



Loddon Abstraction Licensing Strategy

A strategy to manage water resources sustainably

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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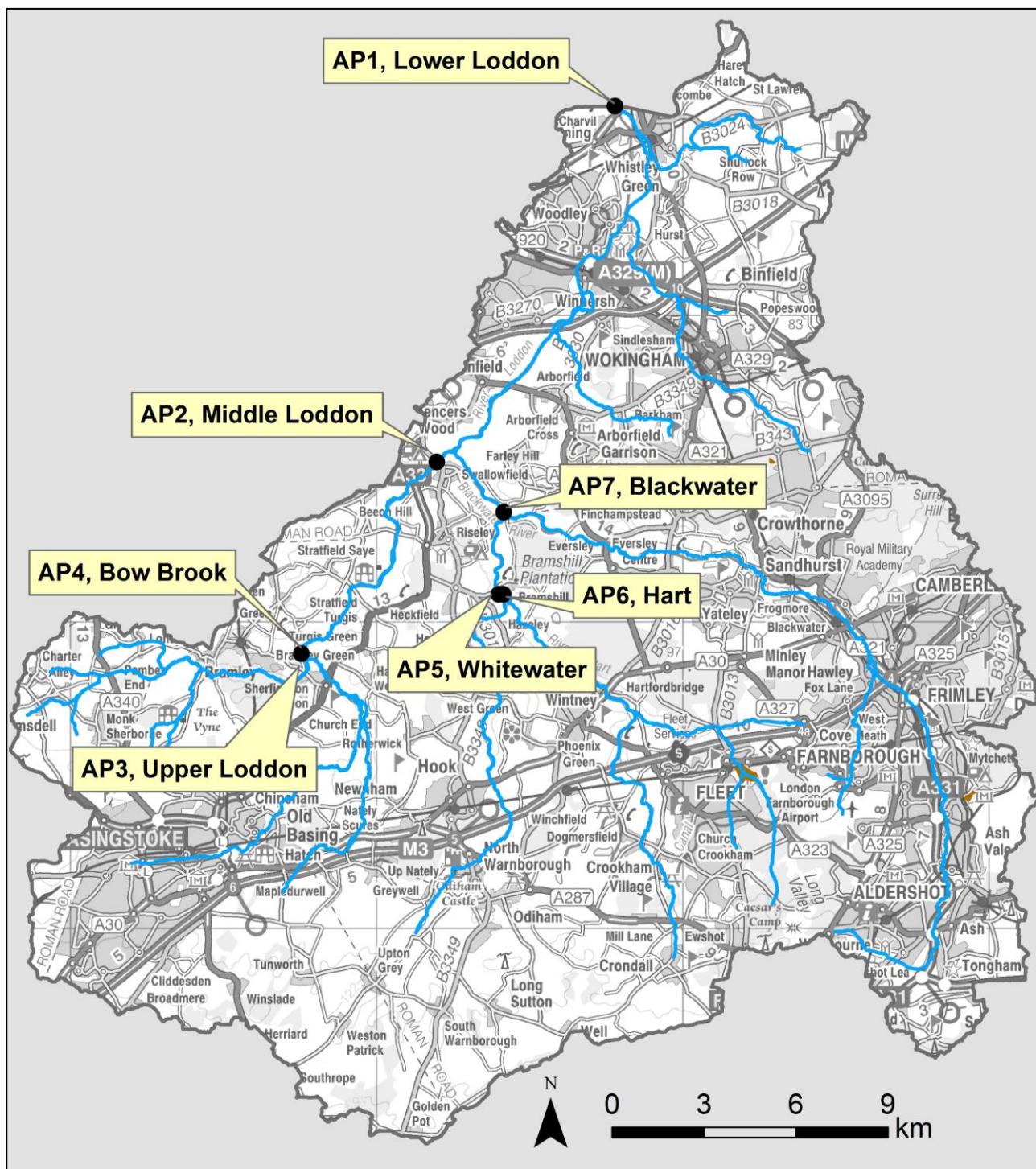
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1. About the licensing strategy

This strategy sets out our approach to managing new and existing [abstraction](#) and [impoundment](#) within the Loddon [catchment](#) in the Thames river basin district. The Loddon abstraction licensing strategy ([ALS](#)) area covers approximately 700 km². The River Loddon rises from chalk springs in Basingstoke. It runs northeast over a predominantly clay, rural catchment to its confluence with the River Thames at Wargrave. The principle tributary of the Loddon is the Blackwater, which has flows artificially increased through sewage treatment discharges. The Basingstoke canal also passes through the Loddon ALS area. A map of the Loddon is shown below (Map 1).

The chalk is the dominant aquifer and feeds many of the streams, rivers and wetlands in the upper catchment, as well as supplying many of the public water supply abstractions. Chalk is underlain by clay in the middle and lower Loddon catchment. The differing geology along the length of the watercourses in the Loddon leads to distinct spatial variations in response to rainfall.

Map 1: The Loddon abstraction licensing strategy area showing the Assessment Points (APs) used in this licensing strategy.



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Legend

● Assessment Points

— Rivers

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 river flow, or [groundwater](#) bodies affected by any reduction in groundwater level or change in flow directions.

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

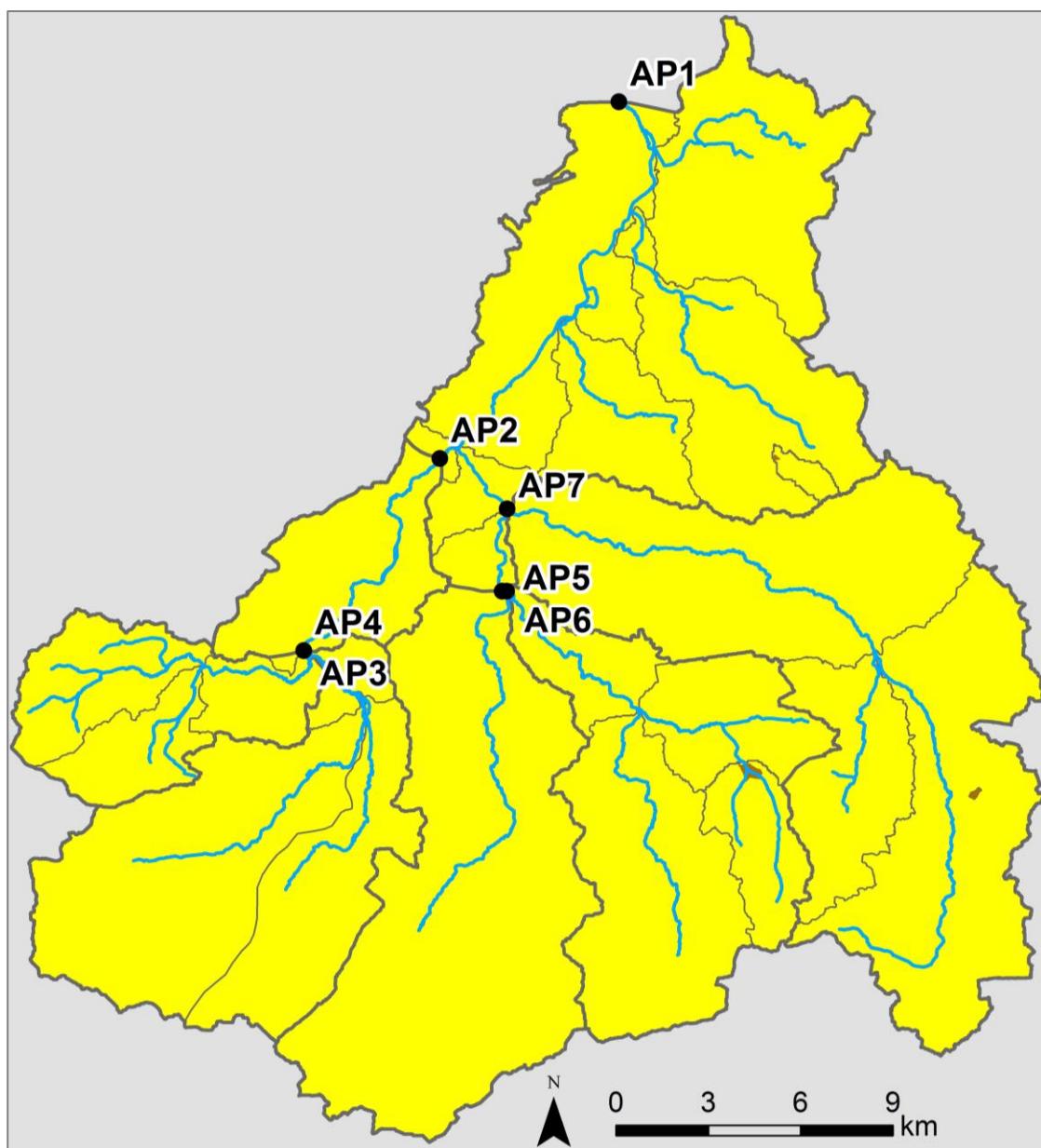
2.1. Resource availability assessment

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 for this ALS is presented and explained in this section and section 3.

Maps 2-5 show the resource availability for the Loddon based on our resource assessment as described in [Managing Water Abstraction](#).

The Thames area has a bespoke licensing strategy (described in section 3.1) that applies to the Loddon. This modifies the water resource availability. Maps 8-11 in section 3.2 show the resource availability for the Loddon after the Thames bespoke licensing strategy is applied.

Map 2: Water resource availability colours at Q30 for the Loddon ALS.



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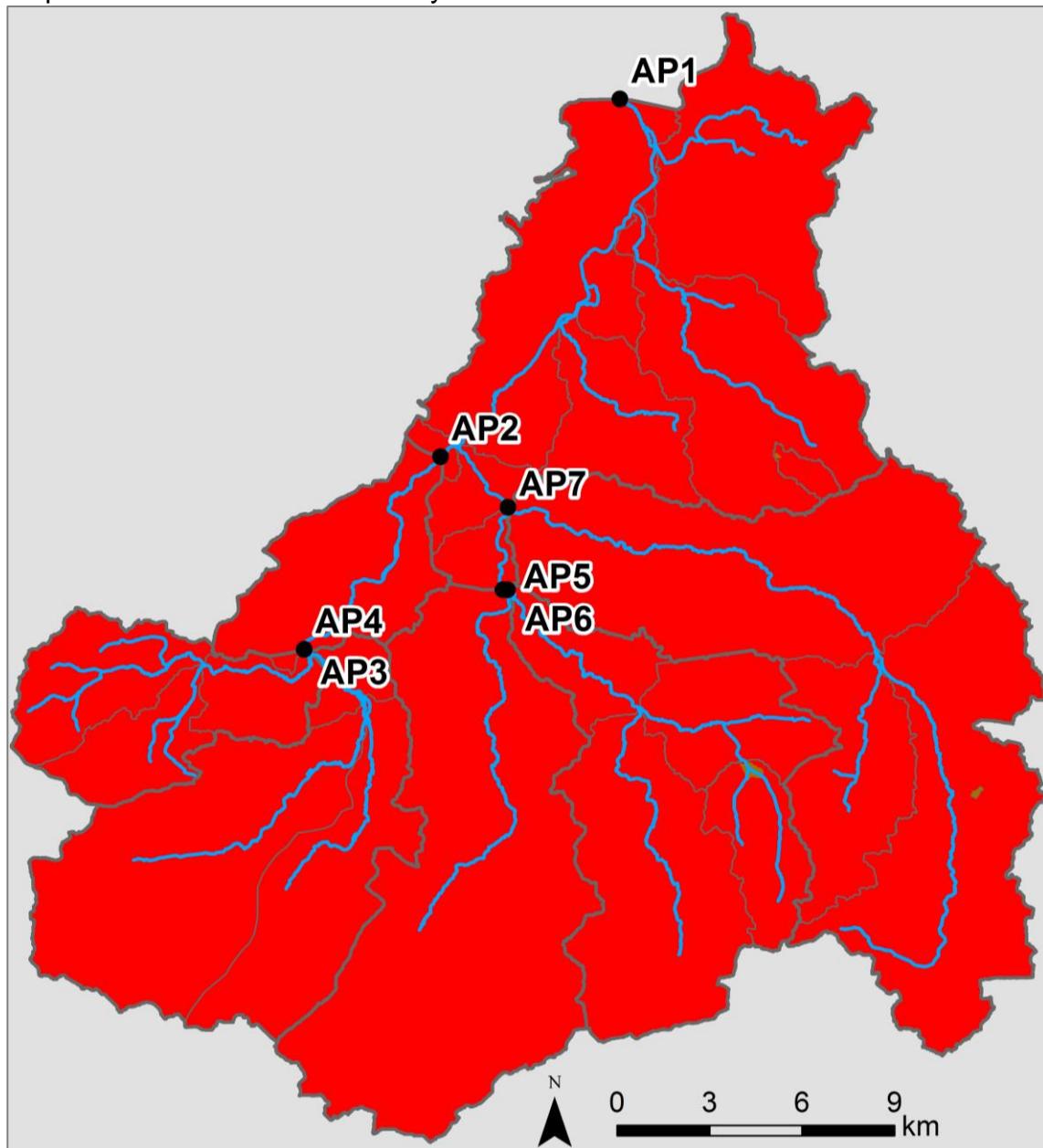
Legend

- Assessment Points
- Heavily Modified Artificial lakes
- Assessment Point Boundaries
- Water body boundaries
- Rivers

Water Availability at Q30:

- Water available
- Restricted water available
- Water not available

Map 3: Water resource availability colours at Q50 for the Loddon ALS.



