



Application for an environmental permit:

Part C6 – Variation to a bespoke water discharge activity and groundwater (point source) activity

Fill in this part of the form, together with parts A, C2 and F2, if you are applying to vary (change) the conditions of a bespoke permit for a water discharge activity or a point source discharge groundwater activity.

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 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. All relevant guidance documents can be found on our website.

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1 About the effluent

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

Variation of the existing STW permit to account for the increased flows from the expanded visitors centre and new Outdoor Activity Centre. Details of the revised flows being generated by the new development can be found in the attached documents.

1b Give this effluent a unique name

You must use this name to identify this effluent throughout this application and all associated documents.

Effluent name

Llys Y Fran Dam STW

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 Give the UK Standard Industrial Classification of Economic Activities 2007 (SIC 2007) code which best describes the main activity

For private domestic dwellings use Z for section and A for class.

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

Section

Class or sub class

Table 1 – About the effluent

Type of effluent	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Domestic sewage – up to 20 m3 a day discharged to surface water or – up to 15m3 a day discharged to groundwater	<input type="checkbox"/>	All	a, b, c, d	a, b	b, f	-	All	-	b, f*, g	-	-	All
Domestic sewage – 20m3 a day or more discharged to surface water or – 15m3 a day or more discharged to groundwater	<input type="checkbox"/>	All	a, b, c, d	a, b	b, f	-	All	b, d, e	b, d*, e*, f*, g*	All	b, c, d, e	All
Intermittent settled storm sewage	<input type="checkbox"/>	All	a, b	-	-	a, b, e, f, g, h, i, m	All	a, d, e	b, g	All	a, b, c, d, e	All
Intermittent combined sewer overflow	<input type="checkbox"/>	All	a, b	-	-	c, d, e, f, g, h, i, m	All	a, d, e	b, g	All	a, b, c, d, e	All
Intermittent emergency overflow	<input type="checkbox"/>	All	a, b	-	-	j, k, l	All	a, d, e	b, g	All	a, b, c, d, e	All
Sewage – water company WwTW final effluent	<input checked="" type="checkbox"/>	All	a, b	-	a, f (b is optional)	-	All	a, b, c, d, e	a, b, c, d*, e*, f*, g (see note below)	All	a, b, c, d, e	All
Trade – known volume	<input type="checkbox"/>	All	a, b, c, d	a, b	b, c, f	-	All	b, c, d, e, f	b, d*, e*, f*, g (see note below)	All	b, c, d, e	All
Trade – rainfall dependent	<input type="checkbox"/>	All	a, b	-	b, c, f	-	All	b, c, d, e	b, d*, e*, f*, g (see note below)	All	b, c, d, e	All
Trade – returned abstracted water (including ground source heating and cooling schemes)	<input type="checkbox"/>	All	a, b, c, d	-	b, c, f	-	All	b, c, d, e, f, g	b, d*, e*, f*, g (see note below)	All	b, c, d, e	All
Mixed effluent – all effluent volumes	<input type="checkbox"/>	All	a, b, c, d	a, b	b, c, f	-	All	b*, d*, e* (see note below)	b, d*, e*, f*, g (see note below)	All	b, c, d, e	All
Mixed effluent – containing any rainfall dependent effluent	<input type="checkbox"/>	All	a, b, c, d	a, b	b, c, d, e, f	-	All	b, c, d, e, f	b, d*, e*, f*, g (see note below)	All	b, c, d, e	All

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

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

2a What date do you want the permit for this effluent to start?

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.

2b Is the discharge time limited?

No ☒

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.

2c Will the discharge take place all year?

Yes ☒

No ☐ Please give details below, 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 Discharges to sewer

3a How far away is the nearest sewer (in metres)?

N/A

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

3b Tell us why you think you cannot discharge your effluent into a sewer.

You must explain why you cannot discharge your effluent into a sewer.

