



Till Abstraction Licensing Strategy

(289_14) A strategy to manage water resources sustainably

March 2019

Version 2

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1. About the licensing strategy

This strategy sets out our approach to managing new [abstraction](#) and [impoundment](#) within the Till [catchment](#) in the Solway Tweed river basin district. The Till catchment covers approximately 700 square kilometres and includes the River Till, with its tributaries - the River Glen, Breamish and Wooler Water - and the Fell Sandstone principal aquifer.

Our approach ensures that River Basin Management Plan objectives for water resources activities are met and we avoid deterioration within this catchment.

We apply this approach to the [water body](#) in which the abstraction is located. It also applies to all downstream [surface water](#) bodies that may be affected by any reduction in abstraction-related flow, or adjacent [groundwater](#) bodies affected by any reduction in groundwater level.

Surface water abstractions on the River Till have not historically been regulated by the Environment Agency, and have instead been regulated by Natural England in order to protect the features of the designated conservation site (River Tweed Site of Special Scientific Interest (SSSI) - see section 3.5). This changed on the 1st January 2018 (see section 4.3 for more information), and as a result, the historic approach to managing existing abstraction has been different to that described in this document.

Please see [Managing Water Abstraction](#) for the technical explanation, legal and policy requirements behind the Abstraction Licensing Strategy ([ALS](#)).

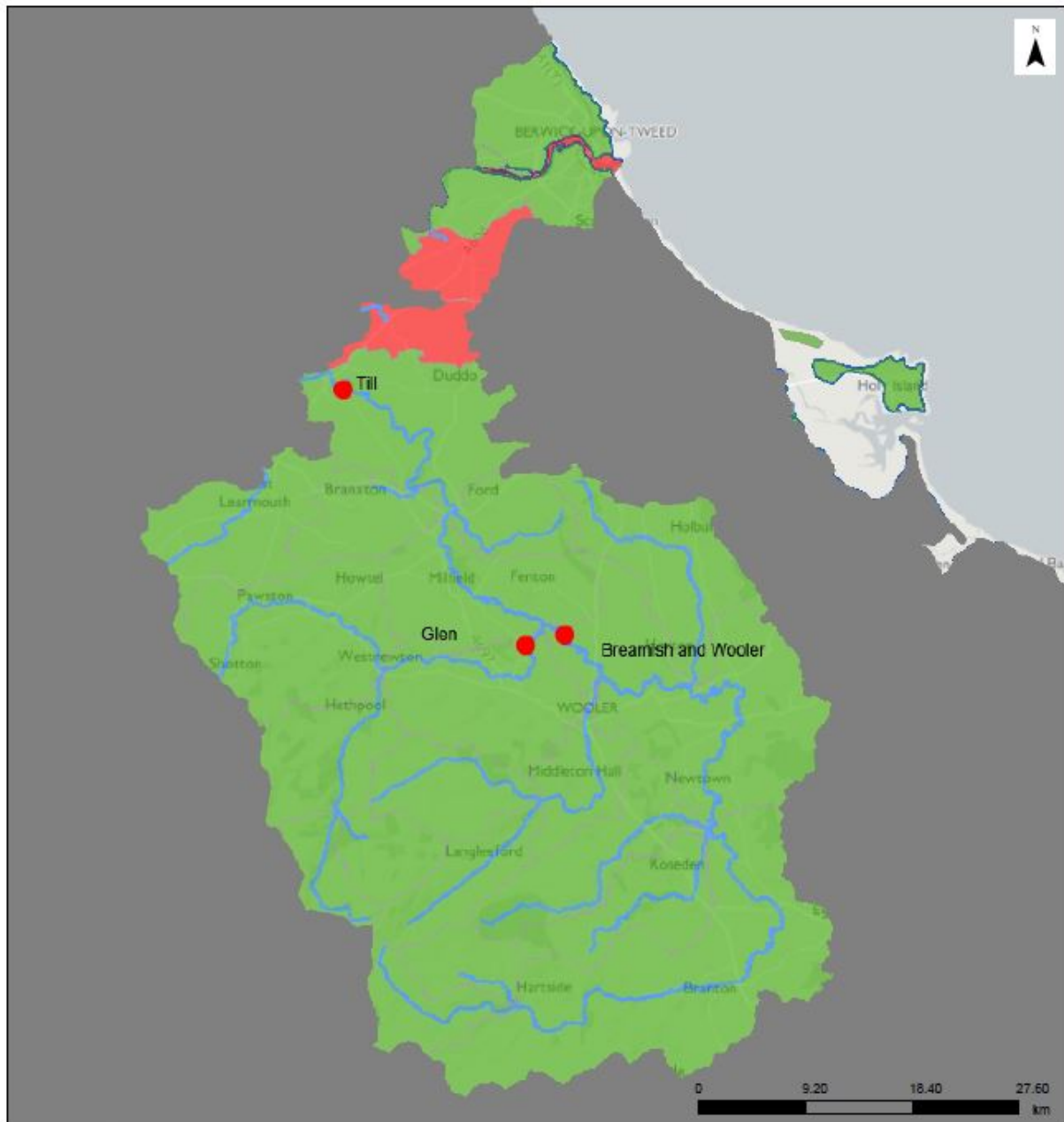
Please see [abstraction pages on gov.uk](#) for advice on who needs an abstraction or impoundment licence, and how to apply.

2. Water resource availability of the Till ALS

2.1. Resource availability

The water resource availability, calculated at four different flows, Q95 (the flow of a river which is exceeded on average for 95% of the time i.e. low flow), Q70, Q50, and Q30 (higher flow) for this ALS are presented and explained in Maps 1-4 and section 2.1.1 below.