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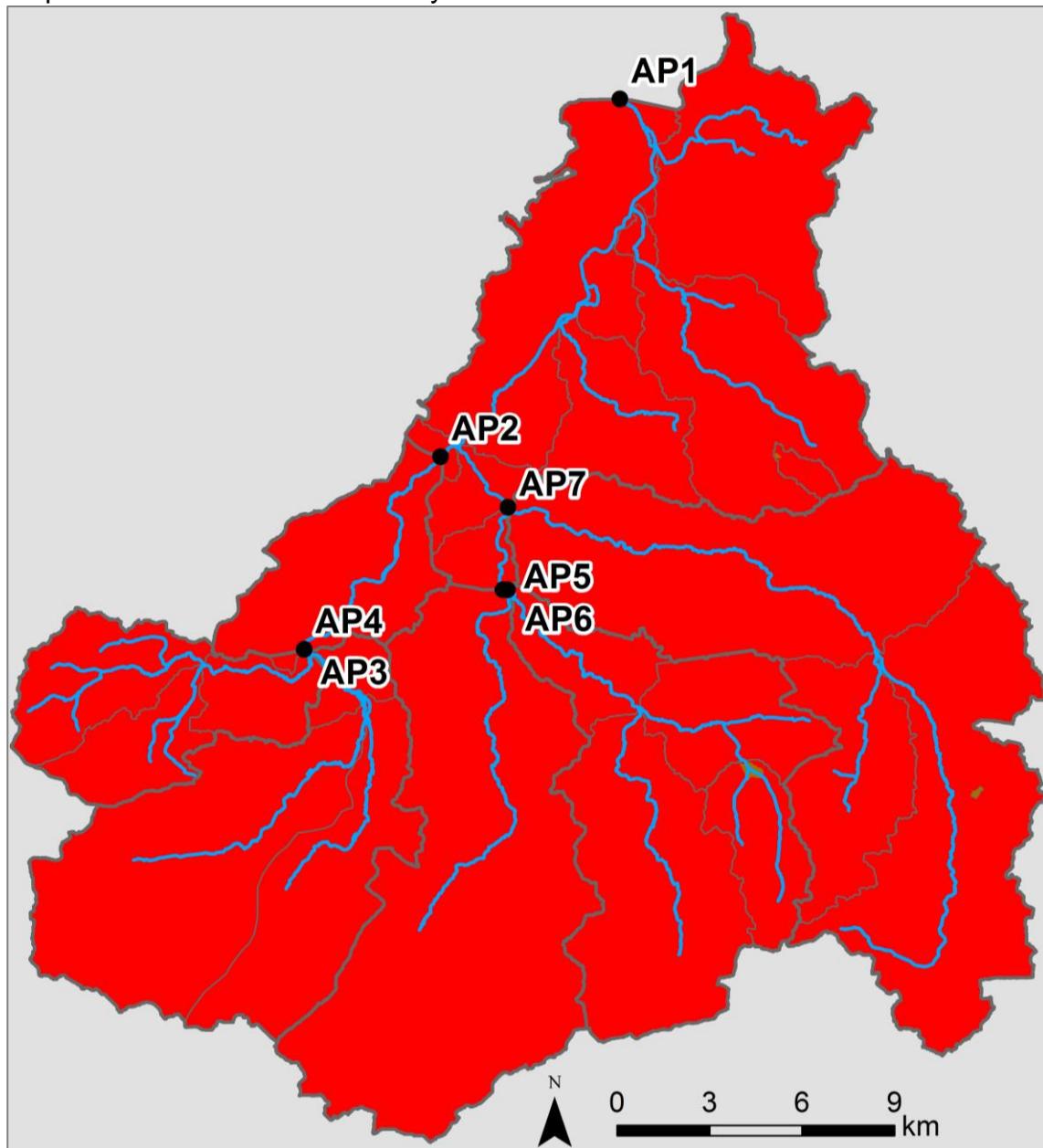
Legend

- Assessment Points
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Water Availability at Q50:

- Water available
- Restricted water available
- Water not available

Map 4: Water resource availability colours at Q70 for the Loddon ALS.



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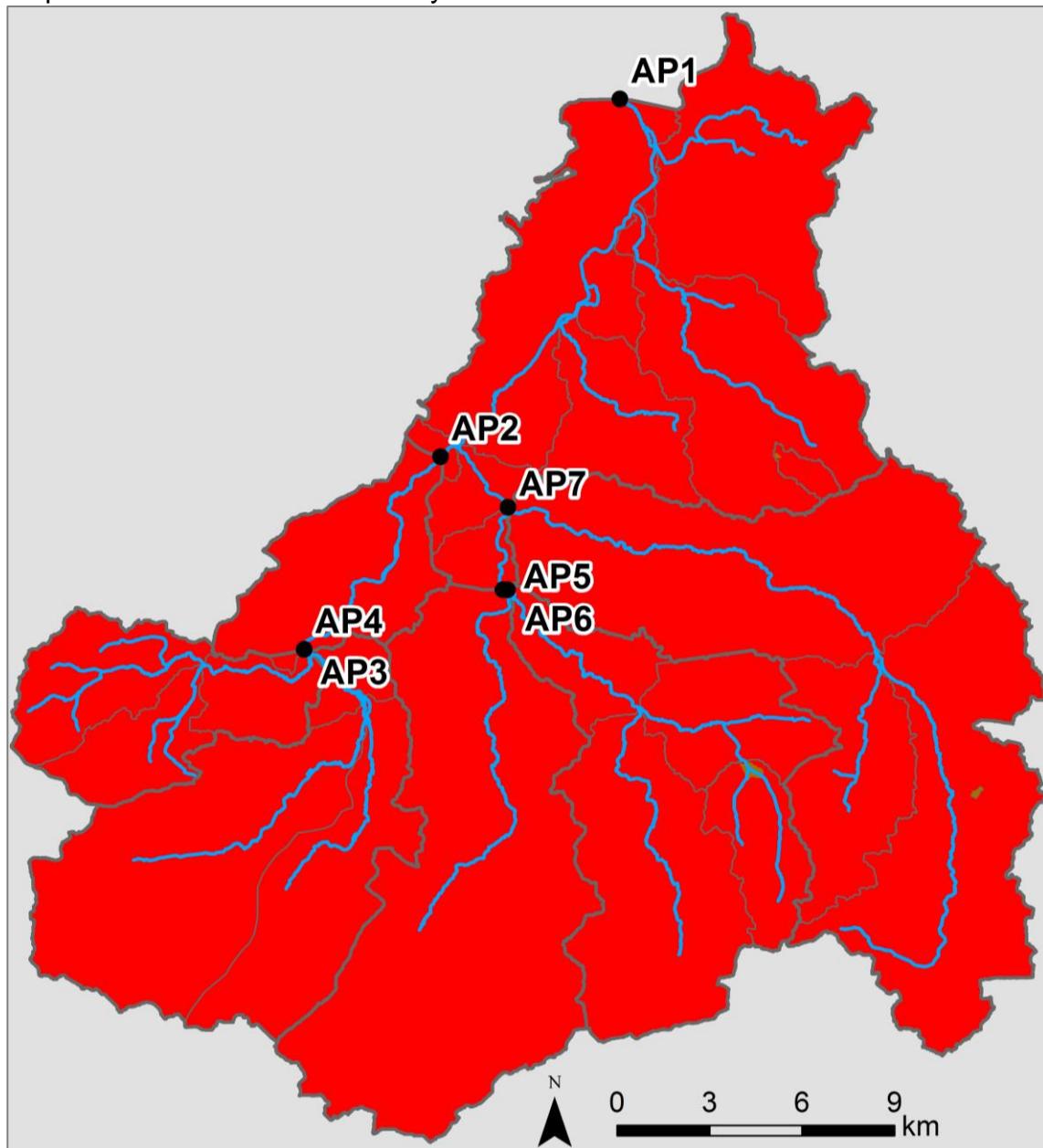
Legend

- Assessment Points
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- Assessment Point Boundaries
- Water body boundaries
- Rivers

Water Availability at Q70:

- Water available
- Restricted water available
- Water not available

Map 5: Water resource availability colours at Q95 for the Loddon ALS



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Legend

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Water Availability at Q95:

- Water available
- Restricted water available
- Water not available

2.2. Water resource availability colours and implications for licensing

The implications of the resource availability colours for licensing under the different flow scenarios (Q30, Q50, Q70 and Q95) are described below. The Thames area has a bespoke licensing strategy that applies to the Loddon ALS as described in section 3.1. This bespoke strategy modifies the water resource availability, the implications of which are shown in section 3.2.

