

Regulatory Method (WAT-RM-11)

Licensing Groundwater Abstractions including Dewatering

Version: v6

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Update Summary

Version	Description
v1.0	First issue for Water Use reference using approved content from the following documents: <i>GW_Abs_Process_v1_26_RM11.doc</i> <i>WAT-RM-11_Revision_2.doc</i> <i>WAT-RM-11_abstractions_from_groundwater_dhrev4_.doc</i>
v1.1	Doc references updated to reflect current doc list Minor changes to sections 3.1.5 (CC), 4.1.2, 6.5.3, 7.5.2
v2.0	2-stage process removed, all sections & refs reviewed, as per: <i>RM11 Licensing Groundwater Abstractions WPRSG.doc</i> (SP)
v3.0	Annex 2 added to incorporate content from <i>WAT-RM-17: Impact Assessment - GW Abstraction Further Investigations</i>
v3.1	Section 2.1.3 screening tests now specify 4km screening distance
v3.2	Figure 1 revised to include WAT-RM-34 assessment option
v4	Updated to specify that boreholes >200m depth escalated (from GBR) to complex licence from 1 April 2013.
v5	Added: Dewatering text (from transition project) & further details on deep BH's inc. NORMs & info requirements (Annex 3).
v6	Revised to highlight new requirement for separate registration authorisation for drilling and test pumping; Deep borehole information removed (now in <i>CAR Licences for Deep Boreholes - Information Requirements</i>)

Notes

References: Linked references to other documents have been disabled in this web version of the document. See the References section for details of all referenced documents.

Printing the Document: This document is uncontrolled if printed and is only intended to be viewed online.

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Always refer to the online document for accurate and up-to-date information.

Table of Contents

1. Purpose of Document.....	4
1.1 Summary.....	4
2. Borehole construction, operation and test pumping	5
3. Licence Applications.....	6
3.1 Assessing the Abstraction Application	6
3.2 Consultation and Advertising	11
4. Licence Assessment Outcomes	12
4.1 No Assessment Failures	12
4.2 Assessment Failures.....	12
4.3 Refusal of Application	13
Annex 1: Dewatering Operations – Estimating the Groundwater Component.....	14
Annex 2: Possible Scope of Further Investigations	15
A2.1 Potential Impact on Groundwater Dependent Terrestrial Ecosystems.....	15
A2.2 Potential Impact on Other Abstractions.....	16
A2.3 Potential Impact on Surface Water Flow.....	17
A2.4 Potential Saline Intrusion	17
A2.5 Insufficient Resource	17
A2.6 Key Principles	18
References	19

1. Purpose of Document

This regulatory method sets out SEPA's process for determining groundwater abstraction licence applications and technical variations under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 ("CAR"). It covers dewatering of quarries, excavations and the operational phase of cuttings which do not fall within GBR15 and are at licence level.

The guidance also explains how the authorisation of borehole construction, operation and any test pumping fits around the abstraction licensing process. If you are carrying out activities related to geothermal energy please see *SEPA's requirements for activities related to geothermal energy*.

1.1 Summary

Most new abstractions from groundwater will require the construction of one or more boreholes and the testing of both the yield and water quality. A registration to drill and test the borehole is required for the abstraction of $> 10\text{m}^3/\text{d}$. For abstractions of between $10\text{--}50\text{m}^3/\text{d}$ this is part of the abstraction registration. For abstractions $>50\text{m}^3/\text{d}$ this is a separate registration, prior to applying for the abstraction licence. Where a deep borehole ($\geq 200\text{m}$) is being drilled, whether or not there is intended to be a licence level abstraction taking place from it, a licence will be required for its construction and operation.

Abstractions can reduce the flow in nearby wells or boreholes, reduce the flow to streams and rivers, cause an impact on the groundwater dependent wetlands and cause saline intrusion into the aquifer¹. Therefore, all licence-level applications will need to specify the location of the abstraction e.g. borehole/quarry sump and any nearby water features that might be affected. SEPA will carry out an initial desk assessment of the suitability of each abstraction and, if any of them appears to be in an unsuitable location, give the applicant the opportunity to amend their application.

