



# **Grimsby, Ancholme & Louth Abstraction Licensing Strategy**

A strategy to manage water resources sustainably

March 2020

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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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# 1. About the licensing strategy

This strategy sets out our approach to managing new and existing [abstraction](#) and [impoundment](#) within the Grimsby, Ancholme & Louth [catchment](#) in the Humber river basin district. The Grimsby, Ancholme and Louth Abstraction Licensing Strategy (ALS) area covers an area of approximately 1,464 km<sup>2</sup> and is bounded by the Humber Estuary to the north, the North Sea to the east, the Witham and Steeping ALS area to the south, and the Lower Trent ALS area (in the East Midlands area) to the west.

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](#)).

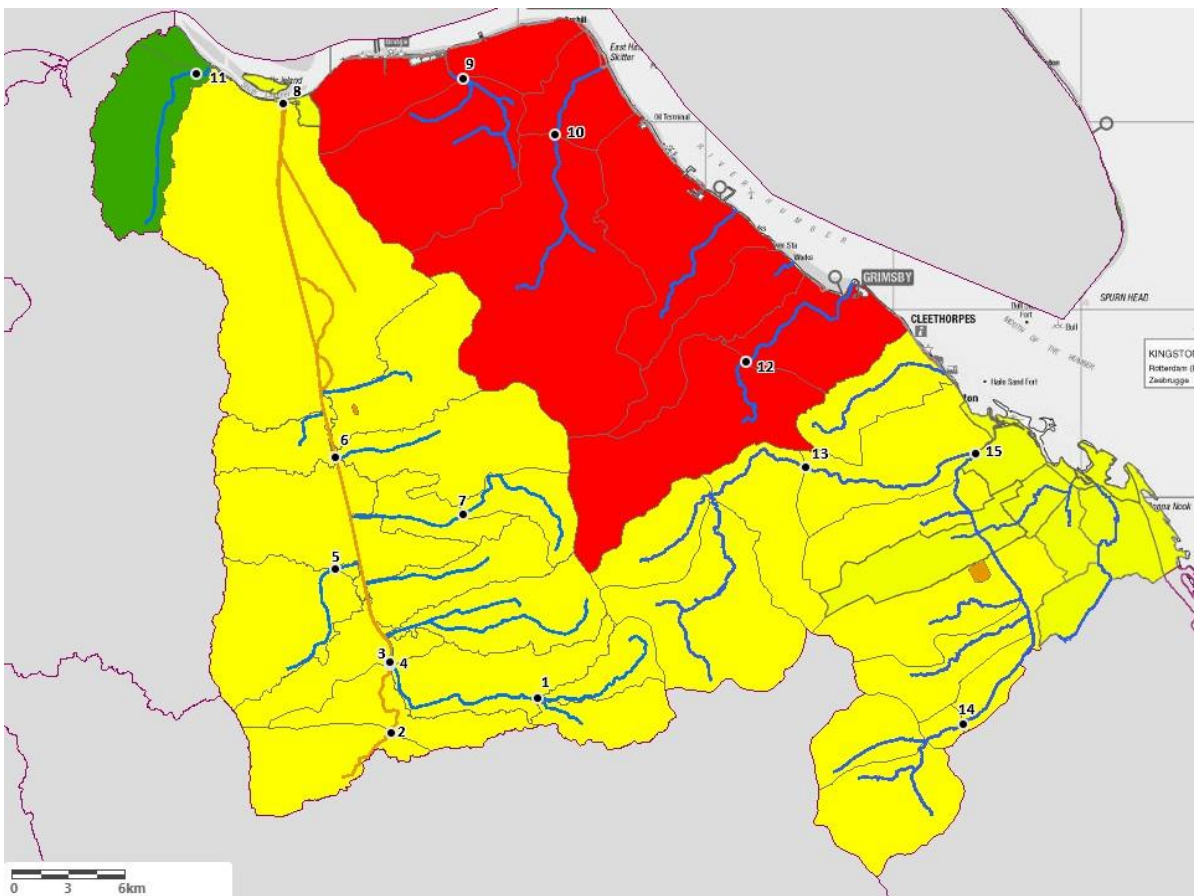
Please see [abstraction pages on gov.uk](#) for advice on who needs an abstraction or impoundment licence, and how to apply.

## 2. Water resource availability of the Grimsby, Ancholme & Louth ALS

### 2.1. Resource availability

The water resource availability for this ALS is 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). The water resource availability is presented and explained in Maps1-4 and section 2.1.1 below.

Map 1: Water resource availability colours at Q30 for Grimsby, Ancholme & Louth ALS.



