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Kennet and Vale of White Horse Catchment Abstraction Licensing Strategy

December 2012

A licensing strategy to manage water resources sustainably

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Foreword

Water is the most essential of our natural resources. It's our job to ensure we manage and use it sustainably. South East England is the driest and most densely populated part of the UK yet uses the most water per person. Consequently pressure upon water resources is high, and there are many areas wherein there is little or no water available for abstraction during drier periods.

The latest population growth and climate change forecasts show that pressure upon water resources will only increase. We must continue to maintain and improve sustainable water abstraction, balancing the needs of the environment with those of the population.

This licensing strategy sets out how we will manage water resources, existing and future abstraction licences and water availability within the catchment. These licensing strategies are tailored to the needs of each catchment, taking into account local environmental and abstractor needs. This ensures that only the most appropriate and effective measures are undertaken.

Julia Simpson
Area Manager
West Thames

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1. About the Licensing Strategy

This Licensing Strategy sets out how water resources are managed in the Kennet and Vale of White Horse area. It provides information about where water is available for further abstraction and an indication of how reliable a new abstraction licence may be.

This strategy was produced in December 2012 and it supersedes the strategy issued in March 2006.

How CAMS contributes to achieving environmental objectives under the (WFD) Water Framework Directive

The Water Framework Directive's main objectives are to protect and enhance the water environment and ensure the sustainable use of water resources for economic and social development. Catchment Abstraction Management Strategies (CAMS) set out how we will manage the water resources of a catchment and contribute to implementing the WFD.

CAMS contribute to the WFD by:

- providing a water resource assessment of rivers, lakes, reservoirs, estuaries and groundwater referred to as water bodies under the WFD;
- identifying water bodies that fail flow conditions expected to support good ecological status;
- preventing deterioration of water body status due to new abstractions;
- providing results which inform River Basin Management Plans (RBMPs).

When is an abstraction licence required?

You need a licence from us if you want to abstract more than 20m³/day (4 400 gallons) of water per day from a:

- river or stream
- reservoir, lake or pond
- canal
- spring or
- an underground source

Whether or not a licence is granted depends on the amount of water available after the needs of the environment and existing abstractors are met and whether the justification for the abstraction is reasonable.

If you want to apply for an abstraction licence or make changes to a licence that you already have then, please contact us:

- by telephone on 03708 506 506
- by email at enquiries@environment-agency.gov.uk
- or visit our website at www.environment-agency.gov.uk.

Sustainable abstraction

This licensing strategy has been produced using evidence and information gathered during the Catchment Abstraction Management Strategy (CAMS) process. Through this process we consider the impact of abstraction at all flows. This helps to manage future abstraction more sustainably.

We now assess water resources at a sub-catchment level called water bodies. This means that we can provide more detailed information on the availability of water resources in the Cotswolds CAMS area compared to the scale used in the previous strategy.

Within this strategy we also outline where we may need to reduce current rates of abstraction and our approach on time limiting licences.

The background, aims and principles of CAMS, the over arching principles we use when managing abstraction licences and links with other initiatives are detailed in our document: [Managing Water Abstraction](#). You should read Managing Water Abstraction when reading this catchment specific licensing strategy.

2. Kennet and Vale of White Horse CAMS area

The Kennet and Vale of White Horse CAMS area is situated to the West of the River Thames basin, drained by the Rivers Kennet, Pang, Ray (Wiltshire) and Ock. Figure 1 shows the Kennet and Vale of White Horse CAMS in its entirety. The area is defined by the River Thames to the north, the Hampshire Downs to the south and the Berkshire and Marlborough Downs to the west. The total surface water catchment area is approximately 2270Km².

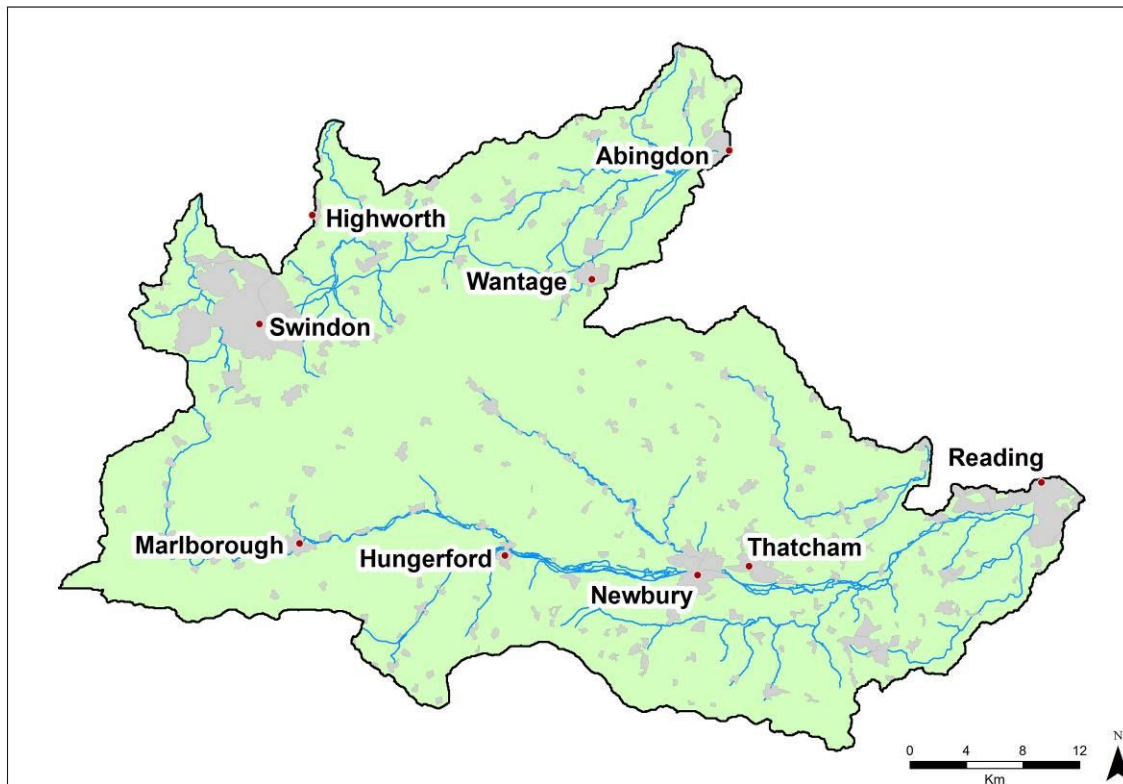


Figure 1 Kennet and Vale of White Horse CAMS (Catchment Abstraction Management Strategy) area

