

47
17

SD22B/0418

emailed
Agent
about
these on
16/11/22.

Site Characterisation

For Clifford Lebioda

Loughtown Lower, Newcastle, Co. Dublin, D22PN52



Prepared By

Hart Building Surveying

RECEIVED
28 OCT 2022
PLANNING COUNTER

SITE CHARACTERISATION FORM

COMPLETING THE FORM

Note: This form requires the latest version of Adobe Acrobat Reader and on PC's Windows 7 or later. Windows XP produces errors in calculations

Step 1:

Goto Menu Item **File, Save As** and save the file under a reference relating to the client or the planning application reference if available.

Clear Form

Use the **Clear Form** button to clear all information fields.

Notes:

All calculations in this form are automatic.

Where possible information is presented in the form of drop down selection lists to eliminate potential errors.

Variable elements are recorded by tick boxes. In all cases only one tick box should be activated.

All time record fields must be entered in twenty four hour format as follows: HH:MM

All date formats are DD-MM-YYYY.

All other data fields are in text entry format.

This form can be printed out fully populated for submission with related documents and for your files. It can also be submitted by email.

Section 3.2 In this section use an underline _____ across all six columns to indicate the depth at which changes in classification / characteristics occur.

Section 3.4 Lists supporting documentation required.

Section 4 Select the treatment systems suitable for this site and the discharge route.

Section 5 Indicate the system type that it is proposed to install.

Section 6 Provide details, as required, on the proposed treatment system.

APPENDIX A: SITE CHARACTERISATION FORM

File Reference:

1.0 GENERAL DETAILS (From planning application)

Prefix: Mr First Name: Surname:

Address: Site Location and Townland:

Number of Bedrooms: Maximum Number of Residents:

Comments on population equivalent

Proposed Water Supply:

Mains Private Well/Borehole _____ Group Well/Borehole

2.0 GENERAL DETAILS (From planning application)

Soil Type, (Specify Type):

Subsoil, (Specify Type):

Bedrock Type:

Aquifer Category: Regionally Important | Locally Important LI _____ Poor _____

Vulnerability: Extreme High Moderate Low

Groundwater Body: Status

Name of Public/Group Scheme Water Supply within 1 km:

Source Protection Area: ZOC SI SO Groundwater Protection Response:

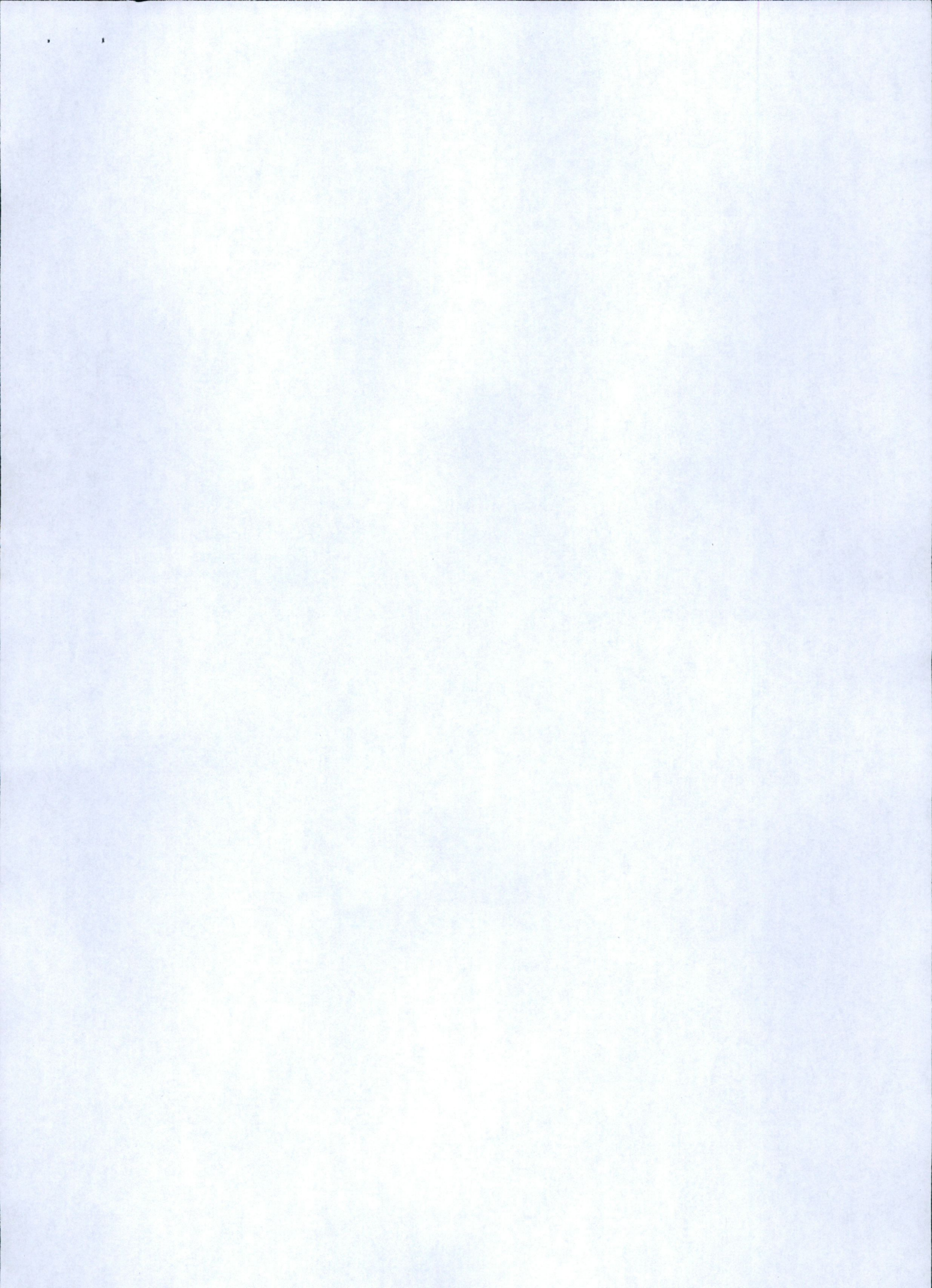
Presence of Significant Sites (Archaeological, Natural & Historical):

Past experience in the area:

Comments:

(Integrate the information above in order to comment on: the potential suitability of the site, potential targets at risk, and/or any potential site restrictions).

The R2/1 Protection Response must be considered in any design, the minimum depths from chapter 6 will be implemented. The target at risk will be the Locally important Aquifer and possibly surface water.



3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment

Landscape Position:

Slope: Steep (>1:5) Shallow (1:5-1:20) Relatively Flat (<1:20)

Slope Comment

Surface Features within a minimum of 250m (Distance To Features Should Be Noted In Metres)

Houses:

Houses to North and south together with the existing house on the site

Existing Land Use:

Garden

Vegetation Indicators:

Ash and Beech

Groundwater Flow Direction:

Ground Condition:

Firm

Site Boundaries:

Hedges all around

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment (contd.)

Roads:

Road to East

Outcrops (Bedrock And/Or Subsoil):

None

Surface Water Ponding:

None

Lakes:

None

Beaches/Shellfish Areas:

None

Wetlands:

None

Karst Features:

None

Watercourses/Streams:*

None

*Note and record water level

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment (contd.)

Drainage Ditches:*

None

Springs:*

None

Wells:*

Holy Well shown on map 160 m North, Not found, possibly on private property

Comments:

(Integrate the information above in order to comment on: the potential suitability of the site, potential targets at risk, the suitability of the site to treat the wastewater and the location of the proposed system within the site).

The potential targets at risk is the locally important aquifer, given the lack of drainage ditches, the site should have reasonable percolation. The site is tight so this will be taken into account in designing any system.

*Note and record water level

3.2 Trial Hole (should be a minimum of 2.1m deep (3m for regionally important aquifers))

To avoid any accidental damage, a trial hole assessment or percolation tests should not be undertaken in areas which are at or adjacent to significant sites, (e.g. NHAs, SACs, SPAs, and/or Archaeological etc.), without prior advice from National Parks and Wildlife Service or the Heritage Service.