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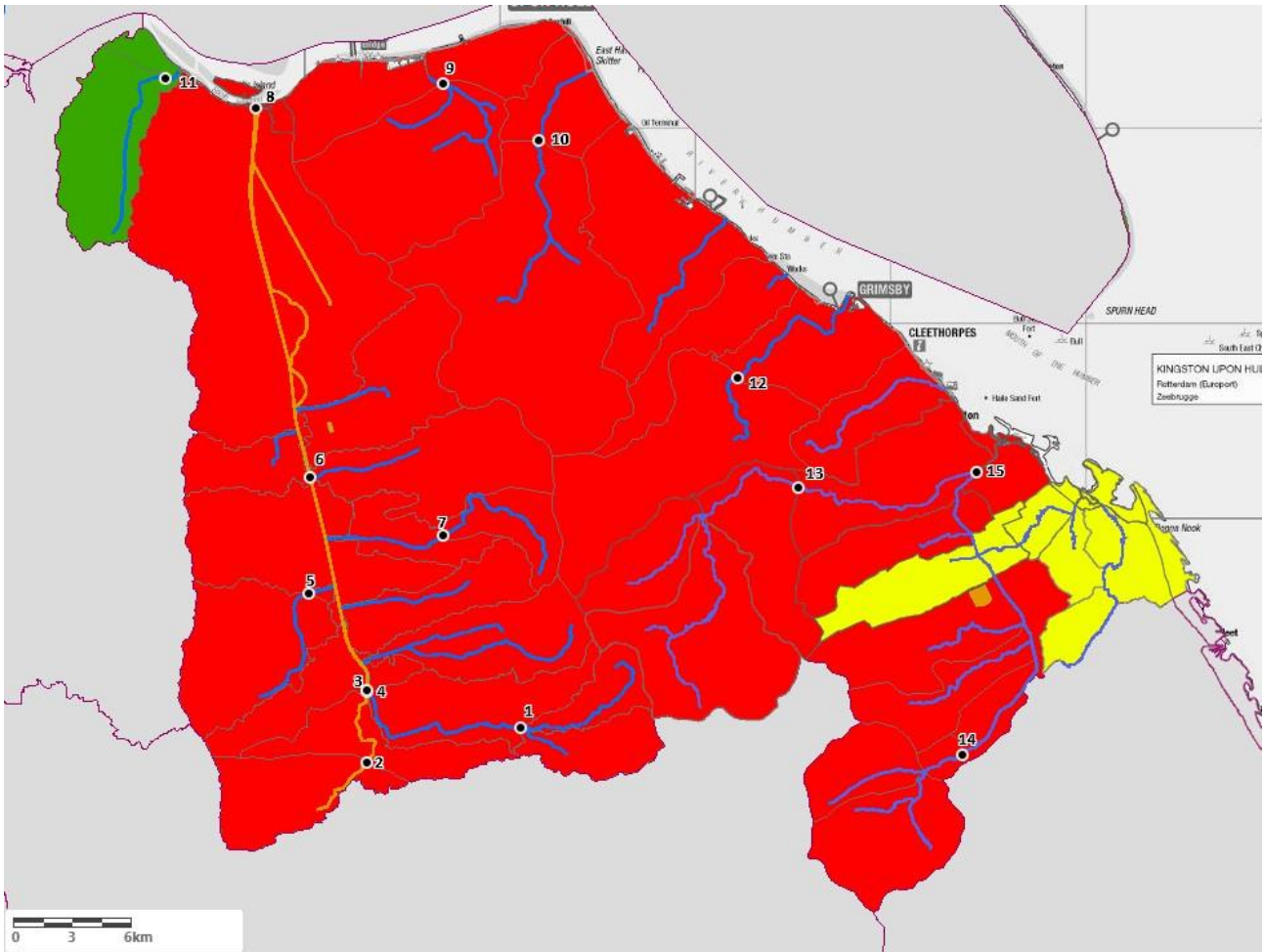
Legend:

- 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 Grimsby, Ancholme & Louth ALS.



