Application for an environmental permit Part B6 – New bespoke water discharge activity and groundwater (point source) activity

Fill in this part of the form, together with parts A, B2 and F1, if you are applying for a new bespoke permit for a water discharge activity or a point source discharge groundwater activity. Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it.

The form can be:

1 Saved onto a computer and then filled in. Please note that the form follows a logic that means questions will open or stay closed depending on a previous answer. So you may not be able to enter text in some boxes.

2 Printed off and filled in by hand. Please write clearly in the answer spaces.

If you want to apply for a standalone discharge of treated domestic sewage effluent of up to fifteen cubic metres (15m³) a day to ground or up to twenty cubic metres (20m³) a day to surface water, please fill in form B6.5.

It will take less than three hours to fill in this part of the application form.

Contents

1 About the effluent – details and type
2 How long will you need to discharge the effluent for?
3 How much do you want to discharge?
4 Intermittent sewage discharges
5 Should your discharge be made to the foul sewer?
6 How will the effluent be treated?
7 What will be in the effluent?
8 Environmental risk assessments and modelling
9 Monitoring arrangements
10 Where will the effluent discharge to?
11 How to contact us
Appendix 1 – Discharges to a borehole or well
Appendix 2 – Discharges into land
Appendix 3 – Discharges onto land
Appendix 4 – Discharges to tidal river, tidal stream, estuary or coastal waters
Appendix 5 – Discharges to non-tidal river, stream or canal
Appendix 6 – Discharges to a lake or pond

About the effluent – details and type

From the list below, choose which type of effluent you are applying for on this form and answer the questions shown in Table 1.

You must fill in a separate copy of this form and the appropriate appendix or appendices for each type of effluent you plan to discharge.

Table 1 – About the effluent

Type of effluent	Charge band	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Sewage effluent (non-water company)	1.3.8 Sewage effluent discharge with a volume greater than 15 m^3/day to groundwater (not requiring specific substances assessment)	☐	All	a, b, c, d	b, f	-	a, b	All	-	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.9 Sewage effluent discharge to groundwater requiring specific substances assessment (any volume)	☐	All	a, b, c, d	b, f	-	a, b	All	b, c, d	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.10 Sewage effluent discharge with a volume greater than 5 m^3/day up to and including 50 m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b, c, d	b, f	-	a, b	All	-	b*, e*	a, b, c, f*, g, h	All
	1.3.11 Sewage effluent discharge with a volume greater than 50 m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b, c, d	b, f	-	a, b	All	-	b*, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)	☐	All	a, b, c, d	b, f	-	a, b	All	b, c, d	b*, c, e*	a, b, c, d*, e*, f*, g, h	All
Water company WwTW treated sewage effluent	1.3.8 Sewage effluent discharge with a volume greater than 15 m^3/day to groundwater (not requiring specific substances assessment)	☐	All	a, b	a, f (b is optional)	-	-	All	-	a, d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.9 Sewage effluent discharge to groundwater requiring specific substances assessment (any volume)	☐	All	a, b	a, f (b is optional)	-	-	All	a, b, c, d	a, d, e*	a, b, c, d*, e*, f*, g, h	All

Table 1 continued

Type of effluent	Charge band	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	1.3.10 Sewage effluent discharge with a volume greater than 5 m^3/day up to and including 50 m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b	a, f (b is optional)	-	-	All	-	a, b*, e*	a, b, c, f*, g, h	All
	1.3.11 Sewage effluent discharge with a volume greater than 50 m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b	a, f (b is optional)	-	-	All	-	a, b*, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)	☐	All	a, b	a, f (b is optional)	-	-	All	a, b, c, d	a, b*, c, e*	a, b, c, d*, e*, f*, g, h	All
Settled storm sewage	1.3.19 Combined sewer overflow	☐	All	a, b	-	a, b, c, d, f, g, h, i, j, k	-	All	-	a, b*, d*, e*	b, g, h	All
Storm sewage	1.3.19 Combined sewer overflow	☐	All	a, b	-	a, b, c, e, f, g, h, i, j, k	-	All	-	a, b*, d*, e*	b, g, h	All
Emergency overflow	1.3.20 Emergency overflows	☐	All	a, b	-	a, l, m, n, o	-	All	-	a, b*, d*, e*	b, g, h	All
Trade and/or non-sewage – known volume	1.3.12 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume up to and including 5 m^3/day (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	a, b	All	-	b*, d*, e*	b, f*, g, h	All
	1.3.13 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume greater than 5 m^3/day (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	a, b	All	-	b*, d*, e*	b, d*, e*, f*, g, h	All
	1.3.14 Trade and/or non-sewage effluent discharge to surface water or groundwater requiring specific substances assessment (any volume)	☑	All	a, b, c, d	b, c, f	-	a, b	All	b, c, d	b*, c, d*, e*	b, d*, e*, f*, g, h	All

