisation factor	= 0.87 .OK
required time to discharge 50% t_{50}	= 2.74 hours
utilisation factor	= 0.11 .OK

GENERAL DATA	
site location:	Ireland
soakaway type:	infilled pit or trench
impermeable area drained to soakaway 'A' [m ²]	= 40
60 min rainfall depth of 5 year return period 'R' [mm]	= 16
M5-60 to M5-2d rainfall ratio 'Y'	= 0.28
allowance for climate change:	20%

SOAKAWAY DATA	
soakaway width 'W' [m]	= 1.50
soakaway length 'L' [m]	= 2.00
total depth from ground level 'D _b ' [m]	= 1.00
depth to drain invert level 'D _d ' [m]	= 0.80
soakaway effective depth 'D _{eff} ' [m]	= 0.40
free volume in infill aggregate [%]	= 95

SOIL INFILTRATION DATA	
allowance for infiltration through soakaway base	20%
available on-site infiltration test results	<input checked="" type="radio"/> Yes <input type="radio"/> No
use soakaway trial pit table below	
internal surface area of trial pit 'a _{psd} ' [m ²]	= 0.80
storage volume between 75-25% 'V _p ' [m ³]	= 0.05
time for water to fall from 75-25% 't _p ' [min]	= 36.00
soil infiltration rate 'T' [m/s]	= 2.89E-05

SOAKAGE TRIAL PIT DATA	
soakage trial pit width 'W _t ' [m]	= 0.50
soakage trial pit length 'L _t ' [m]	= 1.00
total depth from ground level 'D _{tb} ' [m]	= 1.00
depth to pipe invert level 'D _{tp} ' [m]	= 0.80
soakage trial pit effective depth 'D _{teff} ' [m]	= 0.20
free volume in infill aggregate [%]	= 100

NOTE: faces of excavation assumed to be vertical

Infiltration rate: Very good – No seasonal high water table noted above 1m bgl.

REQUIRED STORAGE CAPACITY PER RAINFALL DURATION

rainfall duration [min]	rainfall factor Z1	M5-D rainfalls [mm]	M30-D		Ignore		Ignore		outflow from soakaway [m ³]	required storage [m ³]
			Z2	rainfalls [mm]	inflow [m ³]	Z2	rainfalls [mm]	inflow [m ³]		
5	0.33	5.21	1.44	9.02	0.36				0.02	0.34
10	0.48	7.57	1.47	13.31	0.53				0.03	0.50
15	0.58	9.14	1.48	16.24	0.65				0.05	0.60
30	0.76	11.96	1.49	21.41	0.86				0.10	0.75
60	1.00	15.70	1.49	28.08	1.12				0.21	0.91
120	1.27	19.88	1.47	35.15	1.41				0.42	0.99
240	1.63	25.53	1.46	44.67	1.79				0.83	0.95
360	1.86	29.20	1.45	50.67	2.03				1.25	0.78
600	2.22	34.79	1.43	59.66	2.39				2.08	0.30
1440	3.05	47.85	1.38	79.36	3.17				5.00	0.00

* Z2 is a growth factor from M5 rainfalls

SOAKAGE TRIAL PIT INFILTRATION TEST RESULTS

water level measurement N ^o .		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Soakage Trial 1	time [min] =	0	60																	
	depth to water [m] =	0.80	0.90																	
Soakage Trial 2	time [min] =	0	65																	
	depth to water [m] =	0.80	0.90																	
Soakage Trial 3	time [min] =	0	72																	
	depth to water [m] =	0.80	0.90																	

DETAILS TO BE CHECKED AND VERIFIED BY THE BUILDING CONTROLLER (BC) OR CONTRACTOR/DIRECT LABOR CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORK OR ACTIVITIES.

CLIENT
Aoife Halligan & Gyula Toth

PROJECT
19 Wainefort Drive, Terenure, DOW.

