

APPENDIX B: SITE CHARACTERISATION FORM

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 Duchas, the Heritage Service or other relevant bodies.

1.0 GENERAL DETAILS (From planning application)

NAME & ADDRESS OF APPLICANT:							
SITE LOCATION AND TOWNLAND:							
TELEPHONE NO:		FAX NO:		E-MAIL:			
MAXIMUM NO. OF RESIDENTS:		NO. OF DOUBLE BEDROOMS:		NO. OF SINGLE BEDROOMS:			
PROPOSED WATER SUPPLY: (tick as appropriate)		mains	private well/borehole		group well/borehole		

2.0 DESK STUDY

SOIL TYPE	Gley	Other (specify)	AQUIFER CATEGORY	Regionally Important	Locally Important	Poor
VULNERABILITY	Extreme	High	Moderate	Low	High to Low	Unknown
BEDROCK	Name of Public/Group Scheme Water Supply within 1 km					
Is there a GSI Groundwater Protection Scheme? (Y/N):		Groundwater Protection Response:		Source Protection Area	SI	SO
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).						

NOTE: Only existing information available at the desk study stage should be used in this section

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment

LANDSCAPE POSITION:		SLOPE:	STEEP (>1:5)	SHALLOW (1:5-1:20)	RELATIVELY FLAT (<1:20)
SURFACE FEATURES (Distance to features should be noted in metres)					
HOUSES:					
SITE BOUNDARIES:					
ROADS:					
EXISTING LAND USE:					
OUTCROPS (ROCK AND/OR SUBSOIL):					
SURFACE WATER PONDING:					
LAKES:					
BEACHES/SHELLFISH AREAS/WETLANDS:					
KARST FEATURES:					
WATERCOURSE/STREAM*:					
DRAINAGE DITCHES*:					
WELLS*:					
SPRINGS*:					
VEGETATION INDICATORS:					
GROUND CONDITION:					
<p>COMMENTS: <i>(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).</i></p>					
<p>* note water level</p>					

3.2 Trial Hole

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

Depth of trial hole (m):		Date and time of excavation:		Date and time of examination:	
Depth from ground surface to bedrock (m) (if present):					
Depth from ground surface to water table (m) (if present):					
	Soil/Subsoil Texture & Classification**	Soil Structure	Density/ Compactness	Colour ***	Preferential flowpaths
0.1 m					
0.2 m					
0.3 m					
0.4 m					
0.5 m					
0.6 m					
0.7 m					
0.8 m					
0.9 m					
1.0 m					
1.1 m					
1.2 m					
1.3 m					
1.4 m					
1.5 m					
1.6 m					
1.7 m					
1.8 m					
1.9 m					
2.0 m					
2.1 m					
2.2 m					
2.3 m					
2.4 m					
2.5 m					
Other information					
Depth of water ingress:		Rock type (if present):		Plasticity and dilatancy results:	3 samples to be tested for each horizon and results should be entered above for each horizon
Likely T value:					
EVALUATION:					

** See Appendix E for BS 5930 classification

*** All signs of mottling should be recorded

Note: Depth of percolation test holes should be indicated on diagram above.

3.3 (a) Percolation (“T”) Test @ Invert of Percolation Pipe or relevant subsoil layer

Percolation Test Hole				1	2	
Depth from ground surface to top of hole (mm) (A)						
Depth from ground surface to base of hole (mm) (B)						
Depth of hole (mm) [B - A]						
Dimensions of hole [length x breadth (mm)]						
Each hole must be pre-soaked twice before the test is carried out (from 10.00 am to 5.00 pm and from 5.00 pm to next morning)						
Date of test						
Date pre-soaking started						
Time filled to 400 mm						
Time water level at 300 mm						
Percolation Test Hole No.	1			2		
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)
1						
2						
3						
Average Δt				Average Δt		
Average Δt/4 = [Hole No.1] ____ (t ₁)				Average Δt/4 = [Hole No.2] ____ (t ₂)		
T value* = (t ₁ + t ₂)/2 = _____ (min/25 mm)						
Result of Test : T =						
COMMENTS:						

- If two very different T test results are obtained and where one of these values fails then a third test should be carried out to determine the representivity of each of the results.

3.3 (b) Percolation (“P”)Test @ Ground Level

Percolation Test Hole				1	2	
Depth of hole from ground surface (mm)						
Dimensions of hole [length x breadth (mm)]						
Each hole must be pre-soaked twice before the test is carried out (from 10.00 am to 5.00 pm and from 5.00 pm to next morning)						
Date of test						
Date pre-soaking started						
Time filled to 400 mm						
Time water level at 300 mm						
Percolation Test Hole No.	1			2		
Fill no.	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δp (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δp (min)
1						
2						
3						
Average Δp				Average Δp		
Average $\Delta p/4 =$ [Hole No.1] ____ (p_1)				Average $\Delta p/4 =$ [Hole No.2] ____ (p_2)		
<p>P value* = $(p_1 + p_2)/2 =$ _____ (min/25 mm)</p> <p>Result of Test : P =</p> <p>COMMENTS:</p>						

- If two very different P test results are obtained and where one of these values fails then a third test should be carried out to determine the representivity of each of the results

Sketch of site showing measurement to Trial Hole location and Percolation Test Hole locations, wells and direction of groundwater flow (if known), proposed house (incl. distances from boundaries) adjacent houses, watercourses, significant sites and other relevant features. North point should always be included.

[A copy of the site layout drawing should be used if available]

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).

Suitable for (delete as appropriate)****:

- (a) septic tank and soil percolation system
- (b) septic tank and intermittent filter system and polishing unit; or septic tank and constructed wetlands and polishing unit
- (c) mechanical aeration system and polishing unit

****note: more than one option may be suitable for a site and this should be recorded

and
SUITABLE / UNSUITABLE (delete as appropriate) for discharge to **surface water**¹
SUITABLE / UNSUITABLE (delete as appropriate) for discharge to **groundwater**

5.0 RECOMMENDATION:

Propose to install: _____
and discharge to surface water/groundwater (delete as appropriate)

Conditions (if any) e.g. special works, invert level of trench, site improvement works testing etc.....

Signed: _____

Address: _____

Qualifications/Experience: _____ Date of Report: _____

Phone: _____ Fax: _____ e-mail _____

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

6.0 TREATMENT SYSTEM DESIGN DETAILS

System Type?		Proposed Discharge route?	Surface water	Groundwater
Size of Proposed Treatment System?	Primary/Septic Tank (m ³)	Secondary Treatment System Capacity (m ³)	Percolation Area/Polishing filter (State units - m or m ²)*	
What Quality Assurance is proposed during the following?	Installation & Commissioning		On-going Maintenance	

* the calculated percolation area or polishing filter area should be shown on site plan

7.0 REVIEW (by Local Authority)

Site visit	<input type="checkbox"/>	Date:
Inspection of Trial Hole	<input type="checkbox"/>	Date:
Inspection of Percolation Test Holes	<input type="checkbox"/>	Date:
COMMENTS		
SIGNED:		Date: