East Hampshire Abstraction Licensing Strategy

A strategy to manage water resources

sustainably

Version 3

March 2019

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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

1. About the licensing strategy

This strategy sets out our approach to managing new and existing abstraction and impoundment within the East Hampshire catchment in the South East river basin district.

The East Hampshire catchment covers an area of 517 km² consisting of rolling Chalk downland to the north of the area and a flat heavily urbanised coastal plain to the south. The largely rural area to the north contains small towns and villages whereas the coastal area to the south contains the larger towns and cities of Portsmouth, Havant, Waterlooville, Fareham and Gosport. Much of the northern part of the area is included within the South Downs National Park and the coastal area is designated as a European Special Area of Conservation (SAC), Special Protection Area (SPA) and internationally designated Ramsar.

The Chalk aquifer dominates the area and is an important source of water for many of the streams and wetlands. The River Meon is the only river flowing for some distance over the chalk but the River Hamble and to a lesser extent the River Wallington are supported by chalk springs in their headwaters. The Chalk outcrops in the north between Butser Hill and Cheesefoot Head, and at Portsdown Hill to the south. Between the chalk outcrops, less permeable sand and clay deposits overlie the Chalk. Where rivers flow across the less permeable deposits they become far more responsive to rain and flows rise rapidly following rainfall events.

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).

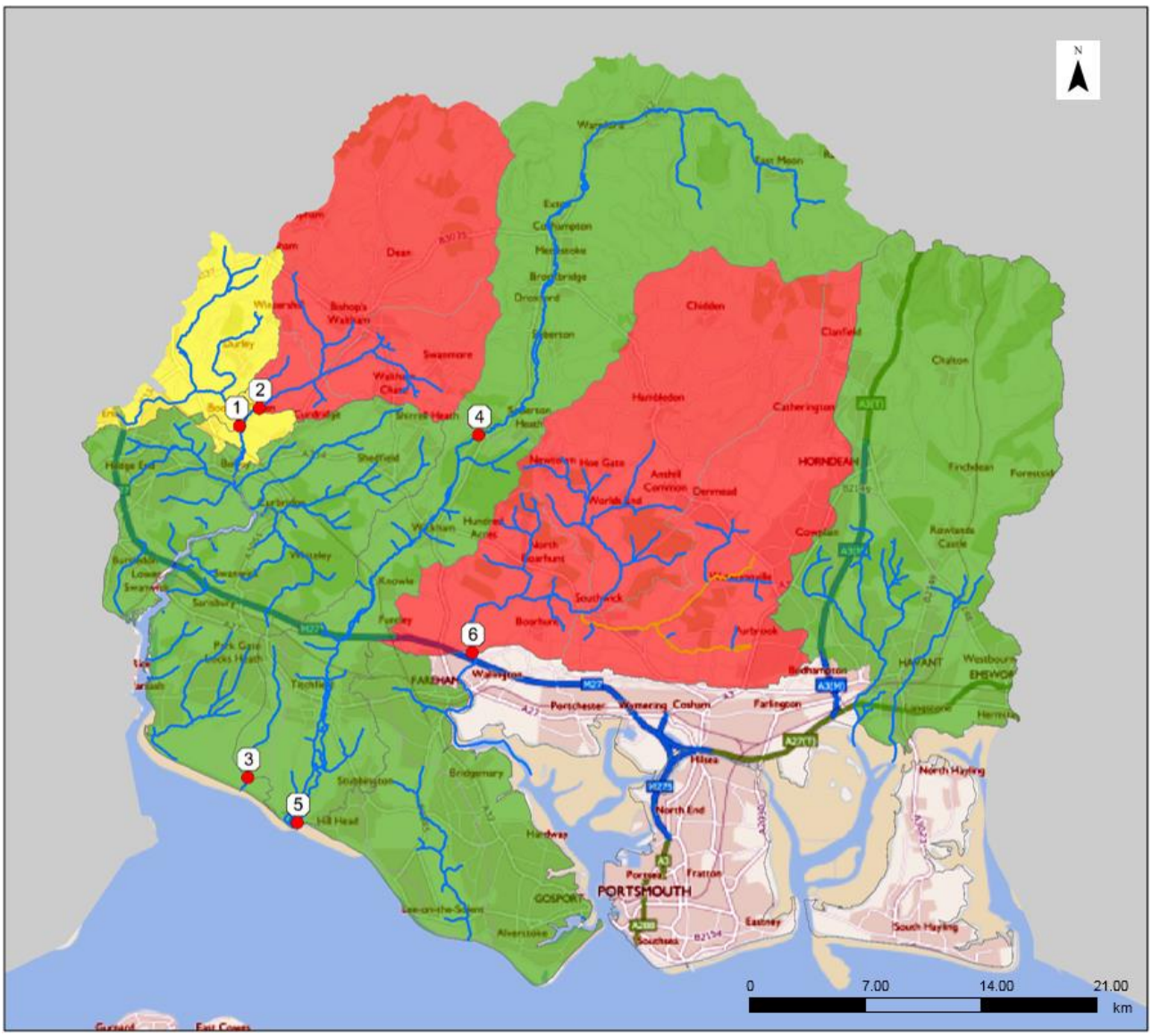
Please see abstraction pages on gov.uk for advice on who needs an abstraction or impoundment licence, and how to apply.