Depth of trial hole (m):

Depth from ground surface to bedrock (m) (if present):

Depth from ground surface to water table (m) (if present):

Depth of water ingress:

Rock type (if present):

Date and time of excavation:

Date and time of examination:

Depth of Surface and Subsurface Percolation Tests

Depth of Surface and Subsurface Percolation Tests	Soil/Subsoil Texture & Classification**	Plasticity and dilatancy***	Soil Structure	Density/ Compactness	Colour****	Preferential flowpaths
0.1 m <input type="text"/>	Top Soil	5 ribbons 80 mm Threads Dilatant	Crumb	Firm	Blackish	Roots
0.2 m <input type="text"/>	-----	-----	-----	-----	-----	-----
0.3 m <input type="text"/>	-----	-----	-----	-----	-----	-----
0.4 m <input type="text" value="P"/>	-----	-----	-----	-----	-----	-----
0.5 m <input type="text"/>	SILT clay	4-5 ribbons 80 mm Threads Dilatant	-----	-----	-----	-----
0.6 m <input type="text"/>	-----	-----	-----	-----	-----	-----
0.7 m <input type="text"/>	-----	-----	-----	-----	-----	-----
0.8 m <input type="text" value="I"/>	SILT Clay with proportion of angular cobbles	4-5 ribbons 80 mm Threads Dilatant	Blocky	Firm	Dark Brown	None
0.9 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.0 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.1 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.2 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.3 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.4 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.5 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.6 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.7 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.8 m <input type="text"/>	-----	-----	-----	-----	-----	-----
1.9 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.0 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.1 m <input type="text"/>	Bottom of Hole	-----	-----	-----	-----	-----
2.2 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.3 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.4 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.5 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.6 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.7 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.8 m <input type="text"/>	-----	-----	-----	-----	-----	-----
2.9 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.0 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.1 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.2 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.3 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.4 m <input type="text"/>	-----	-----	-----	-----	-----	-----
3.5 m <input type="text"/>	-----	-----	-----	-----	-----	-----

Likely Subsurface Percolation Value:

Likely Surface Percolation Value:

Note: *Depth of percolation test holes should be indicated on log above. (*Enter Surface or Subsurface at depths as appropriate).
 ** See Appendix E for BS 5930 classification.
 *** 3 samples to be tested for each horizon and results should be entered above for each horizon.
 **** All signs of mottling should be recorded.

3.2 Trial Hole (contd.) Evaluation:

Soil type and no water table encountered is positive, the sharp cobbles at the lower level may be indicative of approaching the capl bedrock.

3.3(a) Subsurface Percolation Test for Subsoil

Step 1: Test Hole Preparation

Percolation Test Hole

	1		2		3	
Depth from ground surface to top of hole (mm) (A)	400		400		400	
Depth from ground surface to base of hole (mm) (B)	800		800		800	
Depth of hole (mm) [B - A]	400		400		400	
Dimensions of hole [length x breadth (mm)]	300 x	300	300 x	300	300 x	300

Step 2: Pre-Soaking Test Holes

Pre-soak start	Date	22-May-2022	22-May-2022	22-May-2022
	Time	08:00	08:00	08:00
2nd pre-soak start	Date	22-May-2022	22-May-2022	22-May-2022
	Time	18:00	18:00	18:00

Each hole should be pre-soaked twice before the test is carried out.

Step 3: Measuring T_{100}

Percolation Test Hole No.

	1	2	3
Date of test	23-05-2022	23-05-2022	23-05-2022
Time filled to 400 mm	08:30	08:30	08:30
Time water level at 300 mm	09:05	08:53	08:40
Time (min.) to drop 100 mm (T_{100})	35.00	23.00	10.00
Average T_{100}	22.67		

If $T_{100} > 480$ minutes then Subsurface Percolation value >120 – site unsuitable for discharge to ground

If $T_{100} \leq 210$ minutes then go to Step 4;

If $T_{100} > 210$ minutes then go to Step 5;

Step 4: Standard Method (where $T_{100} \leq 210$ minutes)

Percolation Test Hole	1			2			3		
Fill no.	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)
1	09:05	09:55	50.00	08:53	09:30	37.00	08:40	09:06	26.00
2	09:55	11:15	80.00	09:30	10:25	55.00	09:06	09:50	44.00
3	11:15	13:00	105.00	10:25	11:40	75.00	09:50	10:35	45.00
Average Δt Value	78.33			55.67			38.33		
	Average $\Delta t/4 =$ [Hole No.1] 19.58 (t_1)			Average $\Delta t/4 =$ [Hole No.2] 13.92 (t_2)			Average $\Delta t/4 =$ [Hole No.3] 9.58 (t_3)		

Result of Test: Subsurface Percolation Value = **14.36** (min/25 mm)

Comments:

Site is suitable for a system at this level

Step 5: Modified Method (where $T_{100} > 210$ minutes)

Percolation Test Hole No.	1					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 1 = (T_1)		0.00		

Percolation Test Hole No.	2					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 2 = (T_2)		0.00		

Result of Test: Subsurface Percolation Value =

0.00 (min/25 mm)

Percolation Test Hole No.	3					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 3 = (T_3)		0.00		

Comments:

3.3(b) Surface Percolation Test for Soil

Step 1: Test Hole Preparation

Percolation Test Hole	1	2	3
Depth from ground surface to top of hole (mm)	0	0	0
Depth from ground surface to base of hole (mm)	400	400	400
Depth of hole (mm)	400	400	400
Dimensions of hole [length x breadth (mm)]	300 x 300	300 x 300	300 x 300

Step 2: Pre-Soaking Test Holes

Pre-soak start	Date	22-May-2022	22-May-2022	22-May-2022
	Time	08:00	08:00	08:00
2nd pre-soak start	Date	22-May-2022	22-May-2022	22-May-2022
	Time	18:00	18:00	18:00

Each hole should be pre-soaked twice before the test is carried out.

Step 3: Measuring T_{100}

Percolation Test Hole No.	1	2	3
Date of test	23-May-22	23-May-22	23-May-2022
Time filled to 400 mm	08:35	08:35	08:35
Time water level at 300 mm	09:45	08:45	09:08
Time to drop 100 mm (T_{100})	70.00	10.00	33.00
Average T_{100}			37.67

If $T_{100} > 480$ minutes then Surface Percolation value >90 – site unsuitable for discharge to ground

If $T_{100} \leq 210$ minutes then go to Step 4;

If $T_{100} > 210$ minutes then go to Step 5;

Step 4: Standard Method (where $T_{100} \leq 210$ minutes)

Percolation Test Hole	1			2			3		
	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)
1	09:45	11:55	130.00	08:45	09:35	50.00	09:08	10:14	66.00
2	11:55	14:10	135.00	09:35	10:45	70.00	10:14	11:40	86.00
3	14:10	16:35	145.00	10:45	12:00	75.00	11:40	13:30	110.00
Average ΔT Value			136.67			65.00			87.33
	Average $\Delta T/4 =$ [Hole No.1] <input type="text" value="34.17"/> (T_1)			Average $\Delta T/4 =$ [Hole No.2] <input type="text" value="16.25"/> (T_2)			Average $\Delta T/4 =$ [Hole No.3] <input type="text" value="21.83"/> (T_3)		

Result of Test: Surface Percolation Value = (min/25 mm)

Comments:

Site is suitable for a system at this level

Step 5: Modified Method (where $T_{100} > 210$ minutes)

Percolation Test Hole No.	1					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 1 = (T_1)				<input type="text" value="0.00"/>

Percolation Test Hole No.	2					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 2 = (T_2)				<input type="text" value="0.00"/>

Result of Test: Surface Percolation Value =

(min/25 mm)

Percolation Test Hole No.	3					
Fall of water in hole (mm)	Time Factor = T_f	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T-Value = $4.45 / K_{fs}$
300 - 250	8.1			0.00		
250 - 200	9.7			0.00		
200 - 150	11.9			0.00		
150 - 100	14.1			0.00		
Average	T-Value	T-Value Hole 3 = (T_3)				<input type="text" value="0.00"/>

Comments:

3.4 The following associated Maps, Drawings and Photographs should be appended to this site characterisation form.

1. Discovery Series 1:50,000 Map indicating overall drainage, groundwater flow direction and housing density in the area.
2. Supporting maps for vulnerability, aquifer classification, soil, subsoil, bedrock.
3. North point should always be included.
4. (a) Scaled sketch of site showing measurements to Trial Hole location and
 - (b) Percolation Test Hole locations,
 - (c) wells and
 - (d) direction of groundwater flow (if known),
 - (e) proposed house (incl. distances from boundaries)
 - (f) adjacent houses,
 - (g) watercourses,
 - (h) significant sites
 - (i) and other relevant features.
5. Site specific cross sectional drawing of the site and the proposed layout¹ should be submitted.
6. Photographs of the trial hole, test holes and site including landmarks (date and time referenced).
7. Pumped design must be designed by a suitably qualified person.

¹ The calculated percolation area or polishing filter area should be set out accurately on the site layout drawing in accordance with the code of practice's requirements.