Map 1 - Water resource availability colours at Q30 for the Till ALS.



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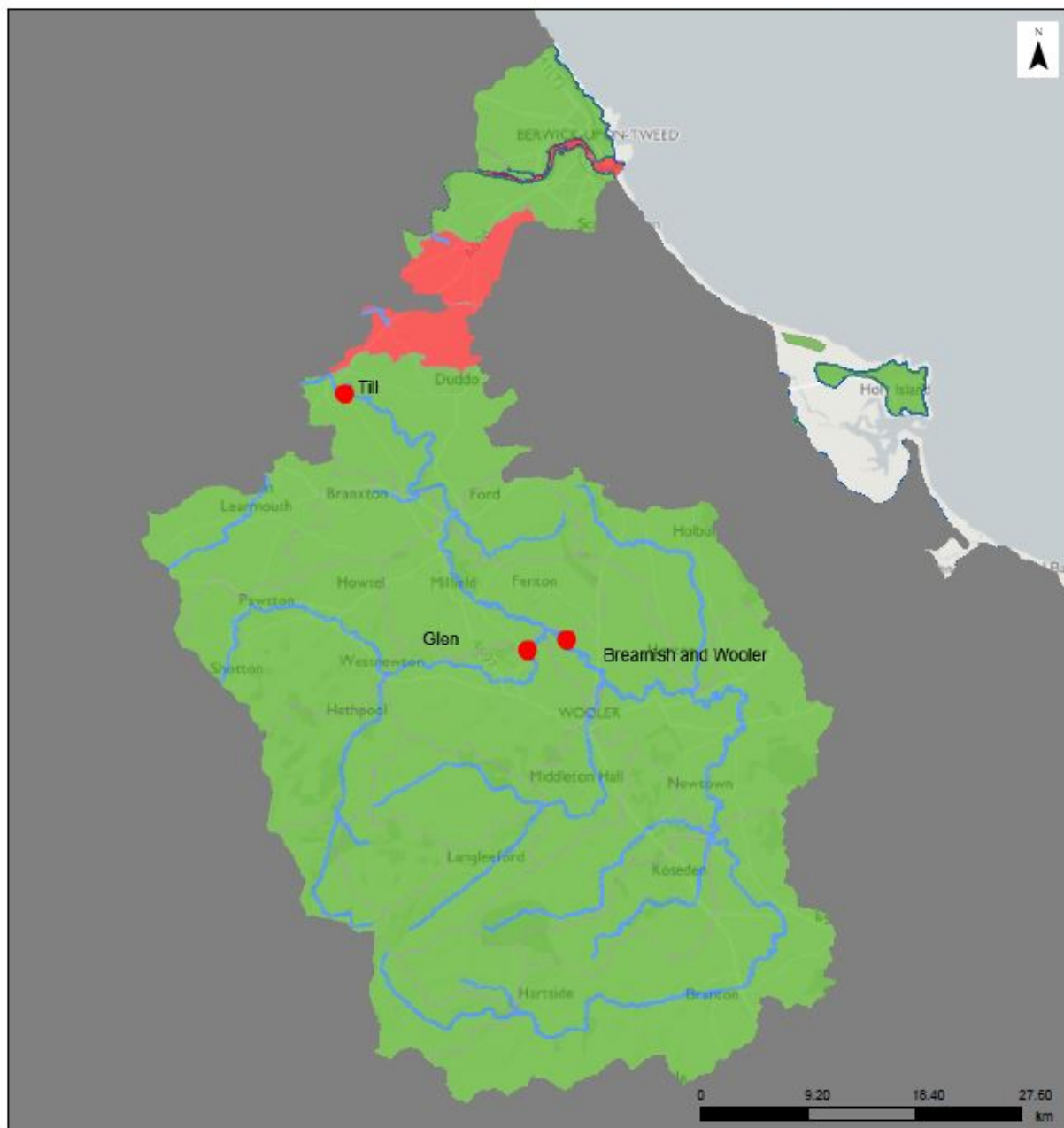
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q30:

- Water available
- Restricted water available
- Water not available

Map 2 - Water resource availability colours at Q50 for the Till ALS.