2. Water resource availability of the East Hampshire 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 East Hampshire ALS



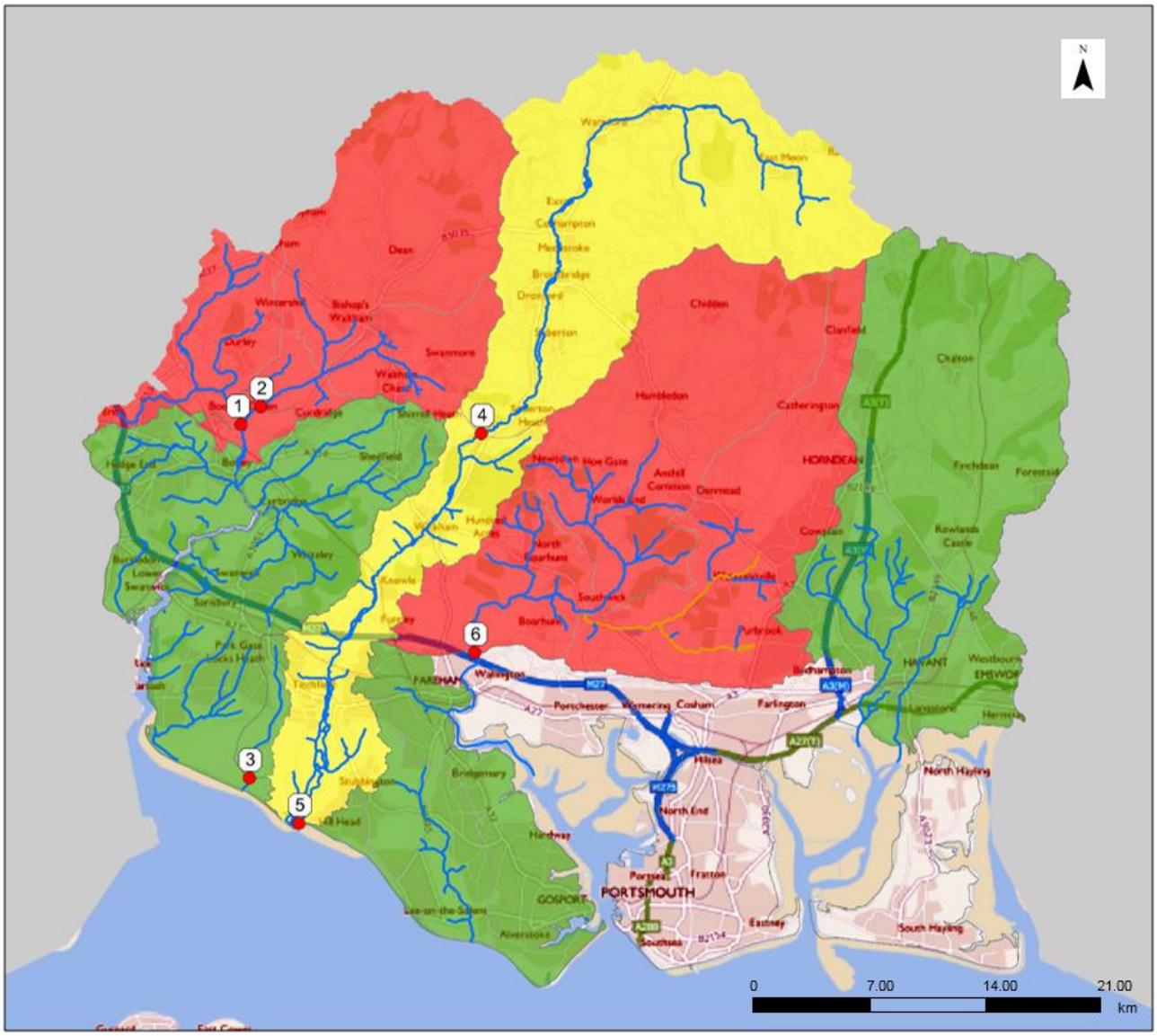
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers

Water Availability at Q30:

- Water available
- Restricted water available
- Water not available

Map 2: Water resource availability colours at Q50 for East Hampshire ALS



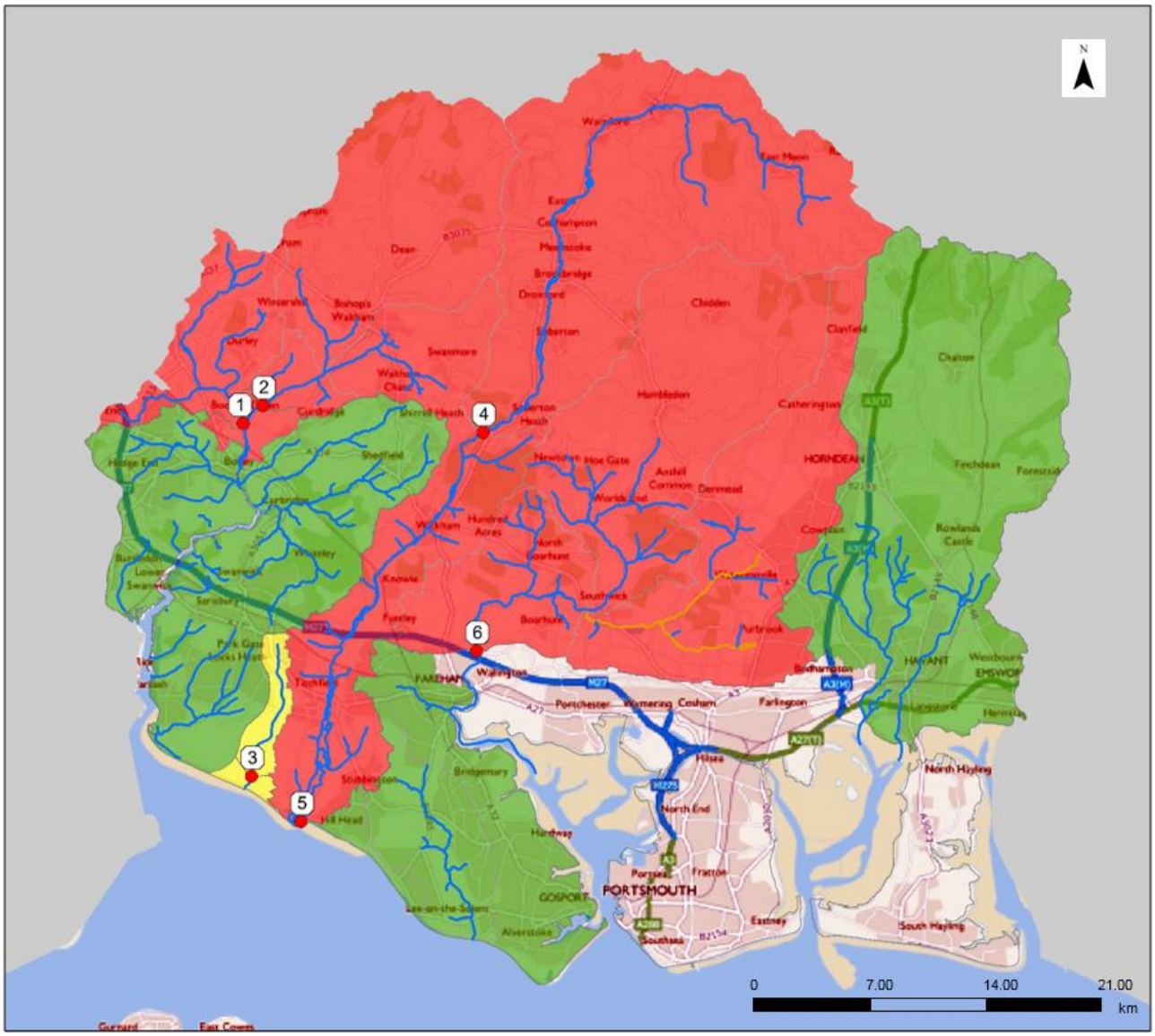
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers

Water Availability at Q50:

- Water available
- Restricted water available
- Water not available

Map 3: Water resource availability colours at Q70 for East Hampshire ALS



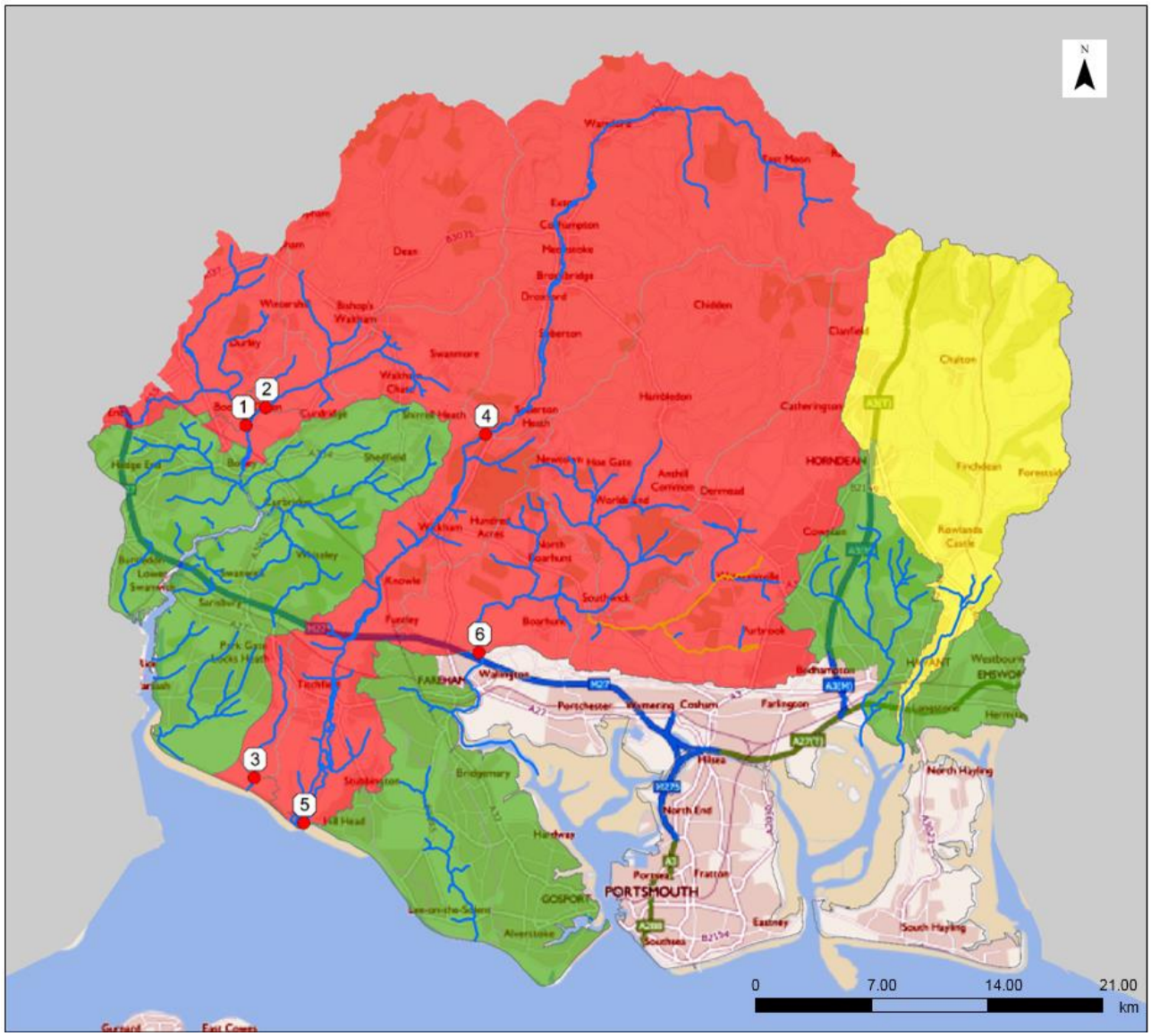
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Rivers