4.0 CONCLUSION of SITE CHARACTERISATION

Integrate the information from the desk study and on-site assessment (i.e. visual assessment, trial hole and percolation tests) above and conclude the type of system(s) that is (are) appropriate. This information is also used to choose the optimum final disposal route of the treated wastewater.

Slope of proposed infiltration / treatment area:

Are all minimum separation distances met?

Depth of unsaturated soil and/or subsoil beneath invert of gravel (or drip tubing in the case of drip dispersal system)

Percolation test result: Surface:

Sub-surface:

Not Suitable for Development

Suitable for Development

Identify all suitable options

1. Septic tank system (septic tank and percolation area) (Chapter 7)
2. Secondary Treatment System (Chapters 8 and 9) and soil polishing filter (Section 10.1)
3. Tertiary Treatment System and Infiltration / treatment area (Section 10.2)

Discharge Route ¹

5.0 SELECTED DWWTS

Propose to install:

and discharge to:

Invert level of the trench/bed gravel or drip tubing (m)

Site Specific Conditions (e.g. special works, site improvement works testing etc.)

Proposed to install Secondary Treatment System.
Followed by Option 4 type Tertiary Treatment soil Polishing Filter.
consisting of 6 no 12 m long trenches set at 0.7 m BGL with 0.3 soil cover.
Trenches to be as per Chapter 10 of the COP Option 4

¹ A discharge of sewage effluent to "waters" (definition includes any or any part of any river, stream, lake, canal, reservoir, aquifer, pond, watercourse or other inland waters, whether natural or artificial) will require a licence under the Water Pollution Acts 1977-90. Refer to Section 2.4.

6.0 TREATMENT SYSTEM DETAILS

SYSTEM TYPE: Septic Tank Systems (Chapter 7)

Tank Capacity (m ³) <input style="width: 80px;" type="text"/>	Percolation Area	Mounded Percolation Area
	No. of Trenches <input style="width: 80px;" type="text"/>	No. of Trenches <input style="width: 80px;" type="text"/>
	Length of Trenches (m) <input style="width: 80px;" type="text"/>	Length of Trenches (m) <input style="width: 80px;" type="text"/>
	Invert Level (m) <input style="width: 80px;" type="text"/>	Invert Level (m) <input style="width: 80px;" type="text"/>

SYSTEM TYPE: Secondary Treatment System (Chapters 8 and 9) and polishing filter (Section 10.1)

Secondary Treatment Systems receiving septic tank effluent (Chapter 8)

Media Type	Area (m ²)*	Depth of Filter	Invert Level
Sand/Soil	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>
Soil	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>
Constructed Wetland	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>
Other	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/>

Packaged Secondary Treatment Systems receiving raw wastewater (Chapter 9)

Type	<input style="width: 100%; border: 1px solid black;" type="text" value="Secondary Treatment BAF"/>
Capacity PE	<input style="width: 80px;" type="text" value="6"/>
Sizing of Primary Compartment	<input style="width: 80px;" type="text" value="3.00"/> m ³

Polishing Filter*: (Section 10.1)

Surface Area (m ² *)	<input style="width: 80px;" type="text"/>	Option 3 - Gravity Discharge Trench length (m)	<input style="width: 80px;" type="text"/>
Option 1 - Direct Discharge Surface area (m ²)	<input style="width: 80px;" type="text"/>	Option 4 - Low Pressure Pipe Distribution Trench length (m)	<input style="width: 80px;" type="text" value="72.00"/>
Option 2 - Pumped Discharge Surface area (m ²)	<input style="width: 80px;" type="text"/>	Option 5 - Drip Dispersal Surface area (m ²)	<input style="width: 80px;" type="text"/>

SYSTEM TYPE: Tertiary Treatment System and infiltration / treatment area (Section 10.2)

Identify purpose of tertiary treatment <input style="width: 100%; height: 100%;" type="text"/>	Provide performance information demonstrating system will provide required treatment levels <input style="width: 100%; height: 100%;" type="text"/>	Provide design information <input style="width: 100%; height: 100%;" type="text"/>
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DISCHARGE ROUTE:

Groundwater	<input type="checkbox"/>	Hydraulic Loading Rate * (l/m ² .d)	<input style="width: 80px;" type="text"/>	Surface area (m ²)	<input style="width: 80px;" type="text"/>
Surface Water **	<input type="checkbox"/>	Discharge Rate (m ³ /hr)	<input style="width: 80px;" type="text"/>		

* Hydraulic loading rate is determined by the percolation rate of subsoil

** Water Pollution Act discharge licence required

6.0 TREATMENT SYSTEM DETAILS

QUALITY ASSURANCE:

Installation & Commissioning

By Tankk supplier

On-going Maintenance

Annual contract to be entered into

7.0 SITE ASSESSOR DETAILS

Company: Hart Building Surveying

Prefix: Mr

First Name: David

Surname: Hart

Address: Allenwood South,
Naas.
Co. Kildare

Qualifications/Experience: Registered Building Surveyor / Fetac Cert On Site Wastewater

Date of Report: 05-Jul-2022

Phone: 0872550383

E-mail: hartsurveying@gmail.com

Indemnity Insurance Number: API0002325

Signature: **David Hart**
Digitally signed by David Hart
Date: 2022.09.07 10:30:24
+01'00'

Trial Hole

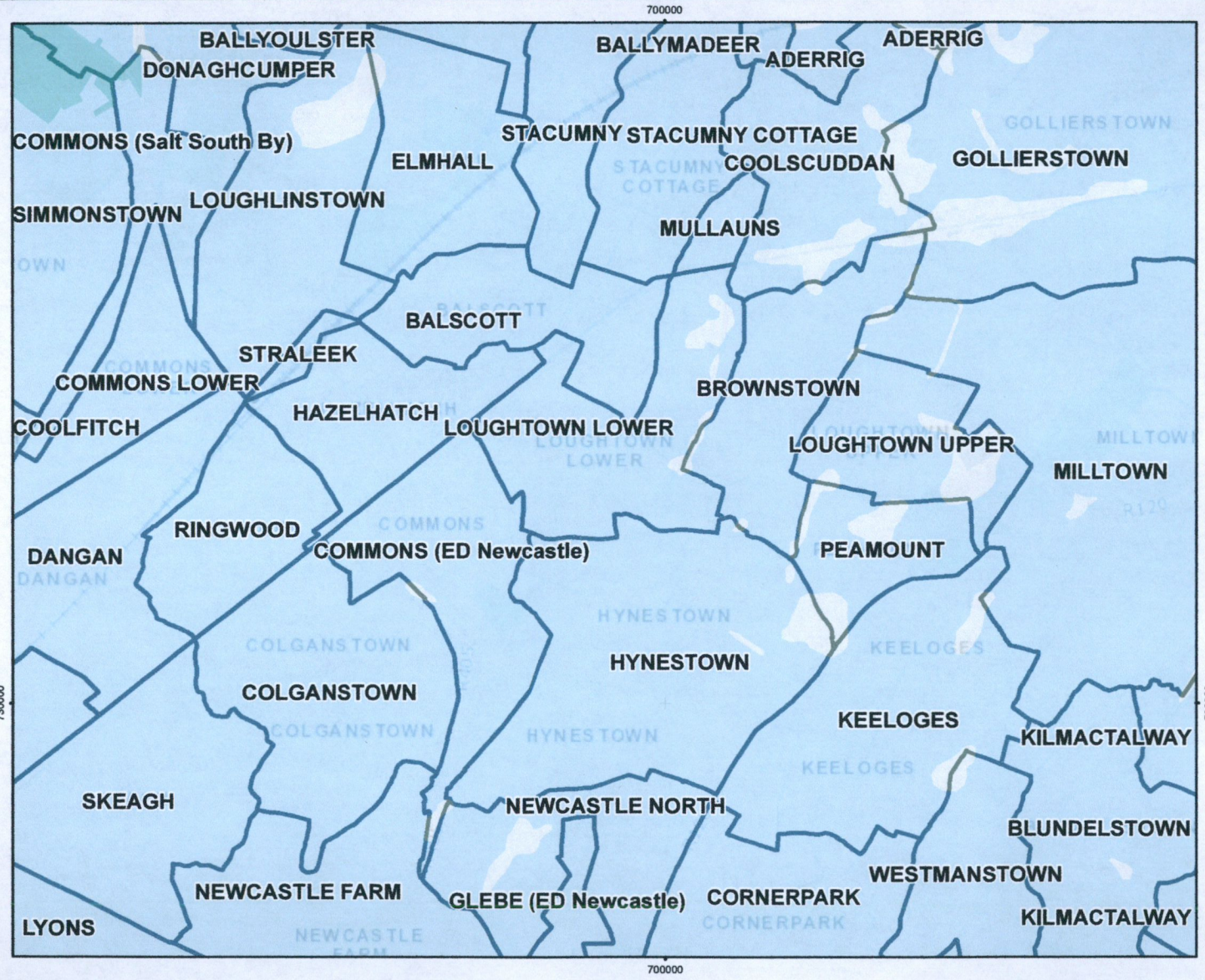


T Holes



P Holes



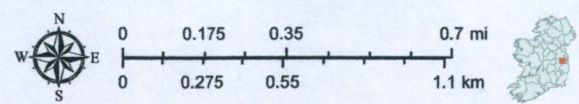


Legend

- IE_GSI_Quaternary_Sediments_50...
- Rck, Bedrock outcrop or subcrop
 - TLs, Till derived from limestones
 - Urban
 - Water
 - Townlands

