

Apply to renew or change an abstraction or impoundment licence

Type of variation/renewal

Indicate the change(s) you wish to make to your licence(s) here.

Same terms renewal (where no environmental or other concerns have been raised in your renewal reminder letter)

The licence(s) you want to change/renew

Provide the licence serial number(s) which the proposed change/renewal relates to

MD/054/0009/029

-

-

Application fee

Please indicate how you wish to pay your application fee. If paying by BACS, please quote the reference number created when setting up the bank transfer.

If paying by cheque, please ensure you add the six digit cheque number below.

Credit or debit card

Is this proposal as a result of a Restoring Sustainable Abstraction programme or other work remediation work, to prevent and reduce environmental damage requested by us?

No

Are you making this application as part of an agreement to trade water rights? Water rights trading is where a Licence Holder sells all or part of their abstraction licence rights, permanently or temporarily, to another person.

No

Provide details below

This application is not part of an agreement to trade water rights with others.

This is for the extension to an existing abstraction licence. The abstracted water is used to run a micro hydroelectric scheme. The abstracted water is returned to the water course after it has passed through the hydroelectric turbine. The original abstraction licence was granted on the 30th July 2014 and expires on the 31st March 2025.

The micro-hydro-electric scheme was built during 2015 and first started operating on the 10th December 2015. It is been in continual operation since that date.

We will be continuing to operate the hydroelectric scheme.

The produced electricity is used in our house and on our farm. Any excess electricity is exported to the national grid.

Existing Licence Holder details

Provide details of the existing Licence Holder.

Full Name Edward Harris
Company, Charity or Trading Name Messrs E R Harris
Company or Charity Registration Number Messrs E R Harris

Registered Address

Building and street Pantycaragle Farm, Dutlas
Dutlas
Town and City KNIGHTON
County Please select region, state or province
Postcode LD7 1YD
Office Telephone Number 01547510210
Mobile Telephone Number 07966460719
Email Address ej17875@hotmail.com

Details of individual or agent authorised to act as a point of contact

Registered Address

Building and street -
-
Town and City -
County Please select region, state or province
Postcode -
Office Telephone Number -
Mobile Telephone Number -
Email Address -

Specify who we should contact with regard to

	Applicant	Agent
Operations (on site) contact	X	
Invoice contact	X	

Details of individual authorised to act as abstraction records (returns) contact

Specify who we should contact regarding abstraction records (returns)

Existing returns contact

Are you applying to apportion your licence? Find an explanation of apportionment on our website.

No

Are you applying for a simple change?

No

Same terms renewal

Are you applying for a same terms renewal?

Yes

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 water usage has been lower than your licensed volumes, you will need to provide additional information to demonstrate your continued need for the water, for example, additional justification or a Business Case.

The hydroelectric system looks to maximise power production from the available water and the available height between abstraction and discharge points. The hydro-electric scheme is designed to operate up to the maximum allowed abstraction and at part flows.

The generated electricity is used in our house and on the farm. Any excess electricity is exported to the national grid.

The hydroelectric scheme operates automatically: on standby and then running when any water is available.

Since December 2015 the hydro electric scheme has been operating for 24 hr/day and 365 days/yr (running when water has been available)

Discussions with NRW in 2014 concluded that the maximum allowable instantaneous abstraction was 59.97 l/s. The abstraction licence also detailed the hands off flow, percentage split that can be abstracted, etc...

We do not believe that there has been any change in the catchment area.

Our system looks to maximise power production and so we look to take whatever water is available up to the 59.97 l/s limit (once HoFlow has been exceeded and only at the percentage allowed).

The per day and per year abstraction limits detailed in the abstraction licence are multiples of the 59.97 l/s instantaneous limit. During the wetter months the system can run at peak abstraction for a number of days. So the existing daily limit is appropriate.

Due to the dryer months it is unlikely that we will ever reach the yearly abstraction limit. This could be dropped but due to the variations in annual flows it would be hard to fix on a lower figure that could not be exceeded in a really wet year.

Therefore we would request a continuation of the 59.97 l/s instantaneous flow limit (as well as having the same hands of flow and percentage split), and the same daily and annual limits. These flows will allow us to continue 24/365 operation of our hydroelectric scheme.

	% 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)
	as previous licence & application	as previous licence & application	as previous licence & application	as previous licence & application

	Turbine efficiency (%)	System efficiency (%)	Maximum power output (kilowatts)	Annual capacity (kilowatt hours)
	see note below on HAF	see note below on HAF	as previous licence & application	as reflected in annual returns

State the length of depleted reach (in metres)

As previous licence & application

Provide the flow data (in cubic metres per second) & ratios specified below:

Q95 As previous licence & application

Q10 As previous licence & application

Qmean As previous licence & application

What is the ratio of Q95:Qmean? As previous licence & application

What is the ratio of Q10:Qmean? As previous licence & application

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)?

As previous licence & application

Provide details of what measures you provide 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 practise.

There is no storage, pumped or recycling of water. Water flows in at the intake and after going through the turbine it discharges back into the water course.

Intake structure (hands off flow notch, intake screen, main wall, etc...) is inspected weekly and cleaned as required.

The two fish passes (one at intake and one half way down the stream) are inspected weekly and cleaned as required.

Pipeline is walked (monthly) and above ground sections are inspected for leaks.

Turbine is regular checked (minimum weekly) and serviced at least once a year.

Annual returns are submitted as soon as practical after the end of each year.

The system efficiencies of turbine (85%), transmission (94%) and generator (94%) combined.

At peak output (peak flow and thus peak kW) the dynamic pressure head at the turbine is 35m.

The HAF used in annual returns is based on these figures.

Different terms renewal

Are you applying for a different terms renewal

No

Signatures: existing Licence Holder (for all changes), and proposed Licence Holder(s) for Transfers and Apportionments

Existing Licence Holder's signature

Full Name EDWARD JOHN HARRIS

Position Partner

Signature E J Harris

Date 31/08/24

Would you like a copy of your submission?

Yes

Your email address

ej17875@hotmail.com