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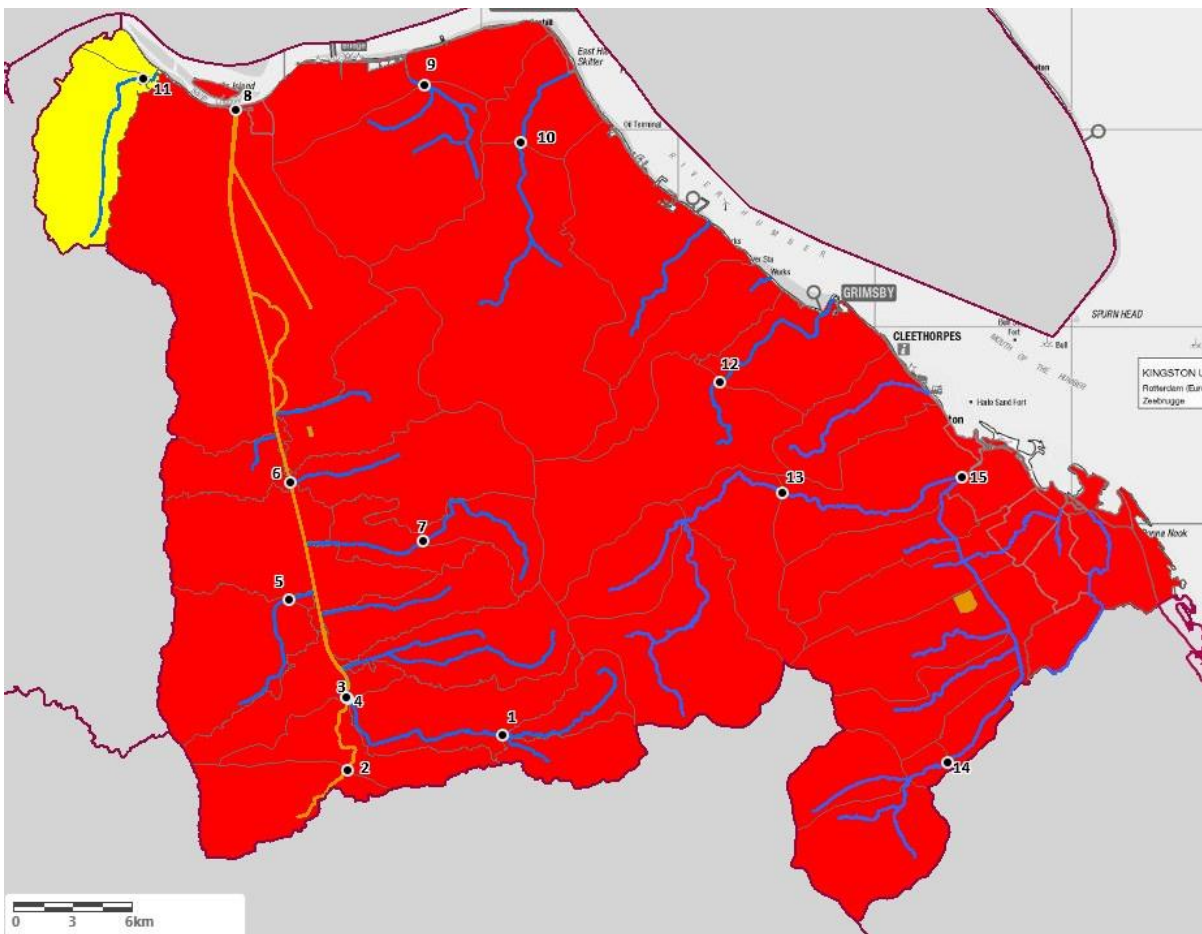
Legend:

- 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 Grimsby, Ancholme & Louth ALS.



