

Fill in this part of the form, together with part C2 and part F1, if you are applying to vary (change) the conditions or any other part of the permit for a water discharge or groundwater activity.

Fill in this part of the form, together with parts C2, C3 and F1 if you are applying to vary or add a point source emission to water, groundwater or sewer from an installation.

Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or making changes to existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

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

### The form can be:

- saved onto a computer and then filled in.
- 2) printed off and filled in by hand. Please write clearly in the answer spaces.

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

### **Contents**

Abo	out the effluent – details and type	2
1	About the variation you are applying for	10
2	About the effluent – how long will you need to discharge the effluent for?	10
3	How much do you want to discharge?	11
4	Intermittent sewage discharges	12
5	Should your discharge be made to the foul sewer?	13
6	How will the effluent be treated?	14
7	What will be in the effluent?	15
8	Environmental risk assessments and modelling	16
9	Monitoring arrangements	17
10	Where will the effluent discharge to?	18
11	How to contact us	19
Apı	oendix 1 – Discharges to a borehole or well (or other deep structure)	20
Apı	oendix 2 – Discharges into land	28
Apı	oendix 3 – Discharges onto land	30
Apı	oendix 4 – Discharges to tidal river, tidal stream, estuary or coastal waters	31
App	oendix 5 – Discharges to non-tidal river, stream, or canal	33
Apı	oendix 6 – Discharges to a lake or pond	35

EPC6 Version 13, November 2021 page 1 of 35

# 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	01	02	03	04	05	90	07	08	60	Q10
Sewage effluent (non-water company)	1.3.3 Sewage effluent discharge with a volume up to and including 5 m³/day to surface water from domestic household or organisation operating for charitable purposes		All	a, b, c, d	b, f		a, b	All	1	b*, f*	a, b, c, f*, h, i	All
	1.3.4 Sewage effluent discharge with a volume up to and including 5 $\rm m^3/day$ to groundwater from domestic household or organisation operating for charitable purposes		All	a, b, c, d	b, f	1	a, b	All	1	d, f*	a, b, c, f*, h, i	All
	1.3.5 Sewage effluent discharge with a volume up to and including 5 m³/day to surface water (not requiring specific substances assessment)		All	a, b, c, d	b, f		a, b	All	1	b*, f*	a, b, c, f*, h, i	All
	1.3.6 Sewage effluent discharge with a volume up to and including 5 $m^3$ /day to groundwater (not requiring specific substances assessment)		All	a, b, c, d	b, f	1	a, b	All	1	d, f*	a, b, c, f*, h, i	All
	1.3.7 Sewage effluent discharge with a volume greater than 5 m³/day up to and including 15 m³/day to groundwater (not requiring specific substances assessment)		All	a, b, c, d	b, f		a, b	All		d, f*	a, b, c, f*, h, i	All

Type of effluent	Charge band	Please tick box	01	05	03	04	0.5	90	07	08	60	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	1	a, b	All		d, f*	a, b, c, d*, e*, f*, h, i	All
	1.3.9 Sewage effluent discharge to groundwater requiring specific substances assessment (any volume)		All	a, b, c, d	b, f	1	a, b	All	b, c, d, e	d, f*	a, b, c, d*, e*, f*, h, i	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*, f*	a, b, c, f*, h, i	All
	1.3.11 Sewage effluent discharge with a volume greater than 50 m³/day to surface water (not requiring specific substances assessment)		All	a, b, c, d	b, f	1	a, b	All	1	b*, f*	a, b, c, d*, e*, f*, h, i	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)		All	a, b, c, d	b, f	1	a, b	All	b, c, d, e	b*, c, f*	a, b, c, d*, e*, f*, h, i	All
Water company WwTW treated sewage	1.3.5 Sewage effluent discharge with a volume up to and including 5 $m^3$ /day to surface water (not requiring specific substances assessment)		All	a, b	a, f (b is optional)			All	-	a, b*, f*	a, b, c, f*, h, i	All
effluent	1.3.6 Sewage effluent discharge with a volume up to and including 5 m³/day to groundwater (not requiring specific substances assessment)		All	a, b	a, f (b is optional)	-		All	-	a, d, f*	a, b, c, f*, h, i	All