Water available for licensing

Green



In this flow scenario, there is more water than required to meet the needs of the environment.

New licences can be considered at this flow but may be constrained to protect local features.

Restricted water available for licensing

Yellow



In this flow scenario, full licensed flows fall below the [Environmental Flow Indicator \(EFI\)](#) in this and/or a downstream water body(ies).

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 at this flow. Water may be available if you can 'buy' (known as water rights trading - see section 4.1) the entitlement to abstract water from an existing licence holder.

It is likely we'll be taking action to reduce full licensed risks.

Water not available for licensing

Red



In this flow scenario, recent actual flows are below the EFI in this and/or a downstream water body(ies).

This scenario highlights water bodies in which abstraction is contributing to flows falling below the EFI. Flows should meet the EFI to help support a healthy ecology in our rivers.

No new consumptive licences would be granted at this flow. Water may be available if you can 'buy' (known as water rights trading - see section 4.1) the amount of water equivalent to that recently abstracted from an existing licence holder.

'Good Ecological Status' ([GES](#)) is when recent actual flows are meeting the EFI and supporting a healthy ecology in a river (known as 'Good Ecological Potential' ([GEP](#)) in water bodies that are heavily modified for reasons other than water resources). We are currently taking action in water bodies in which flows are not supporting GES or GEP.

2.3. Groundwater resource availability

Water availability is the same for surface water and groundwater in the Loddon ALS.

2.3.1. 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 or groundwater levels 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.

Water not available for licensing

Red



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

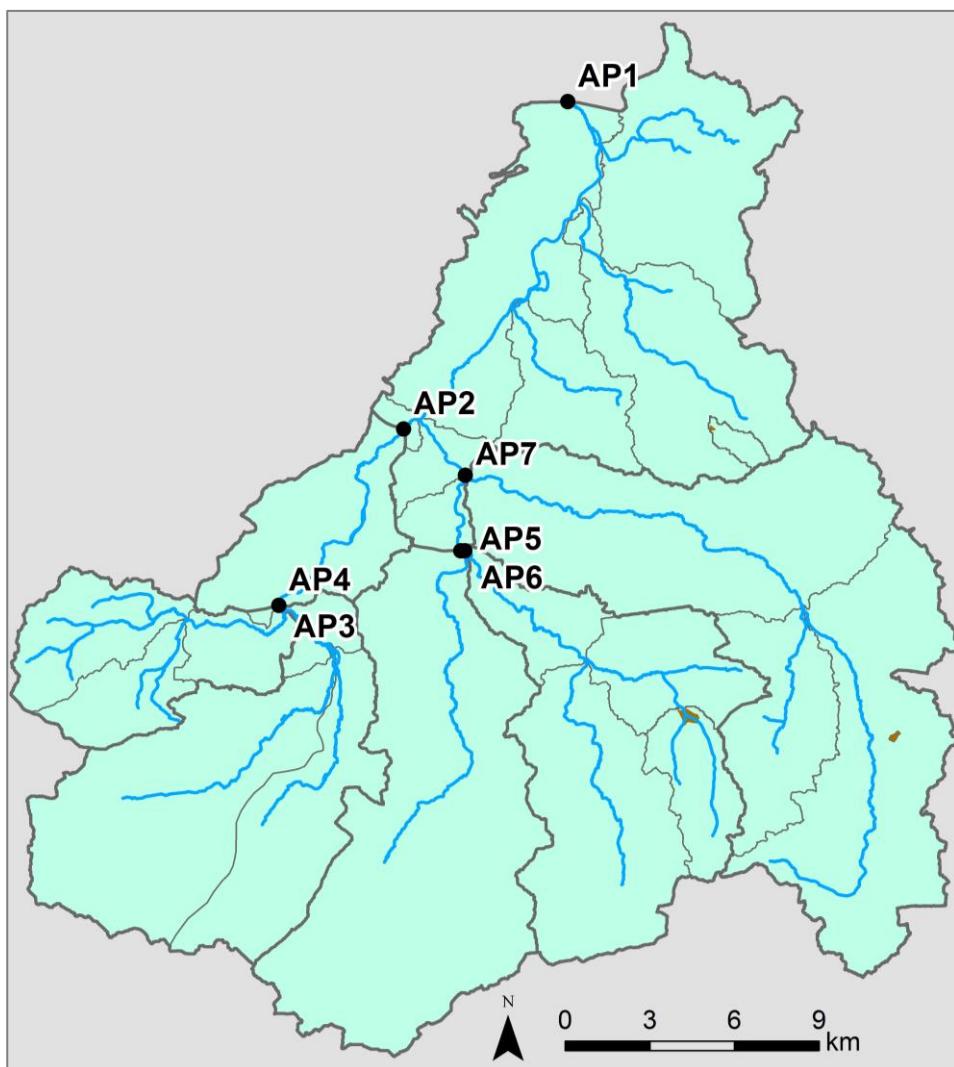
2.4. Resource reliability

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 Loddon area expressed as a percentage of time based on the resource assessment carried out in this section. The Thames area bespoke licensing strategy (described in section 3.1) applies to the Loddon ALS and modifies the resource reliability (shown in section 3.3).

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



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Percentage of the time in an average year resource may be available for consumptive abstraction:

- 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

2.5. 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 and existing abstractors, 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 to ensure they remain sustainable. The next CED for this ALS is 31 March 2028 and the subsequent one is 31 March 2040.