Scale: 1:25,000

Geological Survey Ireland



Map Centre Coordinates (ITM) 699,755 730,870
 05/07/2022, 14:19:46

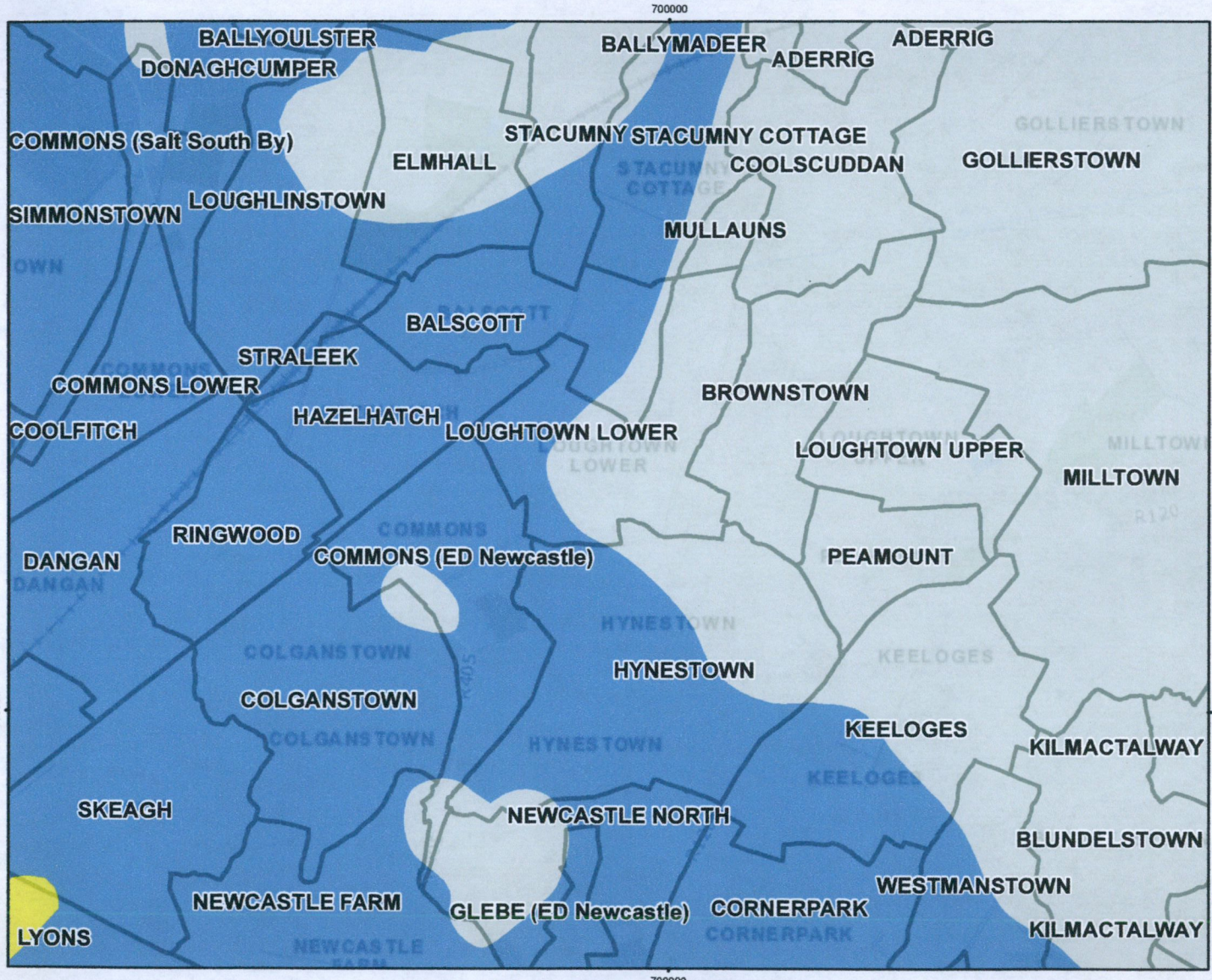
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Legend

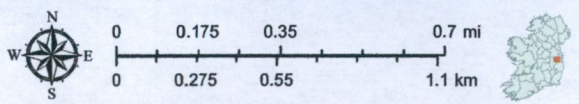
Subsoil_Permeability_40K_IE26_ITM

- Moderate
- Low
- Not mapped
- Townlands



Scale: 1:25,000

Geological Survey Ireland



Map Centre Coordinates (ITM) 699,755 730,870
 05/07/2022, 14:18:47

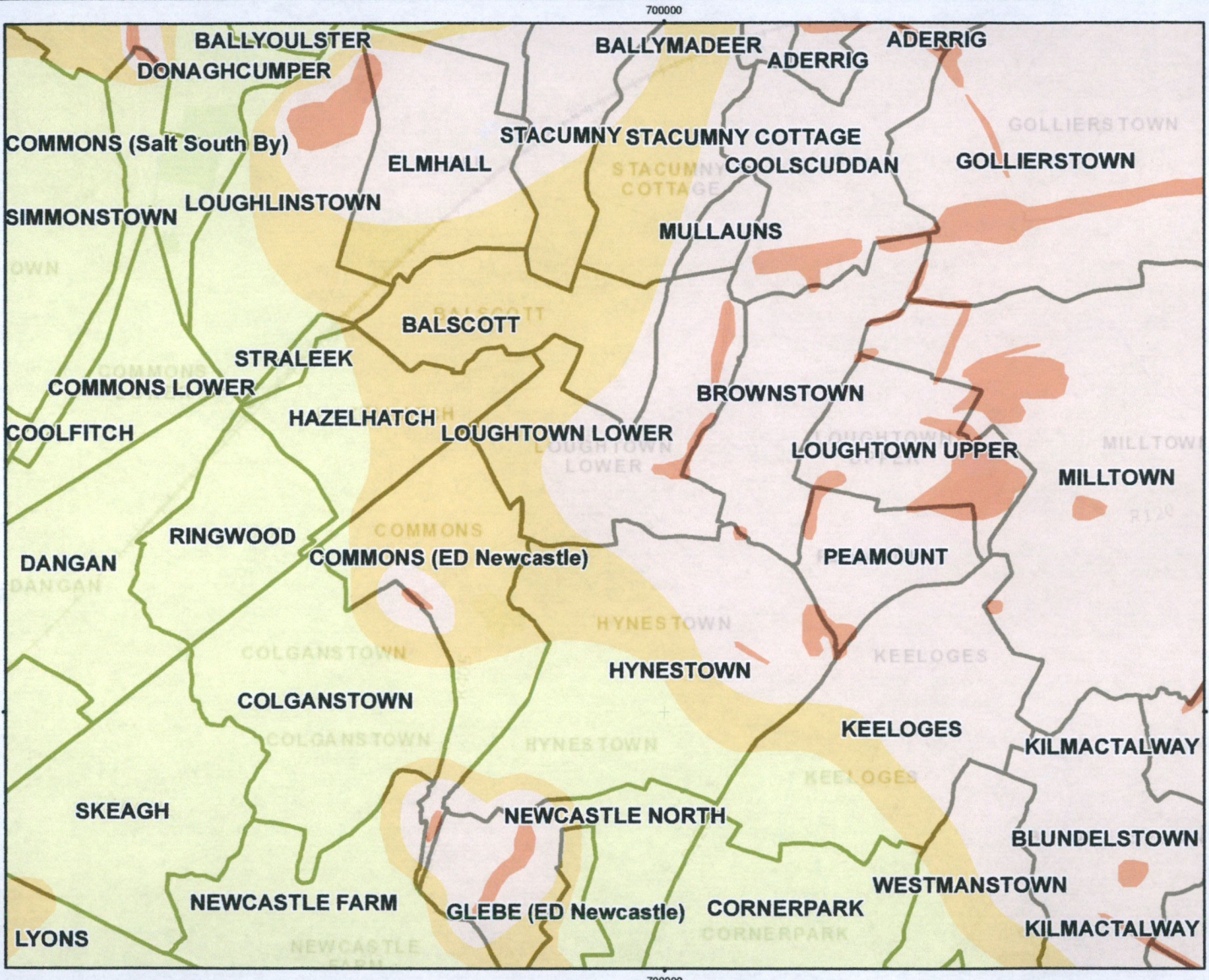
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Legend

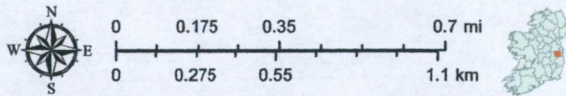
Groundwater_Vulnerability_40K_IE...