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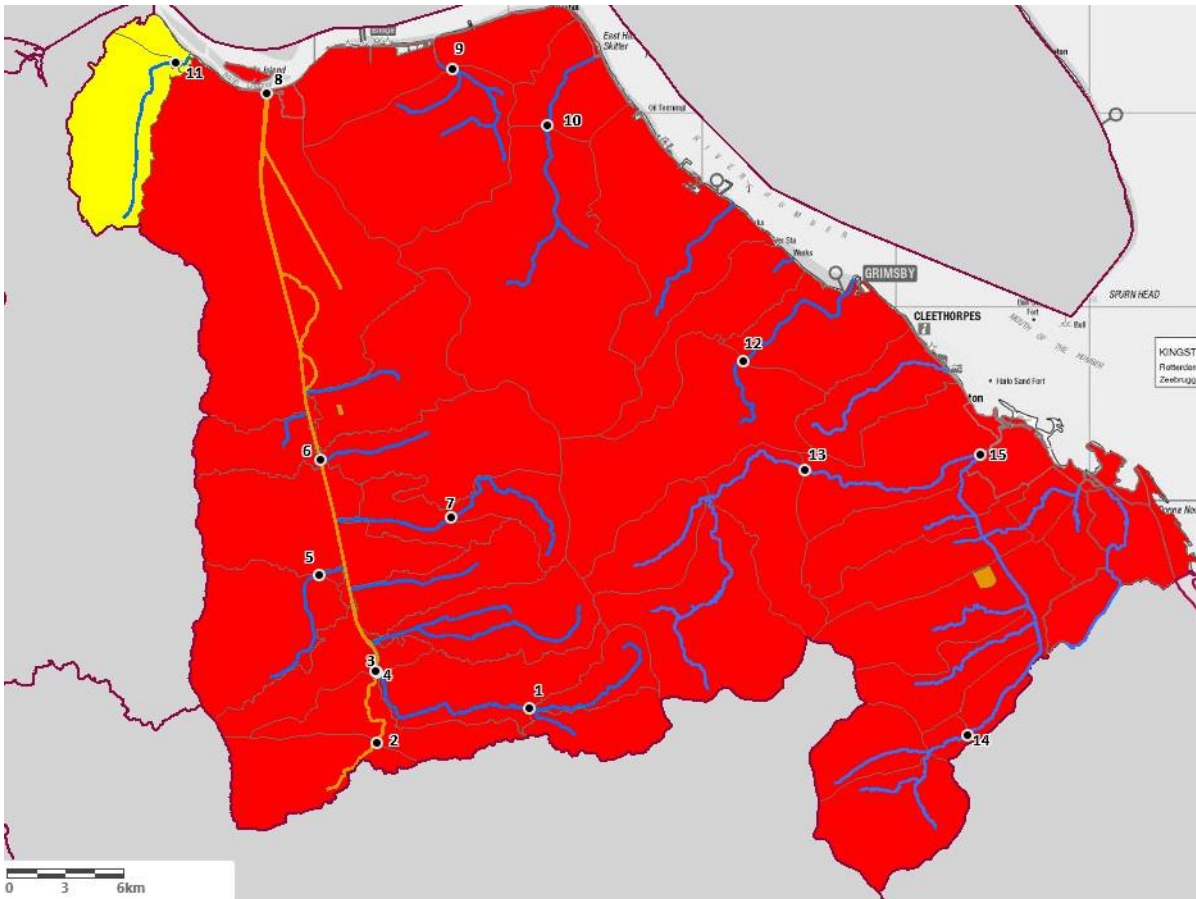
Legend:

- 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 Grimsby, Ancholme & Louth 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](#))

Grey 

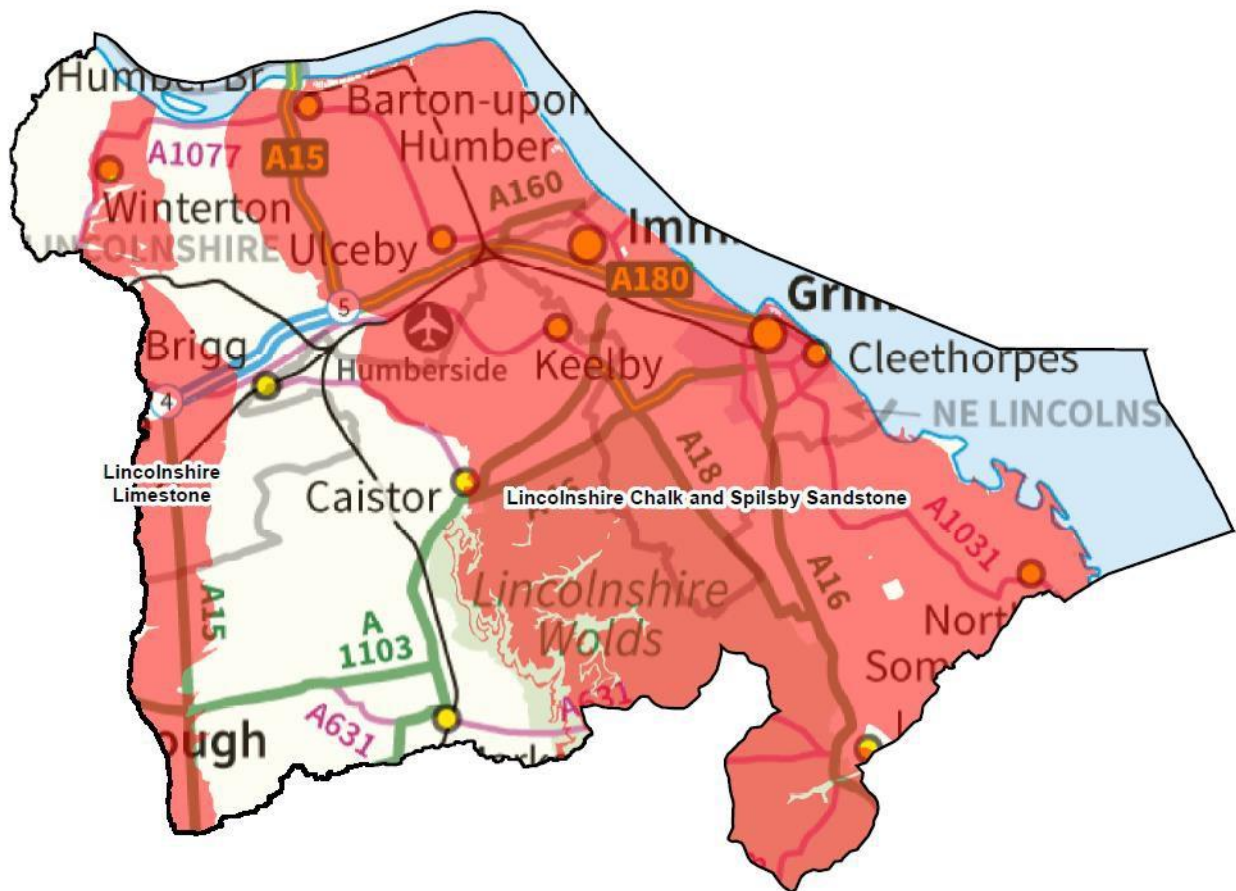
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on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

