



# **Isle of Wight Abstraction Licensing Strategy**

A strategy to manage water resources sustainably

Version 3

March 2019

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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# 1. About the licensing strategy

This strategy sets out our approach to managing new and existing [abstraction](#) and [impoundment](#) within the Isle of Wight [catchment](#) in the South East river basin district. 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](#)).

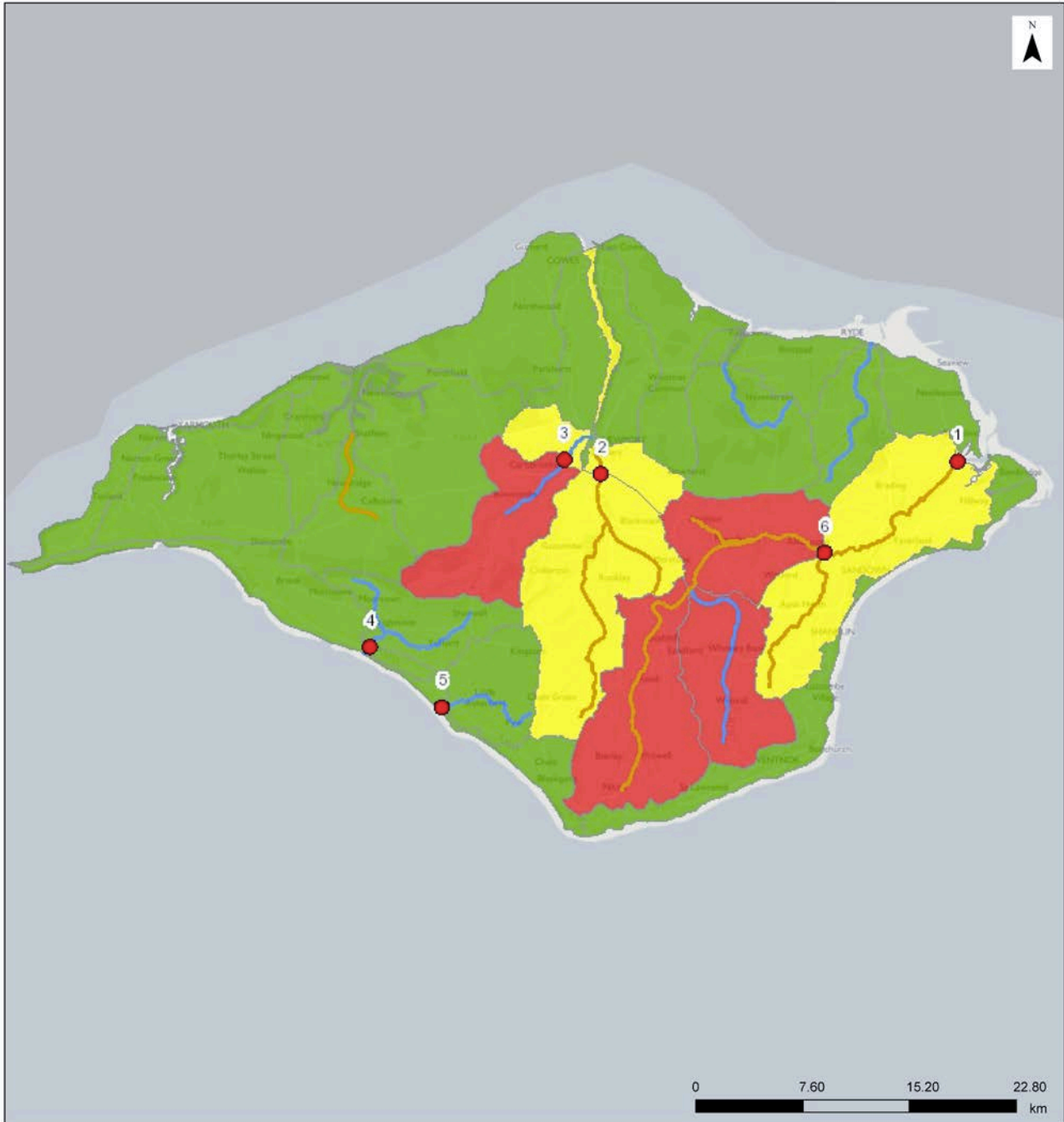
Please see [abstraction pages on gov.uk](#) for advice on who needs an abstraction or impoundment licence, and how to apply.

## 2. Water resource availability of the Isle of Wight 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 to 4 and section 2.1.1 below.

Map 1 Water resource availability colours at Q30 for Isle of Wight ALS.

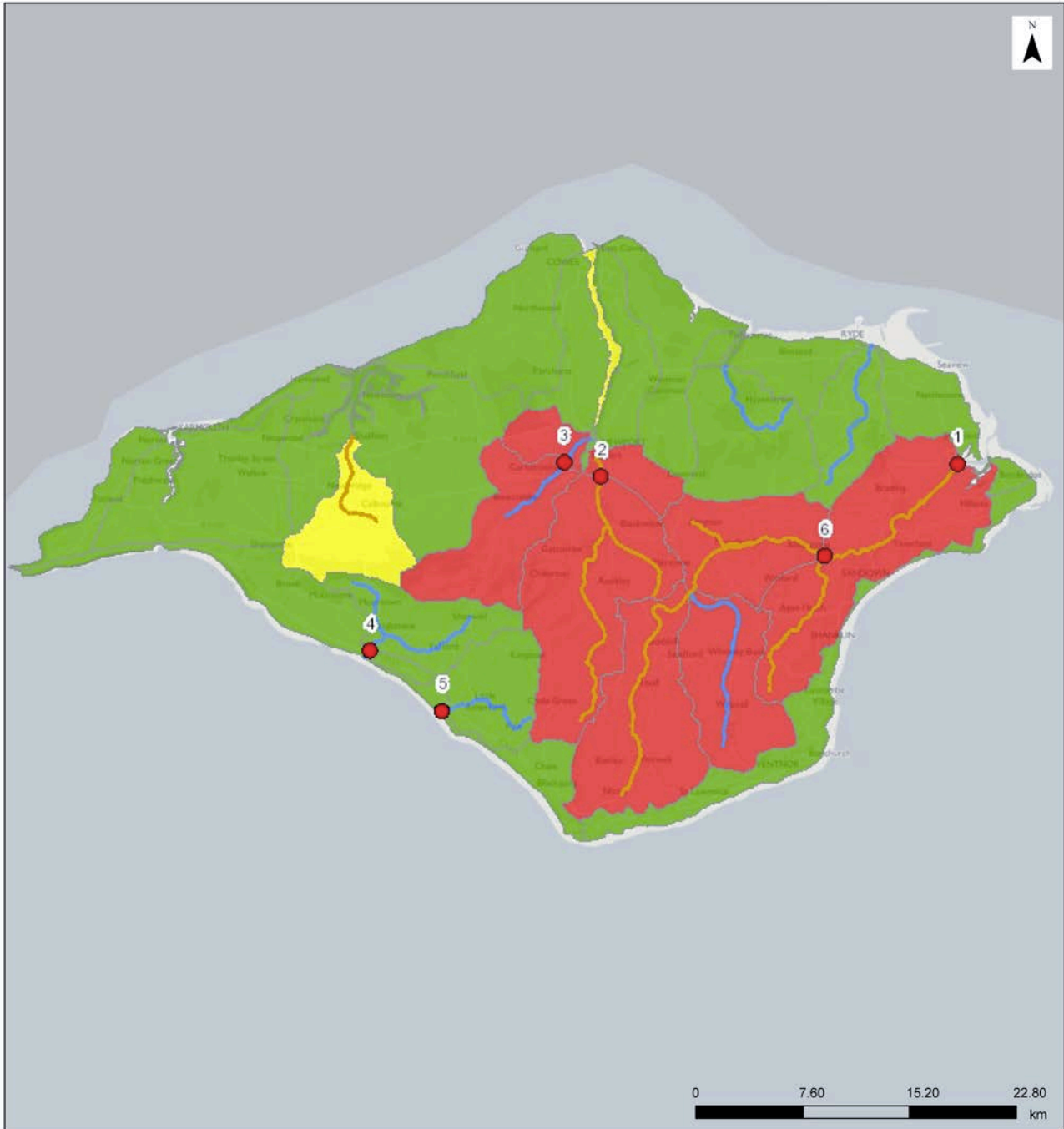


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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers
- Discharge Rich Waterbodies
- Water available
- Restricted water available
- Water not available

Map 2 Water resource availability colours at Q50 for Isle of Wight ALS.