SEPA will then proceed to determine the application. If there is no more than a low risk to the water environment, an abstraction licence can be issued. If any greater risks are identified SEPA will ask for further information by issuing a notice. This notice may ask for information which is to be gained by test pumping. If this information has not already been obtained then the applicant should apply to SEPA for a registration to drill and test the borehole to allow this activity to be undertaken.

Once the applicant has obtained the further information it should be submitted to SEPA so that it can determine the application.

If SEPA is satisfied that the ongoing abstraction will not have an unacceptable impact on the water environment, SEPA will issue the licence.

¹ Abstractions for the purpose of de-watering of excavations, surface mines and quarries are intended to lower the ground-water in a localised vicinity. They are usually non-consumptive, i.e. the abstracted water is discharged back to the water environment, usually to the most convenient watercourse.

2. Borehole Construction, Operation and Test Pumping

It is normal practice to drill a borehole and test the yield of the borehole prior to applying for an abstraction licence. An authorisation to construct, operate and test the borehole(s) should be obtained prior to obtaining an abstraction licence.

The level of authorisation required is set out in *CAR – A Practical Guide*. Details of the information that should be supplied to obtain a deep borehole licence for a borehole $\geq 200\text{m}$ in depth is provided in *CAR Licences for Deep Boreholes - Information Requirements*.

It is recommended that you seek SEPA advice prior to applying for a testing pumping registration for a licence level abstraction. This is because SEPA may require specific information to be gathered from test pumping to support an abstraction licence application. *Annex 2* details the type of information we may ask for in certain circumstances.

3. Licence Applications

3.1 Assessing the Abstraction Application

A series of screening tests should be carried out as shown in Figure 1. These tests allow SEPA to assess the environmental effects of the proposed abstraction. The results of each screening test should be recorded in *WAT-FORM-11: Groundwater Abstraction Application Screening Assessment*.

The tests can be applied on a single proposed abstraction point or a wellfield consisting of a number of potential abstraction points. Where the latter is to be considered, the total maximum volume from the wellfield should be assessed. For further guidance on this, the CO should consult their local Water Resources Specialist.

The CO should also check whether there are currently any other applications in progress for the same locality, and ensure that the order of receipt is taken into account. Applications should be considered on a 'first come first served' basis as capacity cannot be reserved.

If the abstraction of groundwater is associated with a "NORM Industrial Activity" to which the Radioactive Substances Act (RSA) applies (e.g. The production of oil and gas and the dewatering of coal mines), then an RSA authorisation may be required for the discharge of any abstracted groundwater as the groundwater may contain naturally occurring radioactive materials (NORM). Sampling of the groundwater prior to the start of any groundwater abstraction will be required to determine if an authorisation issued under RSA93 will be required. If concentrations of NORM are above the threshold values then an authorisation issued under RSA93 is required, prior to the start of groundwater abstraction, for the accumulation and disposal of this groundwater.

3.1.1 Dewatering

Where the application is for dewatering from a sump which collects both rainwater and groundwater the groundwater component can be calculated by the method described in *Annex 1*.