Your justification must:

- show the extra cost of connecting to a sewer compared to the treatment you propose
- provide details of any physical obstacles; for example, roads, railways, rivers or canals.

Where you are proposing a discharge from a private sewage treatment system in an area where it appears reasonable to discharge your effluent into a sewer, you must, *as a minimum*:

- send us evidence that you have approached the sewerage undertaker, and
- send us their formal response regarding connection.

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

If you fail to send this information with your application, it may be returned to you without processing.

Tell us the reference you've given the document detailing your justification.

Document reference

4 How much do you want to discharge?

4a What is the daily dry weather flow (in cubic metres)?

14.5

4b What is the maximum volume of effluent you will discharge in a day (in cubic metres)?

4c What is the maximum rate of discharge (in litres a second)?

4d What is the maximum volume of non-rainfall dependent effluent you will discharge in a day (in cubic metres)?

4e What is the maximum rate of rainfall dependent discharge (in litres per second)?

4f For each answer in question 4, show how you worked out the figure on a separate sheet

Document reference

5 Intermittent sewage discharges

5a For each answer to b to j below, show how you worked out the figure on a separate sheet.

Document reference

5b What is the total volume of the storm tank storage (in cubic metres)?

5c What is the pass forward flow at the settled storm overflow setting (in litres per second)?

5d What is the pass forward flow at the storm overflow setting (in litres per second)?

5e What is the total volume of storage (in cubic metres)?

5f Is the discharge screened?

No ☐ *Go to section 5k*

Yes ☒

5g What is the mesh screen spacing (in millimetres)?

6

5h What is the minimum flow through the mesh screen (in litres per second)?

5i What is the bar screen spacing (in millimetres)?

5j What is the minimum flow through the bar screen (in litres per second)?

5k Explain how this asset is built to good engineering design – tell us the document reference for this supporting evidence.

5l What is the emergency storage capacity of the sewer and wet well (in cubic metres)?

5m 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)?

5n What is the pass forward flow at the pumping station (in litres per second)?

6 How will the effluent be treated?

6a Do you treat your effluent?

Yes ☒ Go to section 6b

No ☐ You must explain why the effluent will not be treated. Tell us the reference you have given the document setting out your justification.

Document reference

6b Tell us about the treatments.

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

Fill in a separate copy of this form for each type of effluent you plan to discharge.

Table 2		
Effluent name		
Order of treatment	Code number	Description
First		Inlet works
Second		RBC
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. Tell us the reference you've given the separate sheet or design.

Document reference

6c Final effluent discharge quality.

You must provide details on a separate sheet of the final effluent discharge quality that the overall treatment system is designed to achieve. Tell us the reference for this document.

Document reference

See Aatached Email From NRW (Dean Roden14/11/18)

7 What will be in the effluent?

Note: You **do not** need to fill in this section if you are applying for a 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.

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 substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A and answer the relevant questions for your discharge below.

7a Are any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A likely to enter the sewerage system upstream of the discharge through any authorised or known inputs?

Yes ☐

No ☒

7b Are any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A added to or present in the effluent as a result of the activities on the site?

Yes ☐

No ☒

7c Have any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A 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 hazardous substances in your effluent not mentioned in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A?

Yes ☐

No ☒

7e Have you answered yes to any of the above?

No ☒ *Go to section 7f*

Yes ☐ You must give relevant details in Table 3 below.

Table 3						
Substance	Unit	Maximum concentration	Minimum concentration	Average concentration	Number of samples	Total or dissolved

You must also send us any information on samples that you may have. Tell us the reference for the sample information, below.

Document reference

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

ambient

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

Increase in degrees Celsius

Decrease in degrees Celsius

8 Monitoring arrangements

8a What is the national grid reference of the inlet sampling point?

8b What is the national grid reference of the effluent sample point?

