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
WRMSES0807

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]
01/09/2022

Abstraction details

Abstraction location name/reference
SN62113209881

Abstraction point type
Area

National Grid Reference
SN62113209881

Downstream National Grid Reference (If abstracting from a reach), or corners of the area.

SN6211209855
SN6211009827
SN6216709822
SN6216809850

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.

DEWATERING SYSTEM PROPOSAL - DEEPWELL
The client is requiring a reduction in groundwater pressures to facilitate the investigation and remedial works of two Final Settlement Tanks. The installation may comprise six deep wells, to be installed around the two tanks. The wells will be drilled through the underlying sand and gravel to the top of the rock head. A suction pump would be used to pump water from the wells to the proposed discharge point. There would be flexibility in the system to allow pumping to take place around either one or both the tanks.

A generic installation of a deep well dewatering system proposed is as outlined below, this is to be confirmed following dewatering design from a specialist dewatering contractor:

Garnswllt WwTW
No. of wells Min 6 (equally distributed around the 2 tanks)
Installation level Ground Level
Drill diameter [mm] 200
Installation diameter [mm] 150
Depth [m] Up to 7.0mbgl (or depth to refusal)
Installation method Cable percussion rig

The installation of wells will be carried out using cable percussion drilling. The bore will be advanced using a combination of bailer, chisel and / or clay cutter. Water will be added as boring proceeds to aid drilling. Temporary casings will be added to support any unstable strata.
Upon reaching the required depth, the bore will be flushed, and a uPVC liner installed and filter media. The temporary casing will be withdrawn, and the annulus completed as required.
The wells will be developed using airlift techniques and a diesel suction pump installed at an agreed location. The pumps will be linked to a common header laid around the perimeter of the tanks. The ring main will direct the abstracted water to a V-Notch flow monitoring tank located in the vicinity of the nominated discharge point.

Once the system is installed and commissioned, handover training will be provided for the site team to manage the system on a day to day basis. The dewatering contractor will typically attend site fortnightly to carry out system maintenance, or as instructed in response to a need for modifications and repairs

Please upload your drawings and calculations here. (Spreadsheet file formats need to be: .xls, .xlsx, or .ods)

- File: 300392-DEL-GRN01-CA-00002 C01.pdf - Download
- File: 300392-DEL-XXX-DR-00001 P01.pdf - Download

Abstraction quantities

Abstraction location name/reference
Garnswllt WWTW

What purpose will the water be used for?
To repair existing tanks - abstracted water will be discharged through the water treatment plant

Period of abstraction Will it be all year?
No

Start Date: [DD/MM/YY]
01/09/2021

End Date: [DD/MM/YY]
01/09/2022

Maximum quantities (cubic metres)	
Annual	44064
Daily	740
Hourly	30.6

Peak abstraction rate (in litres per second)
8.5

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.

Please see attached abstraction volume calculation and water features survey

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

- File: 300392-DEL-GRN01-CA-00002 C01.pdf - Download
- File: 300392-DEL-XXX-RP-00001 P01 Water Features Survey Report.pdf - Download
- File: 300392-DEL-XXX-DR-00001 P01.pdf - Download

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.

There is no intended use for the water other than for the purpose of lowering the ground water to allow for safe and stable ground conditions to empty the standing tanks. The water is intended to be discharged into the sewer system for treatment.

Discharge details

If you intend to return any of the abstracted water to the environment, provide details below. Details of discharge location(s) should correspond with any maps submitted. Do not include discharges to a public sewage system.

	Discharge location name / reference	National Grid Reference of discharge point (12 digit)	Total volume to be discharged (cubic metres)	Environmental Permit for Water Discharge Activity number (if applicable)
	Garnswllt WWTW	SN6211409881	44064	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

Provide a description of the structure and equipment involved in discharge.

Discharge is to go through the sewer to the works but no more than 8.5lts/second

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.

None

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 S Moore

Print name Sam Moore

position Project Engineer

Date
* 08/07/2021

Would you like a copy of your submission?
Yes

Your email address
sam.moore@morgansindall.com