



# **Tees Abstraction Licensing Strategy**

(296\_14) A strategy to manage water resources sustainably

March 2019

Version 2

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can't do this alone. We work as part of the [Defra](#) group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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# Contents

<b>Tees Abstraction Licensing Strategy</b> .....	<b>1</b>
<b>Contents</b> .....	<b>3</b>
<b>1. About the licensing strategy</b> .....	<b>4</b>
<b>2. Water resource availability of the Tees ALS</b> .....	<b>4</b>
2.1. Resource availability.....	4
2.2. Groundwater resource availability .....	9
2.3. Resource reliability .....	11
2.4. Other considerations for availability and reliability .....	13
2.5. Impoundments.....	13
<b>3. How we manage abstraction in the Tees ALS</b> .....	<b>13</b>
3.1. Assessment points .....	13
3.2. Groundwater.....	16
3.3. Level dependent environments.....	18
3.4. Coasts and estuaries.....	18
3.5. Heavily modified water bodies.....	19
3.6. High Ecological Status water bodies .....	20
3.7. Protected areas .....	20
<b>4. Managing existing licences</b> .....	<b>21</b>
4.1. Water rights trading .....	21
4.2. Taking action on unsustainable abstraction.....	22
4.3. Regulating currently exempt abstraction .....	22
<b>5. List of abbreviations</b> .....	<b>24</b>
<b>6. Glossary</b> .....	<b>26</b>

# 1. About the licensing strategy

This strategy sets out our approach to managing new and existing [abstraction](#) and [impoundment](#) within the Tees [catchment](#) in the Northumbria river basin district. The Tees CAMS area covers an area of approximately 1,092 km<sup>2</sup>. The area includes the catchments of the River Tees, River Skerne and River Leven and a number of smaller tributaries that flow into the River Tees.

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.

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

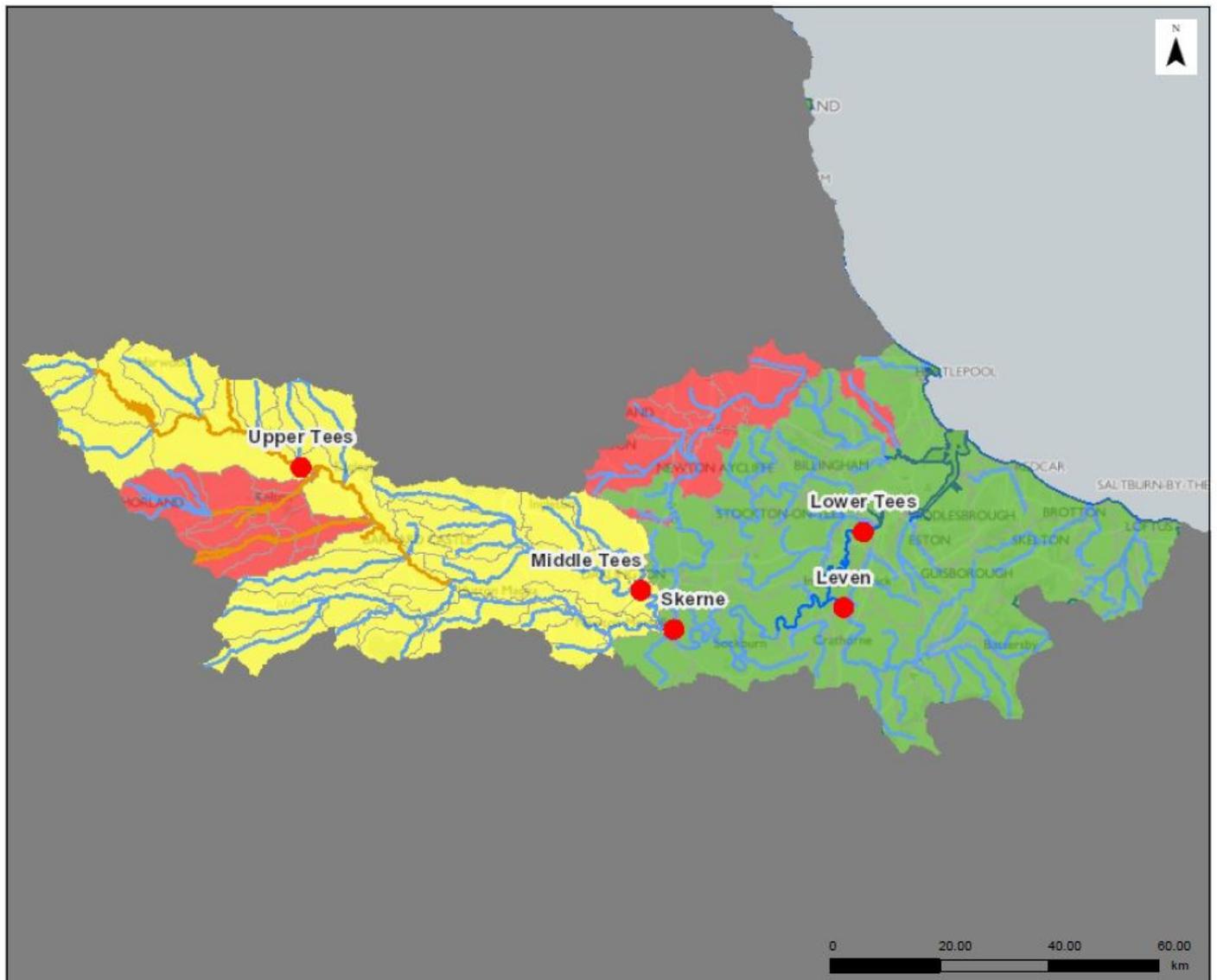
Please see [abstraction pages on gov.uk](#) for advice on who needs an abstraction or impoundment licence, and how to apply.

