

Abstraction Impoundment & Licensing Groundwater Abstractions

Compliance Assessment of Licence Conditions



Northern Ireland
Environment
Agency



Introduction

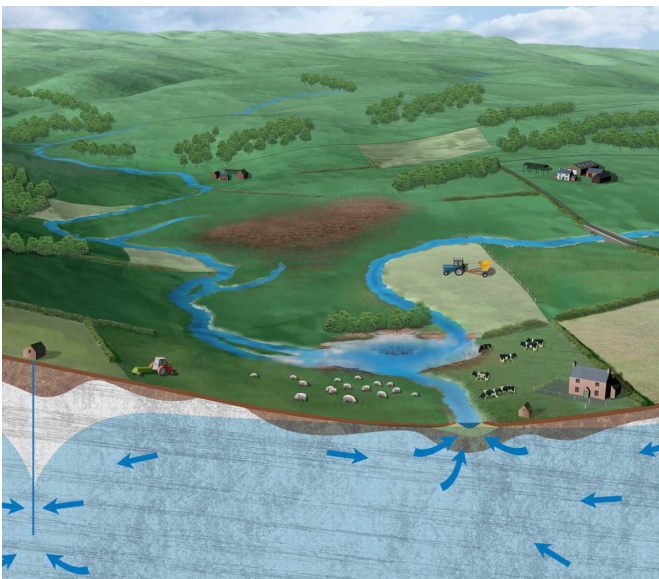
All groundwater abstractions in Northern Ireland over 20 m³/d must have a licence to abstract water under the Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006. Each licence is issued with monitoring conditions attached to it, relevant to the impact an abstraction will have on the environment.

This document details the criteria that licence conditions will be assessed on to determine if an abstraction operator has complied with their licence conditions.

Background

For groundwater abstractions there are three different types of monitoring conditions that may be attached to a licence:

1. Volumes
2. Levels
3. Conductivity



Visual cross section representation of a groundwater abstraction (© www.wfdvisual.com)

All licensed operators are required to record the volumes of water they abstract. If during the licence application process it is identified that an abstraction poses a risk to the environment, so that the scale of the risk can be better determined and the abstraction can be better managed, conditions to monitor ambient groundwater levels and/or the conductivity of abstracted water may be attached to the licence. Operators will be required to submit a monitoring plan prior to a licence being issued and this plan will become part of the conditions of the licence.

The information collected by the monitoring performed by an operator must be submitted to NIEA regularly as set out in the licence. This information will then be used to firstly assess if the operator has complied with the conditions of their licence and secondly to assess the environmental impact caused by the abstraction.

If it is found that an abstraction is causing environmental impact that is unsustainable under relevant regulations, then the operator's licence will be modified to a sustainable abstraction volume accurately determined using the monitoring information collected.

Compliance Assessment

Minimum compliance with conditions of an abstraction licence will be assessed as follows.

1. Volumes

Return of total volume of water abstracted each calendar month expressed in cubic metres (m³)

2. Levels

a. Manual Measurements (using dipmeter)

Return of at least two measurements of the depth to groundwater level from ground surface taken no less than four months apart along with the date and time the measurements were taken.

Note: If the measurement is taken within an active abstraction borehole, the length of time since water was last abstracted from the borehole should also be recorded.



Monitoring of groundwater levels at an abstraction borehole (© Crown Copyright)

b. Automatic Measurements (using device with built-in data logger)

Either

Return of the raw readings recorded by the data logger and at least one reference manual measurement of the depth to groundwater level from ground surface, along with the date and time the measurements were taken when the logger last deployed.

Or

If the logger malfunctioned:

- i. Return of evidence to show that a logging device was deployed (i.e. photographic evidence)
- ii. Return of at least one reference manual measurements of the depth to groundwater level from ground surface along with the date and time the measurements were taken when the logger was last deployed.
- iii. Return of a short explanation (approximately one page) detailing what went wrong and what measures have been implemented to correct the problem in future.

3. Conductivity

Return of at least four conductivity measurements of raw abstracted water taken no less than 2 months apart.

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