Type of effluent	Charge band	Please tick box	01	02	03	Q4	05	90	07	08	60	Q10
Water company WwTW treated sewage	1.3.7 Sewage effluent discharge with a volume greater than 5 m³/day up to and including 15 m³/day to groundwater (not requiring specific substances assessment)		All	a, b	a, f (b is optional)			All		a, d, f*	a, b, c, f*, h, i	All
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, f*	a, b, c, d*, e*, f*, h, i	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, e	a, d, f*	a, b, c, d*, e*, f*, h, i	All
	1.3.10 Sewage effluent discharge with a volume greater than 5 m³/day up to and including 50 m³/day to surface water (not requiring specific substances assessment)		All	a, b	a, f (b is optional)			All		a, b*, f*	a, b, c, f*, h, i	All
	1.3.11 Sewage effluent discharge with a volume greater than 50 m³/day to surface water (not requiring specific substances assessment)		All	a, b	a, f (b is optional)			All		a, b*, f*	a, b, c, d*, e*, f*, h, i	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)		All	a, b	a, f (b is optional)	1		All	a, b, c, d, e	a, b*, c, f*	a, b, c, d*, e*, f*, h, i	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*, f*	b, g, h, i	All

Charge band Please tick box	Please tick box		0,1		03	04	05	90	07	80	60	1
1.3.19 Combined sewer overflow			AII	a, b		a, b, c, e, f, g, h, i, j, k		M	1	a, b*, d*, f*	b, g, h, i	All
1.3.20 Emergency overflows		-	All	a, b		a, l, m, n, o		All		a, b*, d*, f*	b, g, h, i	All
1.3.12 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume up to and including 5 m³/day (not requiring specific substances assessment)		•	All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, d*, f*	b, f*, h, i	All
1.3.13 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume greater than 5 $\rm m^3/day$ (not requiring specific substances assessment)			All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, d*, f*	b, d*, e*, f*, h, i	All
1.3.14 Trade and/or non-sewage effluent discharge to surface water or groundwater requiring specific substances assessment (any volume)			AII	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, c, d*, f*	b, d*, e*, f*, h, i	All
1.3.12 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume up to and including 5 m³/day (not requiring specific substances assessment)			All	a, b	b, e, f			All	b, c, d, e	b*, d*, f*	b, f*, h, i	All
1.3.13 Trade and/or non-sewage effluent discharge to surface water or groundwater with a volume greater than m³/day (not requiring specific substances assessment)			AII	a, b	b, e, f			All	b, c, d, e	b*, d*, f*	b, d*, e*, f*, h, i	All

	Charge band	Please tick box	01	02	<b>Q3</b>	<b>Q</b> 4	<b>Q</b> 5	90	07	08	60	Q10
1 p 2 0	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		1	All	b, d, e	b*, c, d*, f*	b, d*, e*, f*, h, i	All
S T > 1	1.3.5 Sewage effluent discharge with a volume up to and including 5 m³/day to surface water (not requiring specific substances assessment)		All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, f*	a, b, c, f*, h, i	All
1 > ±	1.3.6 Sewage effluent discharge with a volume up to and including 5 m³/day to groundwater (not requiring specific substances assessment)		All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	d, f*	a, b, c, f*, h, i	All
7 > .= 2	1.3.7 Sewage effluent discharge with a volume greater than 5 $m^3$ /day up to and including 15 $m^3$ /day to groundwater (not requiring specific substances assessment)		All	a, b, c, d	b, c, f	ı	a, b	All	b, c, d, e	d, f*	a, b, c, f*, h, i	All
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1.3.8 Sewage effluent discharge with a volume greater than 15 m³/day to groundwater (not requiring specific substances assessment		All	a, b, c, d	b, c, f	1	a, b	All	b, c, d, e	d, f	a, b, c, d*, e*, f*, h, i	All
~ w	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, e	d, f*	a, b, c, d*, e*, f*, h, i	All