Table 1 continued

Type of effluent	Charge band	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Trade and/or non-sewage – rainfall-dependent	1.3.12 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume up to and including 5 m^3/day (not requiring specific substances assessment)	☐	All	a, b	b, e, f	-	-	All	-	b*, d*, e*	b, f*, g, h	All
	1.3.13 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume greater than 5 m^3/day (not requiring specific substances assessment)	☐	All	a, b	b, e, f	-	-	All	-	b*, d*, e*	b, d*, e*, f*, g, h	All
	1.3.14 Trade and/or non-sewage effluent discharge to surface water or groundwater requiring specific substances assessment (any volume)	☐	All	a, b	b, e, f	-	-	All	b, d	b*, c, d*, e*	b, d*, e*, f*, g, h	All
Mixed effluent (sewage combined with trade and/or non-sewage) – known volume	1.3.8 Sewage effluent discharge with a volume greater than 15m^3/day to groundwater (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	a, b	All	-	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.9 Sewage effluent discharge to groundwater requiring specific substances assessment (any volume)	☐	All	a, b, c, d	b, c, f	-	a, b	All	b, c, d	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.10 Sewage effluent discharge with a volume greater than 5m^3/day up to and including 50m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	a, b	All	-	b*, e*	a, b, c, f*, g, h	All
	1.3.11 Sewage effluent discharge with a volume greater than 50m^3/day to surface water (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	a, b	All	-	b*, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)	☐	All	a, b, c, d	b, c, f	-	a, b	All	b, c, d	b*, c, e*	a, b, c, d*, e*, f*, g, h	All

Table 1 continued

Type of effluent	Charge band	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Mixed effluent (sewage combined with trade and/ or non-sewage) containing rainfall-dependent effluent	1.3.8 Sewage effluent discharge with a volume greater than 15m³/day to groundwater (not requiring specific substances assessment)	☐	All	a, b	b, c, d, e, f	-	a, b	All	-	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.9 Sewage effluent discharge to groundwater requiring specific substances assessment (any volume)	☐	All	a, b	b, c, d, e, f	-	a, b	All	b, c, d	d, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.10 Sewage effluent discharge with a volume greater than 5m³/day up to and including 50m³/day to surface water (not requiring specific substances assessment)	☐	All	a, b	b, c, d, e, f	-	a, b	All	-	b*, e*	a, b, c, f*, g, h	All
	1.3.11 Sewage effluent discharge with a volume greater than 50m³/day to surface water (not requiring specific substances assessment)	☐	All	a, b	b, c, d, e, f	-	a, b	All	-	b*, e*	a, b, c, d*, e*, f*, g, h	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)	☐	All	a, b	b, c, d, e, f	-	a, b	All	b, c, d	b*, c, e*	a, b, c, d*, e*, f*, g, h	All
Trade – returned abstracted water (including ground source heating and cooling)	1.3.15 Cooling water or thermal discharge to surface water or groundwater (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	-	All	e, f	b*, d*, e*	a*, b, d*, e*, f*, g, h	All
	1.3.16 Cooling water or thermal discharge to surface water or groundwater requiring specific substances assessment	☐	All	a, b, c, d	b, c, f	-	-	All	b, c, d, e, f	b*, c, d*, e*	a*, b, d*, e*, f*, g, h	All
	1.3.17 Aquaculture (not requiring specific substances assessment)	☐	All	a, b, c, d	b, c, f	-	-	All	-	b*, d*, e*	a*, b, d*, e*, f*, g, h	All
	1.3.18 Aquaculture requiring specific substances assessment	☐	All	a, b, c, d	b, c, f	-	-	All	b, c, d	b*, c, d*, e*	a*, b, d*, e*, f*, g, h	All

*Check the relevant question and our guidance notes on part B6 to see if you need to give an answer.