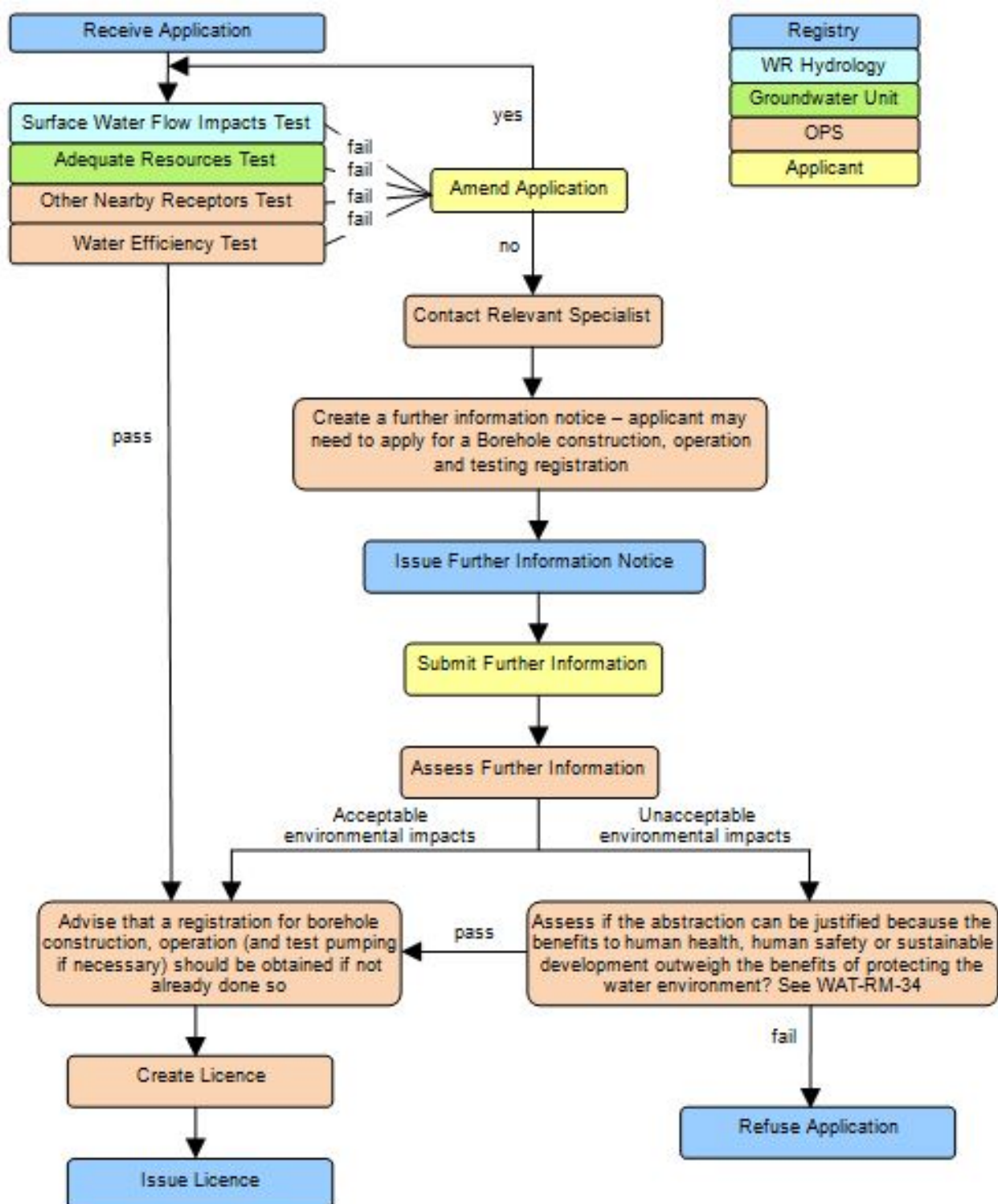
In the case of abstractions for the purpose of ground de-watering, it is accepted that the groundwater will be totally removed within the excavation area. In these cases it is the risk to the water environment outwith the targeted excavation area that should be assessed. Often the main potential impacts are on any nearby surface waters. However these abstractions usually discharge the abstracted water back into these surface waters close to the point of abstraction, and are temporary in nature. Where this is the case these abstractions generally pose a lower risk than dewatering abstractions which discharge the water to other parts of the water environment or take place over a longer time period.

This type of abstraction usually consists of an initially high rate whilst the water table is drawn down in the proposed excavation area, followed by a lower rate over a longer period sufficient to prevent flooding of the

excavation. The assessment therefore must recognise that the initial high rate is not sustained over the life time of the project.