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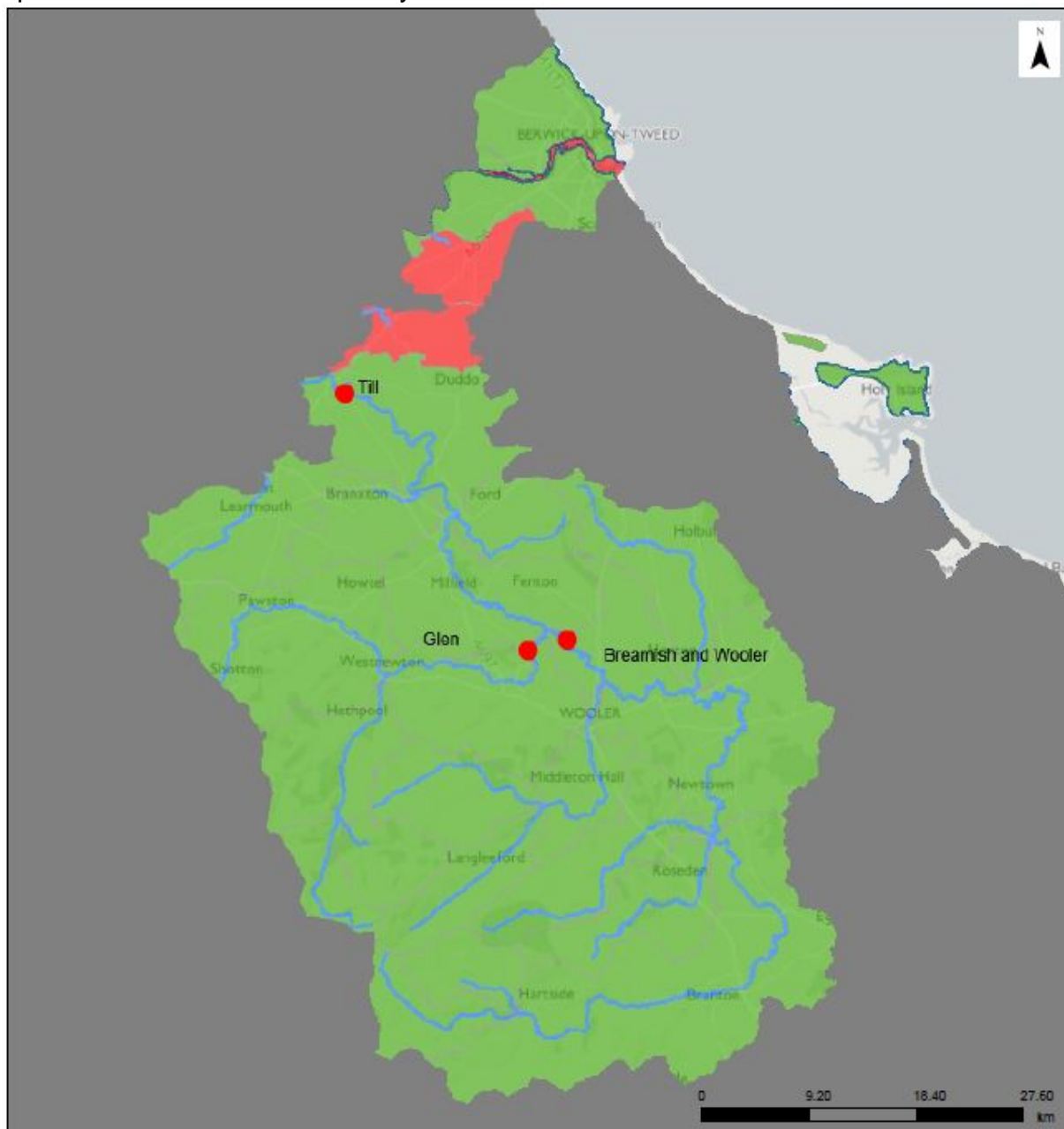
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q50:

- Water available
- Restricted water available
- Water not available

Map 3 - Water resource availability colours at Q70 for the Till ALS.



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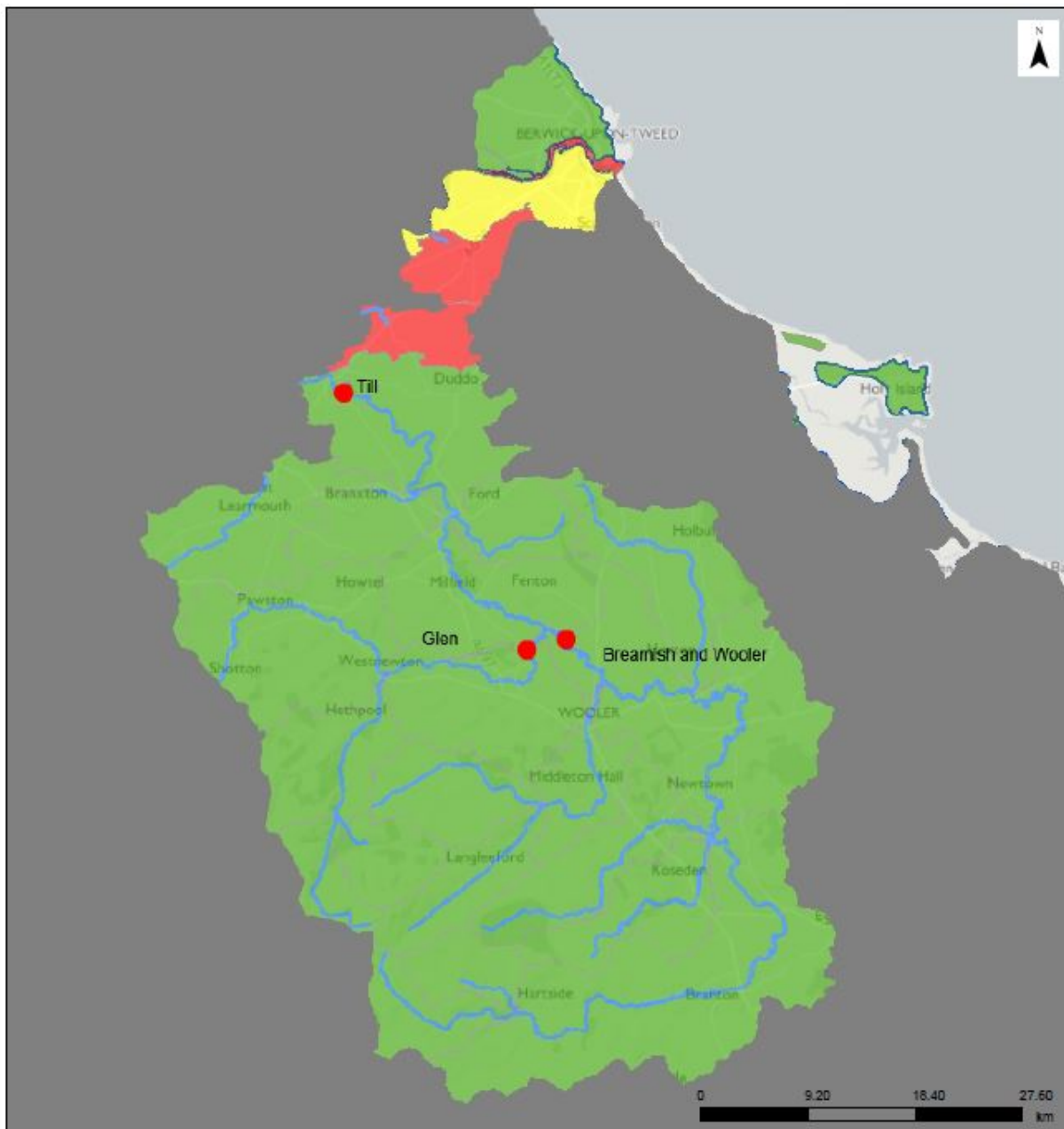
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q70:

- Water available
- Restricted water available
- Water not available

Map 4 - Water resource availability colours at Q95 for the Till ALS



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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q95:

- Water available
- Restricted water available
- Water not available

2.1.1. Water resource availability colours and implications for licensing

Water available for licensing

Green 

There is more water than required to meet the needs of the environment.

New licences can be considered depending on local and downstream impacts.

Restricted water available for licensing

Yellow 

Full Licensed flows fall below the [Environmental Flow Indicators \(EFIs\)](#).

If all licensed water is abstracted there will not be enough water left for the needs of the environment. No new consumptive licences would be granted. It is likely we'll be taking action to reduce full licensed risks. Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder.

Water not available for licensing

Red 

Recent actual flows are below the EFI.

This scenario highlights water bodies where flows are below the indicative flow requirement to help support a healthy ecology in our rivers. We call this 'Good Ecological Status' ([GES](#)) or 'Good Ecological Potential' ([GEP](#)) where a water body is heavily modified for reasons other than water resources.

Note: we are currently taking action in water bodies that are not supporting GES or GEP. We will not grant further licences. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder.

Heavily Modified Water Bodies ([HMWBs](#)) and/or [discharge](#) rich water bodies

Orange 

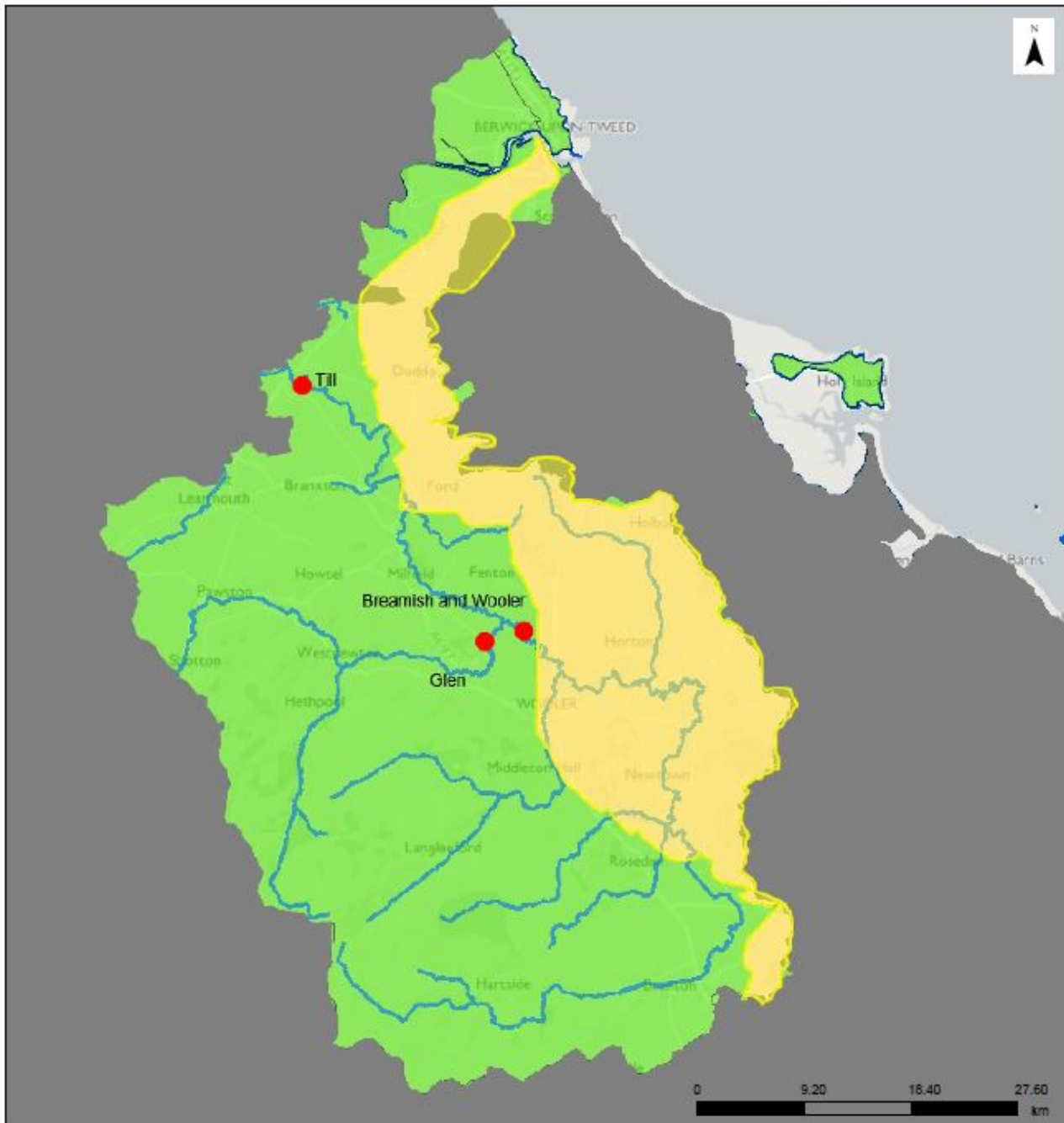
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on these operating agreements. More detail if applicable can be found in section 4.2.1 Surface Water.