The main rivers within the CAMS area are the River Kennet, its tributaries the Rivers Og, Dun, Aldbourne, Shalbourne, Lambourn, Enbourne and Pang, and the Foundry Brook. The Kennet and Avon canal, which runs from Bristol to Reading, flows through the CAMS area parallel to the River Kennet downstream of Hungerford. At times the canal shares the same channel as the River Kennet. To the north in the Vale of White Horse there are the Rivers Ray, Cole and Ock.

The major urban centres in the CAMS area are Reading, Newbury, Swindon and Abingdon. Direct tributaries of the River Thames such as the Mill Brook at Didcot are now assessed within the River Thames CAMS.

The southeast of the Kennet and Vale of White Horse CAMS area has seen considerable development along the M4 corridor, with further development planned particularly around Swindon. By contrast the southwest is a semi-rural landscape, with the Marlborough Downs characterised by arable farming, horse gallops and permanent chalk grassland. To the north of the area is a predominantly arable and grassland landscape stretching between Swindon and Oxford.

The south of the area consists of Chalk, Upper Greensand and Tertiary deposits. There are extensive gravel and alluvium deposits close to the Rivers Kennet, Lambourn and Pang. The former boundary between the Vale of the White Horse and the Kennet and Pang CAMS is dominated by a Chalk and Upper Greensand outcrop. A groundwater divide, generally following the topography of the escarpment separates the groundwater flow in to the Chalk into the Kennet

catchment and down the scarp slope into the Vale of the White Horse catchment. The flow feeds the headwaters of the surface watercourses within the Vale of the White Horse area. Clays underlie this area resulting in rivers which are typically flashy in nature.

Water abstraction in the CAMS area is from both surface water and ground water. The majority of abstractions are from groundwater and abstraction for public water supply predominates.

The first cycle CAMS catchments of the Kennet and Pang and the Vale of White Horse were merged as a result of a national review of CAMS. Although the catchments are quite different in nature, the merger means that the Chalk aquifer spanning both catchments can be assessed as one groundwater management unit (GWMU).

Both the Kennet and the rivers of the Vale of the White Horse CAMS drain into the Thames. Decisions made in the production of the Thames Corridor CAMS are also likely to impact on these tributary CAMS in the same way.

3. Water resource availability of the Kennet and Vale of White Horse area

3.1 Resource assessment

Resource assessment is at the heart of abstraction management. To manage water effectively we need to understand how much is available and where it is available, after considering the needs of the environment. We have a monitoring network to measure river flows and groundwater levels. We use this data along with our knowledge of human influences and environmental needs to establish a baseline of water availability for each water body that builds into a picture for the catchment. The main components of this assessment that help us to understand the availability of water resources are:

- a resource allocation for the environment defined as a proportion of natural flow, known as the Environmental Flow Indicator (EFI);
- the Fully Licensed (FL) scenario - the situation if all abstraction licences were being used to full capacity;
- the Recent Actual (RA) scenario – the amount of water which has actually been abstracted on average over the previous six years.

River flows change naturally throughout the year, so we want to protect flow variability in our rivers from low to high flow conditions. We use flow statistics to help to do this. Flow statistics are expressed as the percentage of time that flow is exceeded. Resource availability is calculated at four different flows, Q95 (lowest), Q70, Q50 and Q30 (highest). Q95 is the flow exceeded for 95% of the time in an average year, and is therefore a very low flow.

This information gives a realistic picture of what the current resource availability is within a given water body. Water bodies are sub-catchment surface water units or groundwater units on which we carry out assessments and map results.

3.2 Resource availability

Surface water

If you want to abstract water, you need to know what water resources are available within a catchment and where abstraction for consumptive purposes is allowed. To show this we have developed a classification system which indicates:

- the relative balance between the environmental requirements for water and how much is licensed for abstraction;
- whether water is available for further abstraction;
- areas where abstraction may need to be reduced.

The availability of water for abstraction is determined by the relationship between the fully licensed and recent actual flows in relation to the EFI. The results mapped onto these water bodies are represented by different water resource availability colours showing the availability of water resource for further abstraction. The water resource availability colours are explained in **Error! eference source not found.** The availability colours for the AP catchments within the Kennet and Vale of White Horse area are shown in Figure 2. In addition to these water resource availability colours we've classified some surface water bodies as 'high hydrological status' which are coloured blue on the maps. In these water bodies very little actual abstraction occurs and they show virtually undisturbed, or close to natural, flow conditions.

Another category of water body is Heavily Modified Water Bodies (HMWB). These can be classified for many reasons but for water resources they are classified if they contain a lake and/or reservoir that influence the downstream flow regime of the river. The downstream 'flow modified' water bodies are also classified as heavily modified.