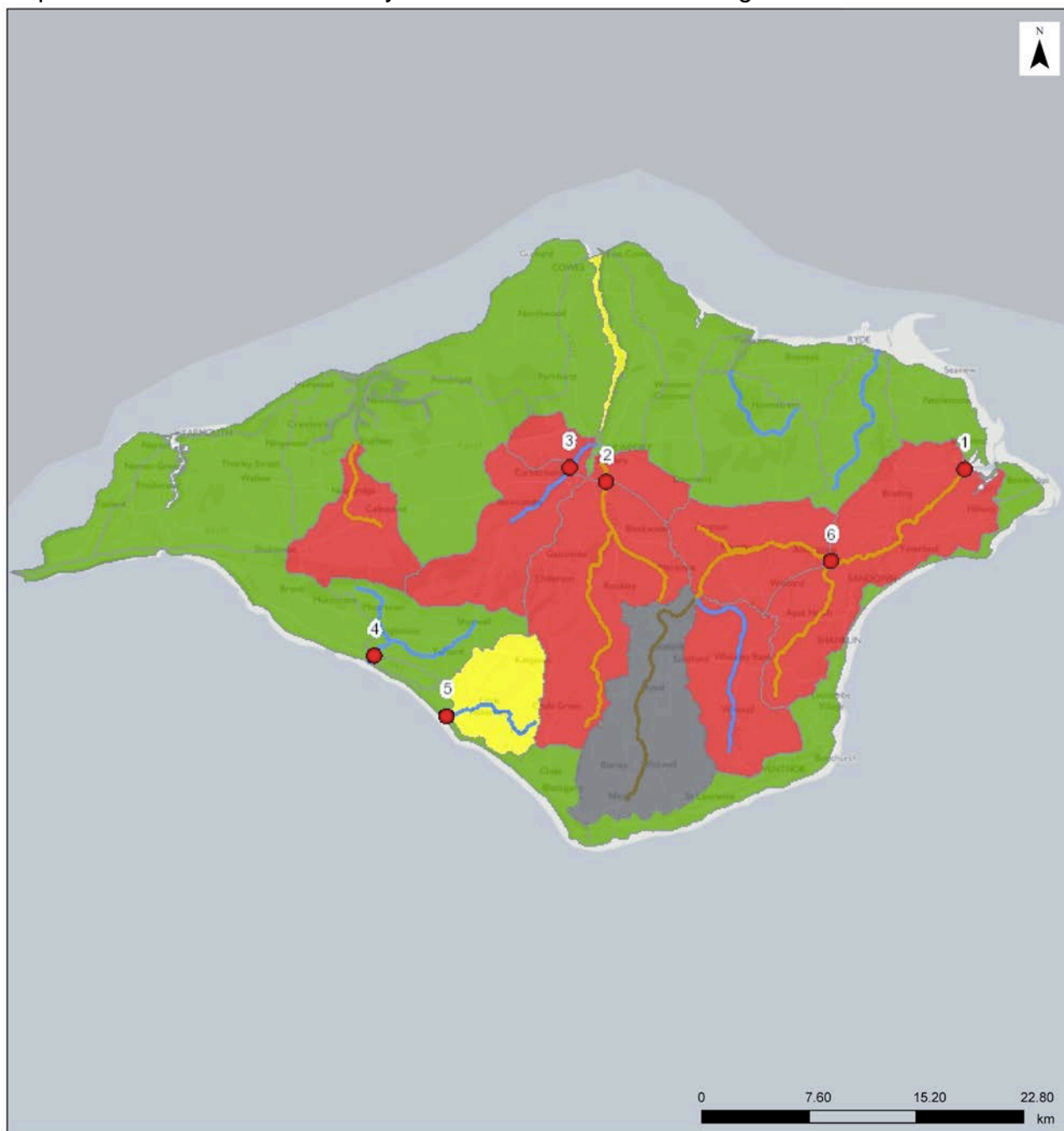


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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers
- Discharge Rich Waterbodies
- Water available
- Restricted water available
- Water not available

Map 3 Water resource availability colours at Q70 for Isle of Wight ALS.



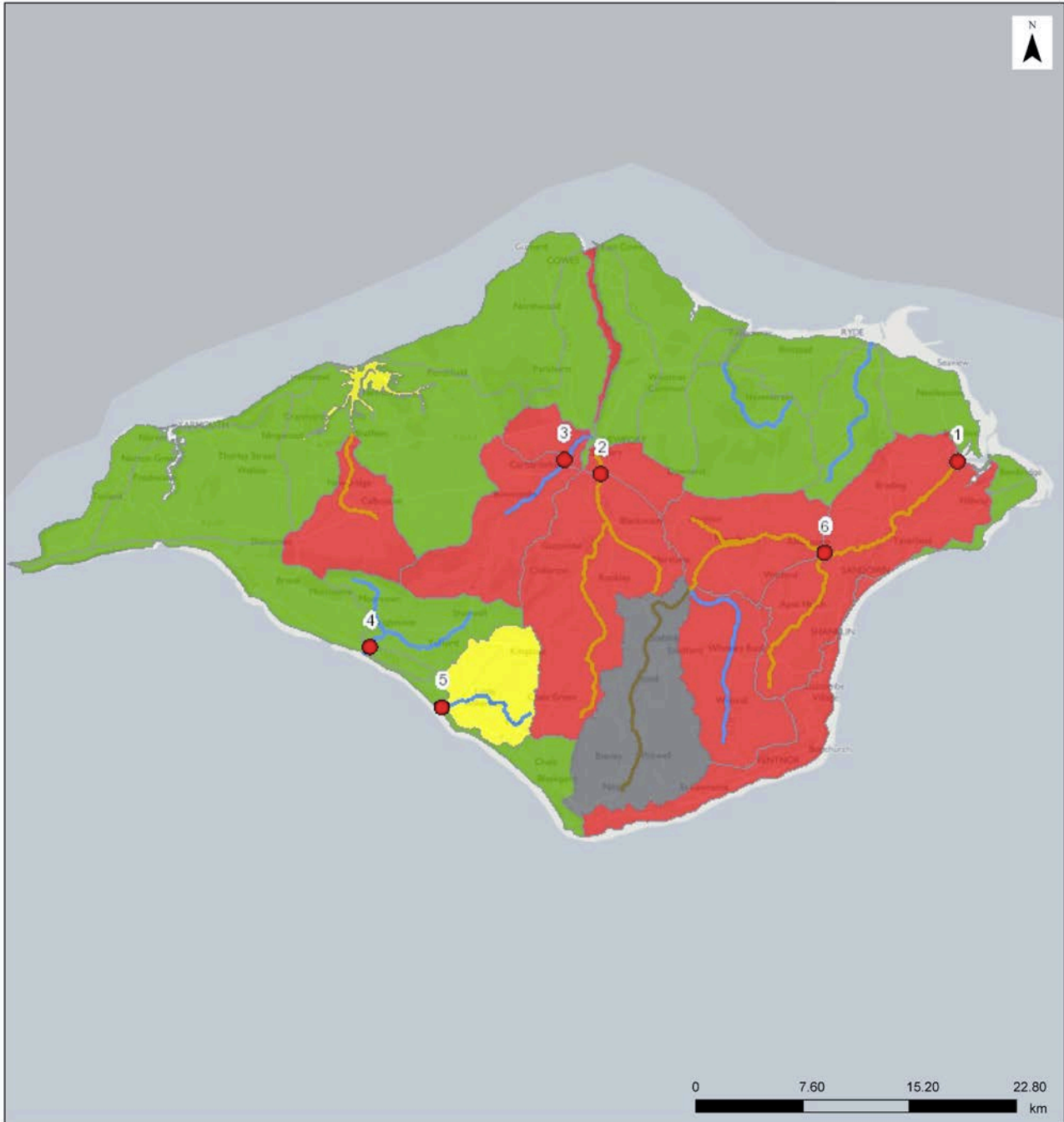
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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers
- Discharge Rich Waterbodies
- Water available
- Restricted water available
- Water not available