1 About the effluent – details and type

1a Give a brief description of the effluent discharge you want a permit for, for example, treated domestic sewage effluent

Discharge from one fish recovery and return system outfall at SZC power station.

1b Give this effluent a unique name
You must use this name to identify this effluent throughout this application and all associated documents.

Name: Waste Stream H - FRR 2

1c Please tick if this is a release from a dam, weir or sluice ('reservoir release') under Schedule 21 of the EPR meaning of water discharge activity. ☐

2 About the effluent – how long will you need to discharge the effluent for?

2a What date do you want the permit for this effluent to start? (DD/MM/YYYY)

Please note that this is the date that your annual subsistence charges will start, even if you have not started to discharge, unless you contact us to change (delay) the start date (see the guidance notes on part B6). The start date cannot be before the permit is issued and cannot be changed (delayed) after it has already passed.

2b Is the discharge time limited?

Yes ☐ Please give the date you expect the discharge to end but please note that your permit will not end on that date and you will still need to notify us to surrender the permit (DD/MM/YYYY)

No ☑

2c Will the discharge take place all year?

Yes ☑

No ☐ Please give details of the months when you will make the discharge

2d Will the discharge take place on more than six days in any year?

Yes ☑

No ☐

3 How much do you want to discharge?

3a What is the daily dry weather flow (in cubic metres)?

3b What is the maximum volume of effluent you will discharge in a day (in cubic metres)? 25,920.00

Show how you calculated the figure given in the box below and continue on a separate sheet if necessary, giving a reference for the extra sheet.

based upon 0.3m3/s from one FRR outfall

Document reference for any extra sheet or sheets used for question 3b: SZC WDA EP Application - Section 4.1.8 Table 4.1.28

3c What is the maximum rate of discharge (in litres a second)? 300.00

3d What is the maximum volume of non-rainfall-dependent effluent you will discharge in a day (in cubic metres)?

3 How much do you want to discharge?, continued

3e What is the maximum rate of rainfall-dependent discharge (in litres per second)?

3f For each answer in question 3, show how you worked out the figure on a separate sheet

Document reference of the extra sheet: SZC WDA EP Application - Section 4.1.8

4 Intermittent sewage discharges

4a For each answer to b to o below, show how you worked out the figure on a separate sheet.

Document reference of the extra sheet: N/A

4b What is the total volume of the off-line/storm tank storage (in cubic metres)?

4c What is the total volume of on-line storage (in cubic metres)?

4d What is the pass forward flow at the settled storm overflow setting (in litres per second)?

4e What is the pass forward flow at the storm overflow setting (in litres per second)?

4f Is the discharge screened?

Yes ☐ Answer the relevant questions from 4g to 4i

No ☐ Go to 4k

4g What is the mesh screen spacing (in millimetres)?

4h What is the minimum screen capacity flow through the mesh screen (in litres per second)?

4i What is the bar screen spacing (in millimetres)?

4j What is the minimum screen capacity flow through the bar screen (in litres per second)?

4k Is the overflow constructed to good engineering design?

Yes ☐

No ☐ On a separate sheet explain what standards the overflow has been constructed to.

Document reference of the extra sheet

4l What is the emergency storage capacity of the sewer and wet well (in cubic metres)?

4m What is the storage time within the sewer and the wet well above the top water level at dry weather flow (in hours and minutes)?

4n What is the pass forward flow at the pumping station (in litres per second)?

4o For intermittent emergency overflows you must provide a document setting out the key protection measures you will provide.

Document reference for pumping station key protection measures

5 Should your discharge be made to the foul sewer?

Foul sewer means public or private foul sewer.

Before answering these questions, you must read the guidance notes to part B6.

You will also need to contact your sewerage undertaker (usually your local water company) and you may need to check if it is possible to connect to a private foul sewer.

5a How far away is the nearest foul sewer from the boundary of the premises (in metres)? 2,000.00

5b To assess whether it is reasonable to discharge your effluent into the foul sewer, please answer 5b1 or 5b2.

5b1 Discharges from domestic properties:

Multiply the number of properties served by the sewage treatment system by 30 metres.