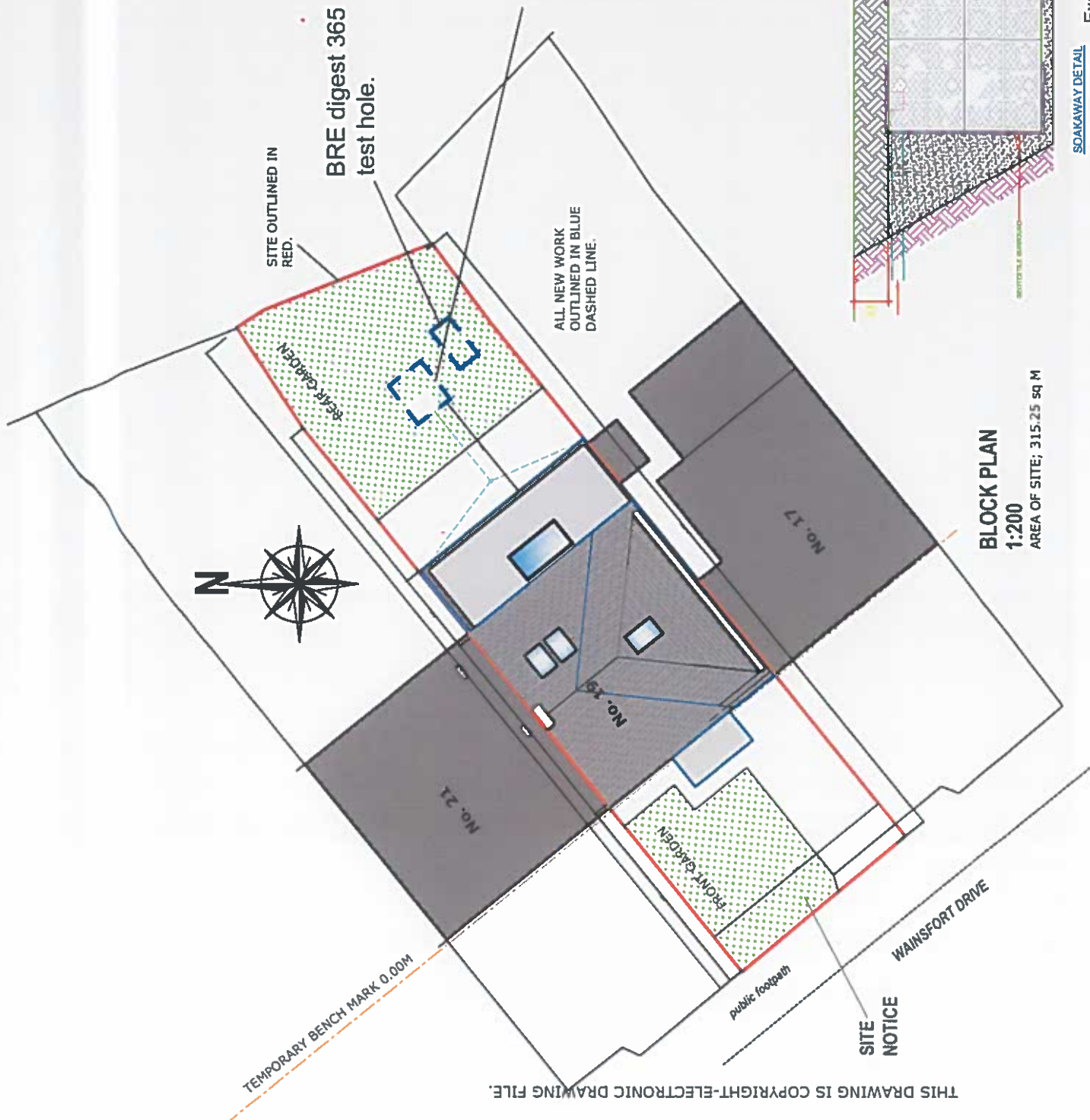
CLIENT
Cilliron Limited

Site Suitability Assessments
& Land Surveys
Newtownmoyaghy
Kilcock
Co Meath
Ireland
Mobile: 0878638757
Email: percolationtests@gmail.com