Water Availability at Q70:

- Water available
- Restricted water available
- Water not available

Map 4: Water resource availability colours at Q95 for East Hampshire ALS



Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- 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 

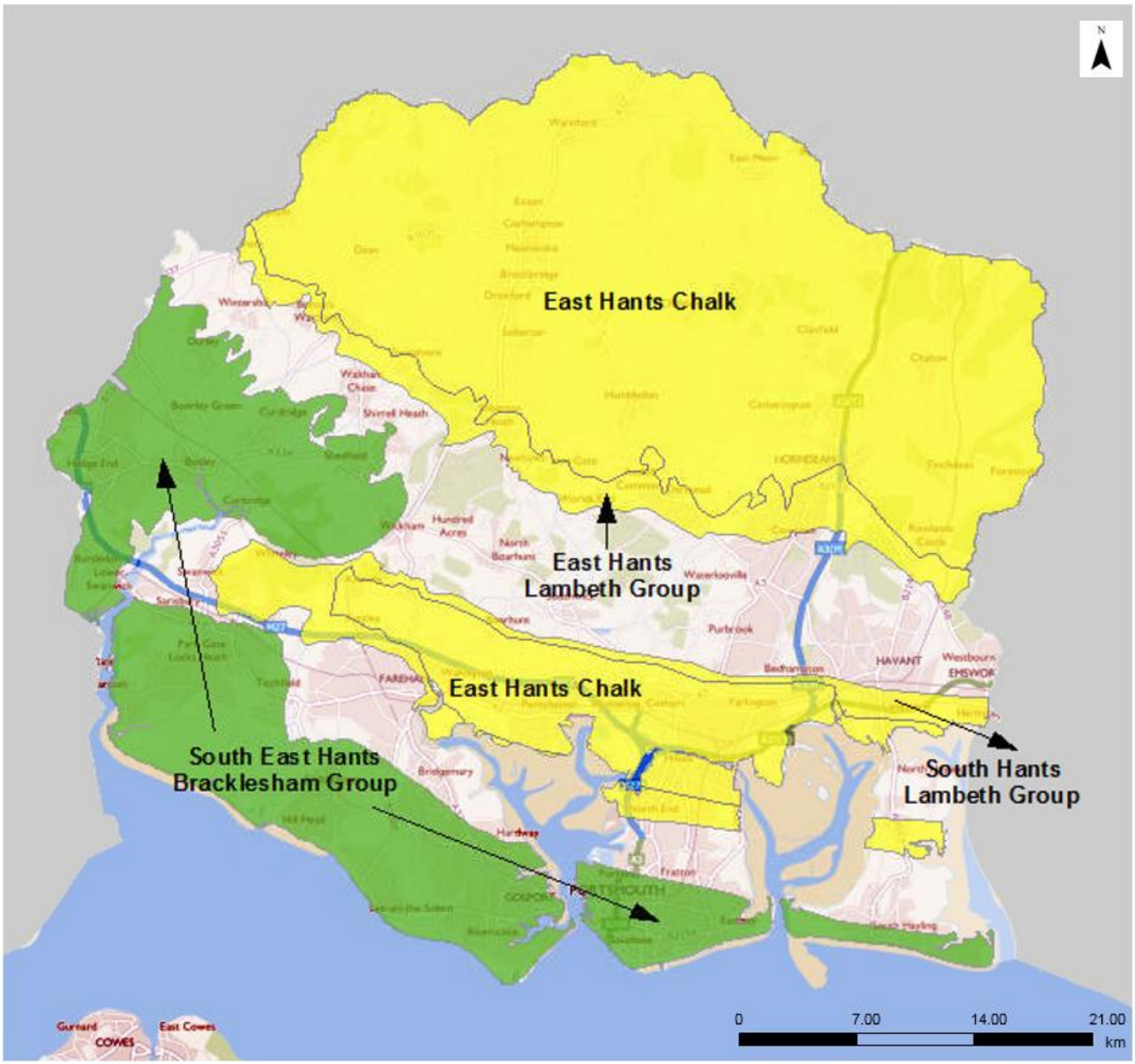
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on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