Abstractions of short duration (for example, associated with road or pumping station construction), will usually be completed before any adverse impact occurs, other than in exceptional circumstances and may be covered by GBR 15. No consultation with Water Resources Hydrology is normally required.

Note that during the construction phase, the abstraction of groundwater from the dewatering (passive or otherwise) of road, rail or other cuttings is regulated via GBR, registration or licence as any other abstraction would be. However, once an operational final passive drainage system is in place for the cutting, such as a pipe network to collect run off and seepage, the activity will be treated as land drainage works and as such no further authorisation will be required.

Figure 1 Technical Assessment for Groundwater Licence Applications

3.1.2 Surface Water Flow Impact Test

This is the test which ensures that surface water body status is not prejudiced by granting groundwater abstraction authorisations.

Abstractions (except dewatering). The Test will be carried out by Water Resources Hydrology. The coordinating officer (CO) should contact Water Resources Hydrology with details of the groundwater abstraction point using the current Hydrology work request form. This form should then be emailed to WR Hydrology at advice@sepa.org.uk.

WR Hydrology will assess the effect of the abstraction on the nearest watercourse, making the assumption that it is recharged entirely by groundwater, and submit a report detailing the outcomes to the CO. Where the assessment concludes that the proposed abstraction would cause a breach of an Environmental Standard the Groundwater Unit and the local Water Resources Specialist should be consulted for advice.

Ground de-watering. The coordinating officer will assess whether consultation with Water Resources Hydrology is required. Comments made by Water Resources Hydrology at the planning consultation stage are available on SEPA's planning casework system.

Licence applications should be accompanied by a water environment risk assessment using an industry-standard model with appropriate input parameters.

No consultation with Water Resources Hydrology is required where the abstraction poses a low risk to the water environment i.e. where operators have followed the guidance provided by SEPA at the planning stage, the risk assessment methodology is likely to be acceptable. Where the risk assessment shows:

- the zone of influence of the abstraction is confined to the targeted excavation area, and
- there is a low risk to the surface and groundwater environment outwith the targeted area, and
- the abstraction is short term* only

* In this context, 'short term' means no more than 180 days.

Water Resources Hydrology should be consulted for advice where the abstraction poses a higher risk to the water environment i.e. the abstraction is of a longer duration, or where the assessment concludes that the proposed abstraction would cause a breach of an Environmental Standard. In these cases the coordinating officer should indicate the specific areas of concern as far as possible to Water Resources Hydrology.

Where the abstraction falls outwith the above criteria and poses a medium risk to the water environment then limited consultation with Water Resources Hydrology can be undertaken. This would usually be confirmation that the risk assessment method provided by the operator is of normal industry standard using appropriate input parameters, but may also include any specific points where the coordinating officer seeks clarification.

3.1.3 Adequate Resource Test

A number of groundwater bodies have been classified as being at poor status or at risk of being at poor status due to insufficient resource. Where the proposed abstraction is from these water bodies it may not be authorised. The Groundwater Unit can advise on the status of the relevant groundwater body and any further information required to determine the application and should be consulted using email: advice@sepa.org.uk.

This test is not required where for dewatering abstractions where the abstracted water is to be discharged back to the water environment close to the point of abstraction.

3.1.4 Other nearby Receptor Tests

This test involves assessing whether the proposed abstraction point is likely to affect any nearby sensitive receptors ('water features').

For all licence-level abstractions, the applicant must submit a Water Features Survey as described in *An applicants guide to water supply boreholes* at the application stage.

This involves identifying water features in a radius around the proposed abstraction. The survey radius is dependent upon the proposed abstraction volume as shown in Table 1. For clarification, in the case of abstractions for ground de-watering, the survey is intended to identify water features outwith the proposed excavation area that potentially may be affected by the abstraction.