2.6. 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 Loddon ALS

3.1. Thames bespoke licensing strategy

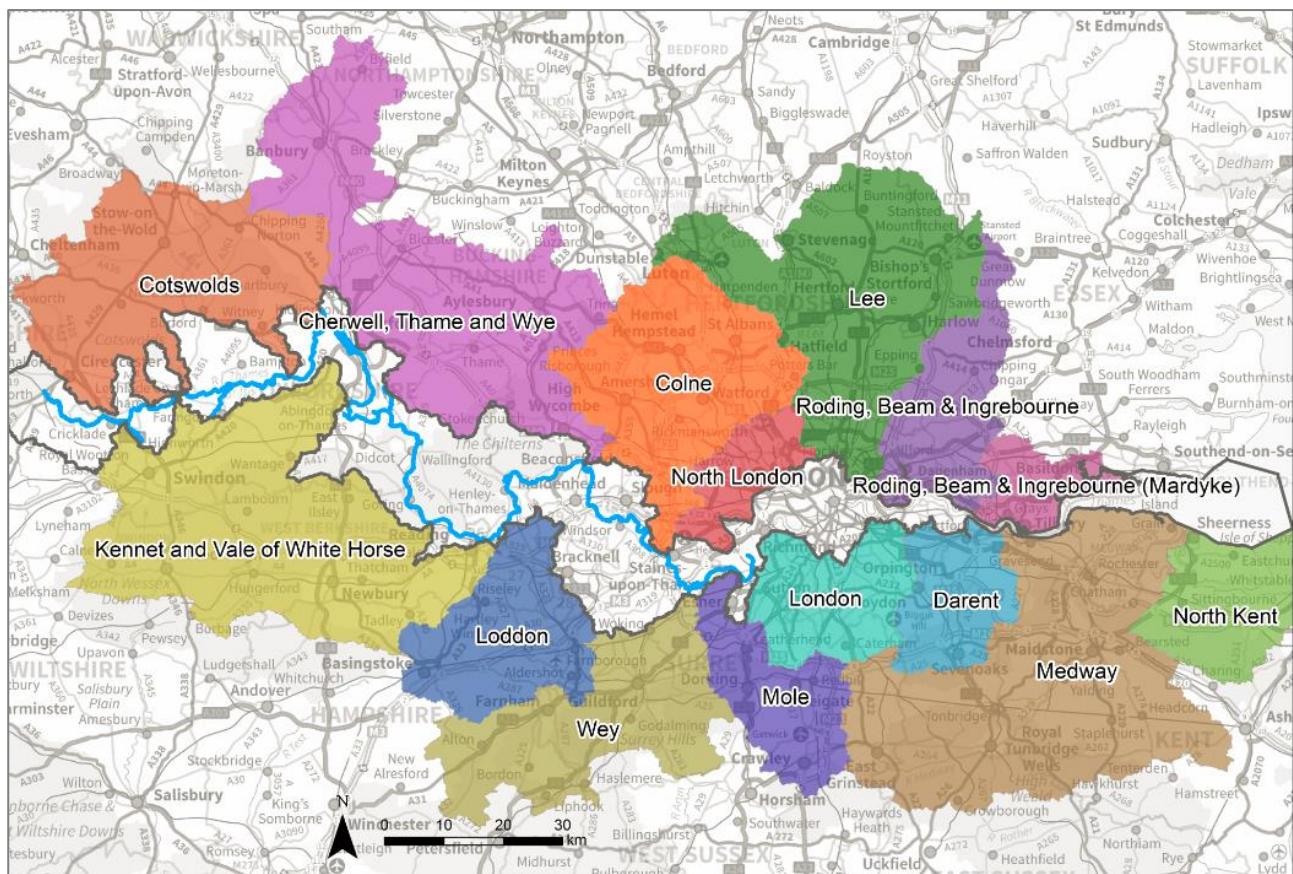
3.1.1. Background information

The Lower River Thames is classed as 'water not available for licensing'. Any consumptive abstraction from the Thames tributaries will reduce flow in the lower River Thames. Flow in the River Thames is required to be maintained to support the environment, navigation, recreation and existing licences, including strategically important abstractions for public water supply. The Loddon catchment is a tributary of the Thames (see Map 7) and as such the licensing strategy needs to take into account the river flow requirements of the River Thames.

The HoF required to protect river flow in the Lower Thames is highly restrictive and has a significant impact on resource availability as shown in section 2. We have a duty to ensure abstraction is sustainable and that the needs of people, businesses and the environment are all balanced. Investigations to date show that there are multiple pressures on the Lower Thames; abstraction is not the only pressure preventing the Lower Thames from reaching [GEP](#). There is no evidence to show that managing the Thames to the highly restrictive HoF identified in the resource assessment will benefit the river and its ecology.

Given the available evidence and the importance of the Thames for water resources, a bespoke strategy has been devised. This bespoke strategy protects the rights of existing abstractors, ensures the health of the Lower Thames can reach [GEP](#) and facilitates future water resource utilisation. A more detailed explanation of the Thames bespoke licensing strategy can be found in the Thames Corridor ALS.

Map 7: Thames Corridor ALS area and the tributary ledgers.



Legend

- Thames Corridor ALS area
- River Thames

3.1.2. The bespoke strategy

The bespoke Thames licensing strategy applies to applications for the following licence types or variations to existing licences:

- Consumptive surface water abstractions
- Groundwater abstractions in direct hydraulic continuity with a river or water dependent habitat features.

For the above abstractions, the bespoke strategy adopts a multi-tier HoF as detailed below:

- For consumptive abstraction licences below 2 Megalitres per day ([MI/d](#)), no abstraction will take place when the average of the daily mean flows of the preceding 5 days in the River Thames as gauged at Kingston is equal to or less than Q50 (1780 MI/d).
- For all consumptive abstractions of 2 MI/d or above, a HoF of between Q30 (5170 MI/d) and Q50 (1780 MI/d) (based on the average of the daily mean flows of the preceding 5 days as gauged at Kingston) will be applied based on the perceived level of risk to the water body or downstream water bodies. Supporting environmental assessments will be required to show the abstraction will not cause environmental deterioration or prevent water bodies achieving [GES](#) or [GEP](#).

- For abstractions of all sizes, additional local HoFs or levels may be applied to protect local features or existing abstractors.

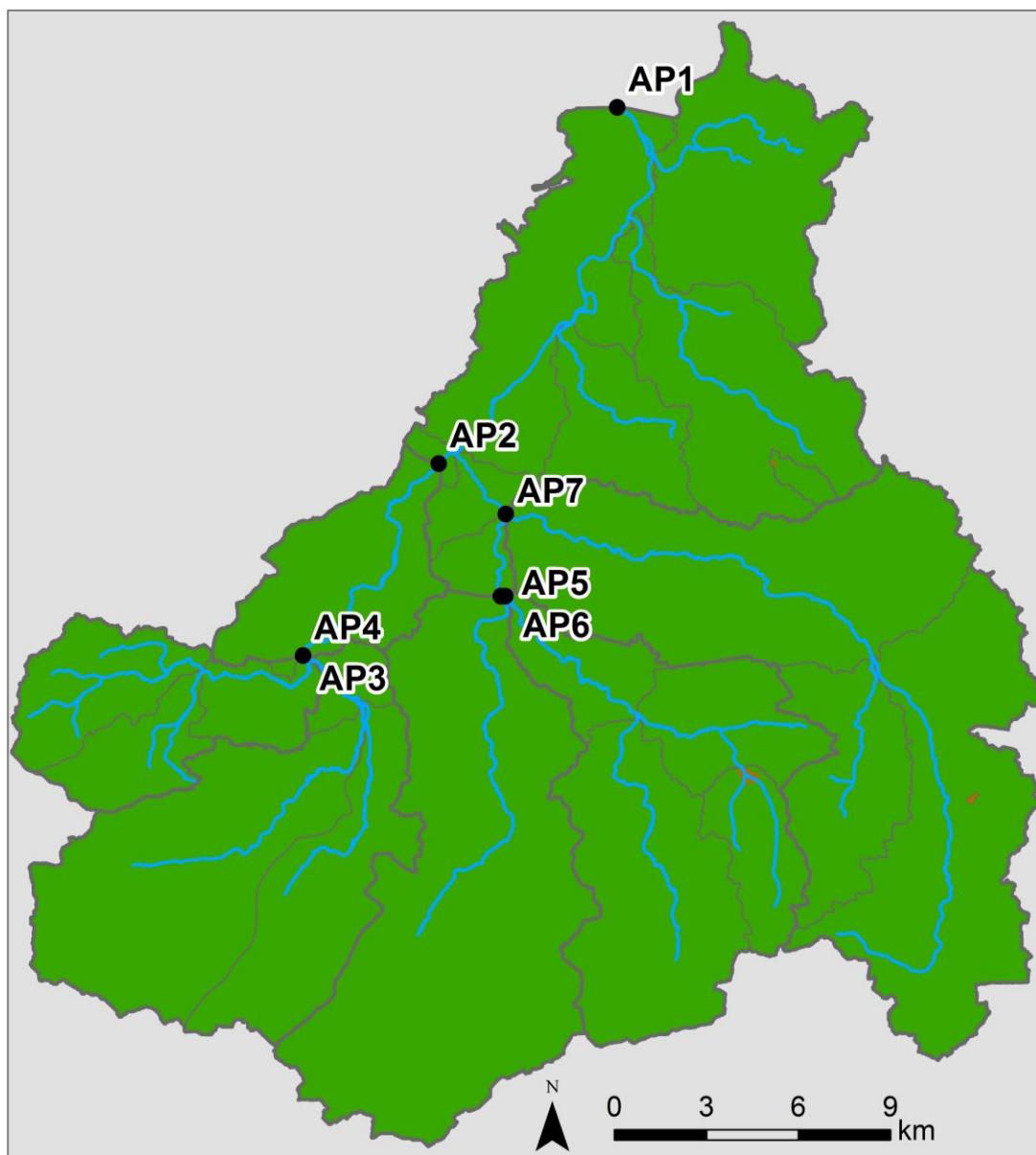
Consumptive groundwater licences which do not have a direct impact upon river flow and will not contribute to the deterioration of groundwater quantitative status may be permitted, but may be subject to restrictions. Restrictions will be determined on a case-by-case basis and applications will be subject to the normal licence determination process.