Type of effluent	Charge band	Please tick box	01	02	03	04	0.5	90	0,7	08	60	010
Mixed effluent (sewage combined with trade	1.3.10 Sewage effluent discharge with a volume greater than 5 m³/day up to and including 50 m³/day to surface water (not requiring specific substances assessment)		All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, f*	a, b, c, f*, h, i	All
and/or non- sewage) – known volume	1.3.11 Sewage effluent discharge with a volume greater than 50 m³/day to surface water (not requiring specific substances assessment)		All	a, b, c, d	b, c, f		a, b	All	b, c, d, e	b*, f*	a, b, c, d*, e*, f*, h, i	All
	1.3.11 Sewage effluent discharge to surface water requiring specific substances assessment (any volume)		All	a, b, c, d	b, c, f	1	a, b	All	b, c, d, e	b, c, d	a, b, c, d*, e*, f*, h, i	All
Mixed effluent (sewage combined with trade	1.3.5 Sewage effluent discharge with a volume up to and including 5 $m^3$ /day to surface water (not requiring specific substances assessment)		All	a, b	b, c, d, e, f		a, b	All	b, c, d, e	b*, f*	a, b, c, f*, h, i	All
and/or non- sewage) containing rainfall-	1.3.6 Sewage effluent discharge with a volume up to and including 5 $m^3$ /day to groundwater (not requiring specific substances assessment)		All	a, b	b, c, d, e, f		a, b	All	b, c, d, e	d, f*	a, b, c, f*, h, i	All
effluent	1.3.7 Sewage effluent discharge with a volume greater than 5 m³/day up to an including 15 m³/day to groundwater (not requiring specific substances assessment)		All	a, b	b, c, d, e, f		a, b	All	b, c, d, e	d, f*	a, b, c, f*, h, i	All
	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	b, c, d, e, f		a, b	All	b, c, d, e	d, f*	a, b, c, d*, e*, f*, h, i	All

Form EPC: Application for an environmental permit – Part C6 varying a water discharge activity or groundwater activity (point source discharge), or point source emission to water from an installation

Type of effluent	Charge band	Please Q1 Q2 tick box	01	02	03	64	05	%	07	04 05 06 07 08 09		010
Effluent	No additional charge, as already included	>	a, b, c	U	b, c, d, f		a, b2	, a	a, b, c, d, d*,		a, b, d, a, b,	a, b,
and/or	as part of the installation variation		р					p, c	e, t, g		e, t, h, i	၁
contaminated	application charge											
surface water												
run-off arising												
from the												
operation of												
an installation												

\* Check the relevant question and our guidance notes on part C6 to see if you need to give an answer.

### 1 About the variation you are applying for

1a Give a brief description of the changes you want to make to your permit

	e Phillips 66 Limited Humber Refinery (Environmental Permit EPR/UP3230LR) is proposing to retrofit Post - combustion bon capture (PCC) plant on its Fluidised Catalytic Cracker unit.
res dis add the	e PCC plant requires additional secondary abatement to reduce the emissions of sulphur dioxide from the FCC unit. This ults in a wastewater that will have an elevated concentration of sulphate requiring discharge. The Humber Refinery charges existing treated surface waters and wastewaters to South Killingholme Drain via Emission Point W2 and this ditional wastewater will be discharge from the same point. No changes to the volume of the existing discharge stated in existing Environmental Permit or the existing emission limits that apply to the discharge are proposed. There is no sting emission limit applied to sulphate for the discharge.
1b	Give this effluent a unique name
	PTU wastewater
You	must use this name to identify this effluent throughout this application and all associated documents
1c	Is this a release from a dam, weir or sluice ('reservoir release') under Schedule 21 of the EPR meaning of water discharge activity?
	☐ Yes
	□ No
1d	Have you obtained all the necessary permissions in addition to this environmental permit to be able to carry out the discharge (see C6 guidance notes for more details)?
	✓ Yes
	No
	N/A
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)
con	ase note that charges will start on this date, even if you have not started to discharge, unless you tact us to change (delay) the start date (see the guidance notes on part C6). The start date cannot be ore 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