SCALE
SCALE BY
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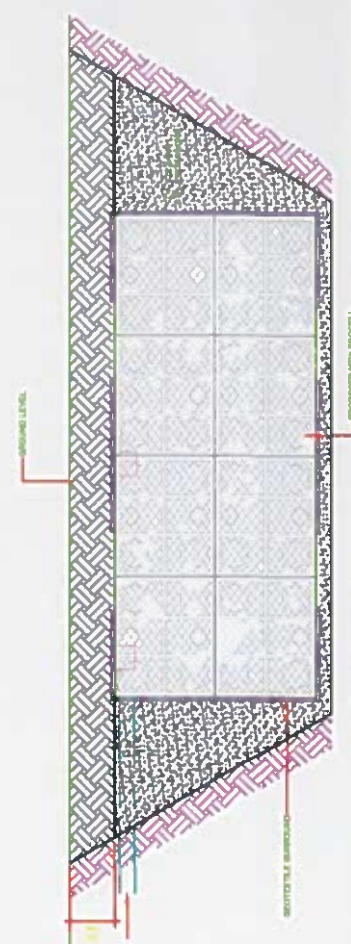
DATE
ISSUE DATE
11/08/2022

FOR PLANNING PURPOSES ONLY



THIS DRAWING IS COPYRIGHT-ELECTRONIC DRAWING FILE.

Min 1.0m³ storage required.
2.0m x 1.5m with an effective depth of 0.40m (see attached calc page).
Soakpit to be located min 5m from any dwelling & 3m from any boundary.
The soakpit shall include an overflow to the existing SW drainage.

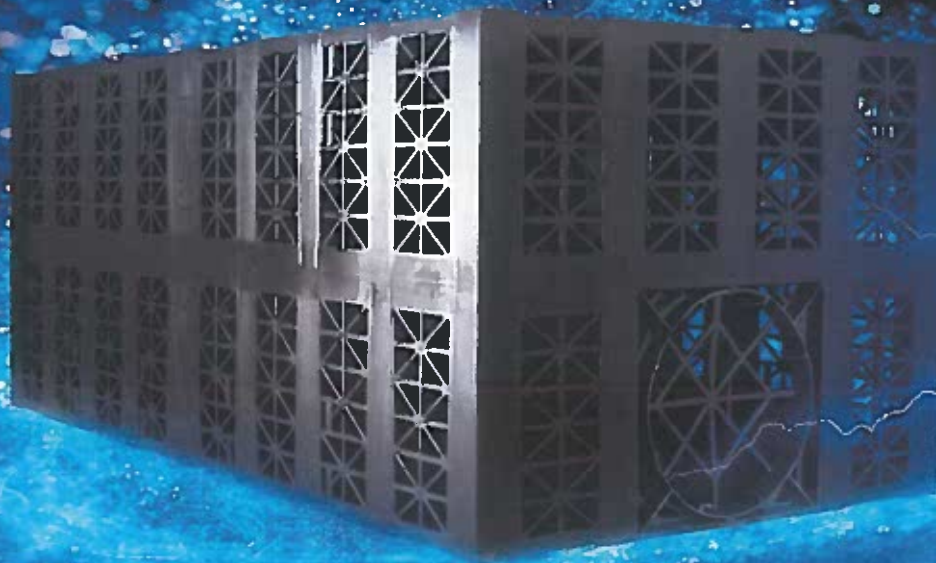


Example cross section not to scale.