- Rock at or near Surface or Karst
- Extreme
- High
- Moderate
- Townlands



Scale: 1:25,000

Geological Survey Ireland



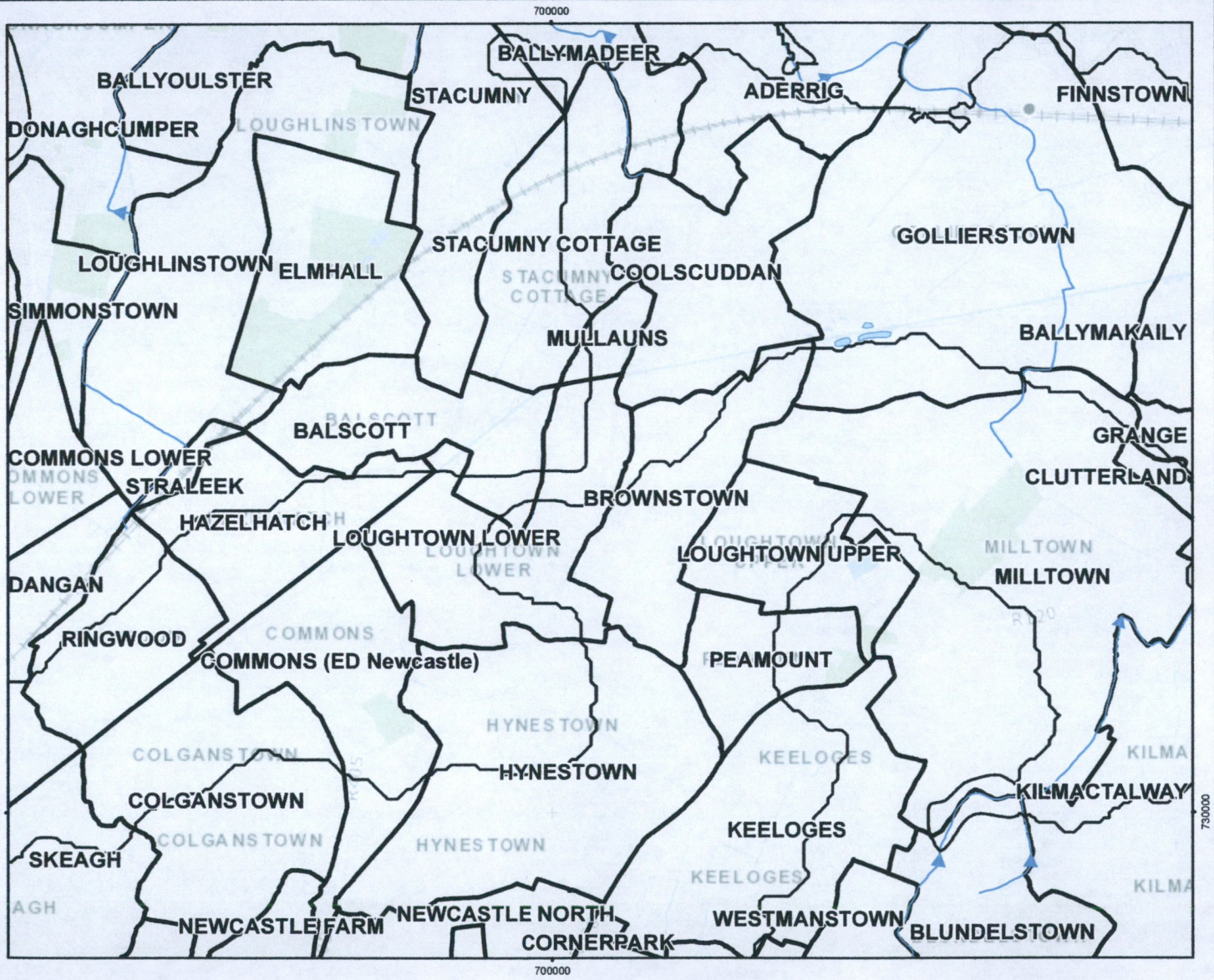
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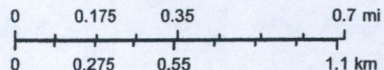
Legend

- EPA Contours
- River Network and River Flow Direction Arrows
- Lake Segments
- Townlands



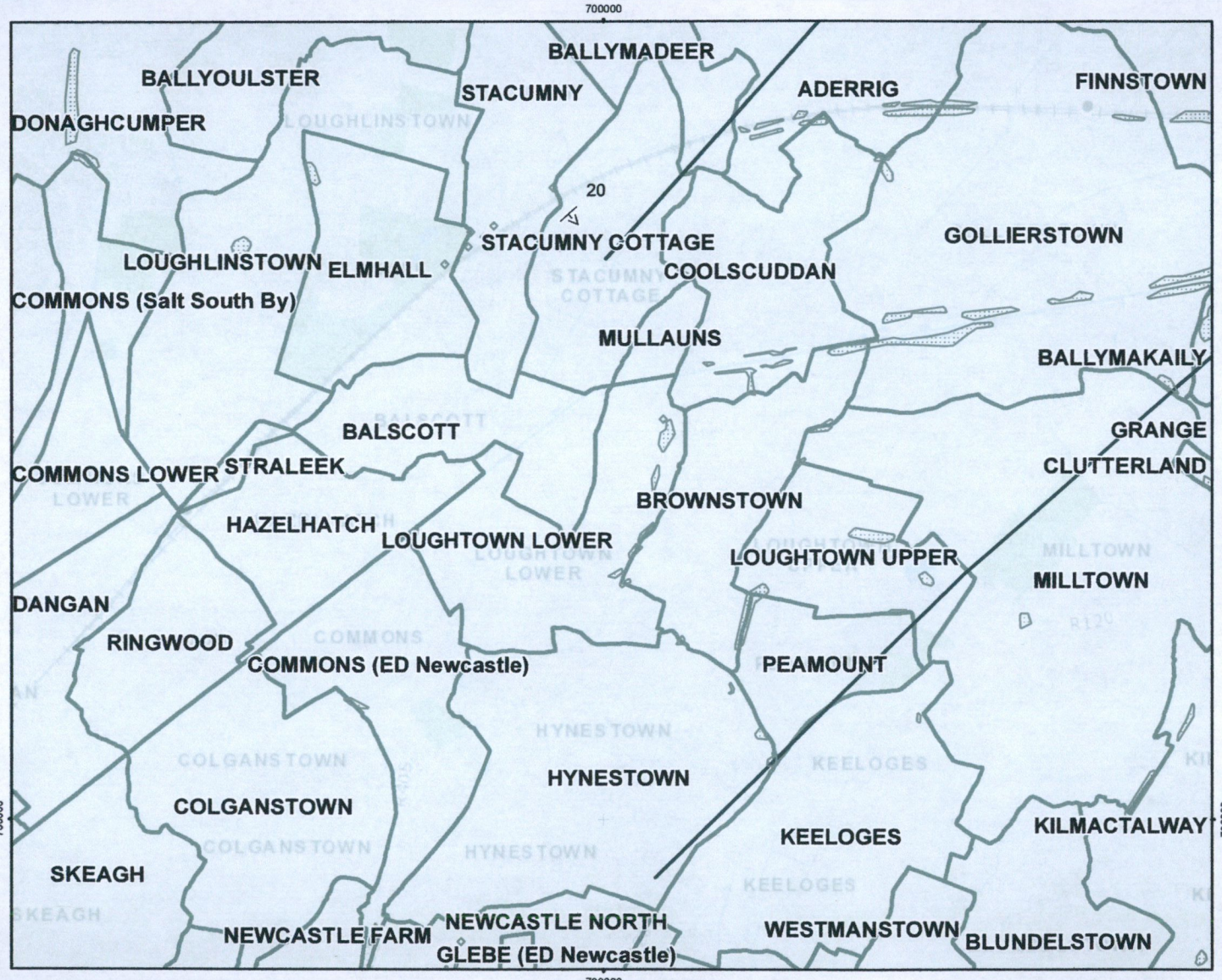
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Geological Survey Ireland



