SITE CHARACTERISATION FORM
COMPLETING THE FORM

Step 1:

[Clear Form]

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

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 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.

SITE CHARACTERISATION FORM

File Reference: _____

1.0 GENERAL DETAILS (From planning application)

Prefix: _____ First Name: _____ Surname: _____

Address: _____

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: Mains ☐ Private Well/Borehole ☐ Group Well/Borehole ☐

2.0 GENERAL DETAILS (From planning application)

Soil Type, (Specify Type): _____

Aquifer Category: Regionally Important ☐ Locally Important ☐ Poor ☐

Vulnerability: Extreme ☐ High ☐ Moderate ☐ Low ☐ High to Low ☐ Unknown ☐

Bedrock Type: _____

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

Groundwater Protection Scheme (Y/N): _____

Source Protection Area: 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).

_____

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

Houses:

Existing Land Use:

Vegetation Indicators:

Groundwater Flow Direction:

Ground Condition:

Site Boundaries: Roads:

Outcrops (Bedrock And/Or Subsoil):

Surface Water Ponding: Lakes:

Beaches/Shellfish: Areas/Wetlands:

Karst Features: Watercourse/Stream*:

Drainage Ditches*:   Springs / Wells*:

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).

*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 P/T Test*	Soil/Subsoil Texture & Classification**	Plasticity and dilatancy***	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						
2.6 m						
2.7 m						
2.8 m						
2.9 m						
3.0 m						

Evaluation:

_____

Likely T value: _____   **Note:** *Depth of percolation test holes should be indicated on log above. (Enter P or T at depts 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.

3.3(a) Percolation ("T") Test for Deep Subsoils and/or Water Table

Step 1: Test Hole Preparation

Percolation Test Hole	1	2	3
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)]	x	x	x

Step 2: Pre-Soaking Test Holes

Date and Time pre-soaking started

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

Step 3: Measuring T_{100}

Percolation Test Hole No.	1	2	3
Date of test			
Time filled to 400 mm			
Time water level at 300 mm			
Time to drop 100 mm (T_{100})			
Average T_{100}			

If T_{100} > 300 minutes then T-value >90 – site unsuitable for discharge to ground
If T_{100} ≤ 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									
2									
3									
Average Δt Value									

Average $\Delta t/4$ = [Hole No.1] _____ (t_1)   Average $\Delta t/4$ = [Hole No.2] _____ (t_2)   Average $\Delta t/4$ = [Hole No.3] _____ (t_3)

Result of Test: T = _____ (min/25 mm)

Comments:

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

Percolation Test Hole No.	1				2				3			
Fall of water in hole (mm)	Time Factor = T_f	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T – Value = 4.45 / K_{fs}	Time Factor = T_f	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T – Value = 4.45 / K_{fs}	Time Factor = T_f	Time of fall (mins) = T_m	$K_{fs} = T_f / T_m$	T – Value = 4.45 / K_{fs}
300 - 250	8.1				8.1				8.1			
250 - 200	9.7				9.7				9.7			
200 - 150	11.9				11.9				11.9			
150 - 100	14.1				14.1				14.1			
Average T- Value	T- Value Hole 1= (t_1)				T- Value Hole 1= (t_2)				T- Value Hole 1= (t_3)			

Result of Test: T = _____ (min/25 mm)

Comments:

3.3(b) Percolation ("P") Test for Shallow Soil / Subsoils and/or Water Table

Step 1: Test Hole Preparation

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

Step 2: Pre-Soaking Test Holes

Date and Time pre-soaking started						

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

Step 3: Measuring P_{100}

Percolation Test Hole No.	1	2	3
Date of test			
Time filled to 400 mm			
Time water level at 300 mm			
Time to drop 100 mm (P_{100})			
Average P_{100}			

If P_{100} > 300 minutes then T-value >90 – site unsuitable for discharge to ground
If P_{100} ≤ 210 minutes then go to Step 4;
If P_{100} > 210 minutes then go to Step 5;