Table 1 Radius of Water Features Survey

Proposed Abstraction	Survey Radius
>50 ≤500m ³ per day	850m
>500m ³ per day	1200m

Through assessing both the information supplied by the applicant and information held by SEPA the CO should confirm whether:

- there are any existing groundwater or surface water abstractions within the survey area. (This is carried out to ensure existing water users would not be adversely affected by the proposed abstraction.

Abstractions authorised by SEPA can be identified through use of the 'licensing' layer on GIS)

- there are any groundwater-dependent wetlands within or intersected by the survey area. The wetland typology guidance should be used to identify all wetlands and indicate their likely dependence on groundwater. Details are included in *An applicants guide to water supply boreholes*.
- there are any water-dependent designated areas of conservation, or any watercourse within 500m upstream of such an area. For SSSIs, SPAs and SACs this test follows the same procedure as set out in the Conservation Test in *WAT-RM-01: Regulation of Abstractions and Impoundments* (Section 7.2).
- the abstraction lies within the maximum coastal buffer zone of 4 km. (This is important in order to assess the potential for saline intrusion or the intrusion of water of different chemical composition into the aquifer where this is liable to cause pollution), and
- the England-Scotland border intersects the survey area. Where the border intersects the survey radius the Environment Agency should be consulted for information on existing abstractions or designated sites.

3.1.5 Water Efficiency Test

When dealing with applications, Regulation 15(1)(b) of CAR requires SEPA to "assess what steps may be taken to ensure sufficient and sustainable water use". Details of how this is carried out are provided in *WAT-RM-01: Regulation of Abstractions and Impoundments* (Section 7.4).

This test is not required for ground de-watering.

3.2 Consultation and Advertising

WAT-RM-20: Advertising and Consultation gives guidance on advertising and consultation procedures, as well as how to deal with the responses.

4. Licence Assessment Outcomes

4.1 No Assessment Failures

Where there are no screening test failures the CO should prepare a licence using *WAT-TEMP-10: Multiple Water Use Licence Template*.

4.2 Assessment Failures

Where the survey radius intersects a SSSI, SPA or SAC or intersects a watercourse within 500m upstream of such a site the Nature Conservation Procedure for Environmental Licensing should be followed. Ecology should also be consulted to determine whether the designated site contains any GW dependent wetlands.

Where a wetland has been identified which is not within a designated site Ecology and SNH should be consulted to determine whether the wetland is groundwater dependent and whether the proposed activity would result in significant damage. If it is, the Groundwater Unit should also be consulted.

Where the Environmental Standards Test (Surface Water Flow Impacts) shows a breach of a standard, where the proposed abstraction point is from a groundwater body known to be at, or at risk of being at, poor status, or where the application fails another screening test, the CO should contact the Groundwater Unit for advice.

Some of these potential impacts could be resolved by moving the abstraction or reducing the abstraction rate. Alternatively, the applicant may be able to demonstrate that the impact will not be significant by undertaking further investigations. *Annex 2* provides information on the sort of additional investigations that an applicant may need to undertake. It also details some key principles about the impacts that groundwater abstractions can have on the water environment which may be of use during discussions with the applicant.

4.2.1 Moving or reducing the abstraction

The CO should contact the applicant to inform them of the potential impact and advise that either moving the proposed location of the borehole or reducing the proposed abstraction may resolve this problem.

If the applicant agrees to relocate or reduce the proposed abstraction, they must confirm in writing that they wish to amend the application, and this confirmation should be placed on the public register along with the application.

4.2.2 Further Investigation

Where neither moving nor reducing the proposed abstraction is appropriate, the applicant may be granted the opportunity to demonstrate, through site investigations, that any impact is not significant. This should be carried out by

requesting further information (*WAT-LETT-14: Letter Requesting Further Information*).

To define the nature of the data to be collected from test pumping, the CO should consult the Groundwater Unit, the local Water Resources Specialist and Ecology as appropriate. This may require data gained from test pumping (which may have already been undertaken when registering the test pumping in line with SEPA advice). Alternatively an application for a registration may not have been obtained and will need to be applied for. Once the information has been submitted to SEPA the CO should refer the data and interpretation to the Groundwater Unit for evaluation.