There may be water available for abstraction in discharge rich catchments, you need to contact the Environment Agency to find out more.

2.2. Groundwater resource availability

In certain areas, resource concerns over groundwater mean that the standard water resource availability colours have been overridden. Section 2.2.1 explains the groundwater resource availability colours, and Map 5 shows these colours for groundwater Till ALS area.

Map 5 - Groundwater Resource Availability for the Till ALS



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2.2.1. Groundwater resource availability colours and implications for licensing

Water available for licensing

Green 

Groundwater unit balance shows groundwater available for licensing. New licences can be considered depending on impacts on other abstractors and on surface water.

Restricted water available for licensing

Yellow 

Groundwater unit balance shows more water is licensed than the amount available, but that recent actual abstractions are lower than the amount available OR that there are known local impacts likely to occur on dependent wetlands, groundwater levels or cause saline intrusions but with management options in place.

In restricted groundwater units no new consumptive licences will be granted in impacted areas. Confirmation that risks posed by any new abstractions are negligible are likely to be required, via a detailed quantitative risk assessment, before any further licence applications can be granted. It may also be appropriate to investigate the possibilities for reducing fully licensed risks. Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder.

In other units there may be restrictions in some areas e.g. in relation to saline intrusion.

Water not available for licensing

Red



Groundwater unit balance shows more water has been abstracted based on recent amounts than the amount available.

We will not grant further licences.

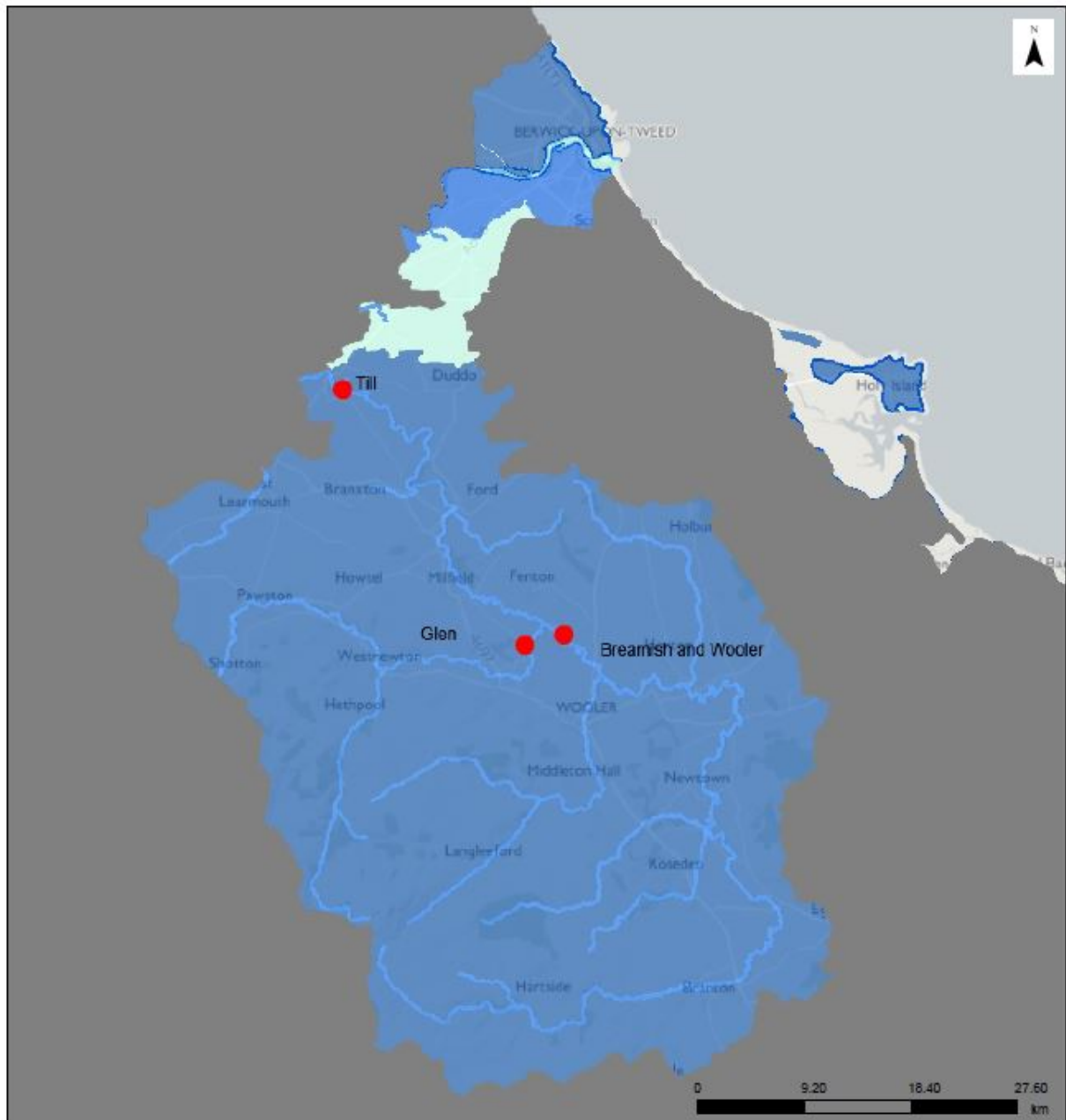
2.3. Resource reliability

If you want to apply for a licence, it's worth considering the reliability of your abstraction.