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

Section 2.2.1 explains the groundwater resource availability colours, and Map 5 shows these colours for groundwater in the Grimsby, Ancholme & Louth area.

Map 5: Groundwater resource availability colours for Grimsby, Ancholme & Louth 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. 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 consumptive licences.

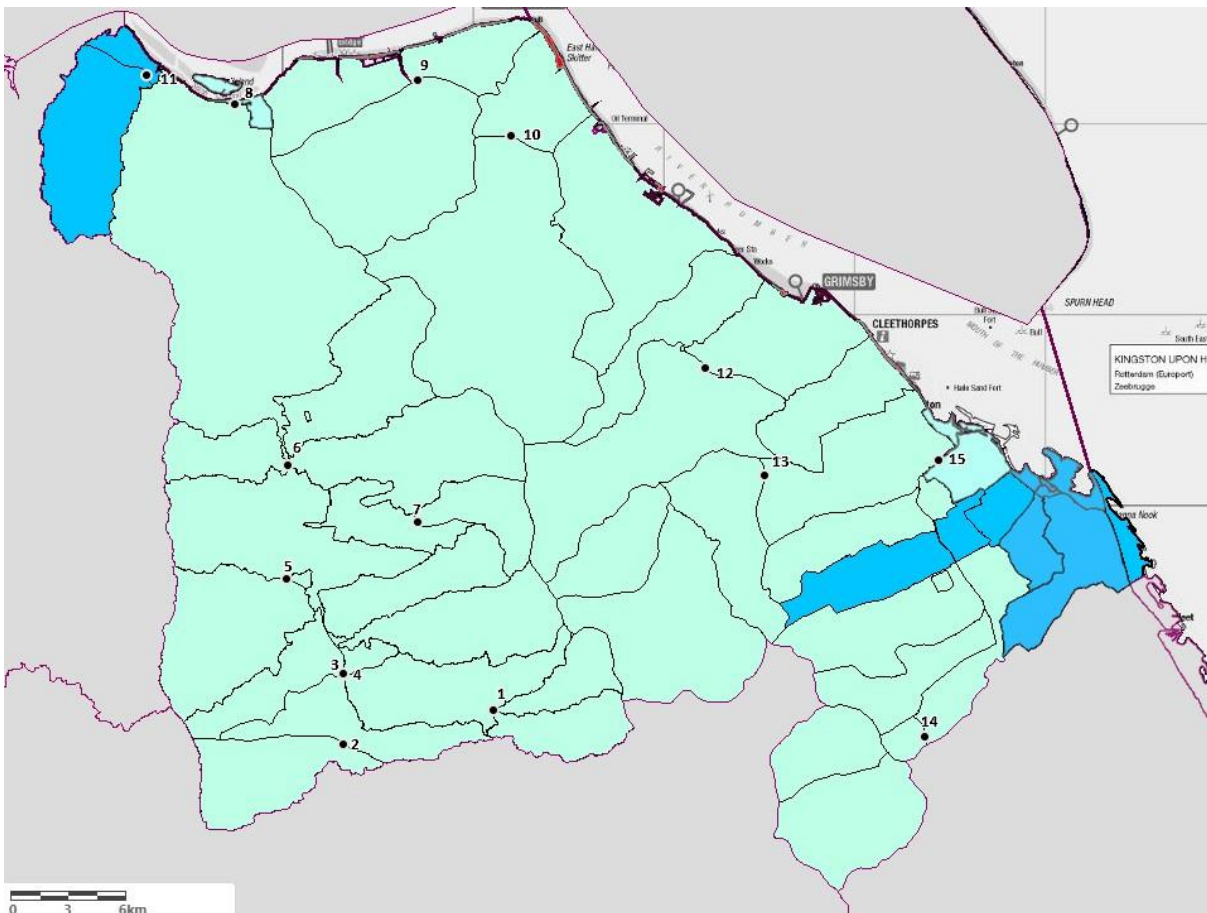
### **2.3. Resource reliability**

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 Grimsby, Ancholme & Louth area expressed as a percentage of time.

