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
WRERICWRIGHTWATER1402

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]
15/12/2025

If you require a shorter or longer duration licence, please provide details and your justification
The abstraction transfer license (removal of groundwater from an excavation and discharge to the River Dee) is associated with construction works to install new tanks at Corwen Wastewater Treatment works. The duration of the work will be limited, and abstraction only required for the duration of the construction work. The work (abstraction) is due to commence on 26th May 2025. A 14 week abstraction period is estimated. The abstraction licence end date of the 15th December allows an extra over allowance for any uncertainty, construction delay, or delay in receiving the abstraction license.

Abstraction details

Abstraction location name/reference
Corwen Wastewater Treatment Works

Abstraction point type
Single point

National Grid Reference
SJ 08197 43649

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 is required to facilitate the construction of a Humus Tank at Corwen Wastewater Treatment Works. The Humus Tank is associated with wider Wastewater Treatment Work improvements to offer phosphate stripping and increased capacity. The Humus Tank (Humus Tank 2) will be partially below ground. The excavation will need to be dewatered to create a dry working area to facilitate construction. The location of the excavation is within 85m of the River Dee and at a similar elevation to the River Dee. The underlying geology (Sandy Clay to 2.3m.bgl underlain by sandy gravel to 4.6m.bgl) is in hydraulic connectivity with the River Dee. Groundwater will be pumped from the excavation. Calculations of the pump flow rate are appended (provided by a specialist dewatering contractor). The dewatering flow rate is 84.9 l/s, or 7339m3 per day.

If necessary, continue on a separate sheet and upload below.
• File: B17490-118564-ZZ-ZZ-DR-CA-CI2001-P07-Proposed Site Layout.pdf - Download • File: Dewatering Design & Flow Estimation.pdf - Download

Abstraction quantities

Abstraction location name/reference
Corwen Wastewater Treatment Works

What purpose will the water be used for?
Dewatering - no intervening use (discharge will be made to the River Dee)

Period of abstraction Will it be all year?
No

Start Date: [DD/MM/YY]
26/05/2025

End Date: [DD/MM/YY]
15/12/2025

Maximum quantities (cubic metres)	
Annual	1,438,444 (based on worst case 28 week abstraction period. Work should be completed in 14 weeks))
Daily	7339
Hourly	305.8

Peak abstraction rate (in litres per second)
84.9

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.

The abstraction is for dewatering an excavation in order to facilitate construction of a partly below ground Humus Tank. The abstraction will be continuous (24 hours a day).

Detailed estimation of the abstraction quantity has been provided by a specialist dewatering contractor and is enclosed. The abstraction quantities are based on the abstraction size, permeability of the ground and hydraulic continuity of the superficial deposits with the River Dee.

There is no intervening use for the abstracted water and discharge will be made to the River Dee. An Environmental Permit is being applied for the discharge (given the quantity involved and that the Dee is a Special Area of Conservation).

A hydrological assessment is also enclosed detailing the proposals, geology, groundwater levels, discharge arrangements, rates and volumes of abstraction, water quality, programme of works and impact of the discharge on the receptor (River Dee).

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

- File: Dewatering Design & Flow Estimation.pdf - Download
- File: 15725 - Hydrological Assessment-01.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.

Not applicable, license required to dewater an excavation to facilitate construction.

Fish and eel considerations (surface water abstractions only)

Does your proposal include measures to safeguard fish and eels? Only provide details of outfall screening if abstracted water is to be discharged back into a watercourse. For further guidance on appropriate screening Intake screening for fish

	Intake	Outfall
Type of fish screen	n/a	rectangular bar with 30mm spacing
Screen aperture size (mm)	n/a	30mm

Confirm the fish species present at your site. If you're not proposing any measures to protect fish and eels, you must justify this. For example, we may have confirmed in our pre-application response that the intake is inaccessible to fish or you undertook a fish survey to confirm.

A detailed survey of species has not been undertaken, however common species in the River Dee include salmon, trout, grayling and sea trout. The 30mm screen size is selected to protect fish and is taken from NRW's 'Intake screening for fish' guidance

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)
	River Dee	SJ 08280 43589	7339 per day	PAN-028538
	-	-	-	-
	-	-	-	-
	-	-	-	-

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

A maximum 300mm size pipe with a bar screen or mesh (30mm bar spacing) fitted. The pipe will be anchored in place adjacent using wooden stakes or similar.

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 dewatering proposals should have negligible impact on all other nearby abstractors or river users. The superficial deposits at the site are in hydraulic continuity with the River Dee. The abstracted groundwater will be returned to the River Dee. The excavation will be relatively shallow, between 5m 6m in depth, and as such dewatering will not impact on the underlying aquifer.

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 Aled Williams

Print name Aled Williams

position Associate - Flood Risk & Drainage

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

- File: Corwen Signed Declaration.pdf - Download

Date

* 02/04/2025

Would you like a copy of your submission?

Yes

Your email address

aled.williams@waterco.co.uk