Number of domestic properties served by the sewage treatment system ☐ x 30 metres = ☐ metres

5 Should your discharge be made to the foul sewer?, continued

5b2 Discharges from all other premises including trade effluent:
Divide the volume of the discharge (in cubic metres) by 0.75 and then multiply this figure by 30 metres.

Volume of the discharge (answer to question 3b) 25,920.00 cubic metres / 0.75 = 34,560.00 x 30 = 1,036,800.0(metres

Is your answer to question 5b1 or 5b2 above greater than the distance to the nearest foul sewer (answer to 5a)?

Yes ☑

No ☐

If no, you do not need to explain why you cannot discharge your effluent into the foul sewer at this point. However, we may request this information from you when we determine your application. Now go to question 6.

If yes, you must explain on a separate sheet why you cannot discharge your effluent into the foul sewer, giving a reference for the extra sheet. Before you submit the application, you must explore the possibility of connecting to the foul sewer, and send us evidence that you have approached the sewerage undertaker, including their formal response regarding connection, if relevant. You must also show the extra cost of connecting to a sewer compared with the treatment system you propose, and details of any physical obstacles such as roads, railways, rivers or canals.

We will only agree to the use of private treatment systems within sewered areas if you can demonstrate that:

- the additional cost of connecting to the foul sewer would be unreasonable;
- connection is not practically feasible; or
- the proposed private treatment system can be shown to significantly benefit the environment.

The guidance notes to part C6 will help you understand what information you need to provide in order to answer this question.

Document reference where you have given this justification SZC WDA App Section 3.2

We are unlikely to grant a permit for a discharge of treated domestic sewage in circumstances where a private sewerage system is being proposed due to a lack of capacity in the nearest public sewerage network.

6 How will the effluent be treated?

6a Do you treat your effluent?

Yes ☐ Now go to question 6b

No ☑ You must explain why the effluent will not be treated

Document reference for where you have given this justification SZC WDA App Section 2.3.8, 2.5, 3.10, 4.1.8, App A Fig 2.3.8

6b Fill in Table 2 for each stage of the treatments carried out on your effluent in the order in which they are carried out

Table 2 – Treatments carried out on your effluent

Order of treatment	Code number	Description
First		
Second		
Third		
Fourth		

Continue on a separate sheet if you need more rows. If you prefer, you can also send us an overall design for the whole treatment process.

Document reference for the extra sheet

6c You must provide details on a separate sheet of the final effluent discharge quality that the overall treatment system is designed to achieve.

Document reference for the extra sheet SZC WDA EP Application - Section 4.1.8

7 What will be in the effluent?

For all applications, whether to surface water, or onto or into ground you should still check to see if your discharge is likely to contain any of the specific substances listed in the guidance documents on 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater'– search for this term at www.gov.uk/government/organisations/environment-agency and answer the relevant questions for your discharge below.

7a Are any of the specific substances listed in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater' likely to enter the sewerage system upstream of the discharge through any authorised or known inputs?

Yes ☐

No ☐

7 What will be in the effluent?, continued

7b Are any of the specific substances listed in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater' added to or present in the effluent as a result of the activities on the site?

Yes ☑

No ☐

7c Have any of the specific substances listed in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater' been detected in samples of the effluent or in the sewerage catchment upstream of the discharge?

Yes ☐

No ☑

7d Are there any other harmful or specific substances in your effluent not mentioned in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater'?

Yes ☑

No ☐

7e Give the maximum temperature of your discharge in degrees Celsius

7f The maximum expected temperature change compared to the incoming water supply

Increase in degrees Celsius

Decrease in degrees Celsius

8 Environmental risk assessments and modelling

You may need to carry out an environmental risk assessment or modelling to support your application. Please answer all the questions that are relevant to your discharge. If an environmental risk assessment or modelling is required, you must send it to us with your application.

8a Sewer modelling report (for discharges of final effluent from a water company WwTW or intermittent sewage discharges)

You must carry out sewer modelling following the guidance 'Surface water pollution risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency. Send us details of how the modelling was carried out and the outcome.

Document reference for the sewer modelling report: N/A

8b Discharges to lakes, estuaries, coastal waters or bathing waters

You must carry out modelling following the guidance 'Surface water pollution risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency. Send us details of how the modelling was carried out and the outcome.