AquaCell

Re-engineered to rain
supreme for years to come

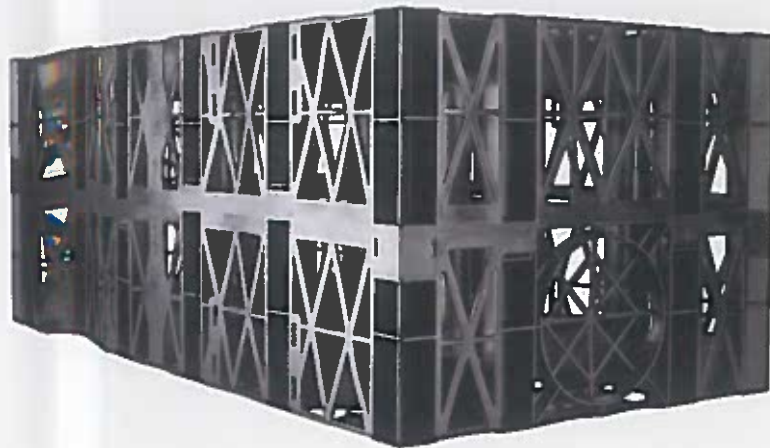
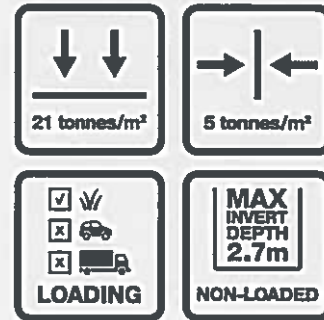
The new AquaCell range engineered
from reformulated, recycled material.



wavin

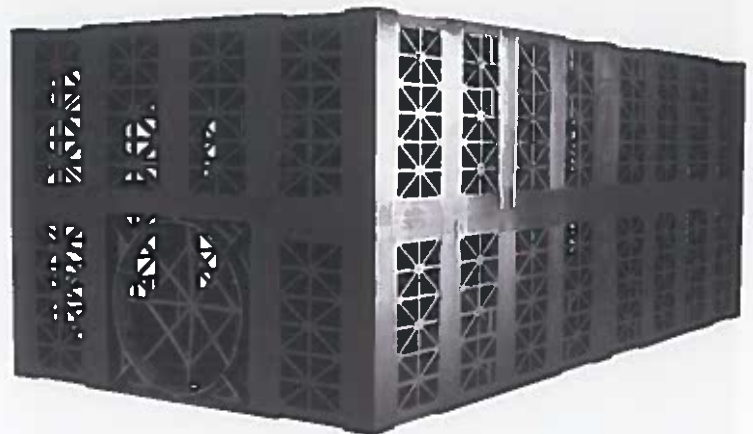
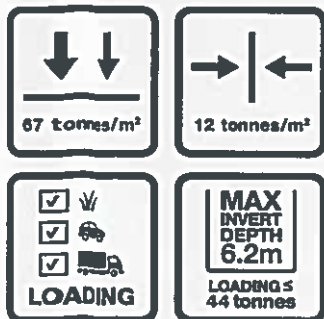
AquaCell ECO

ECO is manufactured from specially reformulated, recycled material and has been designed for shallow, non-trafficked, landscaped applications.



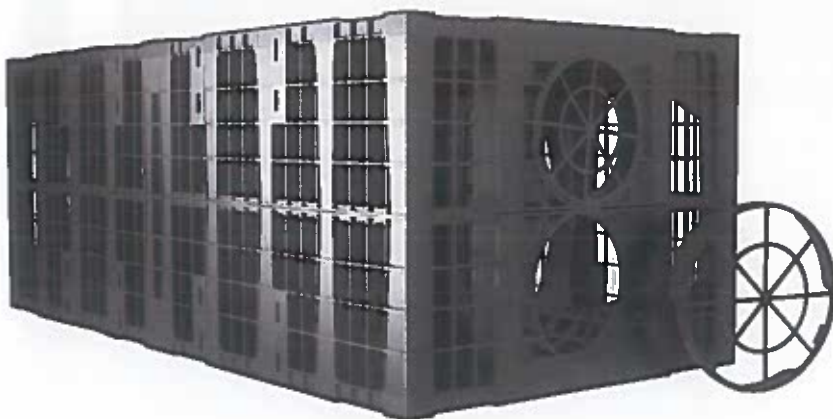
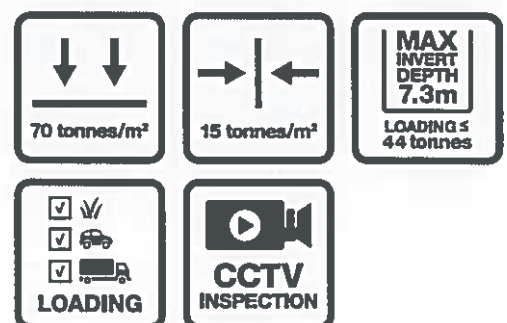
AquaCell CORE-R