## 2. Water resource availability of the Tees 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 Tees ALS.



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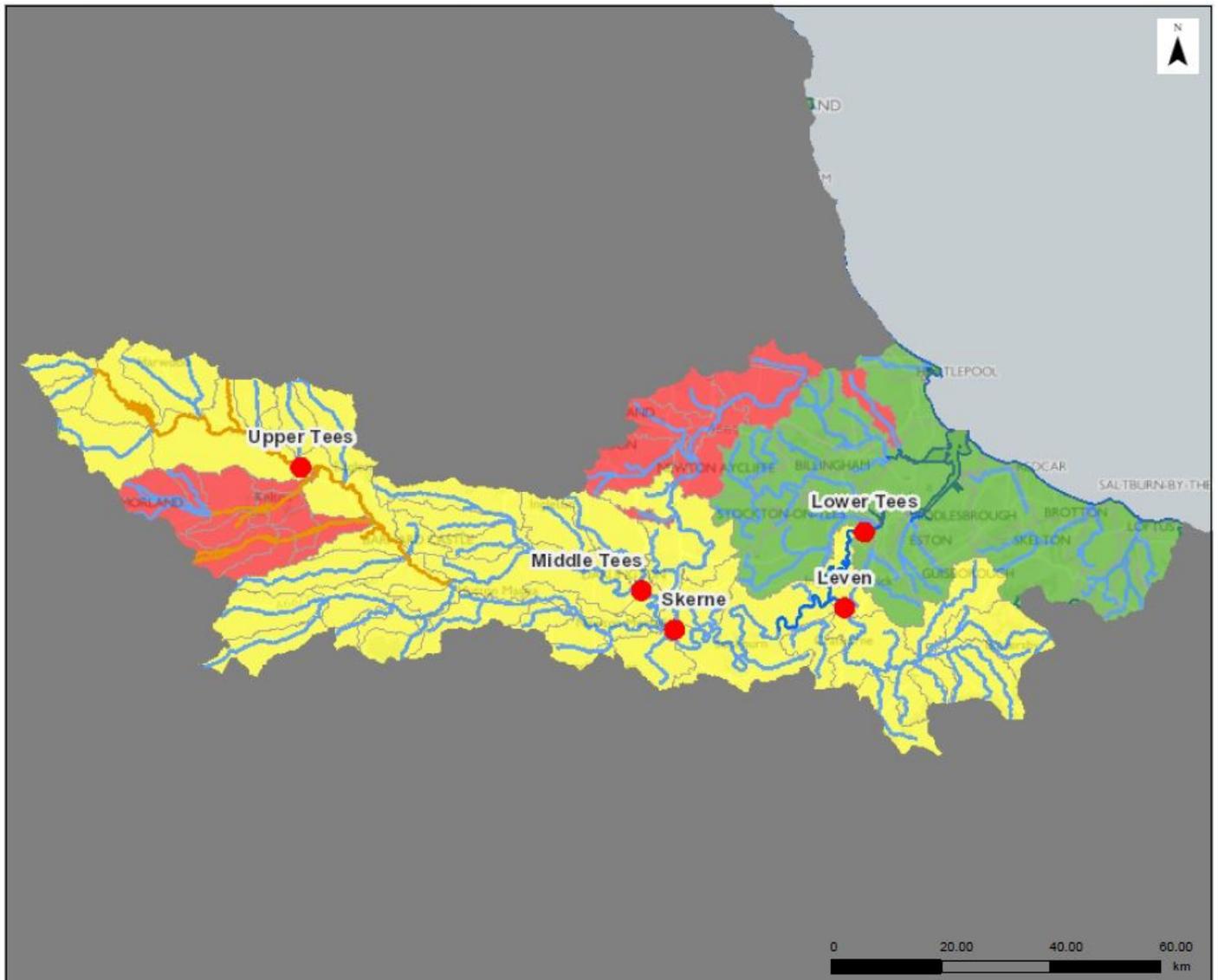
Legend:

- 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 Tees ALS.