Map 6: Water resource reliability of the Grimsby, Ancholme & Louth 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) or '[hands off level](#)' (HoL) 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.

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 31 March 2030 and the subsequent one is 31 March 2042.

## 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 Grimsby, Ancholme & Louth 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 Grimsby, Ancholme & Louth 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 [Ml/d](#) that may be available. 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	Jameson Bridge	Restricted Water Available for Licensing	16.8	131	14	Yes	
2	Toft Newton	Restricted Water Available for Licensing	7.7	131	1.9	Yes	
3	Bishop Bridge (Ancholme)	Water Available for Licensing	155.2*	131	24.5	Yes	
4	Bishop Bridge (Rase)	Restricted Water Available for Licensing	35.9	131	24.5	Yes	
5	Black Dyke	Restricted Water Available for Licensing	15.4	131	2.2	Yes	
6	Cadney	Water Available for Licensing	213.1*	131	24.5	No	
7	Nettleton Beck	Restricted Water Available for Licensing	8	131	6	Yes	
8	South Ferriby	Water Available for Licensing	160.9*	131	24.5	No	HoL
9	Barrow Beck	Restricted Water Available for Licensing	14.8	69	0.7	No	
10	College Bridge	Restricted Water Available for Licensing	29.9	69	3.9	No	
11	Winterton Beck	Restricted Water Available for Licensing	3.8	284	0.1	No	HoL

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
12	Lacey Beck	Restricted Water Available for Licensing	17.3	94	7.1	Yes	
13	Brigsley	Restricted Water Available for Licensing	32.6	80	28	Yes	
14	Lud	Restricted Water Available for Licensing	49.3	80	25.1	Yes	
15	Tetney	Restricted Water Available for Licensing	177.9	80	40.7	No	HoL

Table 1: Summary of licensing approach for the assessment points of Grimsby, Ancholme & Louth ALS. The information in this table is correct at the time of publishing but is subject to change.

\* Abstractions from the River Ancholme are supported by the Environment Agency's Trent-Witham-Ancholme (TWA) transfer scheme. If you apply for a licence which is linked to the TWA transfer scheme you will benefit from the improved resource reliability provided by the support scheme. Abstractions on the Ancholme which benefit from the TWA transfer scheme will pay a Supported Source Factor as part of the Abstraction Charge.

## 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. The HoL is a groundwater level below which an abstractor is required to reduce or stop abstraction.

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

### Licence restrictions on groundwater abstractions in the Grimsby, Ancholme & Louth ALS area

#### Lincolnshire Limestone

The Lincolnshire Limestone can be up to 40m thick, and groundwater movement within the aquifer is generally west to east. In the west of the area the limestone outcrops at the ground surface allowing rainfall to recharge the aquifer. The limestone becomes confined as it is overlain by younger deposits to the east. Although abstraction takes place mainly from the confined region, the aquifer becomes too deep and the quality is considered to be too poor to exploit more than a few kilometres east of the outcrop area.

The resources in the Lincolnshire Limestone are fully committed to existing users and the environment. Consequently, no new consumptive licences will be considered. New non-consumptive licences will be considered on a case-by-case basis, and will be time-limited.

#### Lincolnshire Chalk

The Lincolnshire Chalk, which is a form of white limestone, is thicker in the north (well over 200m thick) compared to the south. Within the chalk, groundwater generally flows west to east following the shallow dip of the aquifer. The exception to this is in the extreme north of the chalk in the area of Barrow-upon-Humber and Barton-upon-Humber where groundwater moves in a more northerly direction away from the outcrop area to discharge as springs in the bed of the River Humber and in places along the South Humber bank. Glacial boulder clays overlie the Chalk over much of the area to the east of the Wolds. Abstraction takes place mainly from this confined region, although only the upper portion of the confined Chalk contributes to groundwater flow – the deeper fraction is less fractured and so groundwater cannot flow through.

The resources in Lincolnshire Chalk are fully committed to existing users and the environment. Consequently, no new consumptive licences will be granted. New non-consumptive licences will be considered on a case-by-case basis, and will be time-limited.

There may be opportunity to explore groundwater abstraction at extremely high groundwater levels on a case by case basis.