By assessing the quantity of water available at different flows it's possible to see when there is a surplus or deficit of water and the associated reliability of an abstraction. This is an indication only; actual reliability of a licence will be discussed when you apply.

Map 6 gives an indication of the resource availability for [consumptive abstraction](#) in the Till ALS area expressed as a percentage of time.

Map 6 Water resource reliability of the Till ALS expressed as percentage of time available



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Legend:

● Assessment Points

— Rivers

Percentage of the time additional consumptive resource may be available:

- Consumptive abstraction available less than 30% of the time
- Consumptive abstraction available at least 30% of the time
- Consumptive abstraction available at least 50% of the time
- Consumptive abstraction available at least 70% of the time
- Consumptive abstraction available at least 95% of the time

2.4. Other considerations for availability and reliability

We may have to add constraints to licences such as '[hands off flow](#)' (HoF) conditions to protect the environment and the rights of other abstractors. As a result, when we grant a licence, it doesn't mean that we guarantee a supply of water. These conditions specify that if the flow in the river drops below what's needed to protect the environment, abstraction must reduce or stop. So, in dry years, restrictions are likely to apply more often, which will affect the reliability of supply.

There may also be restrictions on new groundwater abstractions in some locations if they pose a risk to existing water users or groundwater dependent features. For example, we may impose a "[Hands Off Level](#)" (HoL). A HoL restricts abstraction when water levels drop below a certain level in a borehole or well.

Whilst this document may say that water is available for abstraction, this doesn't guarantee that all applications will be successful. This is because we have to determine each application on its own merits, and local factors may mean we're either unable to grant a licence as applied for, or even at all.

New licences within an ALS are usually given a Common End Date ([CED](#)), which allows them to be reviewed at the same time. The next CED for this ALS is 31st March 2027 and the subsequent one is 31st March 2039.

2.5. Impoundments

Applications for impoundments will be dealt with on a case by case basis. More information may be found on our [water management web pages on gov.uk](#).

3. How we manage abstraction in the Till ALS

3.1. Assessment points

We assess surface water flows at [Assessment points](#) (APs), which are significant points on a river, often where two major rivers join or at a gauging station. APs cover multiple surface water bodies.

Where groundwater abstractions directly impact on surface water flows, the impact is measured at the surface water AP.

Table 1 gives an indication of how much water is available for further abstraction and the associated restrictions we may have to apply to new and varied [abstraction licences](#) from the main river. Tributaries to the main river may be subject to different restrictions and quantities and will be assessed locally on a case by case basis.

Each HoF is linked to an AP and is dependent on the resource availability at that AP. In some cases additional restrictions may apply to licences where there is a more critical resource availability downstream to protect the ecological requirements of the river. This is detailed in the last column of Table 1 if applicable.

All abstraction licence applications are subject to an assessment to take account of any local and downstream issues and may be subject to further restrictions.

Reading from top to bottom in Table 1 are the APs in the Till ALS area. Reading across the columns you can see the potential HoF that may be applied to a licence, the number of days water may be available under this restriction and the approximate volume of water

in [MI/d](#) that may be available etcetera. In cases where there is water available at all flows we may apply a Minimum Residual Flow (MRF) to protect very low flows. We'll decide this on a case by case basis.

AP	Name	Water Resource Availability	HOF Restriction (MI/d)	Number of days per annum abstraction may be available	Approximate volume available at restriction (MI/d)	Is there a gauging station at this AP?	Additional restrictions
1	Till	Water Available for Licensing	86.0 (MRF)	365	8.4	Yes (Heaton Mill)	See comment box below
2	Breamish and Wooler	Water Available for Licensing	64.2 (MRF)	365	5.6	No	See comment box below
3	Glen	Water Available for Licensing	12.6 (MRF)	365	1.8	No	See comment box below

Table 1 Summary of licensing approach for the assessment points of Till ALS.

Water Availability Assessments for the Till ALS

The assessments presented in Maps 1 - 4 (section 2.1) and in Table 1 (above) have been determined on the best available information. Prior to January 2018 surface water abstractions within the Till catchment were exempt from licensing. By the 1st January 2020, the Transitional Arrangements associated with changes to the Water Act 2003 (see section 4.3) will have lapsed and the Environment Agency will begin determining the licencing requirements for existing abstractors in the Till ALS area. This determination process will provide a much greater understanding of water demand and usage. This will mean that the water availability assessments and expected conditions attached to licences will change in the near future. Until this time, any new licence applications, not associated with the Transitional Arrangements (i.e. a New Authorisation application) will be determined on a case by case basis. We may look to grant short duration licences for new applications where there is a high degree of uncertainty regarding available flows.

3.2. Groundwater

Where groundwater abstractions directly impact on surface water flows, including reduction of base flow, the impact is measured at the surface water AP. In these cases, restrictions may be applied to licences, such as Hands off Level ([HoL](#)) conditions.