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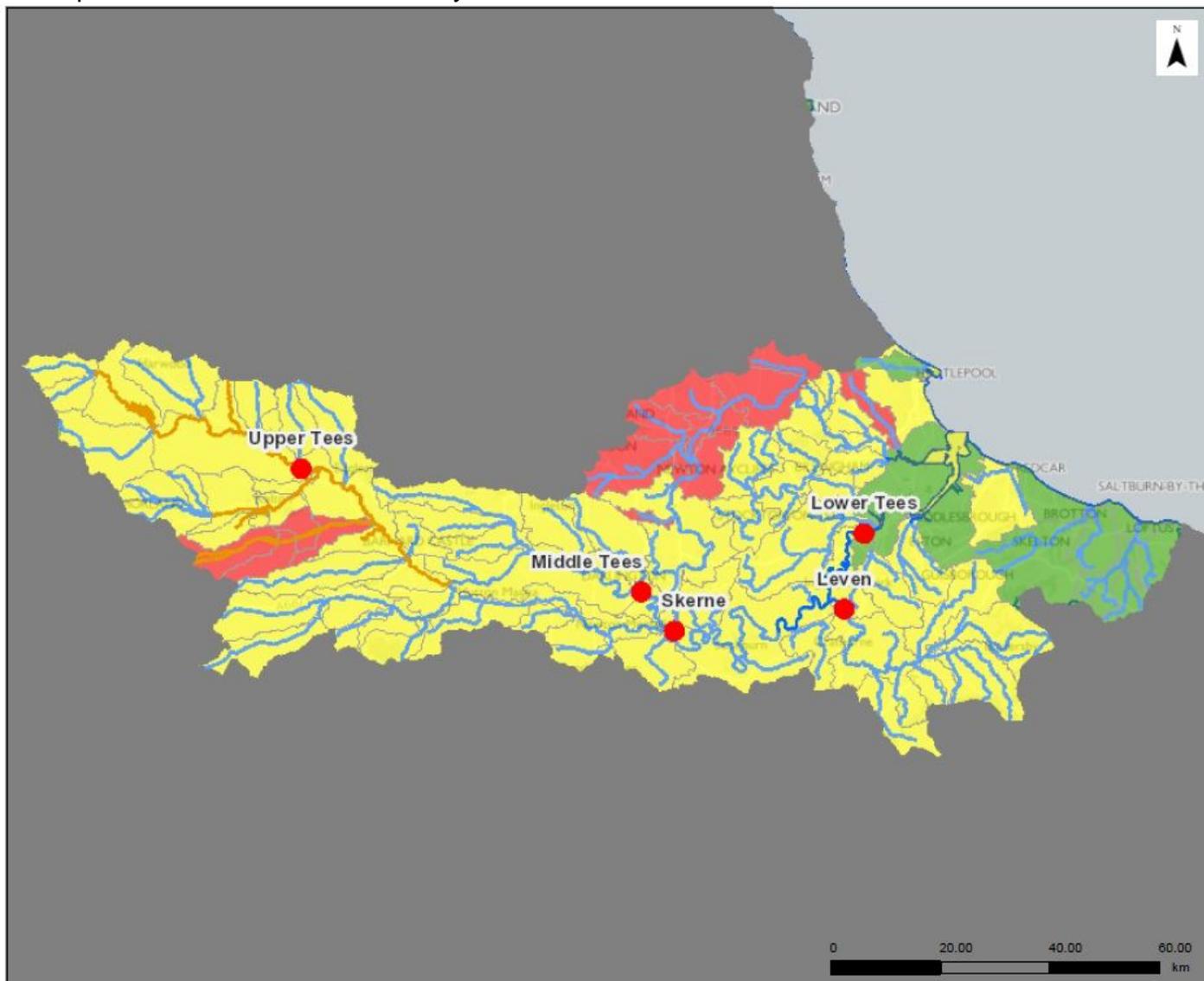
Legend:

- 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 Tees ALS.