Map 4 Water resource availability colours at Q95 for Isle of Wight ALS



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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers
- Discharge Rich Waterbodies
- 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 

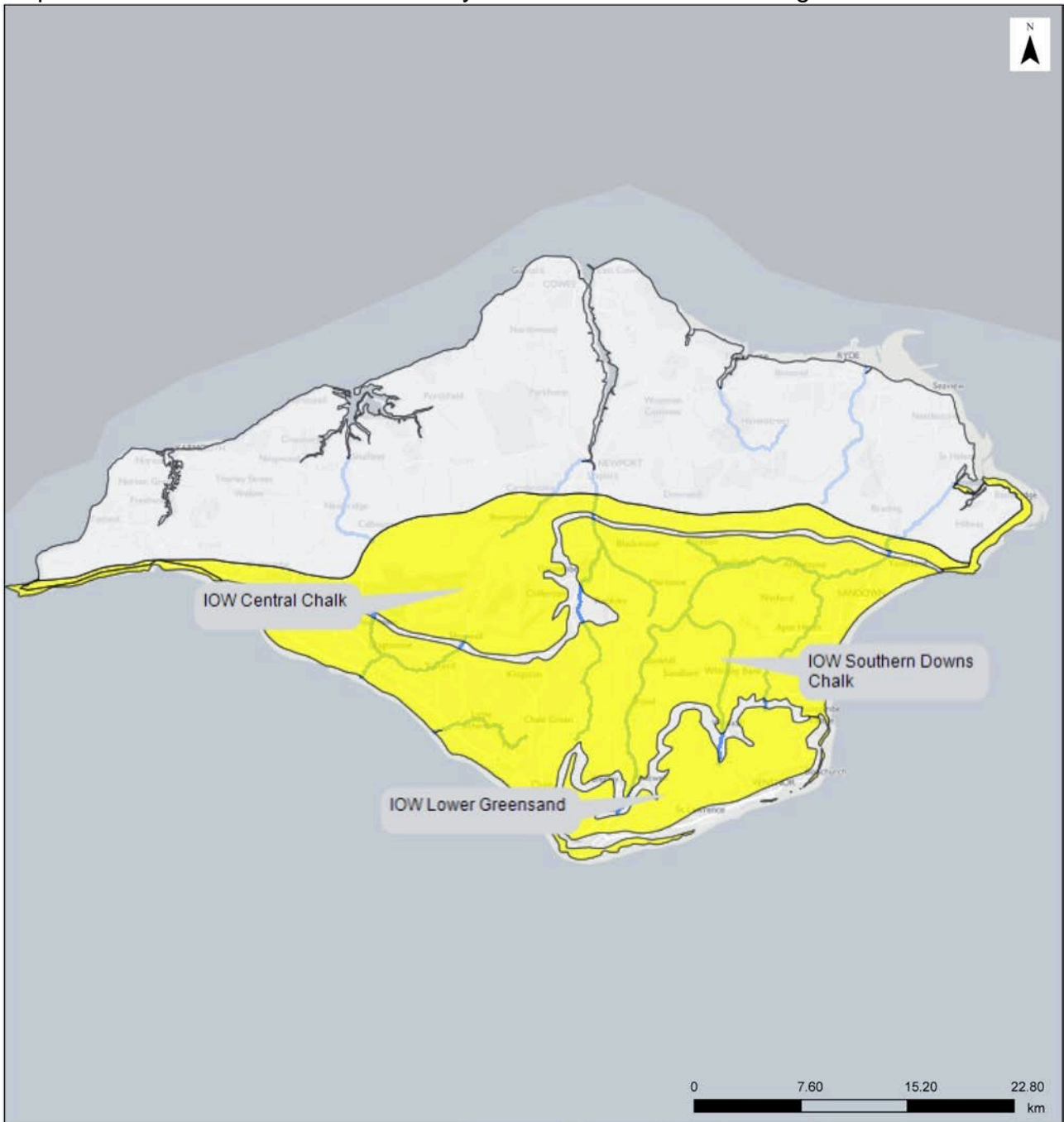
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on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