Document reference for the modelling report: SZC WDA App Section 5

8c Discharges to freshwater (non-tidal) rivers

If the discharge contains, or potentially contains, any specific substances, you must carry out screening following the guidance 'Surface water pollution risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency. The guidance notes on part B6 outline the information you must provide.

Have you answered yes to any of 7a to 7d?

Yes ☐

Send us the completed screening tool, along with the raw data used to create the summary statistics.

Document reference for the screening tool and raw data

No ☐

8d Discharges to groundwater

You must carry out a groundwater quantitative risk assessment following the guidance in 'Groundwater risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency. Send us details of how the modelling was carried out and the outcome.

For groundwater remediation schemes you must send us a site-specific remediation strategy that has been agreed with the local Environment Agency Groundwater and Contaminated Land Team.

Document reference for the groundwater remediation report

8e Environmental impact assessment

Have you carried out an environmental impact assessment?

Yes ☑ Send us details of how the assessment was carried out and the outcome.

Document reference for the environmental impact assessment: SZC WDA App Section 5

No ☐

9 Monitoring arrangements

Note: If your effluent has a maximum volume of no more than 50 cubic metres a day you do not need to complete question 9d or 9e.

9a What is the national grid reference of the inlet sampling point?

9b What is the national grid reference of the effluent sample point? Not known at this stage - SZC WDA EP App Section 4.2.9

9c Do you have an Urban Waste Water Treatment Directive final effluent sampling point?

Yes ☐ Please provide the national grid reference (for example, SJ 12345 67890)

No ☐

9d What is the national grid reference of the flow monitoring point? Not known at this stage - SZC WDA EP App Section 4.2.9

9e Does the flow monitor have an MCERTS certificate?

Yes ☐ Please give the certificate number Not known at this stage - SZC WDA EP App Section 4.2.9

No ☑

9f Do you have a UV disinfection efficacy monitoring point?

Yes ☐ Please provide the national grid reference

No ☑

9g You should clearly mark on the plan the locations of any of the above that apply to this effluent

Document reference for the plan Not known at this stage - SZC WDA EP App Section 4.2.9

9h Do you intend to do your own effluent monitoring?

Yes ☑

No ☐

10 Where will the effluent discharge to?

10a Mark in Table 3 where this effluent discharges to and fill in the relevant appendix or appendices.
You must use the name you gave to this effluent in answer to question 1b of this form when filling in your relevant appendix or appendices.

Table 3 – Where the effluent discharges to

Receiving environment	X	Relevant appendix
Borehole or well		1
Into land (for example, through a drainage system)		2
Onto land		3
Tidal river, tidal stream, estuary or coastal waters	X	4
Non-tidal river, stream or canal		5
Lake or pond		6

10b Is this effluent discharged through more than one outlet?

Yes ☐

No ☑

10c If yes, on a separate sheet, give details of the circumstances under which each outlet would be used by this effluent

Document reference for this extra sheet SZC WDA EP Application Section 2.3.8, 2.5.1 and 3.10

10d If you answered yes to question b above make sure you show clearly on your discharge point appendix or appendices and site plan that this one effluent can discharge to more than one discharge point

You must give us all the details we need for each of the discharge points used by this effluent.

11 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 03708 506 506 (Monday to Friday, 8am to 6pm)

Textphone: 03702 422 549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: www.gov.uk/government/organisations/environment-agency

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

11 How to contact us, continued

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please ☐

No thank you ☐

Crystal Mark 19107 Clarity approved by Plain English Campaign

For Environment Agency use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐ Amount received

£

Plain English Campaign's Crystal Mark does not apply to appendices 1 to 6.

Appendix 1 – Discharges to a borehole or well (or other deep structure)

If you are discharging the effluent to a borehole or well or other deep structure (such as concrete rings, natural swallow hole or deep soakage pit) you must ensure that the discharge is indirect to groundwater. Direct discharges to groundwater cannot be permitted. We will undertake a groundwater quantitative risk assessment on your behalf in line with the guidance 'Groundwater risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency.

For us to do this you must answer the following questions relevant to your application and provide us with additional information as summarised in Table 4.

Without this information we will be unable to complete the risk assessment and it is likely your application will be rejected.

Answer all the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Is the discharge to ground via a

Well ☐

Borehole ☐

Other deep structure ☐

If you have ticked the box for 'other deep structure' please give details (for example, concrete ring structure, shaft, natural swallow hole or soakage pit).