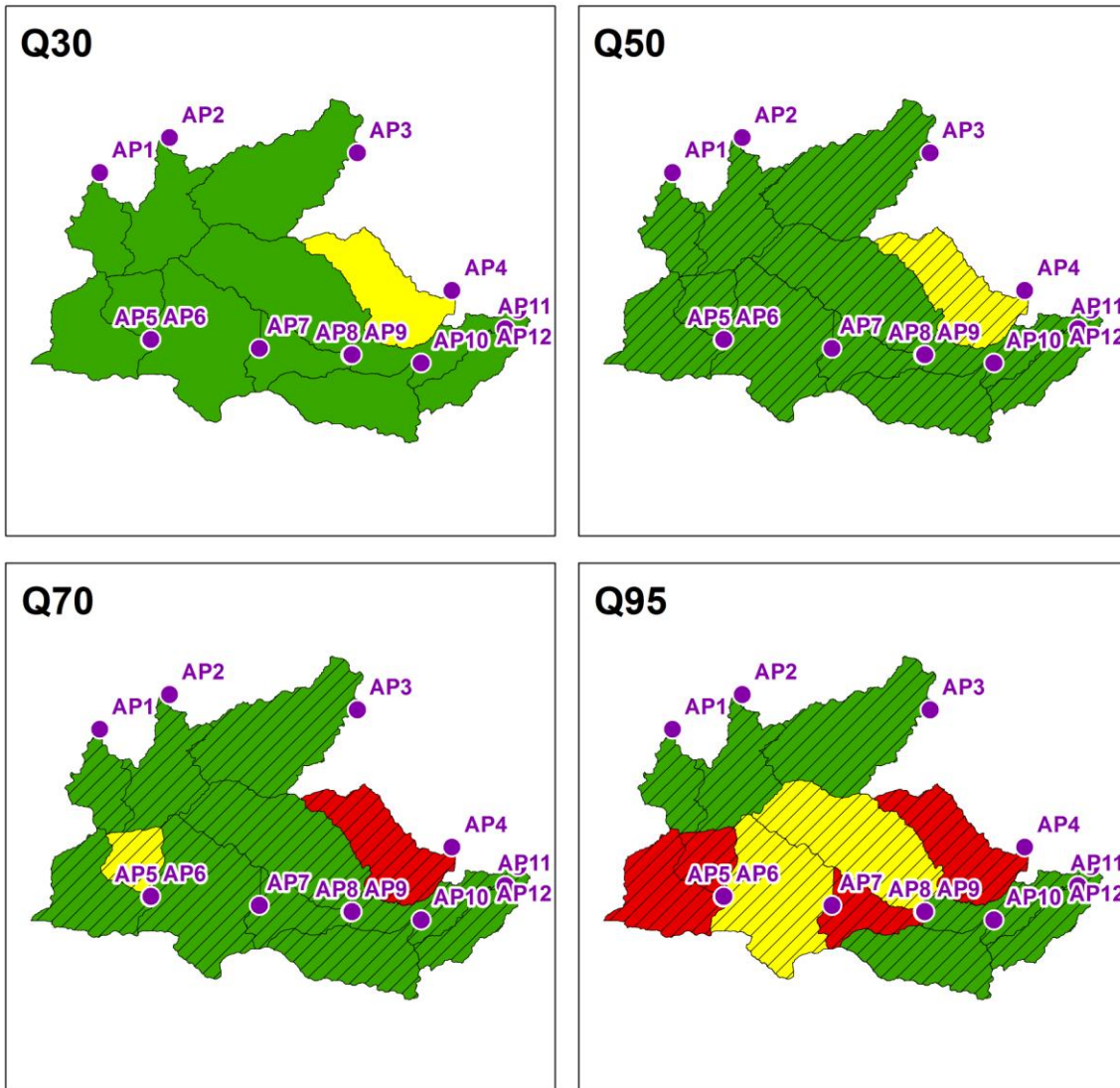
We'll add any conditions necessary to protect flows to a new licence during the licence determination process. We will base licence conditions on the water resource availability at

different flows (high to low). Table 1 lists the implications for licensing for each water resource availability colour.

In cases where there is a flow deficit (RA is below the EFI) or risk of a flow deficit (FL below the EFI), there may be water available for abstraction at higher flows. This means that water may be scarce at low flows, but may be available to abstract at medium or high flows. A licence may still be granted but with conditions which protect the low flows. This usually takes the form of a Hands off Flow (HOF) condition on a licence which requires abstraction to stop when the river flow falls below a certain amount.

Table 1 Implications of water resource availability colours

Water resource availability colour	Implication for licensing
High hydrological regime	There is more water than required to meet the needs of the environment. However, due to the need to maintain the near pristine nature of the water body, further abstraction is severely restricted.
Water available for licensing	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	Full Licensed flows fall below the 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 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	Recent actual flows are below the EFI. This scenario highlights water bodies where flows are below the indicative flow requirement to help support Good Ecological Status (as required by the Water Framework Directive. Note: we are currently investigating water bodies that are not supporting GES. No further consumptive licences will be granted. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder.
HMWBs (and /or discharge rich water bodies)	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.



Water availability for abstraction

- Available
- Restricted
- Not available
- TCAMS Q50 applies
- Assessment points

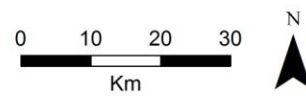


Figure 2 Water resource availability colours for the Kennet and Vale of White Horse area by assessment point (AP) catchment

Groundwater

Groundwater availability is guided by the surface water resource availability colours unless we have better information on principle aquifers or are aware of local issues we need to protect.

3.3 Resource reliability

If you want to apply for a licence, it is worth considering that in some areas a new, consumptive abstraction may not be 100% reliable. Reliability information is based on CAMS resource availability colours and is a way of presenting the reliability of new abstractions at all flows.

The availability of water for abstraction within a river varies greatly from high to low flows. By assessing the quantity of water available at different flows it is 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 on application.

Table 2 shows the resource availability colour associated with the percentage reliability of consumptive abstraction. Figure 3 gives an indication of the resource reliability in the Kennet and Vale of White Horse area expressed as percentage of time.