Map 5 Groundwater resource availability colours at for the Isle of Wight ALS



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Legend:

— Rivers

Groundwater resource availability:

■ Restricted water available

## 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 licences.

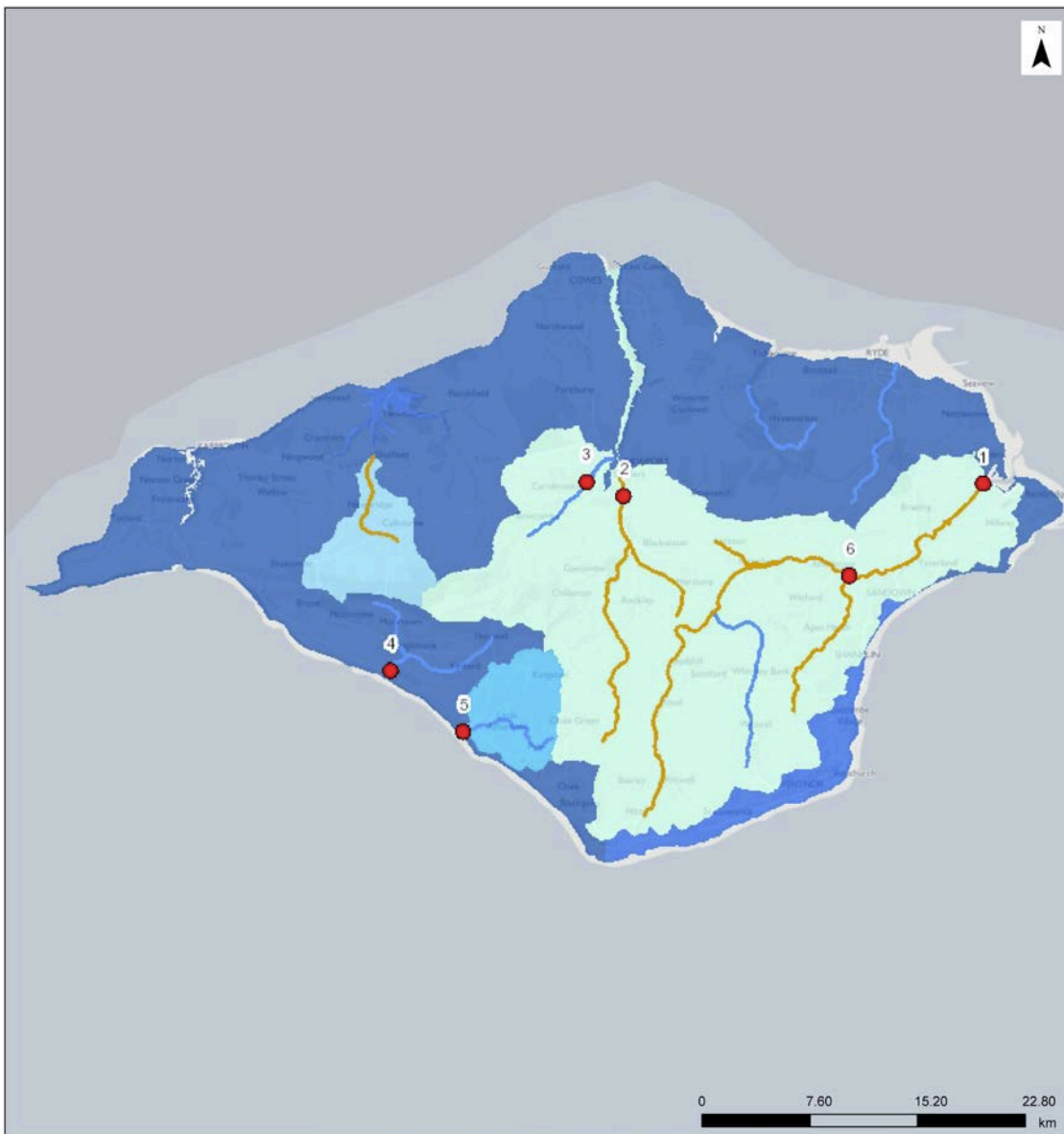
## 2.3. Resource reliability

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 Isle of Wight area expressed as a percentage of time.

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



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Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- 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.

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 31/03/2026 and the subsequent one is 31/03/2032.

## 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 Isle of Wight 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 Isle of Wight 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 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	Bembridge - Eastern Yar	Red - Water not available for licensing	44	73	5	No	HMWB. Habitats Directive requirements	
2	Shide - Medina	Red - Water not available for licensing	28	80	6	Yes	HMWB. Habitats Directive requirements	
3	Carisbrooke - Lukely Brook (Medina)	Red - Water not available for licensing	41	18	4	Yes	Habitats Directive requirements	
4	Grange Chine - Brighstone Stream	See text below						Habitats Directive high flow requirements
5	Shepherds Chine - Atherfield Brook	See text below						Habitats Directive high flow requirements
6	Burnt House GS - Eastern Yar	Red - Water not available for licensing	36	69	1	Yes	HMWB. Habitats Directive requirements	

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