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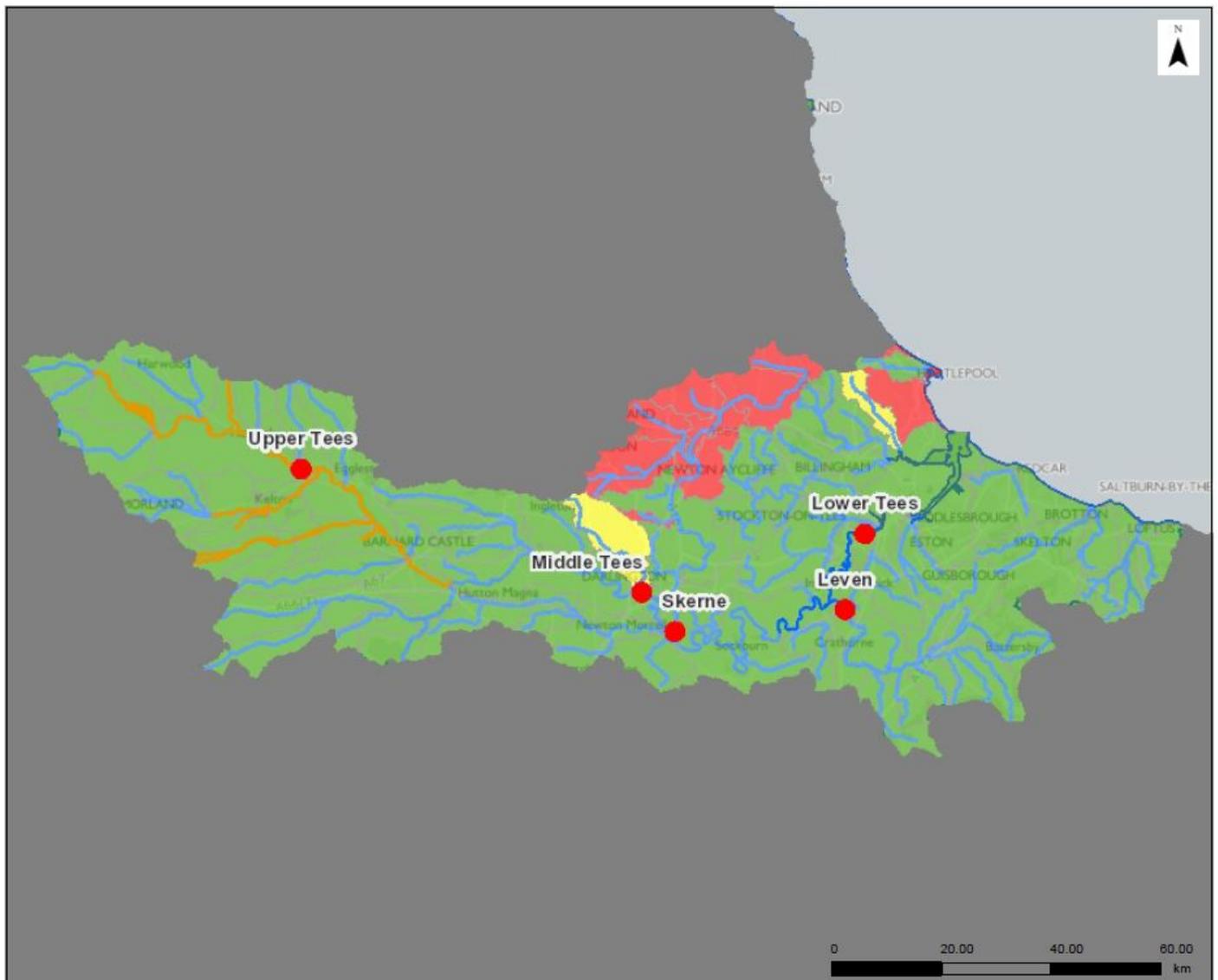
Legend:

- 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 Tees 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 

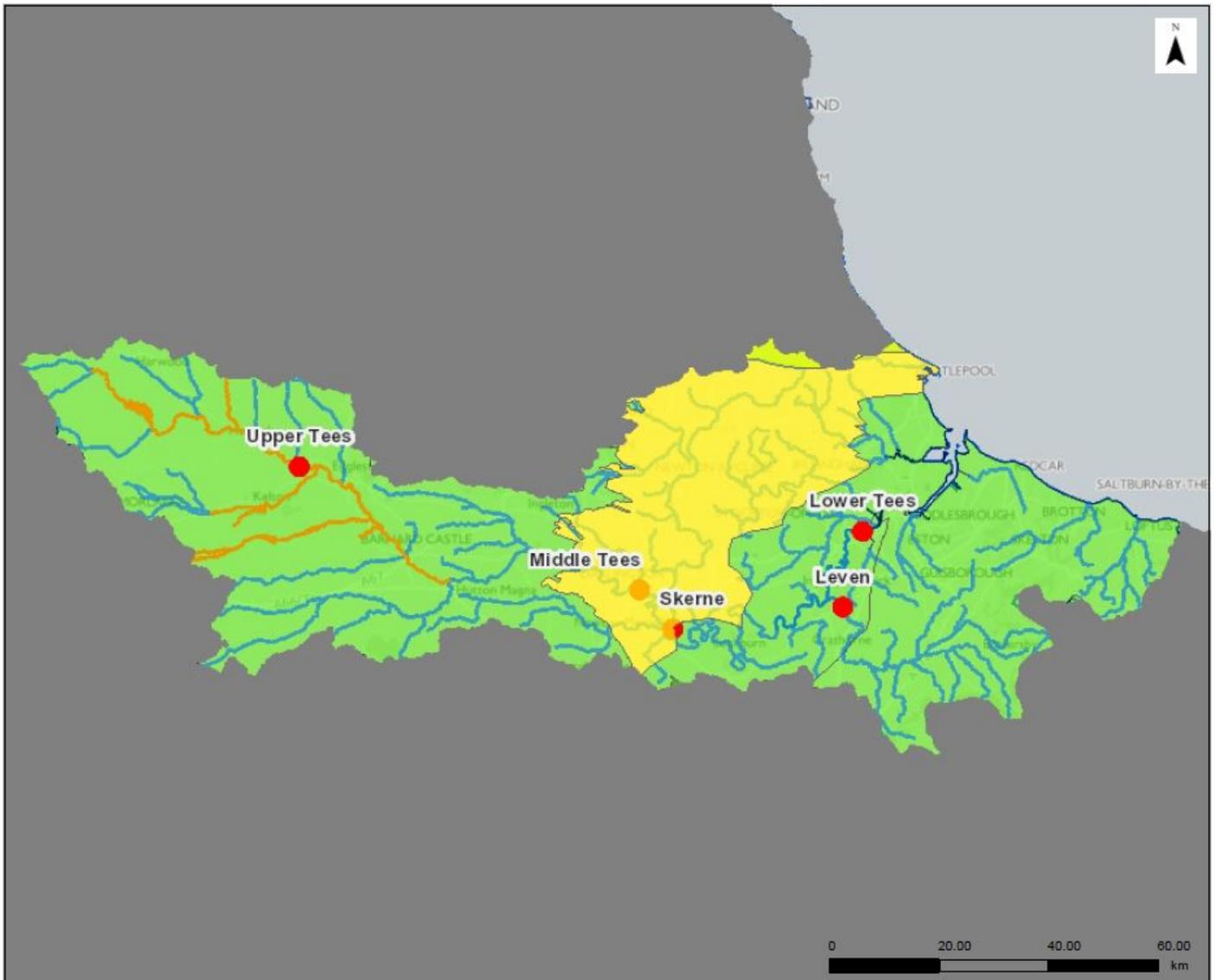
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on 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 in Tees ALS area.