CORE-R has been designed for use in deep applications, subject to both regular and heavy traffic loadings, such as cars and HGV's.



AquaCell PLUS-R

PLUS-R has been designed primarily for use in applications where inspection is required, and is suitable for use in all applications from landscaped areas to heavily trafficked areas.





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AquaCell systems are the tried, tested and fully BBA approved answer to the effective management of excessive rainfall, whether through attenuation or infiltration solutions.

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Tel. 0844 856 5152 | www.wavin.co.uk | info@wavin.co.uk

Met Eireann

Return Period Rainfall Depths for sliding Durations
Irish Grid: Easting: 313474, Northing: 227028,

DURATION	Interval		Years																
	6months	1year	2,	3,	4,	5,	10,	20,	30,	50,	75,	100,	150,	200,	250,	500,			
5 mins	2.7,	3.9,	4.6,	5.6,	6.3,	6.9,	8.8,	10.9,	12.4,	14.5,	16.4,	17.9,	20.2,	22.0,	23.5,	N/A,			
10 mins	3.7,	5.4,	6.4,	7.8,	8.8,	9.6,	12.2,	15.3,	17.3,	20.2,	22.8,	24.9,	28.1,	30.6,	32.7,	N/A,			
15 mins	4.4,	6.4,	7.5,	9.2,	10.4,	11.3,	14.4,	17.9,	20.3,	23.8,	26.9,	29.3,	33.1,	36.0,	38.5,	N/A,			
30 mins	5.8,	8.3,	9.8,	11.9,	13.4,	14.6,	18.4,	22.9,	25.8,	30.0,	33.8,	36.8,	41.4,	45.0,	48.1,	N/A,			
1 hour	7.6,	10.9,	12.7,	15.5,	17.3,	18.8,	23.6,	29.1,	32.8,	38.0,	42.7,	46.3,	51.9,	56.3,	60.0,	N/A,			
2 hours	10.1,	14.3,	16.6,	20.0,	22.4,	24.2,	30.2,	37.1,	41.6,	48.1,	53.8,	58.3,	65.1,	70.5,	75.0,	N/A,			
3 hours	11.8,	16.7,	19.4,	23.3,	26.0,	28.1,	35.0,	42.7,	47.9,	55.1,	61.6,	66.6,	74.4,	80.4,	85.4,	N/A,			
4 hours	13.3,	18.7,	21.6,	26.0,	29.0,	31.3,	38.8,	47.3,	52.9,	60.8,	67.8,	73.3,	81.7,	88.2,	93.6,	N/A,			
6 hours	15.7,	21.9,	25.3,	30.3,	33.6,	36.3,	44.8,	54.5,	60.8,	69.8,	77.7,	83.8,	93.3,	100.6,	106.7,	N/A,			
9 hours	18.4,	25.7,	29.5,	35.2,	39.1,	42.1,	51.8,	62.8,	70.0,	80.1,	89.0,	95.9,	106.5,	114.7,	121.5,	N/A,			
12 hours	20.7,	28.7,	32.9,	39.3,	43.5,	46.8,	57.5,	69.5,	77.3,	88.3,	98.0,	105.5,	117.0,	125.9,	133.3,	N/A,			
18 hours	24.4,	33.6,	38.5,	45.7,	50.6,	54.3,	66.5,	80.1,	88.9,	101.3,	112.3,	120.7,	133.6,	143.6,	151.8,	N/A,			
24 hours	27.4,	37.6,	43.0,	50.9,	56.3,	60.4,	73.7,	88.6,	98.2,	111.7,	123.7,	132.8,	146.8,	157.7,	166.6,	197.6,			