EPC6 Version 13, November 2021 page 10 of 35

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?
	cubic metres
3b	What is the maximum volume of effluent you will discharge in a day?
	cubic metres
	ow how you calculated the figure given in the box below and continue on a separate sheet if necessary, ing a reference for the extra sheet
trea	e maximum volume of PTU effluent has been calculated by the project engineers to be 0.00295m3/s, based on the atment of the flue gas volumes from the FTU unit, the liquor required for the Wet Gas Scrubber unit and the purge rate of s liquor to ensure that the WGS operates effectively.
	infall dependent discharge has not been included, as the area of land on which the PCC plant is to be located is already vered under the permit, and therefore this discharge is already included in the sites existing discharge.
	Document reference
3c	What is the maximum rate of discharge?
	litres a second
3d	What is the maximum volume of non-rainfall dependent effluent you will discharge in a day?
	cubic metres
3e	What is the maximum rate of rainfall dependent discharge?
	litres a second
3f	For each answer in question 3, show how you worked out the figure on a separate sheet
	Document reference

EPC6 Version 13, November 2021 page 11 of 35

# 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
4b	What is the total volume of the off-line/storm tank storage?
	cubic metres
4c	What is the total volume of on-line storage?
	cubic metres
4d	What is the pass forward flow at the settled storm overflow setting?
	litres per second
4e	What is the pass forward flow at the storm overflow setting?
	litres per second
4f	Is the discharge screened?
	Yes Answer the relevant questions from 4g to 4j
	☐ No Now go to 4k
4g	What is the mesh screen spacing?
	millimetres
4h	What is the minimum screen capacity flow through the mesh screen?
	litres per second
4i	What is the bar screen spacing?
	millimetres
4j	What is the minimum screen capacity flow through the bar screen?
	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
41	What is the emergency storage capacity of the sewer and wet well?
	cubic metres
4m	What is the storage time within the sewer and the wet well above the top water level at dry weather flow?
	hours and minutes

EPC6 Version 13, November 2021 page 12 of 35

4n	What is t	ne pass forward flow at the pumping station?
		litres per second
40		nittent emergency overflows you must provide a document setting out the key protection syou will provide
	Documer	nt reference for pumping station key protection measures
5	Should	your discharge be made to the foul sewer?
Fou		eans public or private foul sewer.
Befo	ore answe	ring these questions, you must read the guidance notes to part C6.
		need to contact your sewerage undertaker (usually your local water company) and you may a if it is possible to connect to a private foul sewer.
5a	How far a	way is the nearest foul sewer from the boundary of the premises?
	Not applie	metres metres
5b		s whether it is reasonable to discharge your effluent into the foul sewer, please answer 5b1
5b1	Discharge	es from domestic properties
	Multiply 1	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 =
	0	metres
5b2	Discharge	es from all other premises including trade effluent
	Divide th	e volume of the discharge (in cubic metres) by 0.75 and then multiply this figure by 30 metres
	Volume o	f the discharge (answer to question 3b)
	255	cubic metres / 0.75 =
	340	x 30 =
	10200	metres
	Is your ar (answer t	nswer to question 5b1 or 5b2 above greater than the distance to the nearest foul sewer to 5a)?
	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.
	<b>√</b> 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

EPC6 Version 13, November 2021 page 13 of 35

such as roads, railways, rivers or canals.

compared with the treatment system you propose, and details of any physical obstacles

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

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.

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

answerthis question.		
Document reference for where you have g	given this justification	

6	How	will the	effluent	be treated?
C)	IIIVV 1	//	: cillucill	ne neaten:

6a Do you treat your effluent		eat your effluent?	
	✓	Yes	Now go to question 6b

Main Supporting Document, Section 5.2

No You must explain why the effluent will not be treated

Document reference for where you have given this justification

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

For installations with point source emission to water or sewer, there is no need to duplicate information already provided in part C3 form. Where this information is already provided, give the document reference and go to question 7.

Document reference

Main Supporting Document, Section 5.2

### Table 2 – Treatments carried out on your effluent

Order of treatment	Code number	Description
First	09	Solids will be removed by flocculation and settlement
Second	24	sulphite and COD will be reduced by oxidation
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		
I		

EPC6 Version 13, November 2021 page 14 of 35

### 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' (see <a href="https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit">https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</a>).