Table 2 Percentage reliability of consumptive abstraction

Resource	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.
	Not assessed

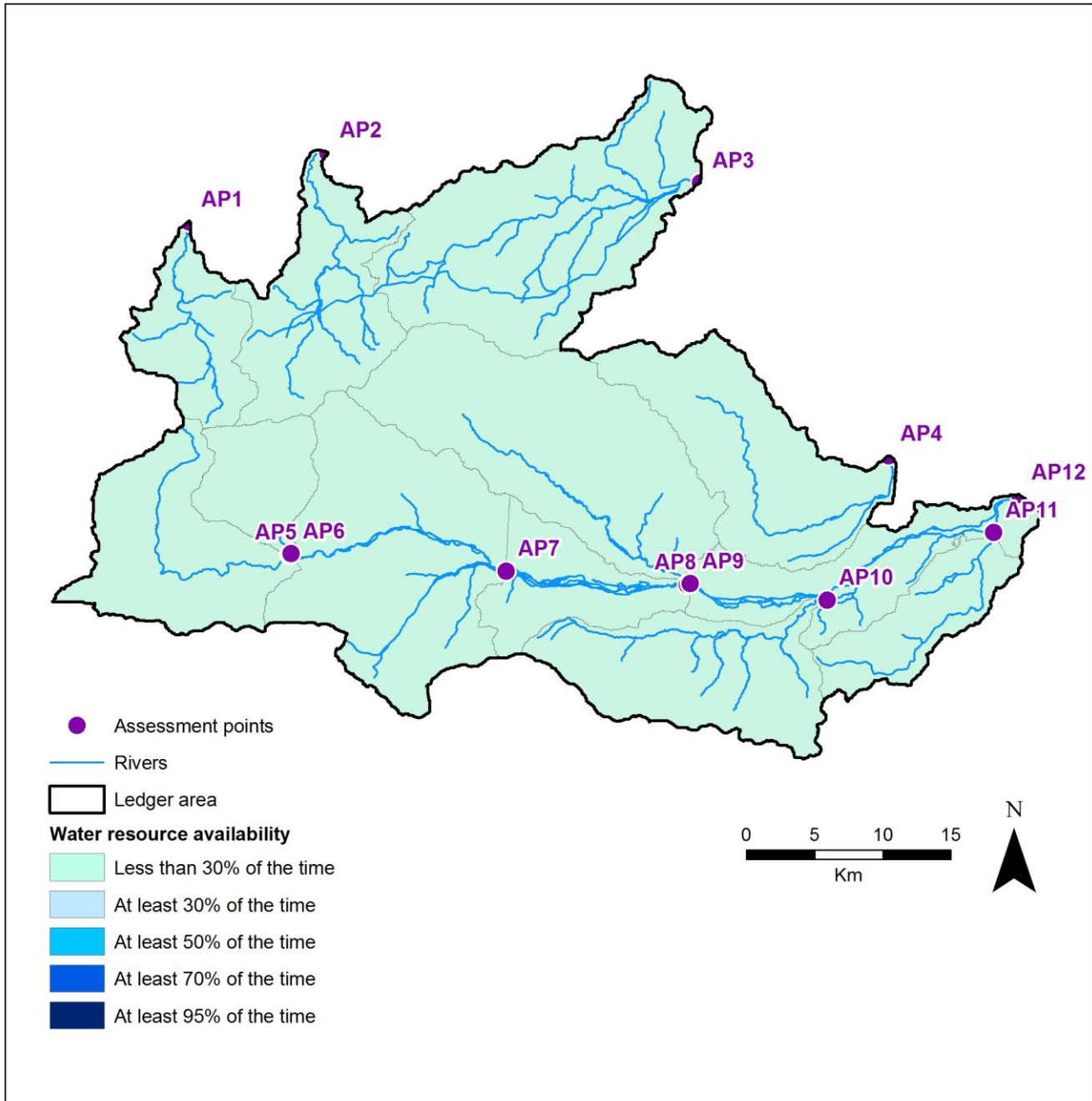


Figure 3 Water resource availability expressed as percentage of time available

4. How we manage abstractions in the Kennet and Vale of White Horse area

4.1 Principles

The document [Managing Water Abstraction](#) outlines the over-arching principles that we follow in managing our water resources. How we apply these principles in the Kennet and Vale of White Horse area is outlined in this section. If you want to abstract water it outlines where water is available for further abstraction and the principles we follow in assessing your application for a licence.

Abstraction license application process

Anyone wanting to take more than 20m³/day (4 400 gallons) from a 'source of supply' (river, stream, lake, well, groundwater, etc) must have an abstraction licence. The application process for abstraction is similar to the planning process in that we may require the application to be advertised and may require supporting environmental information. When considering the application we check that the quantities applied for and the purpose of the abstraction are reasonable, that there is sufficient water available to support it and that the potential impacts on the environment and other water users are acceptable. Depending on the outcome of our investigations we will issue a licence either as applied for, or with conditions that restrict the abstraction to protect the environment or other users. In certain cases we may have to refuse the application. Any applicant who is not happy with our determination (decision) has the right to appeal against it.

Each application is determined on its own merits

Whilst this document may say that water is available for further abstraction, this does not guarantee that all applications will be successful. We'll determine each application upon its own merits and any local impacts.

A licence does not guarantee that water is available

It's important to understand that when we issue a licence we do not guarantee the supply of water. We have to protect the environment and rights of other abstractors. To do this we may add constraints to licences. Licence holders need to understand the implications of this as it affects the reliability of supply. For example, in drier years it's more likely that conditions will come into effect and abstraction is more likely to be stopped.

All abstraction licence applications will be subject to an assessment to take account of any local issues and will be **granted on a first come first served basis**.

Abstractions are managed to protect the environment.

No ecological deterioration

We assess the impact of new applications for water to make sure that the resultant river flows:

- will maintain a good ecology or if the ecology is not good, will not deteriorate the ecology of our rivers further;
- will maintain the near pristine condition of high hydrological regime water bodies.

We'll also take action if necessary to limit the increase in current abstraction, if we think this will lead to deterioration of the ecology or the near pristine condition of our high hydrological regime water bodies.

These principles apply to the water body in which the abstraction is located and also to all downstream water bodies that may be affected by any reduction in abstraction related flow. Doing this means that we will maintain the water body status as reported in the River Basin Management Plans (2009) and ensure compliance with the European Union Water Framework Directive.

Water efficiency and demand management

We need to make the best use of our existing water resources. Adopting water efficiency and demand management measures can help us achieve this goal. Water efficiency is one of the tests that will need to be satisfied before we grant a new licence or renew a time limited licence. We will promote the wise and efficient use of water and actions to limit demand (and reduce leakage) to curb the growth in abstraction and limit the impact on flows and any consequent impact on the ecology. For further details on our general approach to licensing please see the document [Managing Water Abstraction](#).