Other restrictions may apply where availability is limited or to protect the environment, for example to prevent saline intrusion.

There are two groundwater bodies within the Till catchment; Till Fell Sandstone (GB40302G703700) and Till Devonian and Lower Carboniferous (GB40202G700100).

3.2.1. Licence restrictions on groundwater abstractions in the Till ALS area Till Fell Sandstone (GB40302G703700)

The Fell Sandstone extends the length of the eastern boundary of the Till ALS area. The waterbody has been assessed as having Restricted Water Available and the following restrictions apply:

Yield Limitation	Applicants will need to demonstrate that yields are sustainable and are not restricted by local conditions.
Connection with Surface Water	New and existing licences should not cause a detrimental impact to the ecology of surface waters from a reduction in flow.

Table 2 - Summary of Licence Restrictions associated with the Till Fell Sandstone

3.3. Level dependent environments

Currently we are not certain whether or not level dependent environments (LDE) are present in the Till ALS area. Campfield Kettlehole SSSI and Barelees Pond may constitute a level dependent environment; however there are no known abstractions in that area that would impact the environment. Applicants may be required to assess the impact of proposed abstraction on these LDEs, depending on the geology of their abstraction location.

3.4. High Ecological Status water bodies

High ecological status water bodies are those that are close to a natural condition. We restrict abstraction in these water bodies to maintain this condition.

WBID:	Waterbody Name
GB102021072830	Till from Source to Linhope Burn

Table 3 - Summary of the High (WFD) Ecological Status Waterbodies in the Till ALS Area

3.5. Protected areas

UK law provides a very high level of protection to two types of designated sites due to their special environment. These are:

- Special Areas of Conservation ([SAC](#)), which contribute to biodiversity by maintaining and restoring habitats and species;
- Special Protection Area ([SPA](#)), which provides protection to birds and their nests, eggs and habitats

Ramsar sites and Sites of Special Scientific Interest ([SSSI](#)) also carry a high level of environmental importance.

In the Till ALS area, there are over 60 conservation sites that have been designated in relation to the character of the Water Environment. These sites can be identified using the MAGIC mapping interface available at www.magic.defra.gov.uk.

The following sites are notable as they comprise distinct areas of riverine environment. Applications for surface water abstraction in these locations, if eligible, would require a more restrictive assessment than that described in section 2 of this document.

Feature:	Name:	Sub-catchment:
SSSI	Tweed Catchment Rivers-England: Till Catchment	River Till
SSSI	Till River Banks	River Till
SSSI	Tweed Catchment Rivers-Lower Tweed and Whiteadder	River Tweed
SSSI	Harthope Burn	River Till
SAC	River Tweed	River Till

Table 4 - Summary of designated sites within the Till ALS that are notable for distinct areas of riverine environment.

Applications for groundwater abstraction would also need to be rigorously considered in relation to the potential impact to any groundwater fed designated sites.

4. Managing existing licences

4.1. Water rights trading

We want to make it easier to trade water rights. A water rights trade is where a person sells all or part of their water right, as defined by their abstraction licence(s), to another person on a permanent or temporary basis. In the majority of cases a trade will involve a change in abstraction location and/or use which we will need to approve through the issue or variation of abstraction licences.

In licensing trades, as with new abstraction licences, we need to make sure that we don't cause any deterioration in water body status both within the water body / bodies where the trade will take place and to downstream water bodies. The section below provides a guide to the potential for trading in water bodies of a particular ALS water resource availability colour.

To find out more about licence trading please go to our [water management web pages on gov.uk](#)

Guide to the potential trading in water bodies of a particular ALS water resource availability colour

High hydrological regime

Blue 

Opportunities for trading water rights will be limited

Water available for licensing

Green 

Allow trades of recent actual abstraction and licensed abstraction, but little demand for trading expected within water body as water available for new abstractions.

Restricted water available for licensing

Yellow 

There may be opportunities for licence holders to trade up to their full licensed quantities, but the quantities of water available to trade may be restricted once levels of actual abstraction reach sustainable limits. We will not permit licence trades in water bodies where we are taking action to prevent deterioration unless the trade is consistent with achieving water body objectives.

Water not available for licensing

Red 

We will only trade recent actual abstraction but no increase in recent actual abstraction is permitted in water body. Licensed abstraction will be recovered for the environment.

HMWBs

Orange 

Opportunities for trading will depend on local operating agreements and local management.

4.2. Taking action on unsustainable abstraction

4.2.1. Action being taken on unsustainable abstraction in the Till ALS Area Fell Sandstone and AP 1 (Till)

The maps in Section 2.1 show some tributaries of the River Tweed have No Water Available for Licensing and the Fell Sandstone has Restricted Water Available for Licensing.

There is a known connectivity between the Fell Sandstone principal aquifer and some of the smaller waterbodies in the lower Till catchment. The Fell Sandstone is comprised of seven main sandstone units separated by mudstones. Connectivity between the individual sandstone units and connectivity between the sandstone units and the surface waterbodies is likely to vary.

It is believed that Public Water Supply (PWS) abstractions from the Fell Sandstone may be having a detrimental impact on the flows in nearby surface streams. Existing PWS abstractions within the catchment source water from different sandstone units. Northumbrian Water Limited, through the Water Industry National Environment Programme, are undertaking a combined surfacewater / groundwater investigation into the impacts of the PWS abstractions in this area. The findings of this investigation will inform future Water Availability Assessments.