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
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	If you have answered 'No' to any of questions 7a to 7d provide details on a separate sheet of how you have established that the effluent is not likely to contain specific substances.
	Document reference
7f	What is the maximum temperature of your discharge?
	degrees Celsius
7g	What is the maximum expected temperature change compared to the incoming water supply?
	increase in degrees Celsius
	decrease in degrees Celsius

EPC6 Version 13, November 2021 page 15 of 35

### 8 Environmental risk assessments and modelling

Document reference for the groundwater remediation report

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 <a href="https://www.gov.uk/guidance/risk-assessments-for-your-environmental-">https://www.gov.uk/guidance/risk-assessments-for-your-environmental-</a> permit. Send us details of how the modelling was carried out and the outcome. Document reference for the sewer modelling report 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 <a href="https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit">https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</a>. Send us details of how the modelling was carried out and the outcome. Document reference for the modelling report 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 https:// www.gov.uk/guidance/risk-assessments-for-your-environmental-permit. The guidance notes on part C6 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 <a href="https://www.gov.uk/guidance/groundwater-risk-">https://www.gov.uk/guidance/groundwater-risk-</a> assessment-for-your-environmental-permit. 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.

EPC6 Version 13, November 2021 page 16 of 35

### 8e Discharges to freshwater (non-tidal) rivers from an installation, including discharges via sewer

If the discharge contains, or potentially contains, any specific substances, you must carry out screening <u>or-</u>

		_	guidance (see <a href="https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-nental-permit">https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-nental-permit</a> ). The guidance notes on part C6 outline the information you must provide.
Haν	ve yo	u ansv	wered yes to any of 7a to 7d?
	<b>✓</b>	Yes	Send us the completed screening tool, along with the raw data used to create the summary statistics. Where the discharge is via sewer, include sewage treatment reduction factors in the calculations.
Dod	cume	ent refe	erence for the screening tool and raw data
Ma	in Su	pportin	g Document Section 7.4.3.2
			ed to duplicate information already provided in part C3 form. Where this information is led, give the document reference above.
8f	Enν	/ironm	ental impact assessment
	Hav	ve you	carried out an environmental impact assessment?
		Yes	Send us details of how the assessment was carried out and the outcome
	Do	cumen	t reference for the environmental impact assessment
	✓	No	
9	Ma	nito	ing arrangements
Not	e: If	your e	ffluent has a maximum volume of no more than 50 cubic metres a day you do not need to stion 9d or 9e.
9a	Wh NA		ne national grid reference of the inlet sampling point? (for example, SJ 12345 67890)
9b	Wh	at is th	ne national grid reference of the effluent sample point?
		1556 1	
9c	Dο	vou ha	ave an Urban Waste Water Treatment Directive final effluent sampling point?
			Please provide the national grid reference
		No	
24	\/\b		as national grid reference of the flow monitoring point?
9d			ne national grid reference of the flow monitoring point?
		1556 1	
9e			flow monitor have an MCERTS certificate?
			Please give the certificate number
	CC	V V/E3U	123 A192 rev1

EPC6 Version 13, November 2021 page 17 of 35

No

9f	Do you have a UV disinfection efficacy monitoring point?  Yes Please provide the national grid reference	
	✓ No	
9g	Do you have an event duration monitoring point(s)?  Yes Please provide the national grid reference	
	✓ No	
9h	You should clearly mark on the plan the locations of any of the above that a Document reference for the plan Main Supporting Document, Appendix A, Figure 2	apply to this effluent
9i	Do you intend to do your own effluent monitoring?	
<i>)</i>	✓ Yes	
	No	
rele	must use the name you gave to this effluent in answer to question 1b of this vant appendix or appendices.  • le 3 – Where the effluent discharges to	s form when filling in your
Re	ceiving environment	Relevant appendix
Во	rehole or well	1
Int	o land (for example, through a drainage system)	2
On	to land	3
Tid	al river, tidal stream, estuary or coastal waters	4
No	n-tidal river, stream or canal	5
Lal	ke or pond	6
10b	Is this effluent discharged through more than one outlet?	
	Yes Give details, on a separate sheet, of the circumstances under who used by this effluent	ich each outlet would be
	Document reference	
	✓ No	
10c	If you answered yes to question 10b above make sure you show clearly on appendix or appendices and site plan that this one effluent can discharge to discharge point.	