4 What is the diameter of the borehole, well or other deep structure that the effluent will be discharged into (in metres)?

5 Is the borehole, well or other structure already constructed?

Yes ☐ Now answer questions 6 to 9

No ☐ Now answer questions 10 to 12.

Existing borehole, well or other deep structure

6 What is the total depth to the bottom of the existing well, borehole or other structure (in metres below ground level)?

If you are unaware of the actual depth please estimate the depth based on the following categories:

0–5 metres ☐

5–10 metres ☐

Greater than 10 metres ☐

Uncertain ☐

What evidence is the estimated depth above based on?

7 Does the well, borehole or other structure extend into groundwater?

Yes – always contains water ☐

Sometimes – water is present occasionally ☐

No – never contains water ☐

If groundwater is always, or sometimes, present, what is the highest level that the standing water reaches (in metres below ground level)? _____ Measured/estimated (delete as appropriate)

8 Please provide any records, diagrams or borehole logs you may have that could help us understand:

- the method of construction (including any solid casings or linings used); and
- the likely depth of the deep structure; and
- the local groundwater conditions.

Appendix 1 – Discharges to a borehole or well (or other deep structure such as a mineshaft), continued

Please provide photocopies where possible. If it is not possible (for example, if the documents are large or bulky) please summarise any additional information you have on a separate sheet.

Document reference number for the records, diagrams or borehole logs

9 If any maintenance has been carried out on your well, borehole or other deep structure (for example, to aid effective drainage), please give details below.

Please now answer question 13.

Proposed borehole, well or other deep structure that has not yet been constructed

10 Please tell us why you are unable to install a shallow engineered drainage system. This information forms an important part of our permit determination process. Which methods of shallow disposal have you considered, and why did you decide these were not feasible to take forward? Please answer questions 10a and 10b to provide the results of soakage tests and summarise in the box any relevant information supporting your decisions (for example, permission refusals from landowners or physical constraints, or land availability or proximity to buildings).

10a What was your percolation value (Vp) result (in seconds per millimetre)?

You must show in Table 4 how you worked out the percolation value.

Table 4 Percolation value

	Trial 1	Trial 2	Trial 3	Average
Hole 1				
Hole 2				
Hole 3				
Hole 4				

10b If a shallow engineered drainage system were feasible, what would be the required surface area of your infiltration system (in square metres)?

Supporting information to explain why you are unable to install a shallow engineered drainage system can be appended to your application.

Document reference number for these details

11 Please tell us the type of deep structure (for example, borehole, well or deep soakage pit) you propose to install and what the total depth will be in metres below ground level.

12 Please tell us the reason this depth has been selected and, if you are aware of any relevant existing information on local water levels, please also tell us the depth to groundwater (in metres below ground level). What measures will you undertake to ensure the discharge is not direct into groundwater? If the discharge will be direct to groundwater explain why you cannot make it indirect. Direct discharges to groundwater cannot be permitted.

Proximity of your discharge to other receptors

13 Is the borehole, well or other deep structure where the discharge is being/will be made within 50 metres of any other well, spring or borehole used to supply water for drinking water or food production purposes?

Yes ☐ Please now answer question 14

No ☐ Please now answer question 15

Appendix 1 – Discharges to a borehole or well (or other deep structure such as a mineshaft), continued

If yes, please show the location of the well, spring or borehole you identified in answer to question 13 on the plan you have provided for section 4 of the main application form.

14 Please tell us about the water supply (or supplies) used for drinking water or food production purposes identified in question 13 above; for example, the name of the property or properties served by the water supply, what they use the water for (drinking water, food production) and where they are in relation to your discharge.

15 What is the distance in metres to the nearest watercourse (for example, surface water, river, stream or ditch)?

Please tell us whether you have considered discharging to surface water and if so, why this is not feasible.

In Table 5 please provide any further information required for us to complete a groundwater quantitative risk assessment on your behalf in line with the guidance 'Groundwater risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency. Without this information we will be unable to carry out a hydrogeological risk assessment on your behalf.

Table 5 summarises the information required to allow us to undertake a hydrogeological risk assessment of your discharge to a deep infiltration system. Without this information your application will be rejected. You will already have provided some of this information earlier in this application form. **We also need you to provide additional information indicated by a tick (✓) in Table 5**. For further guidance on the additional information required please search for 'Groundwater risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency and the guidance notes on part B6. You may require the advice of an environmental consultant to collate this information.