Applications for new non-consumptive abstraction licences or those with net environmental benefit may be permitted, but may be subject to restrictions to protect local features and any bypassed reach. Restrictions will be determined on a case-by-case basis and applications will be subject to the normal licence determination process.

3.2. Resource availability with the Thames bespoke licensing strategy applied

This section shows the revised resource availability with the Thames bespoke licensing strategy (described in section 3.1) applied.

Map 8: Water resource availability colours at Q30 for the Loddon ALS with the Thames bespoke licensing strategy applied.



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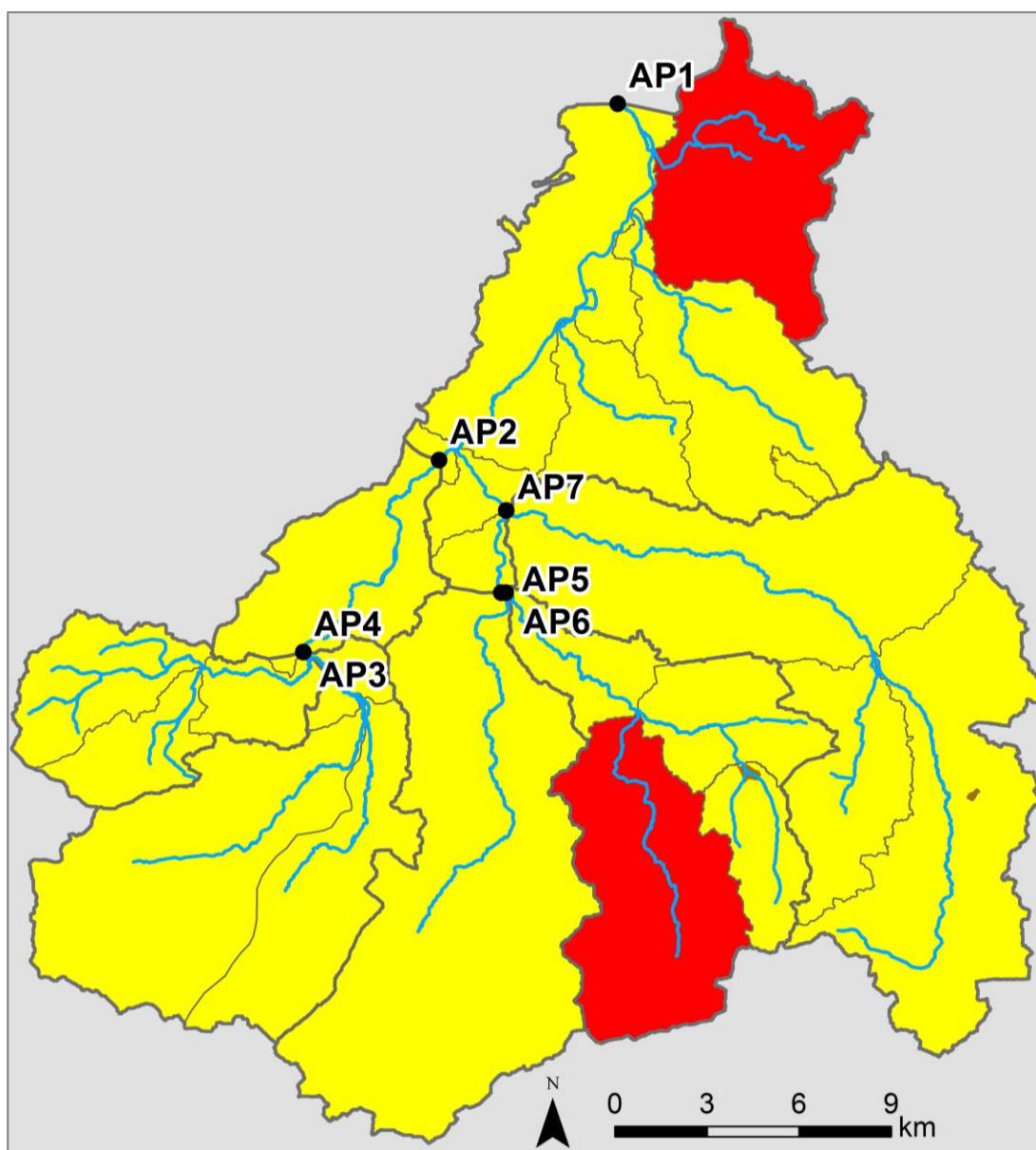
Legend

- Assessment Points
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- Assessment Point Boundaries
- Water body boundaries
- Rivers

Water Availability at Q30:

- Water available
- Restricted water available
- Water not available

Map 9: Water resource availability colours at Q50 for the Loddon ALS with the Thames bespoke licensing strategy applied.



