

Date: 06/07/2023

FOR THE ATTENTION OF:

Sarah Senior

Water Resources Permitting Officer
Natural Resources Wales
Cambria House
29 Newport Road
Cardiff CF24 0TP

Application number: PAN-022228

Our Site Ref: 020 Maerdy Mill Hydropower

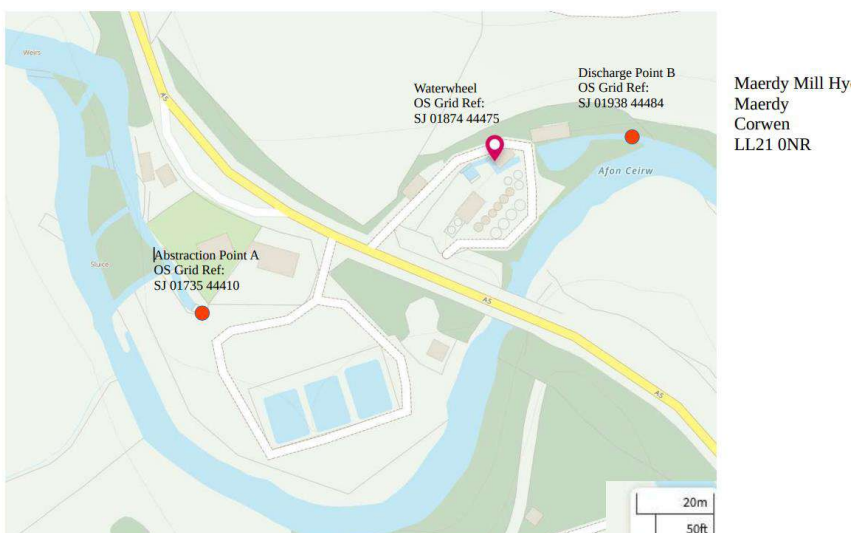
Site Location: Maerdy, Corwen LL210NR

Dear Sarah,

Please see further information requested in your recent letter identified under the headings below.

Abstraction Point

I confirm that we would like to apply for an abstraction from the sluice gate identified as Abstraction Point A on the plan below.



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Expiry Date for License

We are happy to have the CED (Common End Date) as the expiry date for this abstraction

Supporting Documents

My apologies, we didn't realise that two different versions of the supporting document "*HM020 Maerdy HEP Design, operation and abstraction data.pdf*" had been uploaded. The current version has been attached again and dated.

HM020 Maerdy HEP Design, operation and abstraction data.pdf**Bypass Flow Graph**

This uses the modelled flow duration data for the Afon Ceirw at the weir to illustrate the extent of the remaining flow probabilities typically expected in the depleted section after the abstracted flows are deducted.

In this case, the Total Bypass Flow profile is similar to the Total (available) Flow FDC as the abstraction quantities are small compared with the river flow rates.

Overshot Waterwheel Installation Section B-B

The trap door sluice provides a means of quickly stopping and restarting the waterwheel. This can be done manually or automatically. Instances where it would be necessary to stop and restart the wheel are as follows:

- A grid fault (e.g. during a thunderstorm) causes the generator to be taken off-line (several times per year usually with duration of a few minutes)
- The emergency stop button is pressed (rare)
- The system is shut down for maintenance (twice per year for approx 4 hrs)
- There is insufficient flow to generate power efficiently. System is shut down automatically until flows increase. Restarts attempted at user defined intervals if system remains in 'Auto' mode.

Request for Commercial Confidentiality

Commercial confidentiality is not required for this application

Drawings/Plans

We confirm that the original drawings provided during the installation are an accurate representation and that the system has not been modified since. Updated side elevation A-A with datum levels provided.

Additional Drawings/Plans Required

Additional drawings provided:

Plan view of the sluice gate;

Front elevation of the sluice gate and channel

Photo survey

Additional recent photos under low river conditions provided including the following areas:

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1. Upstream of the weir
2. More photos of the weir
3. Downstream of the weir
4. The channel running down to the sluice gate
5. The discharge point back into the river
6. The depleted reach

Please let me know if any further information is required in support of this application.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "P. Maher", is written over a faint, light blue circular stamp.

Phil Maher
Managing Director
Hydromatch Ltd