For some of the risk assessment inputs we are better placed to provide the information and will do so for those parameters indicated by an asterisk (*) as far as possible. However, if you wish to provide site-specific information for those parameters with an asterisk you are welcome to do so.

Table 5: Further information required for the Environment Agency to complete a groundwater quantitative risk assessment on your behalf

Information	Description	Existing structure	Proposed structure	Information supplied?
Information supplied by the applicant This has already been requested earlier in the application form.				**Information you have already supplied on the application form**
National grid reference of the discharge point		Appendix 1 Q2	Appendix 1 Q2	
Volume of effluent (m^3 per day)		Q3b	Q3b	
Type of effluent treatment	Septic tank, package treatment plant, other	Q6	Q6	
Type of deep infiltration system	Borehole, well, concrete ring structure, other	Appendix 1 Q3	Appendix 1 Q3	
Diameter of deep infiltration system (metres)		Appendix 1 Q4	Appendix 1 Q4	
Depth to the base of deep infiltration structure (metres)		Appendix 1 Q6	Appendix 1 Q11	
Depth to water table (metres)	Is discharge above or below water table?	Appendix 1 Q7, Q8	Appendix 1 Q12	
Justification for a deep infiltration system	Why are you unable to install a shallow infiltration system? What other options for disposal have been considered? Provide full details of the infiltration tests undertaken plus results	Appendix 1 Q8 if available	Appendix 1 Q10	

Table continues on next page

Appendix 1 – Discharges to a borehole or well (or other deep structure such as a mineshaft), continued

Information supplied by the applicant
This is additional information we need from you that is not provided elsewhere on the application form. Site data should be given where it is already available. If not, you can submit the relevant literature values quoting the source of the data and justification of the values you have selected. **Please tick the right-hand column to confirm you have provided this essential information.**

Concentration of relevant substances entering the infiltration system	For discharges of domestic effluent we will routinely assess the concentration of nitrogen species, particularly the ammonium concentration	✓	✓	☐
Length of screened borehole section below the water table (metres)	Depth in metres of the borehole screened section that is below the water table (This applies only to boreholes that have groundwater in the base)	✓	✓	☐
Calculated area of infiltration system (square metres)	Explain how the area of the infiltration system has been calculated – this is especially relevant if a non-circular system is used	✓	✓	☐
Unsaturated zone parameters	The following represent the strata above the water table: • hydraulic conductivity (metres per day) • water-filled porosity (per cent) • bulk density (grammes per cubic centimetre)	✓	✓	☐
Saturated zone parameters	The following represent the strata above the water table: • hydraulic conductivity (metres per day) • water-filled porosity (per cent) • bulk density (grammes per cubic centimetre) • hydraulic gradient of the water table (fraction)	✓	✓	☐

Information provided by the Environment Agency where possible
You are free to provide this information if you wish, or in some specific cases we may need to ask for this at a later stage. Please tick if you have provided this information (optional).

Environmental standard	The relevant environmental standard or compliance value against which we will assess your effluent discharge	*	*	☐
Half-life for degradation of the substance (days)	**If you wish to know more about these parameters see 'Groundwater risk assessment for your environmental permit' at www.gov.uk/government/organisations/environment-agency**	*	*	☐
Soil water partition coefficient (litres per kilogramme)		*	*	☐
Mixing zone thickness (metres)		*	*	☐
Distance to compliance point (metres)		*	*	☐

Appendix 2 – Discharges into land

Answer the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Is your infiltration system new or existing?

New ☐ Now go to question 5

Existing ☐ Now go to question 4

4a When was it built?

4b Now answer questions 5–8 if you are able to, if not leave them blank and go to question 9.

5 Is your infiltration system designed and built to British Standard 6297:2007 + A1:2008 or the British Standards in force at the time of installation?

Yes ☐

No ☐ Please provide details, on a separate sheet, of the design criteria used for your infiltration system

Document reference

6 On what date did you carry out a percolation test and dig a trial hole in line with British Standard 6297:2007 + A1:2008?
Date (DD/MM/YYYY)

7 What is your percolation value (Vp) result (in seconds per millimetre)? You must show in the table below how you worked out the percolation value.