SN 03950 24249

8c 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 ☒

Note: If your effluent has a maximum volume of no more than 50 cubic metres a day you do not need to complete question 8d or 8e and you can move direct to 8f.

8d What is the national grid reference of the flow monitoring point?

N/A

8e Does the flow monitor have an MCERTS certificate?

Yes ☐ Please give the certificate number

No ☐

8f Do you have a UV disinfection efficacy monitoring point?

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

No ☐

8g You should clearly mark on the plan the locations of any of the above that apply to this effluent

Document reference

See attached Llys y Fran Dam Plan

9 Emissions of substances not controlled by emission limits management plan

Note: You **do not** need to fill in this section if you are applying for a 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.

9a Does your H1 - Environmental Risk Assessment show that emissions of substances not likely to be controlled by emission limits in your permit are an important issue?

No ☐ Go to section 10

Yes ☐

9b Have you got an emissions management plan which meets the requirements set out in guidance document 'How to comply'?

No ☐

Yes ☐ Please send us your emissions management plan

Document reference

10 Design criteria

Note: You do not need to fill in this section if you are applying for a 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.

10a 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 in 'Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Send us details of how the modelling was carried out and the outcome.

Document reference

10b Discharges to lakes, estuaries, coastal waters or bathing waters

You must carry out modelling following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Send us details of how the modelling was carried out and the outcome.

Document reference

10c Discharges to non-tidal rivers

You may need to carry out modelling following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Have you carried out any river quality modelling?

No ☐

Yes ☐ Send us details of how the modelling was carried out and the outcome.

Document reference

10d Discharges to groundwater

You must carry out a groundwater quantitative risk assessment following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 – Groundwater sections'. 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 which has been agreed with our (Natural Resources Wales) Geoscience Team.

Document reference

10e Environmental impact assessment

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

Document reference

No ☐

11 Where will the effluent discharge to?

11a tell us where the effluent discharges to.

Mark in Table 4 where this effluent discharges to and fill in the relevant questions and 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 4 – Where the effluent discharges to		
Receiving environment		Complete appendix
Non-tidal river, stream or canal	<input checked="" type="checkbox"/>	1
Tidal river, tidal stream, estuary or coastal waters	<input type="checkbox"/>	2
Lake or pond	<input type="checkbox"/>	3
Into land (for example, through a drainage system)	<input type="checkbox"/>	4
Onto land	<input type="checkbox"/>	5
Borehole or well	<input type="checkbox"/>	6

11b Is this effluent discharged through more than one outlet?

No ☒

Yes ☐ You must give details of the circumstances under which each outlet would be used by this effluent, on a separate sheet, and tell us the reference below.

Document reference

You must clearly show each of the discharge points used by this effluent on your discharge point appendix/appendices and site plan.

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

Document reference

12 More information from you

Are there any other factors we need to take into account as part of your application?

No ☒

Yes ☐ Please provide details and give us the reference for the document, below.

Document reference

Appendix 1 – Discharges to non-tidal river, stream or canal

Answer all the questions below and enter the answers to questions 1, 2 and 3 in the table provided. 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)

Llys y Fran Dam STW

2 Give the national grid reference of the discharge point

SN 03787 24195

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

Afon Syfynwy

4 Is the discharge into a (tick an option)

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 ☒

Answers table			
Discharge point name (question 1)	National grid reference (question 2)	Name (question 3)	Name of effluent discharged through this discharge point (question 1b effluent form)
Llys y Fran Dam STW	SN 03787 24195	Afon Syfynwy	Treated Sewage effluent

Appendix 2 – Discharges to tidal river, tidal stream, estuary or coastal waters

Answer all the questions below and enter the answers to questions 1, 2 and 3 in the table provided. 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 tidal river, tidal stream, estuary or area of coastal water if you know it

4 Is the discharge into a (tick an option)

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.

If diffuser system you must answer question 8.