Impoundments

Applications for impoundments will be dealt with on a case-by-case basis. An impoundment is a dam, weir or other construction in an inland waterway that obstructs or impedes flow and/or raises water levels.

Hydropower

Water abstraction for hydropower schemes is non-consumptive, with all water used returned to the watercourse. Hands off Flows and maximum abstraction volumes are determined in line with the Environment Agency's Hydropower Good Practice Guidelines and based on the assessment of environmental risk for each scheme. For further information please refer to our [website](#).

4.2 Abstraction restrictions

When issuing a licence we have to protect the environment and rights of other abstractors. To do this we may add conditions to licences.

Time limited licences

In recognition of changing pressures on water resources all new licences and variations (other than downward variations or minor variations having no environmental impact) will have a time limit imposed. This allows for the periodic review and changes to abstraction licences where circumstances have changed since the licence was granted.

All new licences within a CAMS area have a **common end date** (CED) so they can be reviewed at the same time. When an application is made within six years of the CED, we will generally apply the subsequent CED to any licence granted. This is to avoid issuing shorter and shorter duration licences as the CED approaches. This means that the initial CED on a licence may be between six and 18 years duration. On replacement the normal duration will then usually be 12 years.

However, where we are uncertain about the long term impacts of an abstraction we will grant a short term licence during which time potential impacts are monitored.

Additional information about the replacement of time limited licences is available in [Managing Water Abstraction](#).

We will notify licence holders before the expiry of their licence. Licence holders will then need to apply for a renewal of that licence. There is a presumption that time limited licences will be renewed if:

- There is a continued justification of need (where this is not met we will consider reducing licensed quantities to reflect actual abstraction rates);
- The water is used efficiently;
- Environmental sustainability is not in question. Where environmental damage is found to be occurring we will refuse a renewal or seek changes to the licence to prevent further damage occurring.

We endeavour to give six years notice if a licence will not be renewed or if it is to be renewed on more restrictive terms which impact significant on the use of that licence.

Hands off flow conditions

To protect the environment we may issue a licence with a condition referred to as a 'Hands-Off Flow' (HOF). This specifies that if the flow in the river drops below that which is required to protect the environment abstraction must stop, hence 'Hands-Off Flow'. A HOF will be set from a nearby gauging station. When flows in the river fall below the prescribed HOF, **we will notify those licence holders with a HOF condition to stop abstraction. We will also notify them when they can restart.**

Thames Q50 HOF

The lower River Thames is classed as water not available for licensing. Any consumptive abstraction from the tributaries will reduce flows in the lower Thames. Flows in the River Thames need to be maintained for the environment, navigation, recreation and existing licences, including abstractions for public water supply. The Rivers Kennet, Pang, Ray, Cole and Ock are all tributaries of the Thames and as such any licensing strategy for this CAMS will need to take into account the flow requirements of the River Thames.

Therefore all new consumptive abstraction licences from surface water and new consumptive groundwater abstractions in direct hydraulic continuity with the surface water will be constrained by a HOF to protect flows in the River Thames. They may also be subject to a secondary local HOF to protect flows in the local river if needed.

The HOF to protect the Lower Thames will be Q50 as measured at Kingston gauging station on the River Thames. The Q50 is the flow value that would be exceeded for 50% of the time in an average year. This HOF will be enforced when measured flows at Kingston gauging station fall below Q50, equivalent to 1780 ML/day, which is likely to be during summers (April – October) or in dry winters. The Q50 value was determined through the first cycle of CAMS and published in the Thames Corridor licensing strategy in June 2004.

At the time of publication of this Kennet and Vale of White Horse CAMS the Thames Corridor CAMS is under review, and waiting local data and evidence to reassess the flow requirement of the River Thames. When the revised Thames Corridor CAMS is published, it will supersede the existing licensing strategy, which may result in policies that are more restrictive than those already stated. Please check our website for the latest Thames Corridor CAMS document.

Applicants need to ensure they have read and understood the potential implications of these revised policies for their proposal. Where there is uncertainty on the potential implications of these policies you are advised to contact us before proceeding with your proposal.

4.3 Surface water

We assess surface water flows at Assessment Points (APs) which are significant points on the river, often where two major rivers join or at a gauging station. Where flows fall below the EFI, new abstractions may be subject to HoFs.

Where flows fall below the EFI, new abstractions may be subject to HOFs. 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 **Error! eference source not found.** if applicable.

Error! Reference source not found. gives an indication of how much water is available for further abstraction and the associated restrictions that we may apply to new and varied abstraction licences from the main river. Tributaries to the main river may be subject to different restrictions and quantities.

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 3 are the APs in the Kennet and Vale of White Horse CAMS area. Reading across the columns you can see the potential HOF that may be applied to a licence, the number of days water may be available under this restriction and the approximate volume of water in MI/d that may be available. 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 3 Assessment points, water availability and HOFs within the Wey CAMS area

AP	Name	Water resource availability (colour) at low flows	HOF restriction (Q _{value})	HOF restriction (MI/d)	Number of days per annum abstraction may be available	Approximate volume available at restriction (MI/d)	Gauging station (GS) at this AP?	Additional restrictions (assuming average conditions)
1	Ray	Water available for licensing	No local HOF		365	37.6	Water Eaton	Thames Q50 HOF Abstraction restricted to 182 days per annum
2	Cole	Water available for licensing	No local HOF		365	2.7	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
3	Ock	Water available for licensing	No local HOF		365	9.2	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
4	Pang	No water available for licensing	Q ₂₂	73.5	80	10.4	Pangbourne	Thames Q50 HOF Abstraction restricted to 182 days per annum
5	Upper Kennet	No water available for licensing	Q ₇₅	21.3	274	3.5	Marlborough	Thames Q50 HOF Abstraction restricted to 182 days per annum
6	Og	No water available for licensing	Q ₅₆	10.4	208	1.2	Malborough (Poulton Farm)	Thames Q50 HOF Abstraction restricted to 182 days per annum
7	Upper Middle Kennet	Restricted water available for licensing	Q ₇₅	163.5	274	13.5	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
8	Lower Middle Kennet	No water available for licensing	Q ₇₅	222.3	274	8.2	Newbury	Thames Q50 HOF Abstraction restricted to 182 days per annum
9	Lambourn	Restricted water available for licensing	Q ₇₄	86.4	270	1.1	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
10	Enborne	Water available for licensing	No local HOF		365	0	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
11	Foudry Brook	Water available for licensing	No local HOF		365	57.1	No	Thames Q50 HOF Abstraction restricted to 182 days per annum
12	Lower Kennet	Water available for licensing	No local HOF		365	21.7	No	Thames Q50 HOF Abstraction restricted to 182 days per annum

4.4 Licensing strategy for surface waters and groundwater

This section describes the licensing strategy and available water resource in the catchment to each Assessment Point. Each AP also has an associated sub-catchment, covering the area that drains into the AP. The AP sub-catchments in the Kennet and Vale of White Horse CAMS area are shown in Figure 4.