There are three possible outcomes:

- There are no risks, so the application can be authorised;
- There are possible risks, but these can be mitigated by conditions; or
- The abstraction would have significant adverse impact on the water environment but the applicant claims that socio-economic benefits outweigh environmental risk. Where this occurs the local Water Resources Specialist should be consulted.

4.3 Refusal of Application

Where there is no justification for authorisation (i.e. further investigations could not provide additional information that would permit authorisation), the applicant refuses to undertake further investigations, or does not respond within the agreed time limit, the CO should consult the RRT recommending that the application be refused.

The CO should complete *WAT-FORM-11*, *WAT-LETT-06* (Letter Advising Applicant that Authorisation will be Refused), *WAT-TEMP-69* (Refusal of Application - Notice) and *WAT-TEMP-70* (Refusal of Application - Schedule), and forward to registry to issue.

Annex 1: Dewatering Operations – Estimating the Groundwater Component

The abstraction of rainwater from an excavation is not a controlled activity, therefore authorisation is not required.

Since many dewatering operations will involve rainwater and groundwater components (i.e. rainwater draining from the surroundings and groundwater infiltrating into the excavation), the rainwater element needs to be separated from the total volume abstracted.

Where the dewatering is from borehole/wells within or adjacent to the excavation, SEPA will consider this to be wholly a groundwater abstraction without any rainwater component.

Where the dewatering is via a sump the average daily groundwater volume abstracted can be calculated by following the steps below:

Table 2 Calculating Average Daily Groundwater Abstraction Volume

Calculation	Result
Determine the local average daily precipitation (in m/d) (either measured or obtained from nearby weather stations)	A
Determine the total area that will drain into the excavation (in m ²)	B
Calculate the average volume of precipitation (in m ³ /d)	C = AxB
Calculate the average daily infiltration that would have occurred had there been no quarry development (in m ³ /d). This will require consideration of the local geological conditions but a nominal figure would be 30-40% of the average volume of precipitation.	D = 30-40% x C
Calculate the daily rainfall component (in m ³ /d).	E = C - D
Determine the average daily volume of water removed from the excavation (in m ³ /d). ¹	F
Calculate the groundwater component (in m ³ /d)	G = F-E

¹ SEPA expects there will be a method of reasonably estimating the daily volume of water removed through a measure of discharge rate or based on pump capacity and pump hours run

Annex 2: Possible Scope of Further Investigations

The information below can be used by Ops to give information to applicants on the sort of additional investigations that may be required where a screening test has failed and the applicant is unable or unwilling to relocate the abstraction or reduce the abstraction volume.

The further investigation may demonstrate that the impact from the abstraction may not be significant or there may be mitigation measures that could be adopted to reduce the impact to acceptable levels once the significance of the impact has been more clearly defined. If the applicant is unwilling to undertake the investigations SEPA will have no choice but to refuse the application due to lack of information.

The actual scope of the investigation will only be defined after detailed expert assessment has been undertaken and that the eventual investigation is unlikely to consist of all the relevant investigations specified

The possible further investigations required should be linked to the reason why the abstraction application failed the screening assessment. Therefore, only the relevant sections need to be referred to describe the potential scope of the investigation. The same or similar information may be required to determine impacts on differing receptors.

A2.1 Potential Impact on Groundwater Dependent Terrestrial Ecosystems

Impacts on GWDTEs may be induced by the new groundwater abstraction as a result of changes to surface water flows or groundwater levels. Significant groundwater level impacts will be more likely where these ecosystems are located close to the proposed abstraction as the drawdown of the water table decreases with distance from the abstraction.