EPC6 Version 13, November 2021 page 18 of 35

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 422549 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Website: https://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.

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 19114

For Environment Agency use only	
Date received (DD/MM/YYYY)	Payment received?
	□ No
Our reference number	Yes Amount received
	f

Plain English Campaign

EPC6 Version 13, November 2021 page 19 of 35

### 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 <a href="https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit">https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit</a>.

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

ne you gave to your entuent in answer to question 15 in the entuent form.			
Give the discharge point a unique name			
For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)			
Give the national grid reference of the discharge point			
Is the discharge to ground via a			
☐ Well			
Borehole			
Other deep structure Please give details (e.g. concrete ring structure, shaft, natural swallow hole, soakage pit etc.)			
Hote, soakage pit etc.)			
What is the diameter of the borehole, well or other deep structure that the effluent will be discharged into?			
metres			
Is the borehole, well or other structure already constructed?			
is the solution, well of other structure alleady constructed.			
Yes Now answer questions 1.6 to 1.9			

EPC6 Version 13, November 2021 page 20 of 35

# Existing borehole, well or other deep structure

1.6	What is the total depth to the bottom of the existing well, borehole or other structure?
	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?
1.7	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?
	Measured
	metres below ground level
	Estimated
	metres below ground level
1.8	Please provide any records, diagrams or borehole logs you may have that could help us understand:
	<ul> <li>the method of construction (including any solid casings or linings used)</li> </ul>
	• the likely depth of the deep structure
	the local groundwater conditions
	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 for the records, diagrams, or borehole logs

EPC6 Version 13, November 2021 page 21 of 35

1.9	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	e now answer question 1.13
Prop	osed borehole, well or other deep structure that has not yet been constructed
1.10	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 1.10a and 1.10b 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).
1.10a	What was your percolation value (Vp) result?
	seconds per millimetre
You m	ust show in Table 4 how you worked out the percolation value.
Table	e 4 – Percolation value

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

EPC6 Version 13, November 2021 page 22 of 35

1.10b	f a shallow engineered drainage system were feasible, what would be the required surface area of rour infiltration system?
	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 for these details
1.11	Please tell us the type of deep structure (for example, borehole, well, deep soakage pit) you propose to install
	Vhat will the total depth be?
	metres below ground level
1.12	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.
Proxi	nity of your discharge to other receptors
1.13	s the borehole, well or other deep structure where the discharge is being/will be made within 60 metres of any other well, spring or borehole used to supply water for drinking water or food production purposes?
	Yes Please show the location of the well, spring or borehole you identified in answer to question 1.13 on the plan you have provided for section 4 of the main application form. Please now answer question 1.14
	No Please now answer guestion 1.15

EPC6 Version 13, November 2021 page 23 of 35

1.14	Please tell us about the water supply (or supplies) used for drinking water or food production purposes identified in question 1.13 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
1.15	What is the distance to the nearest watercourse (for example, surface water, river, stream or ditch)?
	metres
Please	e tell us whether you have considered discharging to surface water and why this is not feasible
n Tab	le 5 please provide any further information required for us to complete a groundwater quantitative

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 <a href="https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit">https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit</a>. 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 <a href="https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit">https://www.gov.uk/guidance/groundwater-risk-assessment-for-your-environmental-permit</a> and the guidance notes on part C6. 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.

EPC6 Version 13, November 2021 page 24 of 35

# 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 th	e applicant		•	
This has already been requ	uested earlier in the application fo	orm		
National grid reference of the discharge point		Appendix 1 Q2	Appendix 1 Q2	
Volume of effluent (m³ 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	Information you have already supplied on
Depth to the base of deep infiltration structure (metres)		Appendix 1 Q6	Appendix 1 Q11	the application form
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	Annondiv		
	have been considered?	Appendix 1 Q8 if available	Appendix 1 Q10	
	Provide full details of the infiltration tests undertaken plus results	available		

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.