Map 5 - Groundwater Resource Availability for Tees 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. 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**

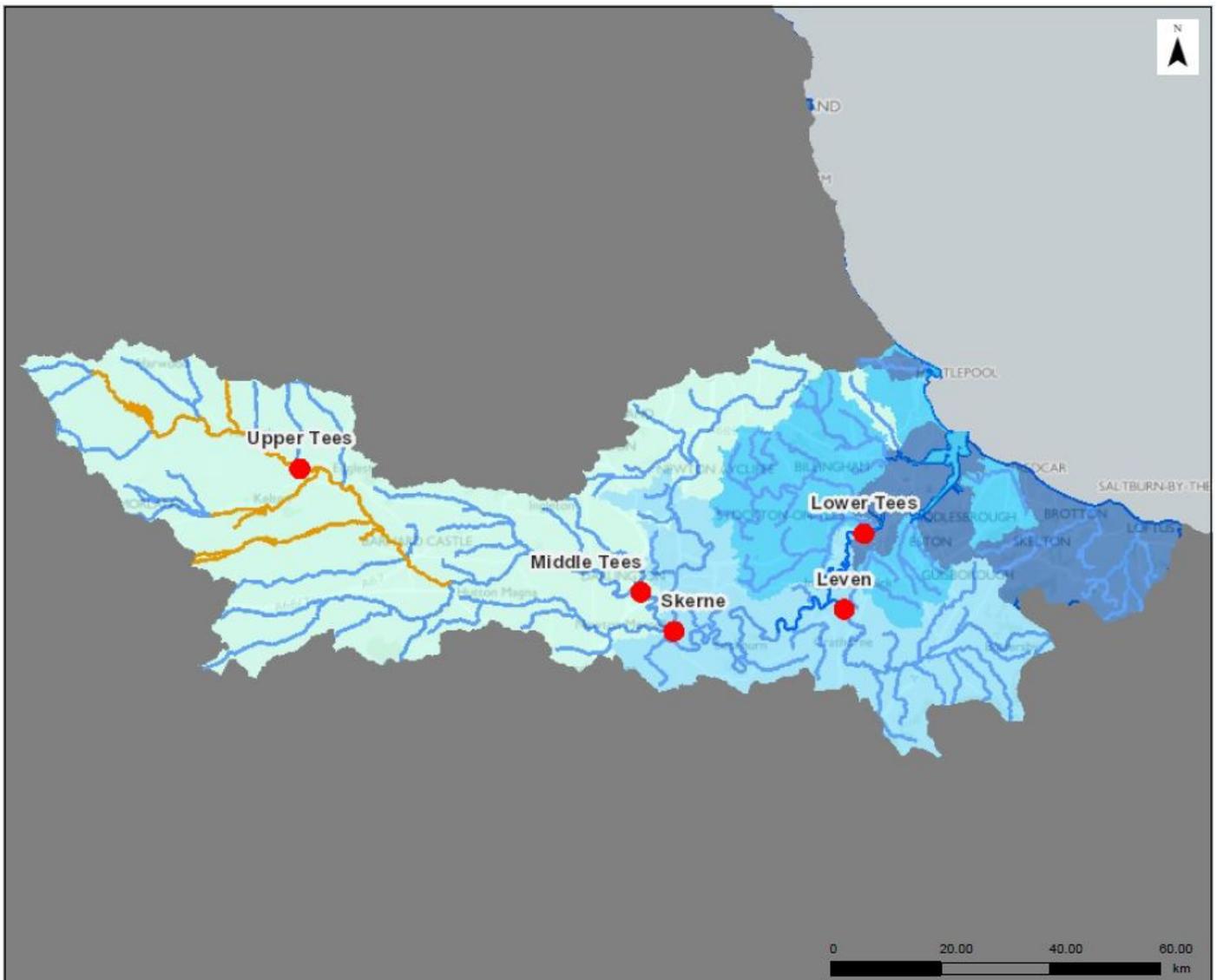
If you want to apply for a licence, it's worth considering the reliability of your abstraction.