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Legend

Structural Symbols 100K ITM 2018

- <| Strike and dip of bedding, right way up
- ▨ Bedrock Outcrops 100 ITM 2018

Bedrock Linework 100k ITM 2018

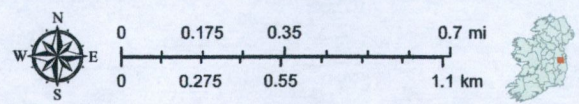
- Fault

Bedrock Polygons 100k ITM 2018

- Lucan Formation
- ▭ Townlands

Scale: 1:25,000

Geological Survey Ireland



Map Centre Coordinates (ITM) 700,032 731,303
05/07/2022, 14:22:12

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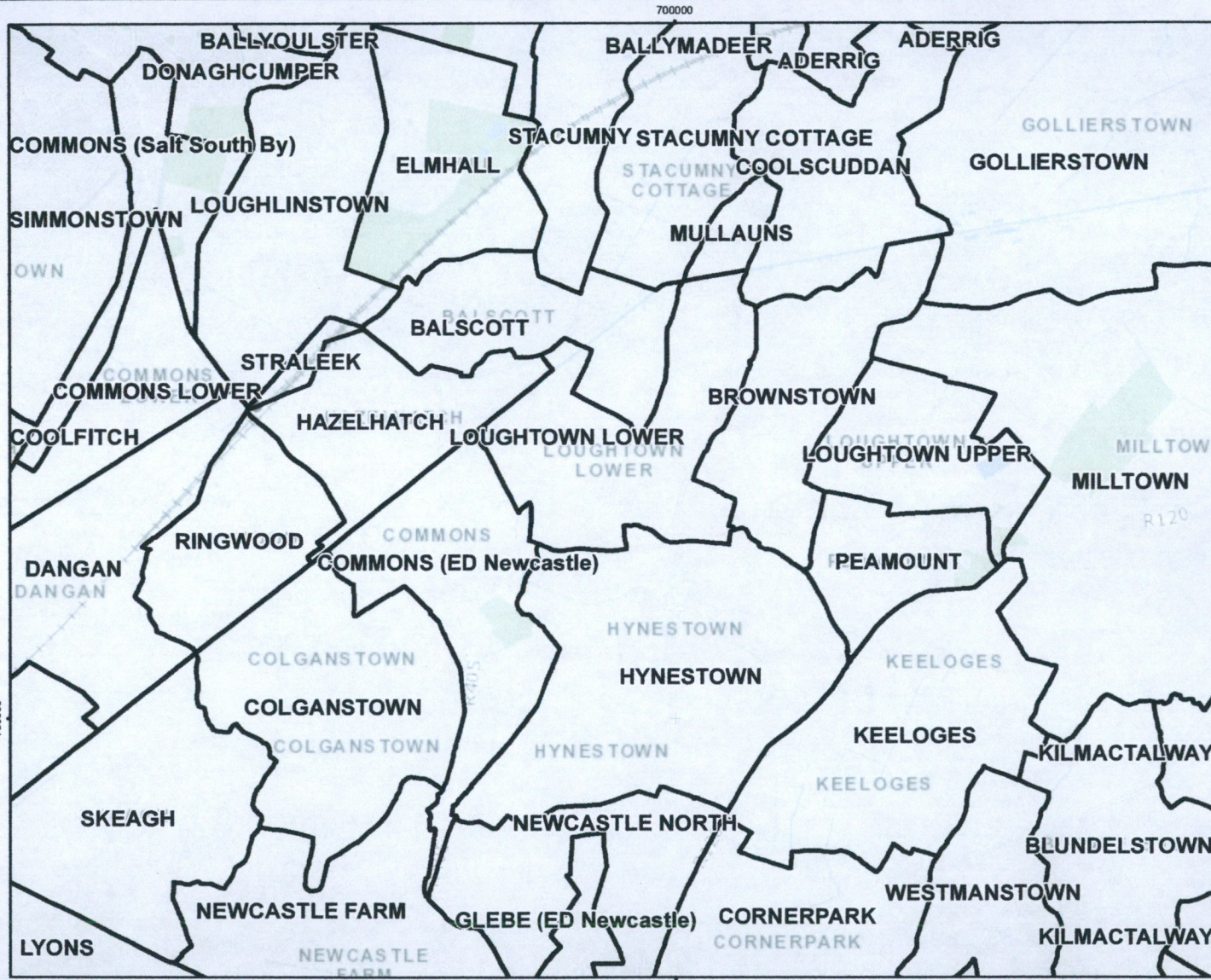
Legend

— Bedrock Aquifer Faults

Bedrock Aquifer

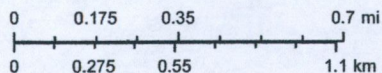
LI - Locally Important Aquifer - Bedrock
which is Moderately Productive only in Local
Zones

□ Townlands



Scale: 1:25,000

Geological Survey Ireland



Map Centre Coordinates (ITM) 699,755 730,870

05/07/2022, 14:19:22

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Discreet, Reliable and Economical Solutions

Sewage System Proposal

Prepared For:


Name : Cliff Lebioda
Street : Loughtown Lower
Town : Newcastle Co.
Dublin
County : Dublin
EirCode : D22PN52

Designer:

David Hart

Sepcon
SEWAGE TREATMENT SYSTEMS

Company: Hart
Surveying
Street: Allenwood
South
Town: Naas
County: Co. Kildare
Eircode: W91-P6D0

<i>Site Location</i>	<i>Designer Details</i>
Name: Cliff Lebioda Street: Loughtown Lower Town: Newcastle Co. Dublin County: Dublin EirCode: D22PN52	 Company: Hart Surveying Street: Allenwood South Town: Naas County: Co. Kildare Eircode: W91-P6D0

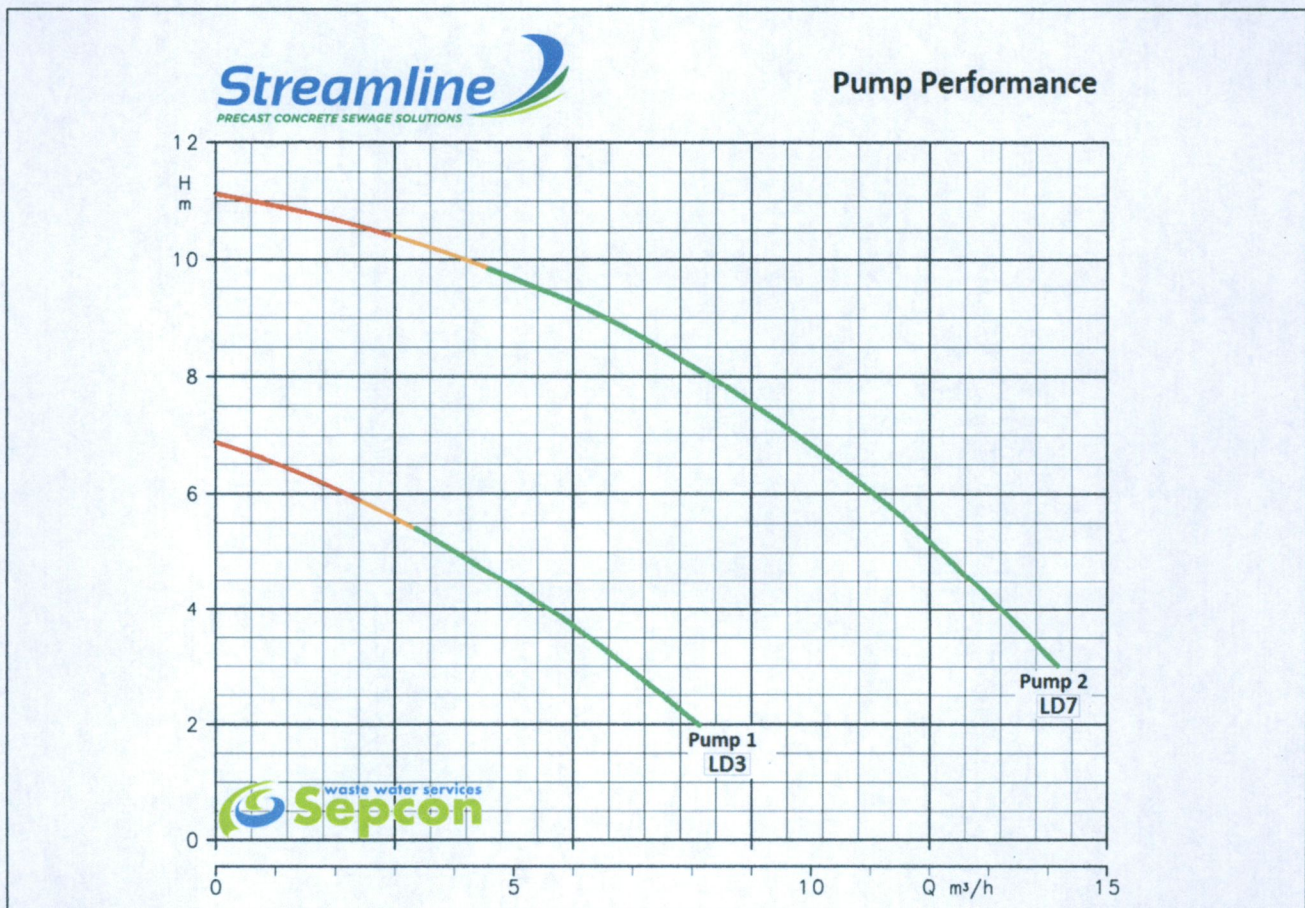
<i>General</i>	
Designer Reference	CL1
Report Date	25/08/2022