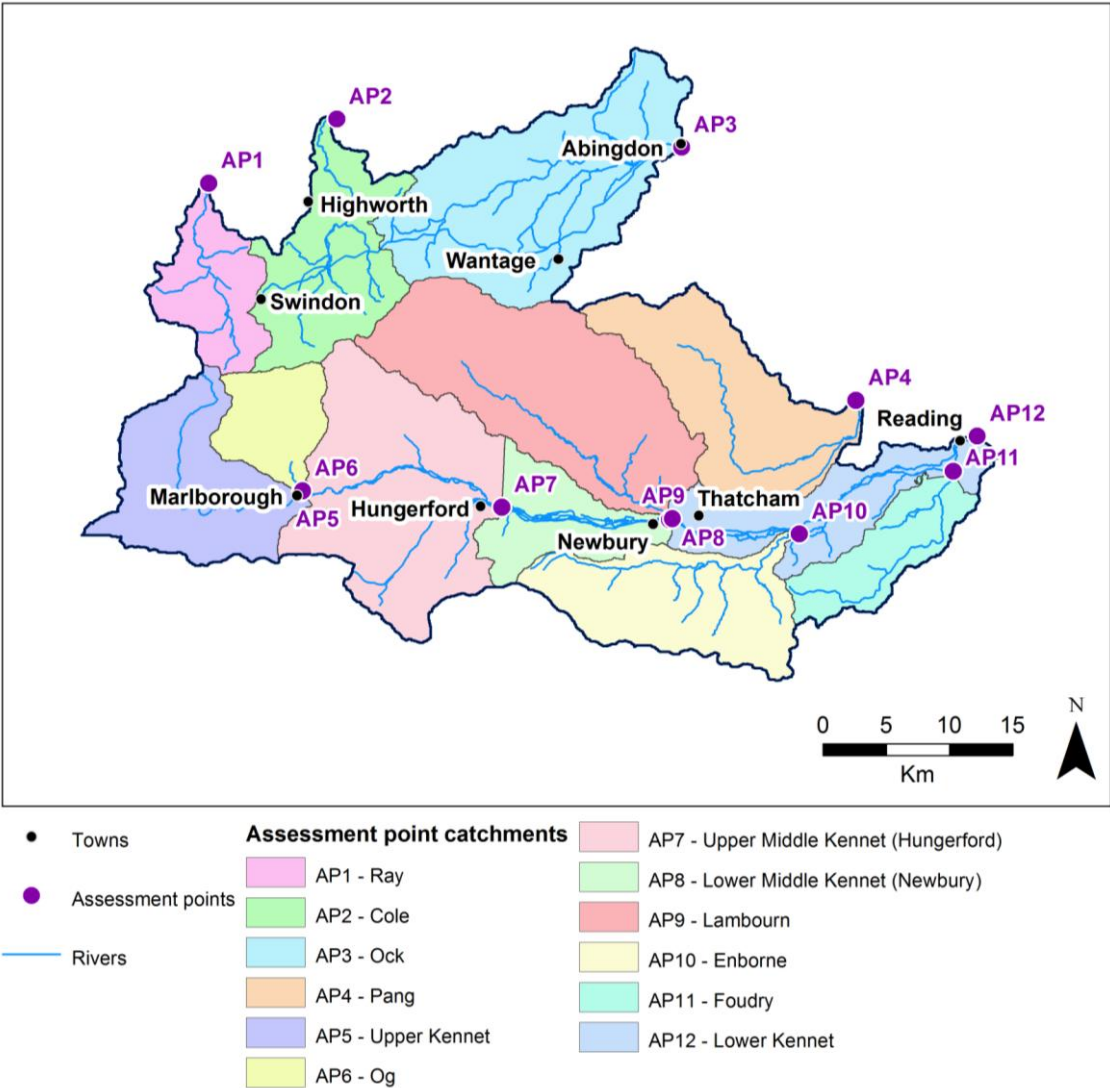


Figure 4 APs and associated catchments within the Kennet and Vale of White Horse area

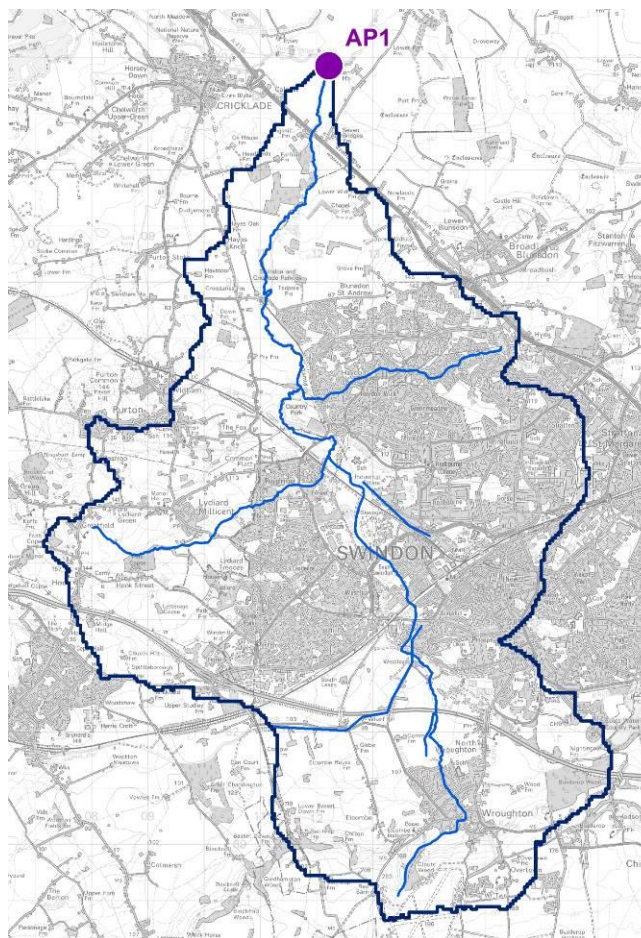
AP1 - Ray

The Ray has local resource status of 'water available for licensing'.