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

(Please note, the Resource Reliability Assessment (Map 6, below) is based solely on modelled data. The impacts of Cow Green, Grassholme and Hury reservoirs are not fully represented by this modelling. See Comment 2 (page 19) for further information.)

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



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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- 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 Tees 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 Tees 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 will decide this on a case by case basis.

<b>AP</b>	<b>Name</b>	<b>Water Resource Availability</b>	<b>HOF Restriction (MI/d)</b>	<b>Number of days per annum abstraction may be available</b>	<b>Approximate volume available at restriction (MI/d)</b>	<b>Is there a gauging station at this AP?</b>
<b>1</b>	Skerne	Water Available for Licensing - see comment 1 (below)	72.3 (see comment 1, below)	146	84.7	Yes (South Park)
<b>2</b>	Leven	Water Available for Licensing	99.1	146	47.5	No
<b>3</b>	Upper Tees	Water Available for Licensing - see comment 2 (below)	see comment 2 (below)	365	407.3	Yes (Middleton-in-Teesdale)
<b>4</b>	Middle Tees	Water Available for Licensing - see comment 2 (below)	see comment 2 (below)	365	407.3	Yes (Broken Scar)
<b>5</b>	Lower Tees	Water Available for Licensing - see comment 2 (below)	see comment 2 (below)	365	219.2	No

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

### Comment 1 - Water Availability Assessment at AP 1 (Skerne)

Many of the waterbodies within the Upper Skerne catchment are shown in Maps 1-4 as having no or restricted water available as the ecology within the waterbodies may already have been impacted as a result of abstraction impacts reducing the base flow. Investigations are currently on-going to determine the degree of impact to surface water flows from ground and surface water abstractions. It is unlikely that we will allow any new abstractions within this area until these impact assessments are completed unless there is sufficient evidence to demonstrate negligible abstraction risks. Proposals for any new abstractions should be discussed with local area staff prior to submission of a formal application.

The Lower and Middle Skerne is very discharge rich, with multiple discharges currently supporting flows. Some of this 'grey water' has already been licensed, preventing dilution of poor water quality at low flows. We will restrict licensing of grey water in the Skerne in future to prevent further deterioration in the water quality of the River Skerne and its tributaries.

### Comment 2 - Water Availability Assessment at APs 3, 4 and 5 (Upper, Middle and Lower Tees)

Cow Green reservoir is a regulating reservoir as it releases water when required to support low river flows at Darlington. This support ensures that NWLs Public Water Supply (PWS) abstractions can operate with no restrictions. Cow Green reservoir (River Tees), Grassholme reservoir (River Lune) and Hury reservoir (River Balder) also release compensation flows into the River Tees. Additionally flows can be supported by releases from the Kielder Transfer tunnel, which discharges at Eggleston, if required.

The Maps 1-4 indicate that there is limited water available within the Middle and Lower Tees and no water available within the vicinity of the Lune and Balder reservoirs, located in the Upper Tees, catchment at Q30-70. This reflects the impact of the reservoirs on medium to high flows. Compensation flow from the reservoirs is constant, which prevents extremely low flows and the reservoirs also act as a buffer to reduce high flows. The overall impact of any reservoir is therefore a reduction in seasonal flow variability. It is this reduction in naturally high flows that results in the restriction in water availability shown in Section 2.1. We are currently working with the water company to assess whether the introduction of flow variability from Grassholme and Hury reservoirs would mitigate their impact and contribute to more natural flow regimes.

Due to the large volumes of water and sources of support available throughout the Tees catchment, abstraction for new and existing licences is unrestricted, unless restrictions are locally required on unregulated tributaries.

## 3.2. Groundwater

For principal aquifers we may divide the area into groundwater management units (GWMU), which are sub-divisions of the groundwater bodies. In these cases we use the information and assessments on these units to determine water availability and licence restrictions.

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 four groundwater bodies within the Tees catchment; Skerne Magnesian Limestone (GB40301G704000), Tees Sherwood Sandstone (GB40301G702000), Tees Carboniferous Limestone and Millstone Grit (GB40302G700300) and Tees Mercia Mudstone and Redcar Mudstone (GB40302G701300).

The Skerne Magnesian Limestone forms the southerly half of the Magnesian Limestone GWMU. At present only the Skerne Magnesian Limestone is impacted by existing abstractions, restricting water availability.