The investigation may need to include some or all of the following:

- A geological investigation to demonstrate that the groundwater table lies at such a depth that the groundwater body cannot be contributing to the wetland.
- A geological investigation to establish the presence of a low permeability barrier between the wetland and the groundwater body.
- Test pumping and groundwater level monitoring to assess the long term drawdown or flow reduction which will occur if the abstraction took place, including the seasonality of the drawdown/reduction in flow.
- Identification and location of sensitive species to demonstrate that these do not include communities that are normally assumed to indicate groundwater dependency.
- Test pumping and groundwater quality measurement to demonstrate that there will be no decrease in the supply of nutrients to the site.

- An ecological survey to demonstrate that there are no species present that are dependent on groundwater.

A2.2 Potential Impact on Other Abstractions

In general, other abstractors of groundwater are the users most likely to be impacted by a new abstraction as a result of changes to groundwater levels. Reduction of groundwater level by a new abstraction may, in extreme cases, result in the groundwater level being reduced close to or below the level of the pump intake of another abstraction, thus prohibiting extraction of groundwater.

The investigation may need to consist of one or both of the following elements:

- A geological investigation to establish the presence of a low permeability barrier or a significant difference in geology between the new and existing abstraction.
- Test pumping and groundwater level monitoring to assess the long term drawdown which could occur if the abstraction took place.

Information of the pumped groundwater level and the depth of the pump intake will be required from the potentially impacted abstraction.

Monitoring of groundwater levels of the pumping and potentially impacted boreholes will usually be required. However, this may not always be possible because:

- Headworks or pumping equipment in the existing borehole may prevent monitoring,
- The pumping regime of the existing well may be such that
- Groundwater level monitoring may not be practicable, or
- The existing abstractor may not be willing to allow monitoring
- In such cases the construction of an observation well may be needed.

In some circumstances (e.g. for a large abstraction $>100 \text{ m}^3/\text{d}$) one or more observation wells may need to be constructed between the application and the existing borehole as the radius of impact of large abstractions may extend to more than a kilometre. In such cases drawdown effects on the existing abstraction may take months or even years to become fully apparent. Where there are large distances between the new and existing abstractions, drawdown effects recorded in observation wells are not conclusive evidence that the existing abstraction will be impacted, as this assumes that aquifer properties are continuous. It may be better in these cases to suggest long term monitoring of groundwater levels.

A2.3 Potential Impact on Surface Water Flow

In some cases more than 50% of surface water baseflow is provided by groundwater. This contribution is particularly important during periods of low rainfall when surface water flow is at a minimum, e.g. the summer and autumn, or when fauna are particularly sensitive to flow, e.g. spawning of salmonid species in the spring. Abstraction of groundwater may therefore have significant impacts on the surface water flow regime at sensitive times.

This investigation may need to include some or all of the following elements:

- A geological investigation to establish the presence a low permeability barrier that would prevent a hydraulic connection between the abstraction and surface water.
- Test pumping and groundwater level monitoring to confirm a change in hydraulic properties between the abstraction and the surface water that would reduce the impact.
- Groundwater level monitoring to demonstrate that the abstraction is drawing water from an adjacent groundwater body.

A2.4 Potential Saline Intrusion

The risk of saline intrusion is dependent on proximity to the coast, geological setting, depth of abstraction and abstracted volume. Evidence of saline intrusion is notoriously difficult to obtain during a short investigation and will normally only be feasible for large abstractions that are close to the coast.

The applicant may need to demonstrate that the abstraction will not result in intrusion of saline water. To do this they would need to undertake one or both of the following:

- A pumping test and groundwater quality monitoring and/or downhole logging for salinity (to determine aquifer properties and short/medium term changes in groundwater quality) with measurement of parameters from the abstracted borehole and, for larger abstractions the installation of observation borehole(s) closer to the source of intrusion, e.g. the sea, should be considered. The duration of the pumping test should normally be significantly longer than that recommended in *WAT-RM-24: Pumping Test Methodology*. Alternatively it may be better to suggest that the abstraction has a condition for long-term monitoring with trigger levels for salinity so that abstraction can be stopped if necessary.
- Collection of geological and hydrogeological evidence (including aquifer properties) to determine the type of aquifer and assess connectivity of features between abstraction and source of intrusion.