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

Percolation Test Hole	1			2			3		
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)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δp (min)
1									
2									
3									
Average Δp Value									

Average Δp/4 = [Hole No.1] ☐ (p_1)   Average Δp/4 = [Hole No.2] ☐ (p_2)   Average Δp/4 = [Hole No.3] ☐ (p_3)

Result of Test: P = ☐ (min/25 mm)

Comments:

☐

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

Percolation Test Hole No.	1				2				3			
Fall of water in hole (mm)	Time Factor = T_f	Time of fall (mins) = T_m	K_{fs} = T_f / T_m	P – Value = 4.45 / K_{fs}	Time Factor = T_f	Time of fall (mins) = T_m	K_{fs} = T_f / T_m	P – Value = 4.45 / K_{fs}	Time Factor = T_f	Time of fall (mins) = T_m	K_{fs} = T_f / T_m	P – Value = 4.45 / K_{fs}
300 - 250	8.1				8.1				8.1			
250 - 200	9.7				9.7				9.7			
200 - 150	11.9				11.9				11.9			
150 - 100	14.1				14.1				14.1			
Average P- Value	P- Value Hole 1= (p_1)				P- Value Hole 1= (p_2)				P- Value Hole 1= (p_3)			

Result of Test: P = ☐ (min/25 mm)

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, bedrock.

3. North point should always be included.

4. (a) 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. Cross sectional drawing of the site and the proposed layout[1] should be submitted.

6. Photographs of the trial hole, text holes and site (date and time referenced).

[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.

Not Suitable for Development ☐

Suitable for [1]

1. Septic tank system (septic tank and percolation area) ☐

2. Secondary Treatment System

    a. septic tank and filter system constructed on-site and polishing filter; or ☐

    b. packaged wastewater treatment system and polishing filter ☐

Discharge Route

[   ]

5.0 RECOMMENDATION

Propose to install: [   ]

and discharge to: [   ]

Trench Invert level (m): [   ]

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

[   ]

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

[2] 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 2.6.2.

6.0 TREATMENT SYSTEM DETAILS

SYSTEM TYPE: Septic Tank System

Tank Capacity (m^3) [   ]

Percolation Area		Mounded Percolation Area	
No. of Trenches	[ ]	No. of Trenches	[ ]
Length of Trenches (m)	[ ]	Length of Trenches (m)	[ ]
Invert Level (m)	[ ]	Invert Level (m)	[ ]

SYSTEM TYPE: Secondary Treatment System

Filter Systems

Package Treatment Systems

Media Type	Area (m^2)*	Depth of Filter	Invert Level
Sand/Soil	[ ]	[ ]	[ ]
Soil	[ ]	[ ]	[ ]
Constructed Wetland	[ ]	[ ]	[ ]
Other	[ ]	[ ]	[ ]

Type [   ]

Capacity PE [   ]

Sizing of Primary Compartment

[   ] m^3

SYSTEM TYPE: Tertiary Treatment System

Polishing Filter: Surface Area (m^2)* [   ]

or **Gravity Fed:**

No. of Trenches [   ]
Length of Trenches (m) [   ]
Invert Level (m) [   ]

Package Treatment System: Capacity (pe) [   ]

Constructed Wetland: Surface Area (m^2)* [   ]

DISCHARGE ROUTE:

Groundwater [ ]   Hydraulic Loading Rate * (l/m^2.d) [   ]

Surface Water ** [ ]   Discharge Rate (m^3/hr) [   ]

TREATMENT STANDARDS:

Treatment System Performance Standard (mg/l)	BOD	SS	NH$_3$	Total N	Total P
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

QUALITY ASSURANCE:

Installation & Commissioning	On-going Maintenance
[ ]	[ ]

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

** Water Pollution Act discharge licence required

7.0 SITE ASSESSOR DETAILS

Company:

Prefix: First Name: Surname:

Address:

Qualifications/Experience:

Date of Report:

Phone: Fax: e-mail

Indemnity Insurance Number:

Signature: _____