### 3.2.1. Licence restrictions on groundwater abstractions in the Tees ALS area

The Skerne Magnesian Limestone groundwater body is positioned in a north-south band across the Tees ALS area. The water body has been assessed as having Restricted Water Available and the following restrictions apply:

<b>Skerne Magnesian Limestone (GB40301G704000)</b>	
<b>Water Quality Impact through Interaction with the Coal Measures</b>	Due to concern about the dissolution of minerals into groundwater from the mixing of water from the coal measures, applicants will need to demonstrate that new abstractors will not cross connect aquifers. This would increase the risk of deteriorating the water quality of the overlying Magnesian Limestone aquifer and reduce the effectiveness of mitigation measures already in place to protect water quality.
<b>Yield Limitation</b>	Applicants will need to demonstrate that yields are sustainable and are not restricted by local conditions.
<b>Saline Intrusion</b>	A 5km buffer zone is in place along the coast. Saline intrusion is known to have occurred around Hartlepool, deteriorating the quality of the aquifer and impacting a number of existing abstractions. New applications should locate outside of this zone or demonstrate that new abstractions will not result in saline intrusion.
<b>Connection with Surface Water</b>	New and existing licences should not cause a detrimental impact to the ecology of surface waters from a reduction in flow. Existing abstractions may be capped at 'Recent Actual' volumes if 'Fully Licensed' volumes are deemed too risky.
<b>Hell Kettles SSSI</b>	Applicants for new abstractions near to these groundwater fed ponds, to the south

	of Darlington, will need to demonstrate they will not cause a detrimental impact to the SSSI which is reliant on Magnesian Limestone calcium carbonate rich water.
<b>Minewater Sulphate Plume</b>	Applicants for new abstractions within the Ferryhill, Trimdon and Sedgfield areas will to demonstrate that they will not expand the existing minewater plume which has entered the Magnesian Limestone from the underlying coal measures.

Table 2 - Summary of Licensing Restrictions for the Skerne Magnesian Limestone

The Tees Sherwood Sandstone is divided in eastern and western sections by the Magnesian Limestone GWMU. The waterbody has been assessed as having Water Available for Licensing, although the following restrictions will still apply:

<b>Tees Sherwood Sandstone (GB40301G702000)</b>	
<b>Saline Intrusion</b>	A 5km buffer zone is in place along the coast. New applications should locate outside of this zone or demonstrate that new abstractions will not result in saline intrusion.

Table 3 - Summary of Licensing Restrictions for the Tees Sherwood Sandstone

### 3.3. Level dependent environments

The Tees ALS contains level dependent environments (LDE). We have divided the area into units, known as level dependent management units. We have completed an assessment on each of these units and the following restrictions apply.

#### 3.3.1 Licence restrictions on abstractions in the relation to LDEs in the Tees ALS area

<b>Magnesian Limestone</b>	
<b>Hells Kettles Ponds SSSI</b>	The ponds, located to the south of Darlington, are dependent upon connectivity with groundwater from the Magnesian Limestone for the purpose of maintaining the water chemistry (hardness - calcium/magnesium content) which the designated site, and its protected species, are reliant upon. Abstraction in the surrounding area will be controlled to protect the water chemistry of the ponds.

Table 4 - Summary of Licence Restrictions for the Tees ALS Area LDE's

### 3.4. Coasts and estuaries

The Tees estuary is a Water Framework Directive (WFD) transitional waterbody downstream of the Tees CAMS area. The main river inflows in this area are the River Tees, Old River Tees, Stainsby Beck, Billingham Beck, Spencer Beck, North Burn and Greatham Beck.

Freshwater inflows from the main River Tees are controlled by the Tees barrage. The Tees barrage was constructed in 1995 and comprises a river barrage, barge lock and fish pass. The water above the barrage is held at a level of average high tide. The lock is a single rise lock with two pairs of lock gates. The fish pass allows salmon and sea trout to travel upstream. Investigations are also ongoing to optimise fish passage through the lock structure.

A significant area of the Tees Estuary is designated for conservation purposes (see section 3.7 for further information).

### 3.5. Heavily modified water bodies

The Tees ALS area also has artificial connectivity with Kielder reservoir, located on the River North Tyne, via the Kielder Transfer Tunnel which can discharge into the River Tees at Egglestone. Kielder Water is northern Europe’s largest man-made lake; it has a surface water of 1086 hectares and a capacity of 200,000 Ml. Water from Kielder Water is released into the River North Tyne and then, via the water abstraction at Riding Mill pumping station (River Tyne) and the connection with the Kielder Tunnel, transferred into the Rivers Wear and Tees. Releases are made so that river flows below major abstraction points on the Rivers Wear and Tees are kept above a prescribed minimum known as the Minimum Maintained Flow (MMF).

As a result of the river regulation benefit from this transfer system, a section of the main River Tees is considered a Supported Source under Schedule 1 of the Scheme of Abstraction Charges (2018 / 2019). Higher charges will be applied to abstractions that are associated with this section of river unless a Hands Off Flow (HOF) restriction is in place.

Since 2001, under the provisions of Section 66 Water Resources Act 1991, the Canal & River Trust (CRT), previously known as British Waterways, have held management responsibility for a 17km stretch of the River Tees upstream from the Tees Barrage. Only CRT can apply to the Environment Agency for abstraction licences in this stretch of river. As a result, third party proposals to abstract water from this part of the River Tees need to be administered through CRT.