We may refuse applications for further licences from the Fell Sandstone if they are proposed in areas and/or from sandstone units which are already thought to be stressed due to existing abstractions.

In areas where there is limited water available for licensing we may impose licence restrictions, for example, a Hands Off Level (HOL) or a Hands Off Flow (HoF), in order to protect existing water supplies and water dependent features.

Till Catchment

Historic surface water abstractions within the Till catchment have been restricted by a 'take' system, which was regulated using river levels measured at Heaton Mill gauging station. This process was developed as it was identified that abstraction was greater than the environment could support. The take system reduced abstractions across the Till catchment and resulted in a more sustainable flow regime, as reflected in the current resource availability status shown in Maps 1 - 4 in section 2.1.

The current Water Availability assessments have benefited from an improved understanding of flows in the Till catchment. This is associated with the continued operation of the gauging station at Heaton Mill, which has now been in operation for over 17 years. This gauging station has been maintained to ensure a high quality flow record is available for the lower Till catchment. Continued investment in flow monitoring will further develop the understanding of flows across the wider Till catchment.

As the majority of abstraction within the Till catchment has historically been unregulated (see section 4.3), there is the potential for unidentified abstraction pressures to be present. The move towards a consistent licensing regime will provide more evidence to assess the availability and use of water. This will possibly identify other abstraction pressures and allow mitigation measures to be developed.

The Environment Agency is undertaking several investigations and projects to further support an evidenced approach to the regulation of abstraction in the Till catchment.

4.3. Regulating currently exempt abstraction

As the abstraction licensing system in England and Wales developed over the past 50 years, certain abstractions have remained lawfully exempt from licensing control. This meant that unlimited supplies of water could be abstracted, even in areas that are water stressed.

This means that those exempt abstractions could potentially take unlimited amounts of water, irrespective of availability and without regard to impacts on the environment or other abstractors.

Following two public consultations Government have introduced new Regulations which took effect from 1st January 2018. The Water Resources (Transitional Provisions) Regulations 2017 have removed the majority of previous exemptions from licensing control, and current exempt abstractors will now require a licence to lawfully abstract water.

The main activities affected are:

- transferring water from one inland water system to another in the course of, or as the result of, operations carried out by a navigation, harbour or conservancy authority;
- abstracting water into internal drainage districts;
- dewatering mines, quarries and engineering works, except in an emergency;
- warping (abstraction of water containing silt for deposit onto agricultural land so that the silt acts as a fertiliser);

- all forms of irrigation (other than spray irrigation, which is already licensable), and the use of land drainage systems in reverse (including transfers into managed wetland systems) to maintain field water levels;
- abstracting within currently geographically exempt areas, including some rivers close to the borders of Scotland; and
- abstractions covered by Crown and visiting forces (other than Her Majesty the Queen and the Duchies of Cornwall and Lancaster in their private capacity).

The Till catchment has previously been considered to be a geographically exempt area. This meant that licences have historically not been required for abstractions from surface waters, no matter how large the abstraction (Water Resources Act 1991, Section 4), or for abstractions from underground strata and springs, provided that the quantity abstracted did not exceed 1,000,000 gallons per year (4546 m³/year), with a daily rate not exceeding 50,000 gallons per day (227 m³/day) (Northumbrian Water Act (NWA, 1981). From the 1st January 2018, the controls governing abstraction from ground and surface waters in the Till catchment have been the same as those in the rest of England and Wales, with only abstractions that do not exceed 20 m³/day (7300 m³/year) being exempt.

Where we have details of previously exempt abstractions, we will endeavour to include them in our assessments to consider how they impact on the catchment.

5. List of abbreviations

ALS

Abstraction Licensing Strategy.

AP

Assessment Point.

CED

Common End Date.

Defra

Department of Environment Fisheries and Rural Affairs.

EFI

Ecological Flow Indicator.

GEP

Good Ecological Potential.

GES

Good Ecological Status.

GW

Groundwater.

HMWB

Heavily Modified Water Body.

HoF

Hands off Flow.

HoL

Hands off Level.

MI/d

Megalitres per day.

SAC

Special Areas of Conservation.

SPA

Special Protection Areas.

SSSI

Sites of Special Scientific Interest.

UKTAG

United Kingdom's Technical Advisory Group.

WB

Water body.

6. Glossary

Abstraction

Removal of water from a source of supply (surface or groundwater).

Abstraction licence

The authorisation granted by the Environment Agency to allow the removal of water.

Assessment point

A significant point on a river, often where two major rivers join or at a gauging station.

Catchment

The area from which precipitation and groundwater will collect and contribute to the flow of a specific river.

Consumptive abstraction

Abstraction where a significant proportion of the water is not returned either directly or indirectly to the source of supply after use. For example for the use of spray irrigation.

Discharge

The release of substances (for example, water, treated sewage effluent) into surface waters.

Environmental flow indicator

Flow indicator to prevent environmental deterioration of rivers, set in line with new UK standards set by [UKTAG](#).

Groundwater

Water that is contained in underground rocks.

Hands off flow

A condition attached to an abstraction licence which states that if flow (in the river) falls below the level specified on the licence, the abstractor will be required to reduce or stop the abstraction.

Hands off level

A river flow or borehole (groundwater) level below which an abstractor is required to reduce or stop abstraction.

Impoundment

A structure that obstructs or impedes the flow of inland water, such as a dam, weir or other constructed works.

Surface water

This is a general term used to describe all water features such as rivers, streams, springs, ponds and lakes.

Water body

Units of either surface water or groundwater which we use to assess water availability.

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