

Form WRE: Application for a new impoundment licence, technical variation to an impoundment licence or the removal of an existing impoundment

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

WRBLAENAU GWENT1301

Are you applying for a licence for a new impoundment or an existing impoundment

alteration to an existing impoundment

Impoundment details

All information should correspond with any maps and drawings submitted with this application

	Impoundment location name/reference	Left bank National Grid Reference	Right bank National Grid Reference
	Intake	SO 18800 06830	SO 18800 06830
	-	-	-
	-	-	-

Provide details about the type of impoundment you propose to construct at the points specified above and how the works will operate. This should include a description of any existing works and how your proposal will affect the flow of inland water.

Tell us the purpose of the works. If the water is to be impounded for more than one purpose, list both the primary and secondary purpose

The proposed impoundment is a via an overshot screen (maximum 10mm aperture) fixed over a concrete sump with an inlet to a gravity-feed pipe. Compensation flow will be provided using a pipe cast into the intake, with the upstream end set below the screen weir crest to prioritise it over abstracted flow. Compensation flow rate will be set using a blanking plate incorporating an offset sharp-edged orifice set to the appropriate height (rotated as required to calibrate the flow). See drawing HD03136-DWC-01 for dimensions.

Description of impoundment

Name of watercourse

The watercourse is Nant Merddog at the South East corner of the Silent Valley landfill site (NP23 6PZ)

Will your proposed impoundment result in a change to the submerged area (downstream) or new submerged areas behind (upstream of) the impounding works?
(If yes, ensure this is shown on any map or drawings submitted)

Yes

Will the ponded area created by the impoundment be lined?

Yes

Give details on how the ponded area created by the impoundment be lined.

The ponded area created by the impoundment will be lined by the existing concrete channel and retaining structure

Give the height of the impoundment structure, from the downstream toe to crest or top of spillway (in metres above Ordnance Datum). If the proposal involves an existing impoundment, state the change in height (in millimetres).

650mm

What is the overflow or crest level of the impoundment (in metres above Ordnance Datum)?

353.50m AOD

Will the proposal create a raised reservoir?

(A raised reservoir is one where water is stored at a level above the natural level of the lowest level of the surrounding area.)

No

What is the proposed capacity of the impoundment when full to spillway level (in cubic metres)?

1m³

Does the proposal involve the controlled release of water to safeguard downstream flows?

This could be the release of flood attenuation flows, reservoir compensation flows or a residual flow via a notch or orifice.

No

Is the impounded water to be used for a subsequent purpose?

Yes

Provide details of subsequent purpose (for abstractions, state the daily and annual quantities in cubic metres).

To be abstracted to drive a micro hydro turbine. The maximum daily abstraction is 2,074m³ and the maximum annual abstraction is 756,864m³.

How will the impounded area be filled initially, and subsequently refilled if applicable?

Example: by rainwater, overland flow or pumped from another source.

The impounded area will be filled from the natural outflow from the diversion culvert which is an existing underground pipe and will be re-filled by the same means if required

Fish and eel passage

Confirm the fish species present at your site.

The intake structure involves the minor modification of an existing impoundment structure and as a consequence the construction impacts are relatively modest. The existing structure will already provide a barrier to any upstream migration of fish interests and the proposal will not have any impact on existing downstream migration. It is not, therefore proposed to include additional measures to safeguard fish and eels.

Please confirm type of fish screen

Intake 400x400x400 mesh cage

Outfall 400x400x400 mesh cage

Please confirm screen height and width - intake (millimetres)

Width 400mm mesh cage

Height 400mm mesh cage

Please confirm screen height and width - outfall (millimetres)

Width 400mm mesh cage

Height 400mm mesh cage

Please confirm screen aperture size (millimetres)

Intake 10

Outfall 10

Please confirm type of upstream fish/eel passage intake

n/a

Please confirm type of downstream fish/eel passage

n/a

Please confirm proposed flow for fish pass

n/a

Construction, maintenance and operation

Provide details of maintenance or activities relating to the operation of the impoundment. Include the extent and frequency of activities. This could include the operation of scour valves or maintenance of a fish pass.

Describe any sediment management plan associated with the impoundment.

Regular visual inspection of installation to identify any leakage, blockage and undertake remedial action where necessary.

Do you intend to divert the flow of the inland water while you are building, changing or removing the impounding works?

No

Proposed Design of Structure

Upload design drawings and calculations here. (Spreadsheet file formats need to be: .xls, .xlsx, or .ods)

- File: HD03136-CAL-06-B Silent Valley Hydrosite - Generation.pdf - [Download](#)
- File: HD03136-CAL-06-B Silent Valley Hydrosite - Hydrology.pdf - [Download](#)
- File: HD03136-DWC-01-C Silent Valley Hydro Intake.pdf - [Download](#)
- File: HD03136-MAP-40-B Silent Valley Hydro - Site Location.pdf - [Download](#)
- File: HD03136-MAP-43-B Silent Valley Hydro - Detailed Site Layout.pdf - [Download](#)
- File: HD03136-MAP-44-B Silent Valley Hydro - Hydrology.pdf - [Download](#)
- File: HD03136-DWC-02-A Silent Valley Hydro Outfall GA.pdf - [Download](#)

Please upload your stage 1 geomorphology photosurvey. Find out more on how to complete your survey on our Geomorphology Photosurveys for Hydropower developments page

- File: SV Geomorphology survey 261018.pdf - [Download](#)

Other permissions

Planning permission advice received?

No

Is planning permission required?

Yes

What is the status of the planning permission?

Not Submitted

Have you applied for or do you hold a Flood Risk Activity Permit (FRAP) for the proposed works?

No

Commercial confidentiality and national security

Are you applying for Commercial Confidentiality?

No

Have you applied to the Welsh Ministers for national security for your 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 S Williams

Print name S WILLIAMS

Position Senior Physical Regeneration Officer

Date

* 10/02/2023

Would you like a copy of your submission?

Yes

Your email address

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