EPC6 Version 13, November 2021 page 25 of 35

		Existing structure	Proposed structure	Information supplied?
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	<b>√</b>	<b>✓</b>	
Length of screened borehole section below the water table (metres)	Length of screened Depth in metres of the borehole borehole section below screened section that is below		<b>✓</b>	
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	<b>√</b>	<b>✓</b>	
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)	<b>√</b>	<b>✓</b>	
Saturated zone parameters	<ul> <li>The following represent the strata above the water table:</li> <li>hydraulic conductivity (metres per day)</li> <li>water-filled porosity (per cent)</li> <li>bulk density (grammes per cubic centimetre)</li> <li>hydraulic gradient of the water table (fraction)</li> </ul>	<b>✓</b>	<b>√</b>	

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).

EPC6 Version 13, November 2021 page 26 of 35

Information	Description	Existing structure	Proposed structure	Information supplied?
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	*	*	
Soil water partition coefficient (litres per kilogramme)	'Groundwater risk assessment for your environmental permit' at <a href="https://www.gov.">https://www.gov.</a>	*	*	
Mixing zone thickness (metres)	uk/guidance/groundwater- risk-assessment-for-your- environmental-permit	*	*	
Distance to compliance point (metres)		*	*	

EPC6 Version 13, November 2021 page 27 of 35

### 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.

2.1	Give the discharge point a unique name
	For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)
2.2	Give the national grid reference of the discharge point
2.3	Is your infiltration system new or existing?
	☐ New Now go to question 2.5
	Existing Now go to question 2.4
2.4a	When was it built?
2.4b	Now answer questions 2.5–2.8 if you are able to, if not leave them blank and go to question 2.9
2.5	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
2.6	On what date did you carry out a percolation test and dig a trial hole in line with British Standard 6297:2007 + A1:2008?
	L (DD/MM/YYYY)
2.7	What is your percolation value (Vp) result?
	seconds per millimetre

You must show in Table 6 how you worked out the percolation value. Please also provide your test sheets and any field notes or observations made regarding ground conditions.

### Table 6 - Percolation value

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

EPC6 Version 13, November 2021 page 28 of 35

2.8	Please snow us now y	ou have calculated the area (A) of your inflitration system
	p	X
	Vp	x
	0.25 for septic ta	nks =
	A [0	square metres
	or	
	p	X
	Vp	
	0.20 for package	treatment plants =
	A L <sup>0</sup>	square metres
	p Population base	ed on maximum occupancy
	Vp Percolation valu	e in seconds/mm
2.9		plan you have provided the extent of the infiltration system. Please write on and width of the sides in metres.
2.10	Is any part of your inf	ltration system within 50 metres of a well, spring or borehole?
	□ No	
		e location of the well, spring or borehole on the plan you have provided and estion 2.11
2.11	Is the well, spring or I	porehole you have identified used to supply water?
	□ No	
	Yes You must o	describe what the water supplied is used for
2.12	Is any part of your inf	ltration system within 10 metres of a watercourse?
	□ No	
	Yes Identify th of part C2	e location of the watercourse on the plan you have provided for section 4

EPC6 Version 13, November 2021 page 29 of 35

### 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.

3.1	Give the discharge point a unique name							
	For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)							
3.2	Give the national grid reference of the discharge point							
3.3	Select from the table below the type of area where the effluent is disposed of							
	ned reed bed							
	ned grass plot							
	ned wetland							
Othe								
3.4	What is the surface area of the land used for your disposal?							
	square metres							
3.5	Is any part of your infiltration system within 50 metres of a well, spring or borehole?							
	Yes Identify the location of the well, spring or borehole on the plan you have provided and answer question 3.6							
3.6	Is the well, spring or borehole you have identified used to supply water? $\hfill\Box$ No							
	Yes You must describe what the water supplied is used for							
3.7	Is any part of your infiltration system within 10 metres of a watercourse?							
	□ No							
	Yes Identify the location of the watercourse on the plan you have provided for section 4 of part C2							