Please also provide your test sheets and any field notes or observations made regarding ground conditions.

	Trial 1	Trial 2	Trial 3	Average
Hole 1				
Hole 2				
Hole 3				
Hole 4				

8 Please show us how you have calculated the area (A) of your infiltration system (in square metres).

p ☐ × Vp ☐ × 0.25 for septic tanks = A ☐

or

p ☐ × Vp ☐ × 0.20 for package treatment plants = A ☐

p Population based on maximum occupancy

Vp Percolation value in seconds/mm.

9 If known, mark on the plan you have provided the extent of the infiltration system. Please write on the plan the length and width of the sides in metres.

10 Is any part of your infiltration system within 50 metres of a well, spring or borehole?

No ☐

Yes ☐ Identify the location of the well spring or borehole on the plan you have provided and answer question 11.

11 Is the well spring or borehole you have identified used to supply water?

No ☐

Yes ☐ You must describe what the water supplied is used for.

12 Is any part of your infiltration system within 10 metres of a watercourse?

Yes ☐

No ☐

Identify the location of the watercourse on the plan you have provided for section 4 of part B2.

Appendix 3 – Discharges onto land

Answer all the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Select from the table below the type of area where the effluent is disposed of

Area Type	
Unlined reed bed	☐
Unlined grass plot	☐
Unlined wetland	☐
Other	☐ Please specify below

4 What is the surface area of the land used for your disposal (in square metres)?

5 Is any part of your infiltration system within 50 metres of a well, spring or borehole?

No ☐

Yes ☐ Identify the location of the well spring or borehole on the plan you have provided and answer question 6.

6 Is the well spring or borehole you have identified used to supply water?

No ☐

Yes ☐ You must describe what the water supplied is used for.

7 Is any part of your infiltration system within 10 metres of a watercourse?

Yes ☐

No ☐

Identify the location of the watercourse on the plan you have provided for section 4 of part B2.

Appendix 4 – Discharges to tidal river, tidal stream, estuary or coastal waters

Answer all the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan) — FRR 2

2 Give the national grid reference of the discharge point — TM 47980 64254

3 Give the name of the tidal river, tidal stream, estuary or area of coastal water if you know it — Greater Sizewell Bay

4 Is the discharge into a

Tidal river ☐

Tidal stream ☐

An estuary ☐

Coastal water ☑

5 Does the discharge reach the watercourse by flowing through a surface water sewer?

Yes ☐ Give the national grid reference where the discharge enters the surface water sewer

No ☑

6 Is the discharge point above the mean low water spring tide mark?

Yes ☐ Please explain, on a separate sheet, why the discharge cannot be made below this point

Document reference

No ☑

7 How is the effluent dispersed? For example, open pipe or diffuser system — Engineered Outfall Structure

If diffuser system go to question 8

8 Give details, on a separate sheet, of the design of the diffuser system

Document reference — SZC WDA EP Application Section 2.3.8, 2.5.1 and 3.10

Appendix 5 – Discharges to non-tidal river, stream or canal

Answer all the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Give the name of the watercourse, canal or the main watercourse it is a tributary of if you know it

4 Is the discharge into a

Non-tidal river ☐

Stream ☐

Canal ☐

5 Does the discharge reach the watercourse or canal by flowing through a surface water sewer?

Yes ☐ Give the national grid reference where the discharge enters the surface water sewer

No ☐

6 Does the watercourse dry up for part of the year?

Yes ☐

No ☐

Appendix 6 – Discharges to a lake or pond

Answer the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point. Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name
For example 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Give the name of the lake or pond if you know it

4 Select from the following table the type of lake or pond you will be discharging to and answer the relevant questions

Type of lake or pond		Relevant questions
Lake or pond which does not discharge into a river or watercourse or another pond which discharges into a river or watercourse	☐	Permit not required*
Lake or pond which does not discharge into a river or watercourse or another pond which discharges into a river or watercourse where you have had a notice served under paragraph 5 of Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2010	☐	5, 6, 7
Lake or pond which discharges into a river or watercourse	☐	5, 6, 7

*Unless a Notice has been served under paragraph 5 of Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2010

5 What is the surface area of the lake or pond (in square metres)?

6 What is the maximum depth of the lake or pond (in metres)?

7 What is the average depth of the lake or pond (in metres)?