#### Spilsby Sandstone

The Spilsby Sandstone outcrops along the foot of the Wolds before dipping gently to the east under the Chalk and other formations. The outcrop narrows northwards before disappearing around Grasby. Recharge can take place from rainfall at the outcrop or leakage inputs from overlying drift cover or confining beds. Most of the recharge is lost through the many springs associated with the Spilsby Sandstone, which have contributed to mudflows and landslips along the Wolds scarp.

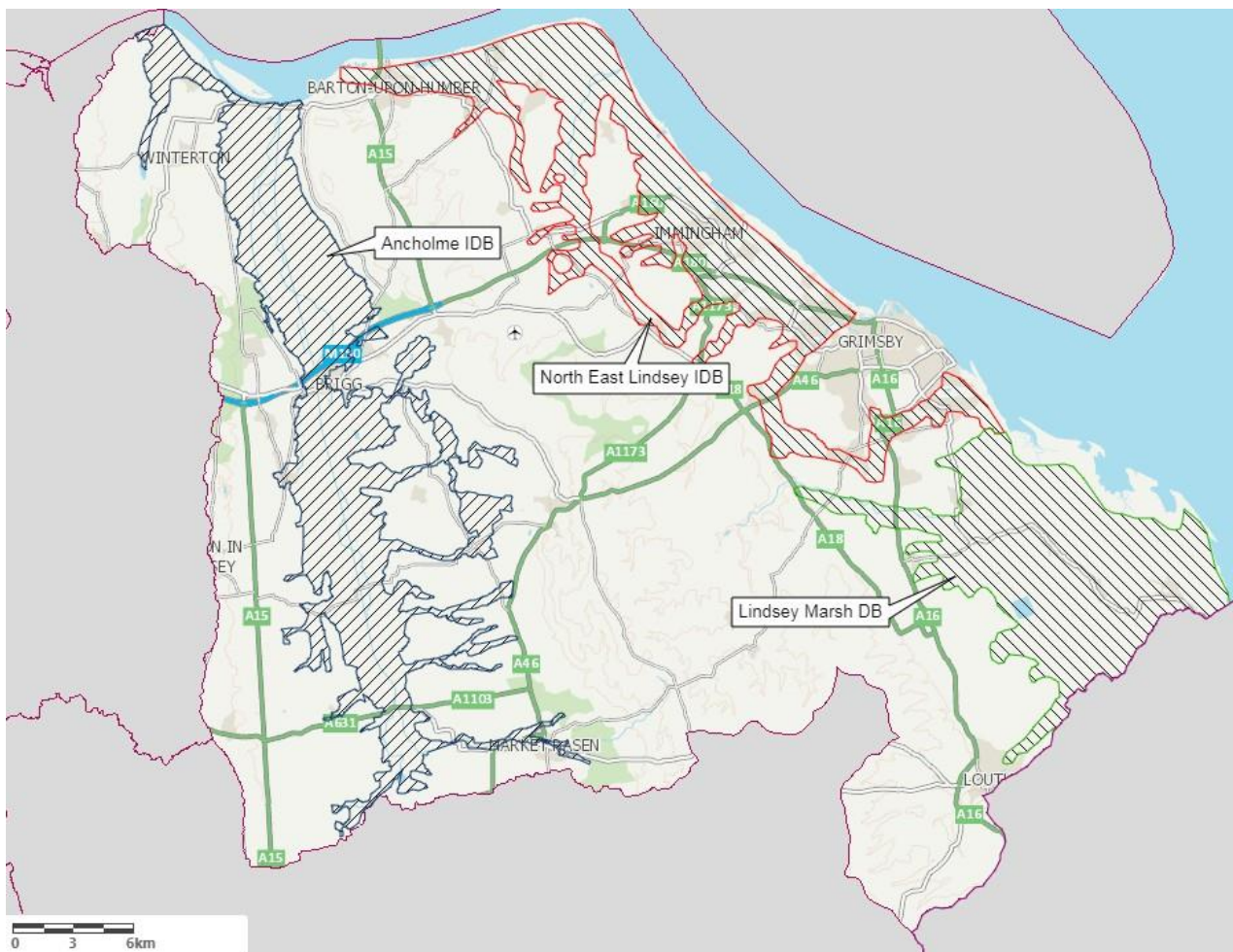
The resources in the Spilsby Sandstone are fully committed to existing users and the environment. Consequently, no new consumptive licences will be granted. New non-consumptive licences will be considered on a case-by-case basis, and will be time-limited.



### 3.3. Internal Drainage Boards (IDBs)

The Grimsby, Ancholme & Louth ALS area contains the Ancholme IDB, North East Lindsey IDB and Lindsey Marsh Drainage Board (DB).

Map 7: Internal Drainage Boards in the Grimsby, Ancholme & Louth ALS.