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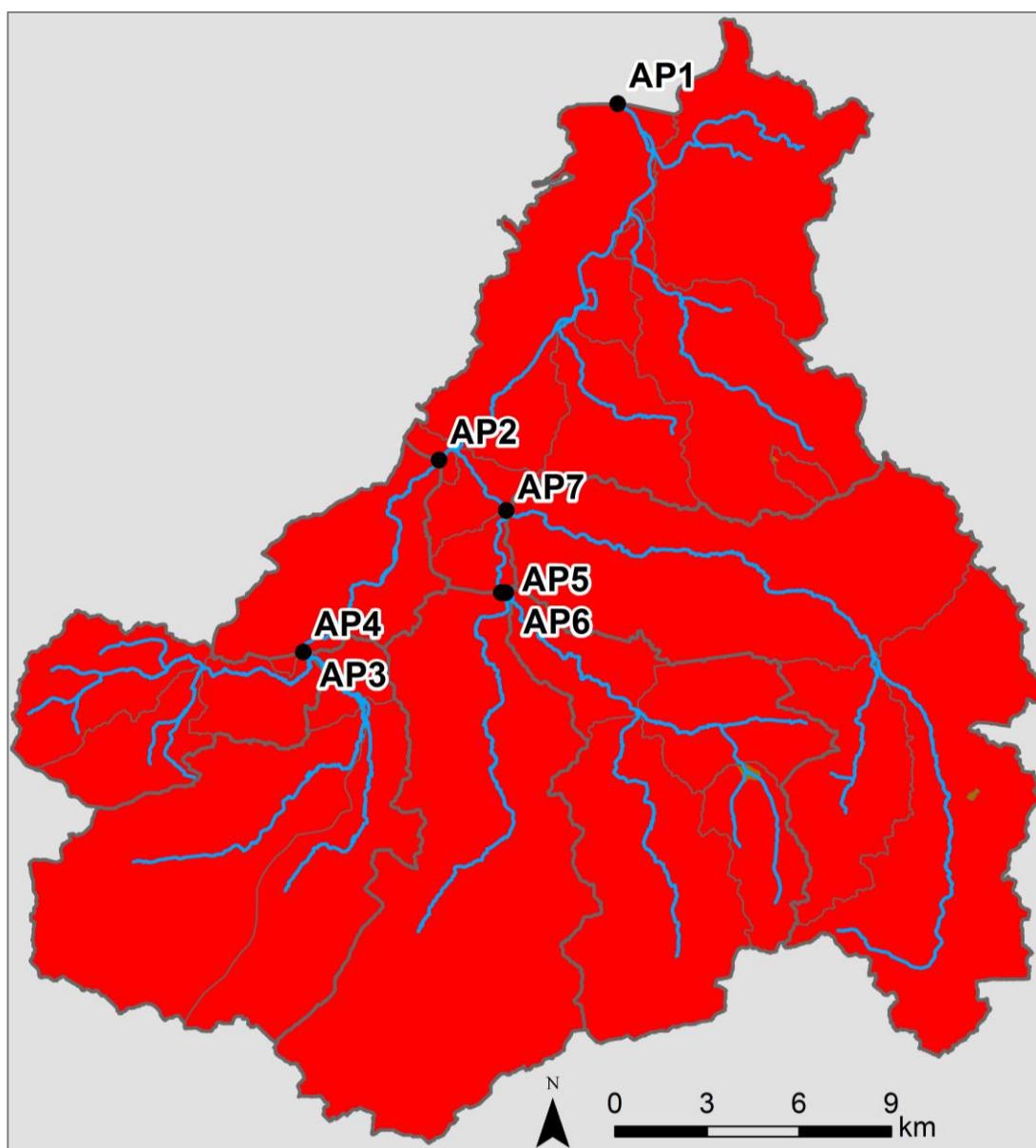
Legend

- Assessment Points
- Heavily Modified Artificial Lakes
- Assessment Point Boundaries
- Water body boundaries
- Rivers

Water Availability at Q50:

- Water available
- Restricted water available
- Water not available

Map 10: Water resource availability colours at Q70 for the Loddon ALS with Thames bespoke licensing strategy applied.



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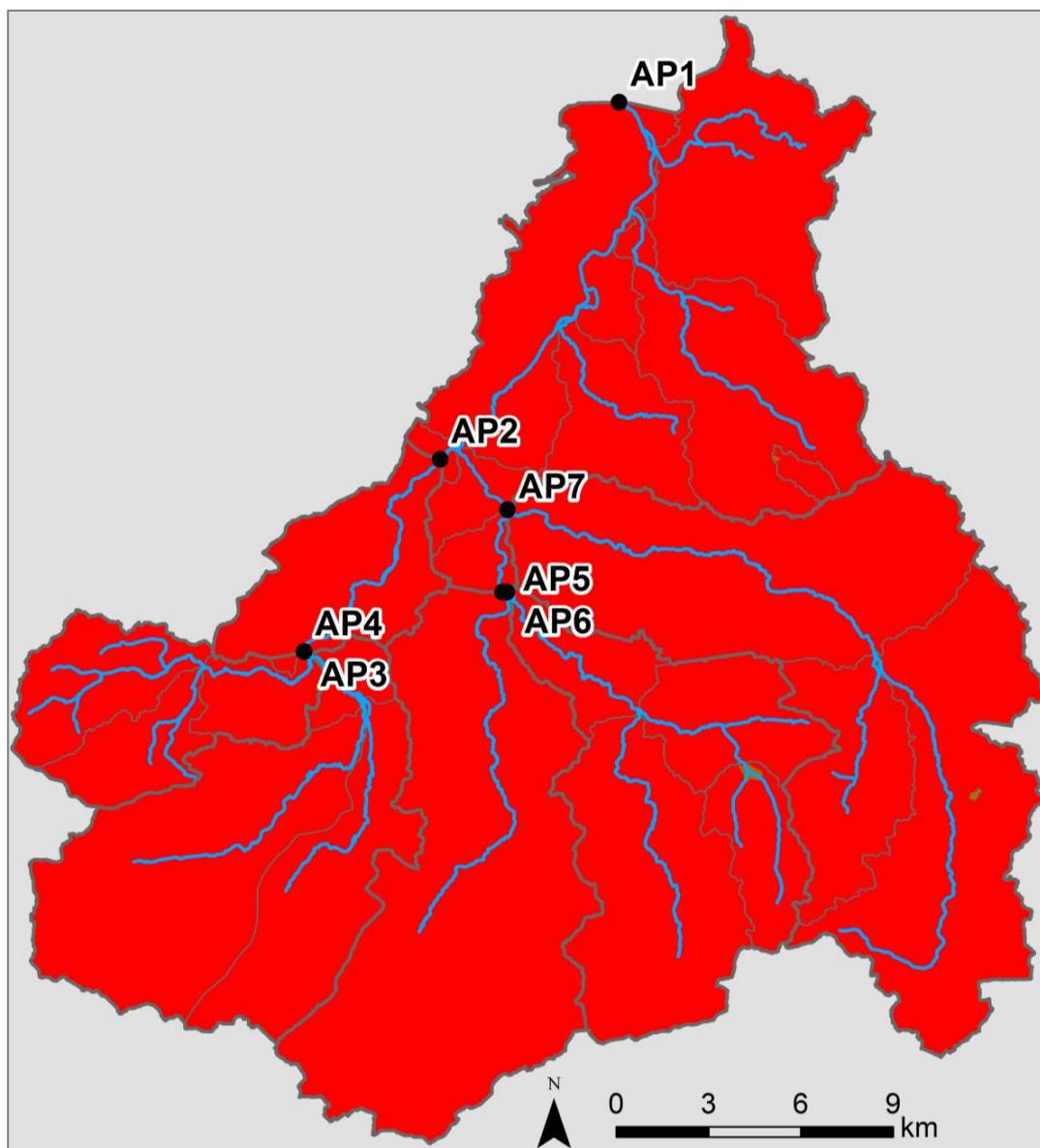
Legend

- Assessment Points
- Heavily Modified Artificial lakes
- Assessment Point Boundaries
- Water body boundaries
- Rivers

Water Availability at Q70:

- Water available
- Restricted water available
- Water not available

Map 11: Water resource availability colours at Q95 for the Loddon ALS with Thames bespoke licensing strategy applied.



