

Form WRD: Application for a new abstraction licence or a technical variation to an abstraction licence

Application type

Reference number (The number you generated in form WRA). Example:
WRNATURALRESOURCESWALES1101

WRHW&HPJERMAN0112

For hydropower abstractions, specify the capacity (in kilowatts) of your scheme.

>25 to 50kW

Are there any applications currently being assessed by us that are linked to this application?

No

Is the proposed abstraction going to be aggregated with another existing abstraction?

No

Are any applications, at the same site; being assessed by the Environment Agency?

No

Tell us when you want your abstraction licence to end: [DD/MM/YY]

31/03/40

Abstraction details

Abstraction location name/reference

Point A, Nant yr Oerfa,Cwmpenllydan,Rhiwbrongelly, Glynbrochan, Llanidloes

Abstraction point type

Single point

National Grid Reference

SN91135 82340

Do you have any further points of abstraction?

No

Means of abstraction

Provide full details of the equipment you propose to use to abstract water, such as maximum pump capacity and any relevant dimensions, e.g. pipe diameter. For groundwater abstractions, include details about the borehole (depth and diameter) and details of screening and lining.

Intake works and a gravity feed pipe of an external diameter not exceeding 225mm.

Hydro scheme has been in operation since 2017.

No alterations have been made to abstraction.

Copy of abstraction licence attached below

Please upload your drawings and calculations here. (Spreadsheet file formats need to be: .xls, .xlsx, or .ods)

- File: 20211201_183333.pdf - [Download](#)

Abstraction quantities

Abstraction location name/reference

Point A Nant yr Oerfa Cwmpenllydan, Rhiwbrongelly, Glynbrochan Llanidloes

What purpose will the water be used for?

Micro Hydropower

Period of abstraction Will it be all year?

Yes

Maximum quantities (cubic metres)

Annual 769824

Daily 3499

Hourly 146

Peak abstraction rate (in litres per second)

40.5

Number of hours of abstraction per day

24

Add quantities for another location?

No

Calculations and supporting information

Use this section to show us how you have calculated the amount of water you require. This should include details of your operational regime (for example, number of hours and days you intend to abstract, number of units produced or area to be irrigated). We use this information to determine if the volumes you propose to abstract are appropriate for the purpose. Depending which industry you are in, you may need to provide additional information below.

If your proposal involves the provision of a residual flow via a notch or orifice, provide information on how this is being calculated. This should include details of the equation being used.

See pages 6 and 7 of abstraction licence attached on previous question

Industry-specific requirements

	% abstraction and zone applied for	Average gradient of depleted reach (%)	Catchment size above abstraction point (kilometres squared)	Net head between abstraction and discharge points (metres)
	90% abstraction Zone 3	greater than 10%	64.7 hectares=0.647 kilometres squared	150

	Turbine efficiency (%)	System efficiency (%)	Maximum power output (kilowatts)	Annual capacity (kilowatt hours)
	90	85	29.9	200371

State the length of depleted reach (in metres)

900

What low flow protection (Low flow protection is the flow rate above which abstraction can begin and is separate to the abstraction % take) do you propose to maintain in the depleted reach when the hydropower scheme is operating (in m3/s)?

0.0075

Means of measurement

State how you intend to measure the quantity of water you abstract. You do not need to do this for a temporary or transfer licence.

Power Generated

Water efficiency

Provide details of what measures you provide or intend to implement, to ensure efficient use of water. This could include water storage, re-use or recirculation, monitoring and checking for leaks, undertaking water audits or other industry specific good practice.

System checked daily.
Water Abstraction Return completed annually

Fish and eel considerations (surface water abstractions only)

Does your proposal include measures to safeguard fish and eels? Only provide details of outfall screening if abstracted water is to be discharged back into a watercourse. For further guidance on appropriate screening Intake screening for fish

	Intake	Outfall
Type of fish screen	Drilled hole stainless steel intake screen	Mesh screen
Screen aperture size (mm)	3mm	10mm

Confirm the fish species present at your site. If you're not proposing any measures to protect fish and eels, you must justify this. For example, we may have confirmed in our pre-application response that the intake is inaccessible to fish or you undertook a fish survey to confirm.

No fish present at intake due to natural 10m waterfall stopping fish progressing up stream.
Hydro intake contains fish easement measure.

Discharge details

If you intend to return any of the abstracted water to the environment, provide details below. Details of discharge location(s) should correspond with any maps submitted. Do not include discharges to a public sewage system.

	Discharge location name / reference	National Grid Reference of discharge point (12 digit)	Total volume to be discharged (cubic metres)	Environmental Permit for Water Discharge Activity number (if applicable)
	Point Q Nant yr oerfa Cwmpenllydan, Rhiwbrongelly, Llanidloes	SN91891 82020	769824	n/a
	-	-	-	-
	-	-	-	-
	-	-	-	-

Provide a description of the structure and equipment involved in discharge.

450mm diameter pipe discharging onto boulders to reduce flow and prevent fish access

Other abstractors / water users

Provide details of nearby abstractors or users of water who could be affected by your proposal. This should include deregulated users (exempt activities or abstractions < 20 cubic metres per day), anglers and canoeists. Your local authority's environmental health will hold details of exempt domestic abstractors.

None

Planning application

Have you sought advice on your planning application?

No

Declaration

By signing below, you are declaring that, to the best of your knowledge; the information given in this form, on any map and in any supporting or additional information; is true.

Signed Helen P Jerman
Print name Helen P Jerman
position Partner

If you need to submit additional signatures, please upload here in a separate document.

- File: 20211201_190726.pdf - [Download](#)

Date

* 02/12/2021

Would you like a copy of your submission?

Yes

Your email address

rhiwbrongelly@live.co.uk