Map 5: Groundwater availability colours for East Hampshire ALS



Legend:

Groundwater Availability:

- Water available
- Restricted water available
- Water not 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.

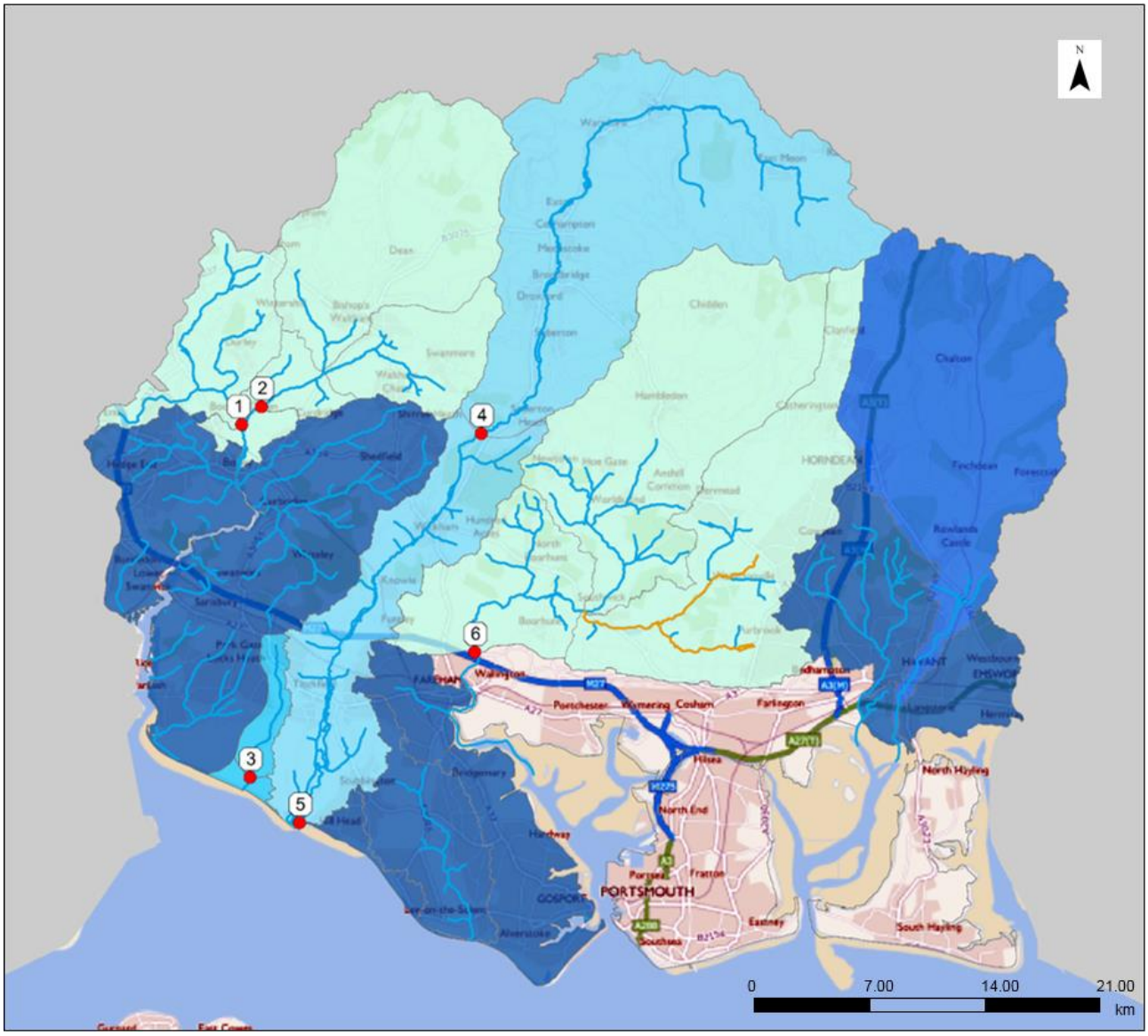
2.3. Resource reliability

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 East Hampshire area expressed as a percentage of time.

Map 6: Water resource reliability of the East Hampshire ALS expressed as percentage of time available



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 March 2028 and the subsequent one is 31 March 2040.

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 East Hampshire 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 East Hampshire 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.

Table 1: Summary of licensing approach for the assessment points of East Hampshire ALS

AP	Name	Water Resource Availability	HOF Restriction (Ml/d)	Number of days per annum abstraction may be available	Approximate volume available at restriction (Ml/d)	Is there a gauging station at this AP?	Additional restrictions
1	River Hamble at Maddoxford	Water not available for licensing	1	347	<0.5	No	Habitats Directive sites downstream
2	River Hamble at Frog Mill	Water not available for licensing	49	73	9	Yes	Habitats Directive sites downstream
3	Brownwich Pond	Water not available for licensing	1	182	<0.5	No	Habitats Directive sites downstream
4	River Meon at Mislingford	Water not available for licensing	70	128	4	Yes	Habitats Directive sites downstream
5	River Meon at Titchfield	Water not available for licensing	60	186	3	No	Habitats Directive sites downstream
6	River Wallington at North Fareham	Water not available for licensing	42	80	15	Yes	Habitats Directive sites downstream

Table 1 shows that for the main River Hamble, River Meon and River Wallington, abstraction will only be considered when flows are high. In the small streams of the River Hamble at Maddoxford and the Brownwich Stream, there are relatively little amounts of water available. Additional restrictions may be needed to protect other abstractors and sensitive habitats.

Because of the natural low flows and restrictions on water available we 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.

Small streams without assessment points and located in the tidal or coastal reaches are modelled in the East Hampshire 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 consider potential applications in these water bodies on a case-by-case basis.

3.2. Groundwater

For major 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. 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 East Hampshire ALS area

East Hampshire Chalk – Restricted water available

When assessing if we will grant licences for abstraction from the Chalk, we have to assess how those abstractions may affect nearby water features, other licence holders and the overall balance of water resources in the Chalk aquifer. Analysis shows that there is very little scope for any additional abstraction which would not cause additional impacts on sensitive water features. Consequently, there is a presumption against new consumptive groundwater abstractions from the Chalk.