<i>Site Characterisation report overview</i>	
Design Population (PE)	6
Design T / P Value	24
Water Table / Bedrock / Mottling Level	2.1 BGL
Groundwater Protection Response	R2_1
Site Type	Upgrade Replacement

Proposed Sewage System	
Selected Tank	6PE Sepcon BAF Concrete
Design Population	6 PE
Proposed Outlet Type	Pumped Outlet
Pump Type	LD7 - Pump 2
Design Pump Head	Relativity Flat

DESIGN NOTE: This report shall become void if a substitute waste water treatment system is put in place of the system specified above. This report is based on the specified systems performance.

Pump Performance:



Tank Certification



TREATMENT PERFORMANCE RESULTS

Streamline Environmental Ltd. distributed Sepcon
Moyglare Road, Kilcock, Meath, Ireland

EN 12566-3

Results corresponding to EN 12566-3 and S.R. 66

PIA-SR66-1601-1010

Streamline System
Biological Aerated Filter (BAF)

Nominal organic daily load	0.32 kg/d	
Nominal hydraulic daily load	0.90 m ³ /d	
Material	Concrete	
Watertightness	Pass	
Structural behaviour (Vertical load test)	Pass (also wet conditions)	
Durability	Pass	
Treatment efficiency (nominal sequences)		
	Efficiency	Effluent
	COD 91.7%	61 mg/l
	BOD ₅ 95.5 %	15 mg/l
	NH ₄ -N 94.5 %	1.7 mg/l
	SS 94.2 %	25 mg/l
Number of desludging	Not more than once	
Electrical consumption	1.1 kWh/d	

Performance tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
52074 Aachen, Germany

This document replaces neither the declaration of performance nor the CE marking.



Notified Body
No.: 1739

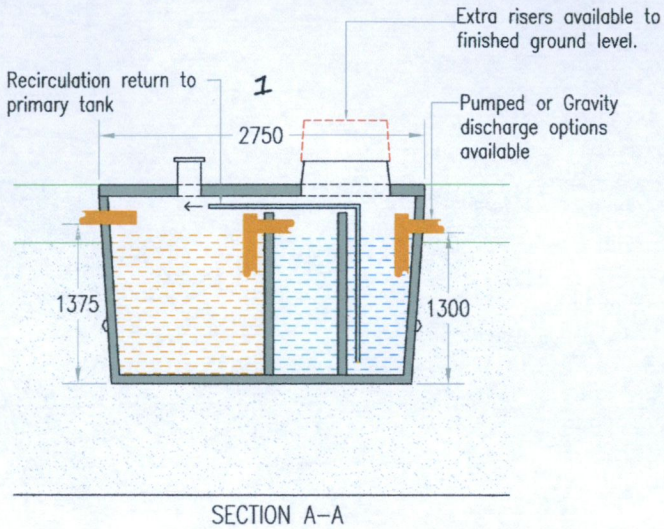


Certified according to
ISO 9001:2008

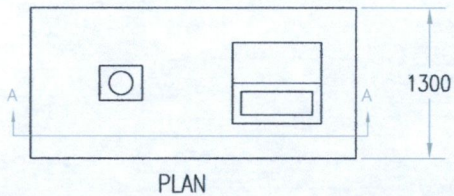


Elmar Lancé

July 2016



Various tank configurations possible depending on site layout.



Moyglare Rd, Kilcock, Co Meath
Ph: 01 6287300
Email: info@sepcon.ie Web: www.sepcon.ie

This drawing is Copyright to Ryan Civil Contracting Ltd t/a Sepcon

Notes:

1. Do not scale from this drawing.
2. Drawings are for illustration purposes only and are subject to change.
3. Observe all safety regulations in regard to excavation and lifting requirements.
4. Never leave tank lids uncovered or unattended at any time.
5. Refer to the site specific report for details of loadings and further design information.
6. The cross section drawing above shows the tanks in a straight series configuration only. Consult us for excavation requirements in different tank configurations.
7. Ground conditions for tank installation to be approved by clients engineer.

Project Name: Streamline Waste Water Treatment System

Drawing Title: PE6 Sewage Treatment System - EN12566-3 & S.R.66:2015

Address:

Project No:

Client Ref:

Date: OCT16

Scale: N.T.S

Rev. no:

Dwg No: STR-WWTS-PE28

Polishing Filter Details

The design and layout and construction of the polishing filter shall be in line with the requirements of Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (pe<10)

The following details are required for the polishing filter based on the EPA COP:

<i>Polishing Filter Design Overview</i>	
Polishing Filter Type	72 Linear Meter Trench Percolation
Polishing Filter Size	72
Flow from tank to polishing filter	Pumped Outlet
Polishing filter Invert Level (From ground level)	1.2m BGL
Water Table / Bedrock / Mottling Level (BGL)	2.1m
Minimum Separation	0.9m
Design Notes	

Design Notes: A minus figure Polishing Filter Invert Level indicated that the polishing filter invert is above ground level. A final polishing filter design shall be produced taking the above data into account, prior to installation commencing in consultation with the assigned certifier for this development, in accordance with local authority requirements.

In this design the polishing filter invert level above takes the following into account:

- EPA CoP Guidance on Minimum Separation from the Watertable, Bedrock & Mottling
- The Groundwater Protection Response for this site.

DESIGN NOTE: This report shall become void if a substitute polishing filter is put in place of the polishing filter specified above. This report is based on the specified design and performance data.

Polishing Filter Drawing

Notes:

1. The Percolation area must be installed by a competent person. All stages of the installation should be supervised and documented. A compliance certificate should be issued by a suitability qualified and insured person upon completion in accordance with the building regulations.
2. Sepcon provide a complete turn-key installation service to homebuilders and issue the relevant ancillary compliance certificates upon completion in accordance with the building regulations
3. Always refer to the Site Characterisation Report for the final polishing filter design measurements and the Site Specific Report for sewage treatment system information.
4. All Measurements are in millimetres
5. Do not scale from this drawing. Drawings are for illustration purposes only and are subject to change.