This status is overridden by the flow requirements of the Thames, which changes the status to 'Water not available for licensing'

This means that for new licences at AP1:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.



Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence

AP2 - Cole

The Cole has local resource status of 'water available for licensing'.

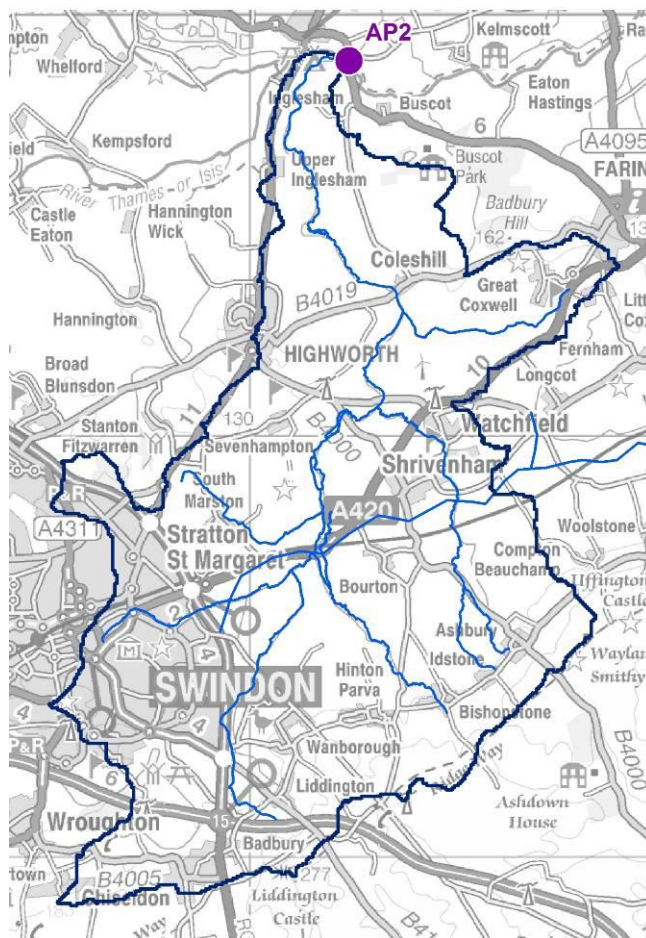
This status is overridden by the flow requirements of the Thames, which changes the status to 'Water not available for licensing'

This means that for new licences at AP2:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- No new consumptive licences will be granted at low flows to protect the requirements of the Thames.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

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- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP3 – Ock

The Ock has local resource status of ‘water available for licensing’.

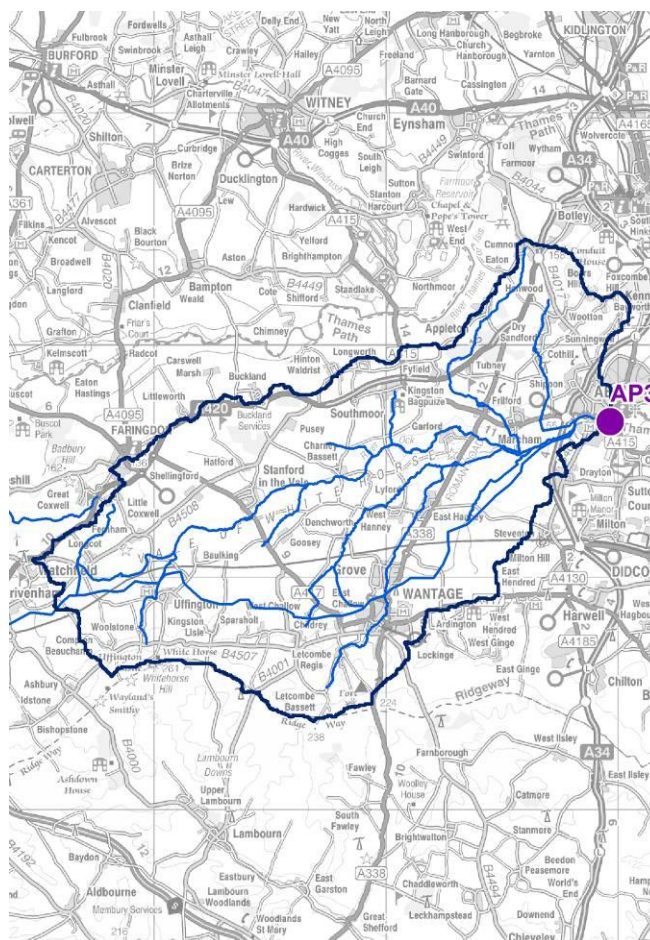
This status is overridden by the flow requirements of the Thames, which changes the status to ‘Water not available for licensing’

This means that for new licences at AP3:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- No new consumptive licences will be granted at low flows to protect the requirements of the
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years’ notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP4 - Pang

The Pang has local resource status of water not available for licensing.