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

Answers table			
Discharge point name (question 1)	National grid reference (question 2)	Name (question 3)	Name of effluent discharged through this discharge point (question 1b effluent form)

Appendix 3 – Discharges to a lake or pond

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	<input type="checkbox"/>	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 2016	<input type="checkbox"/>	5, 6, 7
Lake or pond which discharges into a river or watercourse	<input type="checkbox"/>	5, 6, 7
*Unless a Notice has been served under paragraph 5 of Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2016		

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)?

Answers table			
Discharge point name (question 1)	National grid reference (question 2)	Name (question 3)	Name of effluent discharged through this discharge point (question 1b effluent form)

Appendix 4 – Discharges into land

Answer the questions below and enter the answers to questions 1 and 2 in the table provided. 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? (Existing means in place prior to 6/04/2010)

New ☐ *Go to section 5*

Existing ☐ Answer question 4 and then answer questions 5 to 8 if you are able to.

4a When was it built?

You must 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?

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?

7 What is your percolation value (Vp) result (seconds per millimetre)?

You must show in the table below how you worked out the percolation value.

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

8 What is the surface area of your infiltration system (in square metres)?

9 Mark the extent of the infiltration system on the plan you have provided .

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.

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

No ☐

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

12 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 B6.

Answers table		
Discharge point name (question 1)	National grid reference (question 2)	Name of effluent discharged through this discharge point (question 1b effluent form)

Appendix 5 – Discharges onto land

Answer all the questions below and enter the answers to questions 1 and 2 in the table provided. 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 In what type of area will the effluent is disposed of? (Tick an option)

Unlined reed bed ☐

Unlined grass plot ☐

Unlined wetland ☐

Other ☐ Please specify in the box 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.

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

No ☐

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

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.

Answers table		
Discharge point name (question 1)	National grid reference (question 2)	Name of effluent discharged through this discharge point (question 1b effluent form)

Appendix 6 – Discharges to a borehole or well (or other deep structure such as a mineshaft)

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 The discharge point name

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 The national grid reference of the discharge point

3 Is the discharge to ground via a (tick an option)

Well ☐

Borehole ☐

Other deep structure ☐

Please give details in the box below.

4 Total depth of the borehole or well

What is/or will be the total depth of the borehole or well (in metres) below ground or other reference level (please specify the reference level you are using)?

5 Is the borehole or well or structure already constructed?

Yes ☐

No ☐

6 To what depth is the borehole or well or structure sealed with unperforated linings or casing (in metres) below your reference level?

7 Is any part of your discharge within 50 metres of another well, spring or borehole?

No ☐ *Go to section 9*

Yes ☐ You must identify the location of the well, spring or borehole on the plan you have provided.

8 Is the other well, spring or borehole you have identified used to supply water?

No ☐

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

9 Does the borehole or well or structure into which you are intending to make your discharge intermittently or permanently contain standing water?

No ☐ *Go to section 11*

Yes ☐

10 If your discharge falls into any of the following groups of activities please tick the appropriate box. If not just leave blank.

- Injection of water containing substances resulting from the operations for exploration and extraction of hydrocarbons or mining activities ☐
- Reinjection of pumped groundwater from mines and quarries or associated with the construction or maintenance of civil engineering works (includes the treatment and reinjection of contaminated groundwater for the purposes of remediation) ☐
- Injection of natural gas or liquefied petroleum gas for storage purposes ☐
- Construction, civil engineering and building works and similar activities on or in the ground (for example discharge arising from the grouting of old mineshafts) ☐
- Discharges of small quantities of substances for scientific purposes for characterisation, protection (including use of substances as tracers) or remediation of groundwater, where such activities are not eligible for a registered exemption ☐
- The artificial recharge or augmentation of a body of groundwater for the purposes of groundwater management ☐
- Reinjection of pumped groundwater used for geothermal purposes (including ground source heat systems) ☐

11 What is the highest level the standing water reaches in the borehole or well or structure (in metres) below your reference level?