Table 1 shows that the catchments on the Isle of Wight are already heavily committed to abstraction and so there is very little scope for additional abstraction. Because of the natural low flows and restrictions on water available we will maintain our policy of encouraging potential abstractors to apply to take water during high flow periods to provide reservoir storage for subsequent re-use during drier months when other surface water resources are unavailable.

A distinctive feature of the south western coastline is the presence of a number of deeply incised coastal valleys, or Chines. These very unusual geomorphic features are included within the South Wight Maritime SAC as part of the Vegetated Sea Cliffs feature (and Geological SSSI). We undertook an investigation in-conjunction with Southampton University which showed that the IOW Chines are wholly dependent on incision cause by erosion from stream flow. Each Chine is unique but in general high flows produce the most erosion and therefore it is these flows that need protecting as well as protecting low flows for in-stream ecological needs. This approach differs from most other abstraction impact assessments where most focus is on reducing impacts on low flows.

Therefore, water is only available for licensing in the Chines within a range of flows. Any new licence would need a flow condition that stops abstraction once a high flow is reached, and another when a low flow is breach. This makes the Chines resource assessment complicated and each application would have to be looked at individually also having regard to other abstractors already operating in that area.

Small streams without assessment points and located in the tidal or coastal reaches are modelled in the Isle of Wight ALS, but we have low confidence of resource assessment and reliability in these areas on account of no measured flow data or ecological monitoring. We will therefore consider potential applications in these water bodies on a case-by-case basis.

