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
WRLowerpantfarm061022

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]
01/10/2040

Abstraction details

Abstraction location name/reference
Lower Pant Farm

Abstraction point type
Single point

National Grid Reference
SO 33608 13691

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.

Abstraction takes place by using a pump which extracts water from a concrete tank which overflows into the existing water course (Pant Brook). The water is pumped to an overground storage tank which calls for water from the spring via a ball valve.

Maximum pump capacity: 50 Litres / minute
Pipe diameter: 50mm
Storage tank capacity: 10 cubic metres

The water extracted from the spring is recorded by a water meter which has readings taken and recorded on a monthly basis by the land owner.

Abstraction quantities

Abstraction location name/reference

Lower Pant Farm

What purpose will the water be used for?

Agriculture - intensive poultry site and dairy cattle. Also for personal use in main farmhouse and separate property Pant Isaf

Period of abstraction Will it be all year?

Yes

Maximum quantities (cubic metres)

Annual 25000

Daily 90

Hourly 10

Peak abstraction rate (in litres per second)

0.83

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.

There are 2 domestic properties which will be using water for human consumption. One is a 4 bedroom farmhouse, the other a 3 bedroom barn conversion. Currently there are 4 adults and 2 children living at these properties. The annual water consumption based on an average of 152 Litres per person per day (see below) for 6 people is 332.88 cubic metres per annum.

These figures are taken from 'Statista' Average water usage per person per day in England and Wales 20162021. Published by Ian Tiseo, Aug 15, 2022. Available at: https://www.statista.com/statistics/1211708/litersperdayperpersonwaterusageunitedkingdomuk/

The dairy Business consumption of water is estimated at 9036 cubic metres per year. This figure takes into account Livestock drinking, plate cooler use, collecting yard and parlour wash down, bulk tank washing, domestic use and sprayer use. This figure is based on calculations from a typical dairy farm of 160 milking cows and 80 young stock (numbers slightly above the stocking rate of our farm). These calculations are available in pdf format online and are on page 6 of the attached MDC document:

Effective Use of Water on Dairy Farms (Published by Milk Development Council, August 2007) http://adlib.everysite.co.uk/resources/000/250/966/MDC_Effective_use_water.pdf

The poultry site which houses 200,000 broiler chickens on a 5 week growing cycle is estimated to use 8,770 cubic metres of water per annum. See attached 'poultry site water consumption' document provided by the sustainability coordinator at avara foods for our poultry site.

In Summary the water consumption estimate in cubic metres per annum is as follows:

Human consumption at 2 residential properties: 332.88
Dairy Business: 9036
Poultry site: 8770
Estimate of total annual water requirement from spring at Lower Pant Farm = 18,138.88 metres cube per annum

Additional document. (Spreadsheet file formats need to be: .xls, .xlsx, or .ods)

- File: MDC_Effective_use_water.pdf - Download
- File: Poultry site water consumption.pdf - Download

Industry-specific requirements

For agricultural use

	Livestock type	Number of animals	Maximum daily quantity of water used (cubic metres)	Comments
	Dairy Cattle - dairy cow in milk	150	15	based on max consumption of 100 L / day https://www.daerani.gov.uk/articles/wateradvice-livestockfarmers
	Dairy Cattle - young stock	80	2.4	based on max consumption of 30 L / day : https://www.daerani.gov.uk/articles/wateradvice-livestockfarmers
	Broiler Chickens	200000	69	based on max consumption of 345 Litres per 1000 birds/day: https://www.daera-ni.gov.uk/articles/wateradvicelivestockfarmers

Provide details of any additional requirements (washing / cleaning)

See calculations on previous page regarding poultry site washdown and parlour wash

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.

Meter

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.

Use of 20 cubic metre storage tank with a ball valve which calls for water when required. Having the ball valve means that no water is unnecessarily extracted from the spring.

Monthly meter readings will be undertaken to monitor usage. In addition, meter readings will be taken before and after poultry site wash down.

Routine monthly water trough inspections to check for leaks.

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.

The pant brook eventually feeds in to the Throthy stream which is a tributary to the river Wye.

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 GL Morgan

Print name Gareth Lewis Morgan

position Owner

Date

* 17/10/2022

Would you like a copy of your submission?

Yes

Your email address

Gareth@glmpoultry.com