A2.5 Insufficient Resource

There should be an excess of recharge over abstraction supported by falling groundwater levels.

The investigation may include one or more of the following:

- An alternative recharge calculation, supported with data, which demonstrates that the inclusion of indirect recharge will materially affect the assessment.
- Evidence that conditions exist that would allow a material contribution to recharge from outside the boundary of the groundwater body, i.e. that groundwater from an adjacent groundwater body is contributing to the abstraction.
- Geological evidence, supported with borehole logs, or other suitable evidence, and an appropriate conceptual model that demonstrates that groundwater flow barriers exist within the groundwater body such that the ratio of cumulative abstraction volume to recharge would be materially affected or that falling groundwater levels elsewhere in the groundwater body do not apply.
- Measurements that demonstrate that the falling groundwater levels used in screening assessment are not representative of the groundwater body in general or the area of the proposed abstraction in particular.
- Measurements that demonstrate that the fall in groundwater levels is temporary.

A2.6 Key Principles

The key principles about the effect that groundwater abstractions can have on the water environment are set out below. This information may be of use in helping answering questions from the applicant.

1. All abstractions eventually have an impact; it is only a question of where the impact will appear and how long it will take to happen.
2. Abstractions can have impacts beyond their catchment zones, for example by intercepting water which would otherwise have contributed baseflow to a river.
3. Impacts include changes in flow and level. Impacts on flow are harder to observe, as it may represent only a small proportion of the flow in a river, it may take some time for the impact to reach the river, and river flows are variable anyway.
4. Rainfall recharge does not 'fill up' cones of depression, because the cone of depression is superimposed on the pre-existing groundwater profile.
5. The impacts of the abstraction will still be the same upstream as downstream.
6. Groundwater flow divides make no difference to the distribution of the impacts of abstraction.
7. Faults are not necessarily impermeable.

References

NOTE: Linked references to other documents have been disabled in this web version of the document.

See the Water >Guidance pages of the SEPA website for Guidance and other documentation (www.sepa.org.uk/water/water_regulation/guidance.aspx).

All references to external documents are listed on this page along with an indicative URL to help locate the document. The full path is not provided as SEPA can not guarantee its future location.

Regulatory Methods & Guidance

WAT-RM-01: Regulation of Abstractions and Impoundments

WAT-RM-09: Modifications to CAR Authorisations

WAT-RM-16: Hydrogeologist Input to GW Abstraction Assessment

WAT-RM-20: Advertising and Consultation

WAT-RM-24: Pumping Test Methodology

WAT-RM-26: Determination of Aquifer Properties

WAT-RM-27: Modelling Methods for Groundwater Abstractions

WAT-SG-62: Groundwater Abstractions - Geothermal Energy

Forms, Letters and Templates

WAT-FORM-11: Groundwater Abstraction Application Screening Assessment

WAT-LETT-06: Letter Advising Applicant that Authorisation will be Refused

WAT-LETT-14: Letter Requesting Further Information

WAT-LETT-28: Revocation Notice Covering Letter

WAT-TEMP-10: Multiple Water Use Licence Template

WAT-TEMP-24: Notice of Variation - Operator Initiated

WAT-TEMP-25: Notice of Variation - Schedule

WAT-TEMP-29: Revocation Notice - Schedule

WAT-TEMP-30: Revocation Notice - Front Sheet

WAT-TEMP-69: Refusal of Application - Notice

WAT-TEMP-70: Refusal of Application - Schedule

Further Information

All available from the SEPA website www.sepa.org.uk

An applicants guide to water supply boreholes

CAR Licences for Deep Boreholes - Information Requirements

CAR – A Practical Guide (The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) - A Practical Guide)

SEPA's requirements for activities related to geothermal energy

- End of document -