South East Hampshire Bracklesham Group, South Hampshire Lambeth Group and East Hampshire Lambeth Group

It is unlikely that there will be any potential for significant, reliable abstractions from these units. There is no specific policy for these aquifers. Decisions about an application will be made on a case by case basis and so customers wishing to enquire about the availability of a source should contact the Environment Agency.

Arun and Western Streams Upper Greensand

The Upper Greensand aquifer does not outcrop or provide any flow into watercourses in this ALS area but there are abstractions from the confined aquifer at the top of the Meon Valley. Our analysis shows that the Upper Greensand in this area is not well connected to the Chalk and the impacts of any abstraction are felt in the nearby tributaries of the upper River Rother to the east of the upper River Meon. As the aquifer is confined, the drawdown of water levels can be significant and derogation of other licence holders needs careful consideration.

3.3. Coasts and estuaries

The rivers in the East Hampshire ALS area provide freshwater input to several designated coastal sites. The River Hamble, Brownwich Stream and River Meon flow into the Solent and Southampton Water SPA and Ramsar site. The River Hamble itself is tidal from high in its catchment at Botley and there are swathes of SSSI all along its tidal stretch. The Hamble is also part of the Solent Maritime SAC. The River Meon flows into the Titchfield Haven SSSI at its downstream end before reaching the downstream SPA.

The River Wallington flows into Portsmouth Harbour which is itself an SPA. Important chalk springs also feed into the adjacent Langstone Harbour (which is contained within the Chichester and Langstone Harbour SPA). Langstone Harbour also forms part of the Solent Maritime SAC.

3.4. Heavily modified water bodies

The only heavily modified water body in the East Hampshire ALS area is the Potwell Stream on the River Wallington. This is designated heavily modified for water resources purposes due to Southwick Lake. The lake is online and predominantly a fishing and amenity lake, but it is utilised for abstraction for spray irrigation of a local golf course.

Being a Heavily Modified Water Body does not have any implications for licences because there is already limited water available in the catchment. Flows downstream of the lake are currently controlled by its discharge which is a condition on the abstraction licence. Consideration of flow into the lake and any impacts on its water levels must also be made in licensing any new abstraction upstream.

3.5. Protected areas

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

• Special Areas of Conservation (SAC), which contribute to biodiversity by maintaining and restoring habitats and species;

• Special Protection Area (SPA), which provides protection to birds and their nests, eggs and habitats

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

The East Hampshire ALS area contains a number of protected areas. Key ones that need to be considered are the Solent Maritime SAC, the Solent and Southampton Water SPA and Ramsar Site, Portsmouth Harbour SPA, Chichester and Langstone Harbour SPA, and Titchfield Haven SSSI, among others.

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

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

AP 2 Frogmill

The water resource availability colour is red

Abstraction pressure on the River Hamble has been investigated over many years, resulting in the closure of one public water supply source in 2003. The remaining impact of abstraction on the North Pond and Northbrook in Bishops Waltham has been considered as part of a Water Framework Directive investigation and appropriate measures discussed and agreed at the East Hampshire catchment partnership.

AP 3 Brownwich Pond

The water resource availability colour is red

The impact of abstractions on the downstream designated coastal site was assessed during the Review of Consents process. Changes to licences were made in 2015 to ensure that freshwater flows to the designated site were protected.

AP 4 & 5 River Meon

The water resource availability colour is red

A public water supply licence was reduced in 2003 to reduce the risk of abstraction having an impact on the River Meon. The impact of all abstraction licences on the downstream designated coastal sites of Titchfield Haven and the Meon foreshore were then assessed during the Review of Consents process. As a result of that process, in 2015, flow conditions were added to spray irrigation licences and some licences were reduced and revoked. Changes were also made to a public water supply licence to mitigate the impact of abstraction on river flows in dry conditions.

AP 6 River Wallington

The water resource availability colour is red

The impact of abstraction on the River Wallington was assessed as part of a Water Framework Directive investigation and modifications to a public water supply licence were made in 2015 to ensure that freshwater flows into the designated site were protected.

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.

Ml/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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