

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

WRRHONDDACYNONTAFCBC1112

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
	Treforest Weir	ST 08456 88932	ST 08418 88921
	-	-	-
	-	-	-

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 proposal is to alter the existing impoundment on the right bank, which will involve removing a fish pass constructed in 2003 and replacing it with a new hydro electric scheme. The heritage structure of the main weir would not be affected apart from a small notch cut out from it to allow for a new fish pass to be installed.

The proposal is for the 'Installation of a low head hydroelectric scheme of 215 – 300kW Total Installed Capacity. The development will make use of an existing weir and peripheral structures at the site. The project will involve construction of a new hydraulic channel adjacent to the weir on the right-hand (west) bank which will replace an existing fish pass and intake sluice. A coarse debris screen upstream of the weir will lead to a new intake sluice, automated fish screen, turbine house, and outfall below the weir. A new fish pass structure will be sited in the river channel next to the hydroelectric installation.

The development will involve minor alterations to the listed building, specifically a small notch within the existing weir to be removed so that the new fish pass can be installed.

Description of impoundment

Name of watercourse

River Taff

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.

Concrete

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).

Zero change in levels

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

46.7 metres

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)?

700

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.

Yes

Tell us what the proposed flow at the outlet will be and how you intend to measure this. If the works involve monitoring of levels or flows, include details of this.

No flood outflow from new impoundment. Penstock will be closed (inlet sluice) during flood conditions. All residual outflow will be over the existing weir and new fish pass.

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).

Energy generation - daily abstraction 1,296,000 cubic metres and annual 473,040,000 cubic metres

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

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

Rainwater, Surface water - River Taff

Fish and eel passage

Confirm the fish species present at your site.

As confirmed by NRW Fisheries Office.
The species likely to be present at the site of Treforest weir are Atlantic Salmon, Sea Trout, Brown Trout, European Eel and Grayling.
There will also be smaller species present such as bullhead, minnow, stone loach and stickleback.

Please confirm type of fish screen

Intake Horizontal bar - 10mm

Outfall Horizontal bar - 50mm

Please confirm screen height and width - intake (millimetres)

Width 15 metres

Height 3 metres

Please confirm screen height and width - outfall (millimetres)

Width 16 (8x2)

Height 2

Please confirm screen aperture size (millimetres)

Intake 10mm

Outfall 50mm

Please confirm type of upstream fish/eel passage intake

Weir notch to Larinier

Please confirm type of downstream fish/eel passage

Weir notch to Larinier

Please confirm proposed flow for fish pass

700 - 2,000 litres per second (Q95-Q20)

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.

Flows <Q90 - No abstraction - Intake sluice closed
Q90<Flows <Q5 - Hydro automated operation. Variable flow turbines adjusted to maintain minimum (Q95) flow over weir and fish pass).
Flows > Q5 - Sluice gate closed to maintain maximum level in penstock.
Auto raking screen and flush gate as regulated by screen differentiation pressure.

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

Yes

How do you intend to divert the flow of the inland water while you are building, changing or removing the impounding works. Give details.

Partial Width coffer dam - Right hand bank only

Proposed Design of Structure

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

- File: TREF-001.1 rev0 Location Plan Sheet 4.pdf - [Download](#)

Other permissions

Planning permission advice received?

Yes

Is planning permission required?

Yes

What is the status of the planning permission?

Submitted

Planning permission reference

25/0002/GREG

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 Jodie Pritchard

Print name Jodie Pritchard

Position Senior Surveyor

If an agent is to sign on behalf of the Licence Holder, a letter of authorisation from the Licence Holder is required.

- File: Customer Authorisation Letter - Baileys.pdf - [Download](#)

Date

* 14/02/2025

Would you like a copy of your submission?

Yes

Your email address

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