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We will consult the relevant IDB/DB for any licence that is considered in an IDB/DB area. In most cases licences for abstraction within an IDB/DB area will require a HoL condition relevant to the local level management system agreed following liaison with the relevant IDB/DB.

### 3.4. Coasts and estuaries

The main rivers draining from the Grimsby, Ancholme and Louth ALS area discharge into the Humber Estuary. The inner estuary supports extensive areas of reed bed with areas of mature and developing salt marsh backed by grazing marsh in the middle and outer estuary. On the north Lincolnshire coast, the salt marsh is backed by low sand dunes with marshy slacks and brackish pools. The estuary supports large numbers of waterfowl/birds (especially geese, ducks and waders) during the migration periods and in winter. It also supports important breeding populations of terns and raptors in summer.

### 3.5. Heavily modified water bodies

Some water bodies may be designated as ‘artificial’ or ‘heavily modified’. This is because they have been created or modified to suit a particular purpose such as water supply, flood protection or navigation.

Regulation in the Grimsby, Ancholme and Louth ALS area is significant. There are four heavily or artificial water bodies in the ALS area. These water bodies (see Table 2) are designated for water supply and regulation.

Water Body ID	Water Body name
GB30432209	Covenham Reservoir
GB30431809	Cadney Reservoir
GB104029061850	Ancholme from Source to Bishopbridge
GB104029067520	Ancholme from Bishopbridge to the Humber

Table 2: Heavily modified and artificial water bodies in the Grimsby, Ancholme & Louth ALS area.

#### Covenham Reservoir

Covenham Reservoir is used to support public water supply and industrial use on the Humber Bank.

When flows in the Louth Canal are low, abstractions to Covenham Reservoir can be supported by the Great Eau and Covenham Reservoir Transfer Scheme. The scheme is owned, managed and operated by Anglian Water Services. Water is abstracted from the lower reaches of the Great Eau in the Steeping, Great Eau and Long Eau ALS and transferred to the Louth Canal. This water can then be abstracted from the Louth Canal and stored in Covenham Reservoir for public water supply. The Great Eau and Covenham Reservoir Scheme is managed between Anglian Water Services and the Environment Agency.

#### Cadney Reservoir

This public water supply reservoir is filled by abstraction from the River Ancholme via Elsham Water Treatment Works under a licence held by Anglian Water Services. During periods of insufficient natural flow, flows in the Ancholme are supported by the Environment Agency-operated Trent-Witham-Ancholme (TWA) surface water transfer scheme.

#### The Trent-Witham-Ancholme (TWA) Surface Water Transfer Scheme

The Ancholme water bodies are supported by water from the Trent Witham Ancholme Surface Water Transfer Scheme. This scheme comprises two river transfers, from the River Trent into the River Witham, and from the River Witham into the River Ancholme. The TWA transfer scheme is owned, managed and operated by the Environment Agency. The TWA transfer scheme has a major impact on resource availability in the ALS area, helping meet the needs of a number of large abstractions.

### 3.6. 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 Grimsby, Ancholme & Louth ALS area, the key protected area that needs to be considered is the Humber Estuary. This site is designated as Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) and parts are designated as a Special Protection Area (SPA). The Humber Estuary is also classified as a wetland of international importance under the Ramsar Convention.

Any new abstraction licenses with the potential to affect the Humber Estuary SPA/SAC will need assessing under the Habitats Directive.

## 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, as shown on previously on Maps 1 to 4.

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

#### 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

Grey



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 Grimsby, Ancholme & Louth area

There are a series of actions that we are taking to address unsustainable abstraction, as part of our Water Abstraction Plan. These include:

- Taking action to reduce or revoke any unused or partially used licences across the area to secure the proper use of water resources.
- Taking actions under the water industry national environment programme to make sure that water companies take a leading role in addressing unsustainable abstraction.
- Reviewing time limited licences, adjusting them as necessary to make sure they do not allow environmental damage now or in the future.

### Northern Chalk

We have been working with Anglian Water to reduce the impact of their abstraction on the Northern Chalk. After undergoing an options appraisal the preferred solution for these licences was to reduce licence quantities and implement river support on the Laceby and Skitter beck. The licence changes will be implemented by March 2025.

## 4.3. Regulating previously 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 previously 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).

Where we have details of these abstractions, we've included 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 Food 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 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.

## Would you like to find out more about us or your environment?

### Then call us on

**03708 506 506** (Monday to Friday, 8am to 6pm)

### email

**enquiries@environment-agency.gov.uk**

### or visit our website

**www.gov.uk/environment-agency**

### incident hotline

**0800 807060** (24 hours)

### floodline

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