Title:

72 Linear Meters
Treatment Trench Percolation

Last Revision: OCT 2016



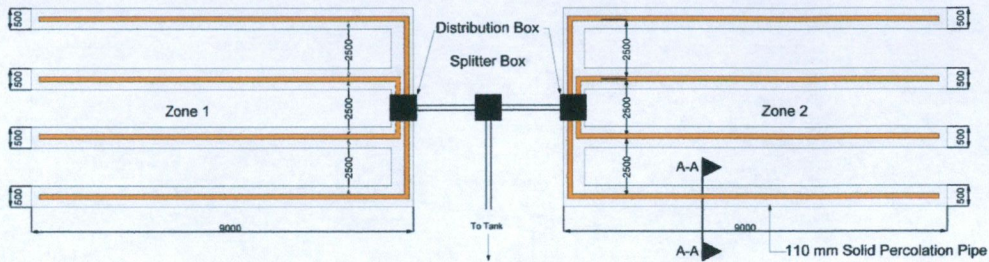
Moyglare Rd, Killock, Co Kildare

Phone: 01 6287300
Email: info@sepcon.ie

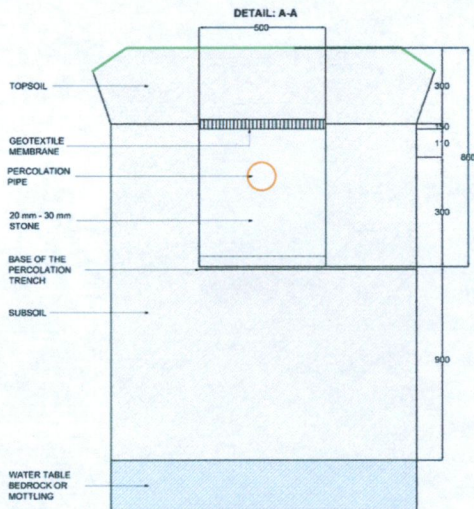
Web: www.sepcon.ie

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72 Linear Meters Trench Percolation

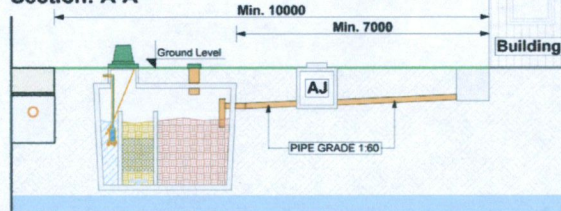


Position of Zones subject to Site Layout and Site Characterization Report



Always refer to Site Characterisation Report for separation distances

Section: A-A



While every effort has been made to ensure accuracy within this documentation, Sepcon or its associates cannot accept responsibility for errors or omissions contained in this documentation. The assumptions contained in this documentation, though reasonable, are produced for guidance and no liability can be accepted for changes in conditions not revealed by the Site Characterisation report results or by any other site specific information provided.

Polishing Filter Location

The location and configuration of the on-site wastewater treatment unit will depend on the site topography, the presence or otherwise of underground services, planning conditions and on other factors, whether existing, planned or anticipated.

The application will have a site layout drawing indicating the final location of the tank and the polishing filter.

The following separation distances must be met. The separation distances in the table below are taken from Table 6.1 of the EPA code of Practice and are provided as a general reference.

<i>Features</i>	<i>Treatment Unit (m)</i>	<i>Polishing Filter (m)</i>
Watercourse / Stream	10	10
Surface Water Soak away	5	5
Well / Spring	10	45 – Down Gradient ¹
		25 – No Gradient ²
		15 – Up Gradient ³
Lake or Foreshore	50	50
Any dwelling House	7	10
Site Boundary	3	3
Trees	3	3
Road	4	4
Ditch	4	4

¹ Down Gradient domestic well or flow direction unknown
² Domestic Well Alongside (No Gradient)
³ Up Gradient domestic well

Installation Options

Option 1 - Supply & Commission Only

This is suitable for a building contractor who has the relevant competency to install waste treatment water systems to the prescribed & EPA standards and provide the necessary ancillary certification with accompanying professional indemnity insurance in accordance with the building regulations.

Option 1 Responsibilities:

Sepcon:	Supply and commission the waste water treatment unit and supply the commissioning certs along with and EN certificates in relation the unit.
Homeowner / Building Contractor:	Shall be responsible for the all groundwork's and the supply and installation of the polishing filter. The building contractor shall also provide the necessary ancillary certification in relation to the entire installation.

Option 2 - Supply, Supervise, Commission & Certify

This option is suitable for homebuilders who have the relevant plant & operators on site to conduct the installation of a sewage system under the constant supervision of a suitability qualified and insured engineer, who will on completion, provide a compliance certificate

Option 2 Responsibilities:

Sepcon:	Supply and commission the waste water treatment unit and supply commissioning certs along with EN certificates in relation the unit. Sepcon will also supply the necessary materials and supervise the installation of the polishing filter and provide ancillary certification.
Homeowner / Building Contractor:	Shall be responsible for the all groundwork's and the installation of the polishing filter.

Option 3 - Complete Turn-Key Installation & Certify

This option is the most cost effective option as the entire installation of the Sewage Plant & Polishing Filter are installed by Sepcon's in-house installation team, under the constant supervision of a qualified and insured site suitability assessor, who will on completion, provide a compliance certificate.

Option 3 Responsibilities:

Sepcon:	Supply and commission the waste water treatment unit and supply commissioning and EN certificates in relation the unit. Sepcon will also supply materials and install the polishing filter and provide the necessary ancillary certification.
Homeowner / Building Contractor:	N/A

Getting a Quote



ONLINE:
Visit Sepcon.ie / Quote



PHONE:
Call us on 01 6287300



EMAIL:
Send us an email to info@sepcon.ie

Sewage Treatment System – (Sample) Service Agreement

Ryan Civil Contracting Ltd T/A Sepcon ("the company") enter this maintenance agreement with the customer ("the customer") named below:

Client Details	
Name	Cliff Lebioda
Address	Loughtown Lower Newcastle Co. Dublin Dublin D22PN52
Mobile	
Landline	

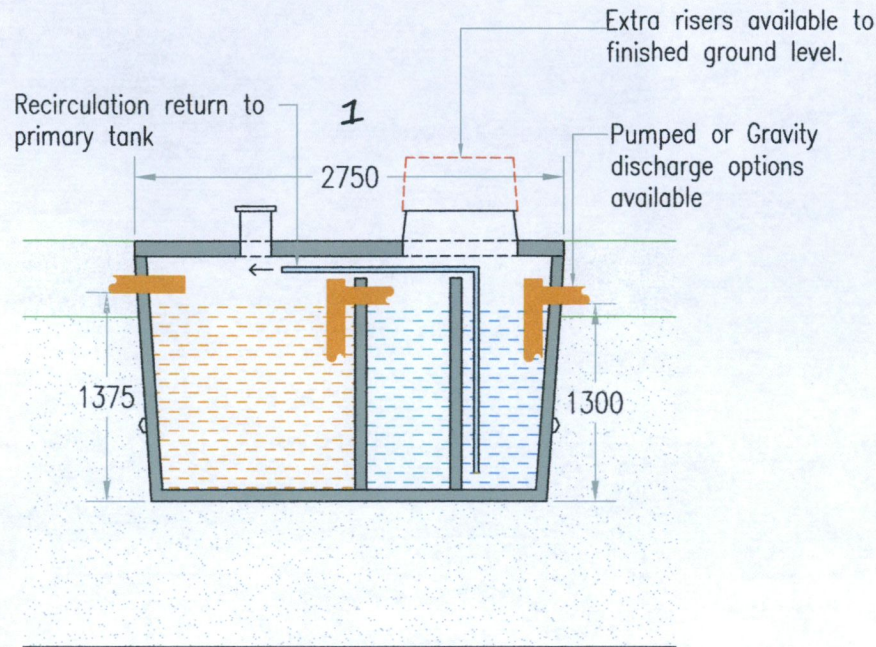
Details of Sewage Treatment Unit			
Make	Sepcon BAF System	Percolation	Secondary Treatment Trench Percolation
Model	6 PE	Discharge	Pumped Outlet
Yr Installed		Serviced	
Comments			

Duration of this Maintenance Agreement			
Commencement Date		Expiry Date	

Service Agreement Options	Price	Select
1 Year	€	
3 Year Contract	€	
5 Year Contract	€	
10 Year Contract	€	
All prices include VAT		

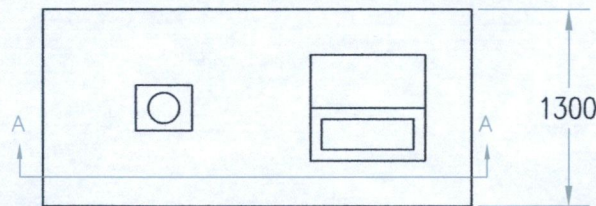
<i>Sepcon agrees to provide the services listed on this maintenance agreement subject to the terms and conditions below:</i>	<i>Please supply the services listed on this maintenance agreement subject to the terms and conditions below:</i>
Signed Sepcon:	Signed Customer:
Name:	Name:
Date:	Date:

This is a sample contract only. Full service contract terms & conditions are available by request



SECTION A-A

Various tank configurations possible depending on site layout.



PLAN



Moyglare Rd, Kilcock, Co Meath
Ph: 01 6287300

Email: info@sepcon.ie Web: www.sepcon.ie

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Notes:

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Project Name: Streamline Waste Water Treatment System

Drawing Title: PE6 Sewage Treatment System - EN12566-3 & S.R.66:2015

Address:

Project No:

Client Ref:

Date: OCT16

Scale: N.T.S

Rev. no:

Dwg No: STR-WWTS-PE28