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Legend

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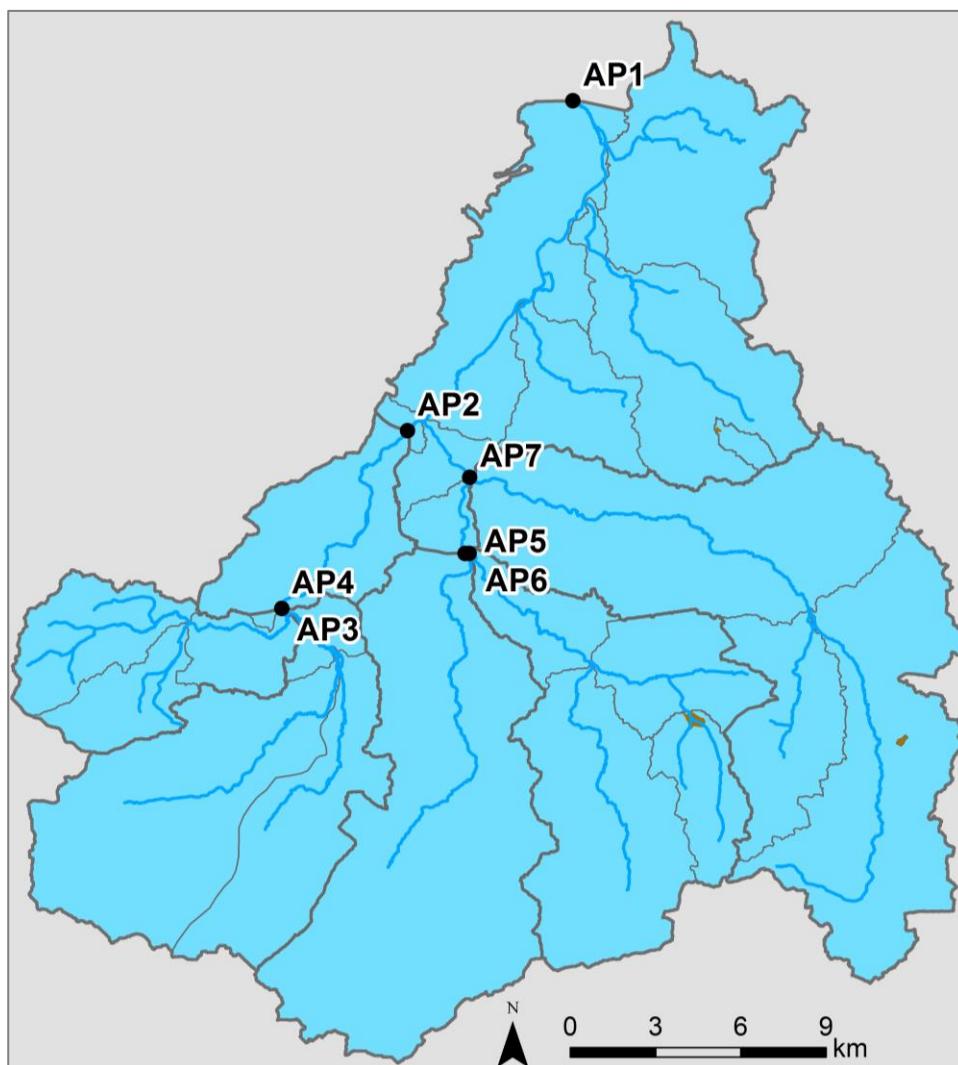
Water Availability at Q95:

- Water available
- Restricted water available
- Water not available

3.3. Resource reliability with the Thames bespoke licensing strategy applied

Map 12 gives an indication of the resource availability for consumptive abstraction in Loddon area expressed as a percentage of time after the Thames bespoke licensing strategy described in section 3.1 has been applied.

Map 12: Water resource reliability of the Loddon ALS expressed as percentage of time available with the Thames bespoke licensing strategy applied.



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Percentage of the time in an average year resource may be available for consumptive abstraction:

- 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

3.4. 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 generally cover multiple surface water bodies.

Where groundwater abstractions directly impact on surface water flows, the impact is calculated 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 HoF 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 Loddon 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.

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	Lower Loddon	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	102.3	Twyford	Thames Q50 HoF (182 days)
2	Middle Loddon	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	19.5	Sheepbridge	Thames Q50 HoF (182 days)
3	Upper Loddon	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	21.7	No	Thames Q50 HoF (182 days)
4	Bow Brook	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	1.8	No	Thames Q50 HoF (182 days)
5	Whitewater	Restricted water available for licensing	30.0	238 (182 - see additional restrictions)	2.3	Holdshott Farm	Thames Q50 HoF (182 days)
6	Hart	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	13.9	No	Thames Q50 HoF (182 days)
7	Blackwater	Restricted water available for licensing	n/a - see additional restrictions	182 - see additional restrictions	67.6	No	Thames Q50 HoF (182 days)

Table 1 Summary of licensing approach for the assessment points of Loddon ALS after the Thames bespoke licensing strategy is applied. Note - the number of days per annum abstraction may be available assumes average conditions

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 Loddon has two protected areas that are at risk of impacts from abstraction activities due to some the habitat features that make up these protected areas:

- Thursley, Ash, Pirbright & Chobham SAC
- Thames Basin Heaths SPA

All applications for abstraction licences will be assessed in relation to their direct and indirect impacts on protected areas. If an abstraction is deemed to potentially impact a protected area, the licence (if granted) may be conditioned with local, site specific restrictions to ensure the protected area is not impacted. These conditions may be more restrictive than the strategy outlined throughout this document.

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 water rights trades, as with new abstraction licences, we need to make sure that the trade does not cause any deterioration in water body status both within the water body / bodies where the trade will take place, or 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 8-11.

To find out more about water rights 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 full licensed abstraction, but little demand for trading expected within water body as water is 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 water rights 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 Loddon ALS area

Throughout the Loddon ALS area, we are seeking voluntary licence reductions where possible when licences reach their time limited renewal date. Where there is evidence to show an abstraction is causing environmental damage, we may take further steps to reduce licence volumes. Unused and underused licences are being targeted for revocation and reduction respectively. There are further specific actions to address unsustainable abstraction described below. Any action to reduce the impacts of unsustainable abstraction will contribute to improving flows at downstream assessment points.

AP 5: Whitewater

The water resource availability colour is yellow.

Greywell Fen (a SSSI protected area upstream of AP5) and river flows have been impacted historically by public water supply abstraction. South East Water have investigated the impacts of public water supply through the Restoring Sustainable Abstraction Programme. This investigation has identified the South East Water groundwater abstraction at Greywell as having an adverse impact on Greywell Fen. Subsequently, Greywell abstraction will be closing in 2023.

AP 6: Hart

The water resource availability colour is yellow.

The Hart (Crondall to Elvetham) water body upstream of AP6 is currently failing to achieve GES due in part to public water supply abstractions at Boxalls Lane and Itchel. These public water supply abstractions have been investigated by South East Water and identified as contributing to the flow failure. Options to reduce the impacts of these abstractions are currently being explored, and measures will be put in place over the next 6 years.

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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