EPC6 Version 13, November 2021 page 30 of 35

### 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.

For exam	ole, 'Outlet 1' (you must use this name to identify the discharge point on the plan)					
Give the r	ational grid reference of the discharge point					
Give the r	ame of the tidal river, tidal stream, estuary or area of coastal water if you know it					
s the dis	charge into a					
Tidal	river					
Tidal	stream					
An e	stuary					
Coas	tal water					
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						
s the dis	charge 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					
Documen	t reference					
No						
How is th	e effluent dispersed?					
For exam	ole, open pipe or diffuser system					
lf diffuser	system go to question 4.8					
	ils, on a separate sheet, of the design of the diffuser system					
	,					

EPC6 Version 13, November 2021 page 31 of 35

4.9	Is the discharge made to a roadside drain or ditch?						
	☐ No						
	☐ Yes	If yes, it is your responsibility to ascertain whether the relevant highways authority is responsible for the roadside drain or ditch. If it is, you need to secure the appropriate permissions from the relevant highways authority before submitting an application for an environmental permit to the Environment Agency. A copy of the written permission from the relevant highways authority must be submitted with the environmental permit application.					
	Document reference for the written permission from the relevant highways authority						
	I						

EPC6 Version 13, November 2021 page 32 of 35

### 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.

Give the discharge							
W2			entify the discharge	point on the plan)			
Give the national g	grid reference of t		nt				
Give the name of t		anal or the main	watercourse it is a tr	ibutary of if you know it			
Is the discharge in	to a						
Non-tidal rive	r						
✓ Stream							
Canal							
Does the discharge	e reach the water	course or canal by	y flowing through a s	surface water sewer?			
Yes Give the	e national grid re	erence where the	discharge enters th	e surface water sewer			
<b>√</b> No							
Does the watercou	ırse dry up for pa	t of the year?					
<b>√</b> No							
Yes How ma	any months per y	ear is the waterco	urse dry?				
		ı					
Do you agree to in:	stall perforated p	pe work before th	ne discharge point?				
_	c of any watercou	se shall be perfo	rated, but this perfo	pe which lies within 10 rated section shall not			
If the watercourse does dry up for part of the year can you indicate a typical period when the surfact water runs dry each year – start and finish (in months)							
Watercourse typica	ally becomes dry	in:					
January February March April	☐ May ☐ June ☐ July ☐ Augus		September October November December				

EPC6 Version 13, November 2021 page 33 of 35

	Watercourse typically flows again in:											
					May June July August			September October November December				
5.6.2					up for part of t uent soaks in?	•	ow n	nany metres do	wnstre	am of the	discharge i	į
5.7	Is the discharge made to a roadside drain or ditch?											
	✓	No										
	Yes If yes, it is your responsibility to ascertain whether the relevant highways authority is responsible for the roadside drain or ditch. If it is, you need to secure the appropriate permissions from the relevant highways authority before submitting an application for an environmental permit to the Environment Agency. A copy of the written permission from the relevant highways authority must be submitted with the environmental permit application.											
	Document reference for the written permission from the relevant highways authority											
						1						

EPC6 Version 13, November 2021 page 34 of 35

### Appendix 6 - Discharges to a lake or pond

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.

6.1	Give the discharge point a unique name								
	For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)								
6.2	Give the national grid reference of the discharge point								
6.3	Give the name of the lake or pond if you know it								
6.4	Select from the following table the type of lake or pond you will be discharging to and answer the relevant questions								
Туре	of lake or pond	Relevant questions							
Lake or pond which is not connected to a river or watercourse Permit not requir									
you	e or pond which is not connected to a river or watercourse, where have had a notice served under paragraph 5 of Schedule 21 of the ronmental Permitting (England and Wales) Regulations 2016	6.5, 6.6, 6.7							
Lake	e or pond that discharges into a river or watercourse	6.5, 6.6, 6.7							
	ess a Notice has been served under paragraph 5 of Schedule 21 of the Env and and Wales) Regulations 2016	rironmental Permitting							
6.5	What is the surface area of the lake or pond?								
	square metres								
6.6	What is the maximum depth of the lake or pond?								
	metres								
6.7	What is the average depth of the lake or pond?								
	metres								

EPC6 Version 13, November 2021 page 35 of 35