## 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 Isle of Wight ALS area

#### IOW Lower Greensand

Restricted water available for licensing. No new consumptive licences will be granted. The interaction of the Lower Greensand with surface water is particularly complex. The impact of groundwater abstractions from the Lower Greensand on Eastern Yar, River Medina, Brighstone Stream and Atherfield Brook has been assessed, it is unlikely that there is any scope for further abstraction from this unit.

#### IOW Central Chalk

Restricted water available for licensing. No new consumptive licences will be granted. This unit includes the Upper Greensand as well as the Chalk. This major aquifer provides flow into the River Medina, Lukely Brook, Caul Bourne, Shorwell Stream and Brighstone Stream as well as providing small inflows to the Monktonmead Brook and Brading Marshes to the east. Recent water balance calculations suggest that around half of the recharge to this unit is abstracted. Under dry conditions, if all licences were fully used, the



supply of water to streams and wetlands would be significantly depleted. For this reason, there is no scope for any further consumptive abstractions from the Chalk and Upper Greensand.

### **IOW Southern Downs Chalk**

Restricted water available for licensing. No new consumptive licences will be granted. This unit also includes the Upper Greensand aquifer. Flows from this aquifer feed into the headwaters of the River Medina and Eastern Yar as well as providing spring seepages into the SSSI designated habitats of the undercliff to the south. There is no scope for further abstraction from this unit.

## **3.3. 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.

The Isle of Wight ALS area overlaps or contains the following protected areas: The South Wight Maritime SAC, The Solent Maritime SAC, The Solent and Dorset Coast pSPA (potential SPA) and The Solent and Southampton Water SPA/Ramsar Site

## **3.4. Coasts and estuaries**

The majority of the Isle of Wight coastline is designated for conservation; with Solent Maritime SAC and Solent and Southampton Water SPA principally on the north facing coastline and the South Wight Maritime SAC covering most of the remaining southern coastline.

As well as flowing to the SPA and SAC sites, the estuaries of the northern half of the Island are themselves designated as SSSIs.

The intertidal area between Cowes and Bembridge, which can be 2 km wide at low tide, is an important component of the Solent estuarine system which supports internationally important over-wintering populations of wildfowl and waders, and important breeding populations of waders, gulls and terns.

There are numerous Chines on the south western coast which are deeply incised channels formed by small streams intersecting soft cliffs. Maintaining adequate flow in these streams is essential to the conservation and maintenance of the Vegetated Sea Cliffs that fall under the Solent Maritime SAC designation.

## **3.5. Heavily modified water bodies**

The River Medina and the Eastern Yar are heavily modified as flows are “managed” by the Medina-Yar augmentation schemes. The Medina-Yar Augmentation Scheme is owned and operated by Southern Water, and is split into two elements – a groundwater augmentation scheme and a transfer scheme. The schemes aim to augment flows in the Eastern Yar to prevent the flow at Burnt House Gauging Station from falling below 1 Ml/d.

The augmentation scheme takes water from the river and boreholes in the Medina Catchment, this is transferred to the Eastern Yar, where abstraction from additional boreholes is used to further supplement the flows in the Eastern Yar.

Both the River Medina and Eastern Yar are heavily used for public water supply so no further abstraction at low to mid flows is likely to be permitted.

## 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 maps 1, 2, 3 and 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

#### 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

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 Isle of Wight ALS

#### AP 3: Lukely Brook

The water resource availability colour is Red.

We have an ongoing investigation with Southern Water Service Ltd to consider the impact of abstraction on the Lukely Brook and Plaish Meadows. The Lukely Brook is a Chalk stream tributary of the River Medina, which flows through the important Plaish Meadows Sites of Interest to Nature Conservation (SINCs) and joins the Medina in Newport. The majority of licensed abstractions in the catchment are for public water supply. A Water Frame Directive investigation has been carried out to assess the impact of abstraction on the Lukely Brook and there have been further studies to consider the impact of abstraction on Plaish Meadows. We are committed to concluding this work and making any necessary changes to abstraction licences by March 2020.

## 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).

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 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.

### 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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