2 days	34.4,	46.1,	52.1,	61.0,	66.9,	71.4,	85.9,	101.8,	112.0,	126.2,	138.6,	148.1,	162.5,	173.5,	182.6,	213.8,			
3 days	40.0,	52.9,	59.5,	69.1,	75.5,	80.3,	95.7,	112.6,	123.3,	138.2,	151.1,	160.9,	175.8,	187.1,	196.5,	228.4,			
4 days	45.0,	58.9,	65.9,	76.2,	83.0,	88.1,	104.3,	122.0,	133.2,	148.7,	162.0,	172.2,	187.5,	199.2,	208.7,	241.4,			
6 days	53.7,	69.3,	77.2,	88.5,	95.9,	101.6,	119.3,	138.3,	150.4,	166.8,	181.0,	191.8,	207.9,	220.2,	230.2,	264.2,			
8 days	61.4,	78.5,	87.0,	99.3,	107.3,	113.3,	132.3,	152.5,	165.3,	182.6,	197.6,	208.8,	225.7,	238.5,	248.9,	284.2,			
10 days	68.5,	86.8,	96.0,	109.1,	117.6,	124.0,	144.0,	165.3,	178.7,	196.9,	212.5,	224.2,	241.8,	255.0,	265.8,	302.2,			
12 days	75.1,	94.6,	104.4,	118.2,	127.2,	133.9,	154.9,	177.2,	191.2,	210.1,	226.2,	238.4,	256.6,	270.3,	281.4,	318.8,			
16 days	87.4,	109.1,	119.8,	135.0,	144.7,	152.1,	174.9,	198.8,	213.9,	234.1,	251.3,	264.2,	283.4,	297.9,	309.6,	349.0,			
20 days	98.8,	122.4,	134.0,	150.3,	160.6,	168.7,	193.0,	218.5,	234.5,	255.8,	273.9,	287.5,	307.7,	322.9,	335.2,	376.2,			
25 days	112.2,	137.9,	150.5,	168.2,	179.5,	187.9,	214.0,	241.2,	258.2,	280.8,	300.0,	314.3,	335.6,	351.5,	364.4,	407.3,			

NOTES:

N/A Data not available

These values are derived from a Depth Duration Frequency (DDF) Model

For details refer to:

'Fitzgerald D. L. (2007), Estimates of Point Rainfall Frequencies, Technical Note No. 61, Met Eireann, Dublin',

Available for download at www.met.ie/climate/dataproducts/Estimation-of-Point-Rainfall-Frequencies_TN61.pdf



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T: +353 1 524 2800

sound.ie

Date: 22/03/2022
Reference: RYDA01001

INSURANCE CERTIFICATE

To Whom It May Concern

We confirm we act as Insurance Brokers to the above and set out below a summary of cover we have arranged:

Business Description: *Soil Engineer (Percolation Testing)*

PROFESSIONAL INDEMNITY

Policy No.	PID00024862
Insurer:	Accredited Insurance (Europe) Ltd
Period of Insurance:	04/03/2022 to 03/03/2023
Limit of Indemnity:	€1,000,000

Subject always to Insurers policy wording, warranties, conditions, restrictions & exclusions a copy of which is available on request.

We trust this is in order but if you have any queries, please do not hesitate to contact us.

Yours sincerely,



Gary Kinsella
Commercial Broker
P: (01) 524 1415
E: Gary@sound.ie