Due to the large volumes of water and sources of support available throughout the Tees catchment, abstraction for new and existing licences is unrestricted, unless restrictions are locally required on unregulated tributaries.

Across the Tees ALS area, 7 waterbodies are designated as Heavily Modified as the result of an impact on flows associated with reservoir impoundment, river regulation and / or strategic transfers.

WBID:	Waterbody Name:	
<b>GB103025076080</b>	The Tees from Trout Beck to Maize Beck	Waterbody includes Cow Green reservoir which is used for river regulation. As a result of the reservoir the downstream flow regime of the river is impacted. The reservoir also has a constant compensation release of 38.6 Ml per day and significant volumes of spill.
<b>GB103025072511</b>	Tees from Maize Beck to Percy Beck	Waterbody is downstream of Cow Green reservoir. As a result of the reservoir the downstream flow regime of the river is impacted.

<b>GB103025072230</b>	Soulgill Beck from Source to Selset Reservoir	The lower reach of the waterbody is impounded by Selset Reservoir which impacts the flow regime of the river.
<b>GB103025072330</b>	Lune from Selset Reservoir to River Tees	Waterbody includes Grassholme reservoir which is used for water supply. As a result of the reservoir the downstream flow regime of the river is impacted. Grassholme Reservoir has a constant compensation release of 28.5 MI per day.
<b>GB103025072240</b>	Balder Catchment (Trib of Tees)	Waterbody includes Balderhead, Blackton and Hury reservoirs which are used for water supply. As a result of the reservoirs the downstream flow regime of the river is impacted. The reservoir group has a constant compensation release of 15.2 MI per day.
<b>GB103025072512</b>	Tees from Percy Beck to River Greta	Waterbody is downstream of Cow Green Reservoir, Grassholme Reservoir and Hury Reservoir. As a result of the reservoirs the downstream flow regime of the river is impacted.
<b>GB103025076070</b>	Skerne from Source to Carrs	Waterbody includes Hurworth Burn reservoir which was used by Hartlepool Water Company for water supply until 2012. The reservoir is now under private ownership and has no compensation releases. As a result of the reservoir the flow regime of the river is impacted.

Table 5 - Summary of Heavily modified Waterbodies in the Tees ALS Area.

### 3.6. 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.

The Tees ALS area has 1 high status waterbody:

<b>WBID:</b>	<b>Waterbody Name</b>
<b>GB103025072440</b>	Maize Beck from Source to River Tees

Table 6 - Summary of the High (WFD) Ecological Status Waterbodies in the Tees ALS.

### 3.7. 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 Tees ALS area, there are over 50 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](http://www.magic.defra.gov.uk).

The following sites are notable as they comprise distinct areas of riverine environment. Applications for surfacewater 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	Hell Kettles	Skerne
SSSI	Brignall Banks	Tees Middle
	Sleightholme Beck Gorge-The Troughs	Tees Middle
SSSI	Teesmouth and Cleveland Coast	Tees Lower and Estuary

Table 7 - Summary of designated sites within the Tees 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 Tees ALS**

#### **AP 4: Middle Tees / AP 5: Lower Tees**

The water availability assessments for the main river Tees, downstream of the Balder and Lune System Reservoirs, is impacted by the operation of the reservoirs (see section 3.1). Action is being taken by Northumbrian Water Limited, through the Water Industry National Environment Programme, to investigate, and, if appropriate, implement, seasonal variation in the compensation releases to mitigate the impact of the reservoirs on the downstream flow regime.

#### **AP 1: Skerne**

Action is being taken by the Environment Agency's as part of our Water Framework Directive investigation programme and by Anglian Water Services (AWS) through the Water Industry National Environment Programme to determine and quantify the source of impact to surface water flows. Investigations are investigating effects on river flows from a number of public water supply abstractions (PWSs), Hurworth Burn Reservoir and a number of naturally present features e.g. sinkholes within the upper and middle reaches of the Skerne catchment.

### **4.2.2. Action being taken on unsustainable groundwater abstraction**

#### **Skerne Magnesian Limestone**

Impacts from groundwater abstractions on river flows and supporting ecology in the upper and middle Skerne catchment are currently being investigated in collaboration with local water companies and the Coal Authority. Any action to modify or reduce existing abstractions or restrict future will be determined as an output of this work.

## **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 to take 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 Tees catchment has previously been considered to be a geographically exempt area. This meant that licences have historically not been required for abstractions from underground strata and springs provided that the quantity abstracted did not exceed 1,000,000 gallons per year (4546 m<sup>3</sup>/year), with a daily rate not exceeding 50,000 gallons per day (227 m<sup>3</sup>/day) (Northumbrian Water Act (NWA, 1981). From the 1st January 2018, the controls governing abstraction from ground and surface waters in the Tees catchment have been the same as those in the rest of England and Wales, with only abstractions that do not exceed 20 m<sup>3</sup>/day 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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