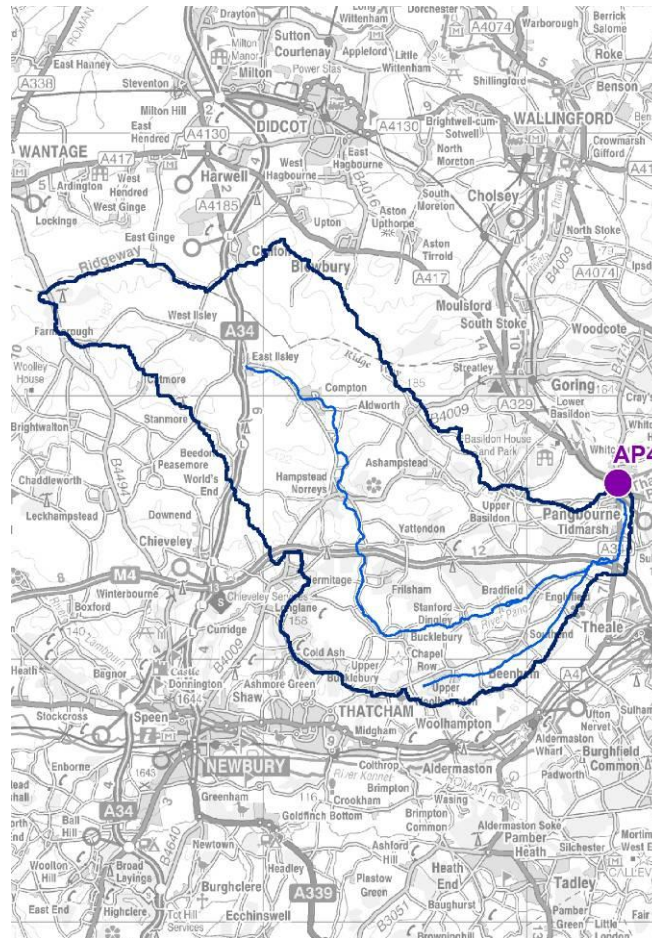
The status of the River Thames is also Water not available for licensing.

This means that for new licences at AP4:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water Pang and the Thames. This will consist of the Thames Q50 HOF and a local HOF of Q75 (73.5 ML/day) gauged at Pangbourne gauging station.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



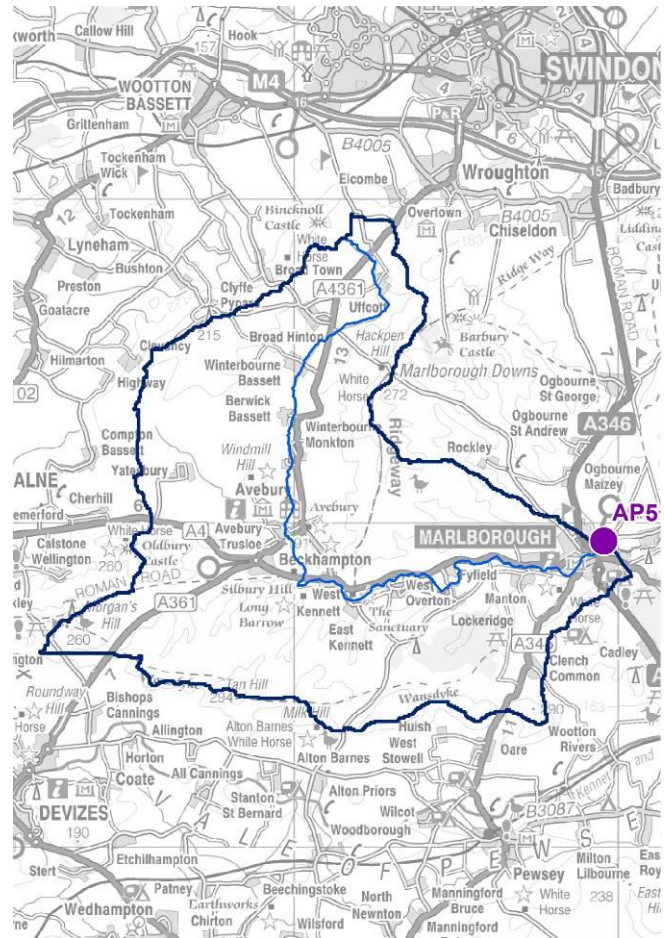
AP5 – Upper Kennet

The Og has local resource status of Water not available for licensing.

The status of the River Thames is also water not available for licensing

This means that for new licences at AP5:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a dual HOF system to protect flows in Kennet and the Thames. This consists of the Thames Q50 HOF and a local HOF of Q75 as gauged at Marlborough gauging station (21.3 ML/day).
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.



Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence

AP6 - Og

The Og has local resource status of Water not available for licensing.

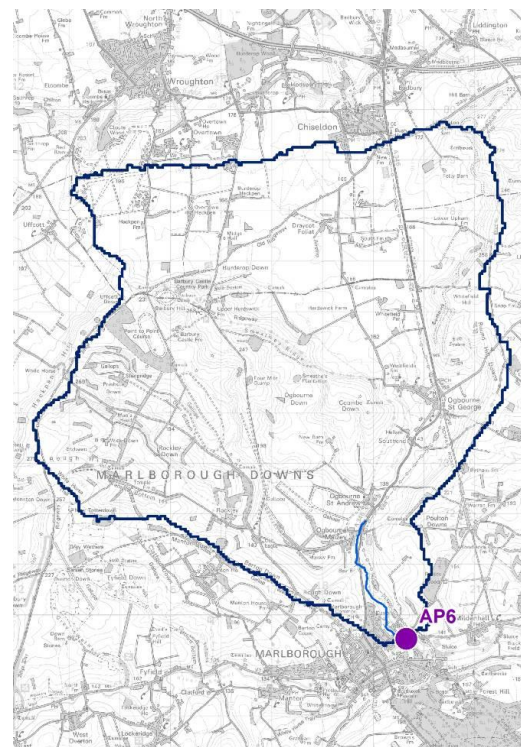
The status of the River Thames is also water not available for licensing.

This means that for new licences at AP6:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a dual HOF system to protect flows in the Og and the River Thames. This consists of the Thames Q50 HOF and a local HOF of Q57 as gauged at Poulton Farm gauging station (10.4 ML/day).
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP7 – Upper Middle Kennet (Hungerford)

The Upper Middle Kennet has local resource status of 'restricted water available for licensing'.

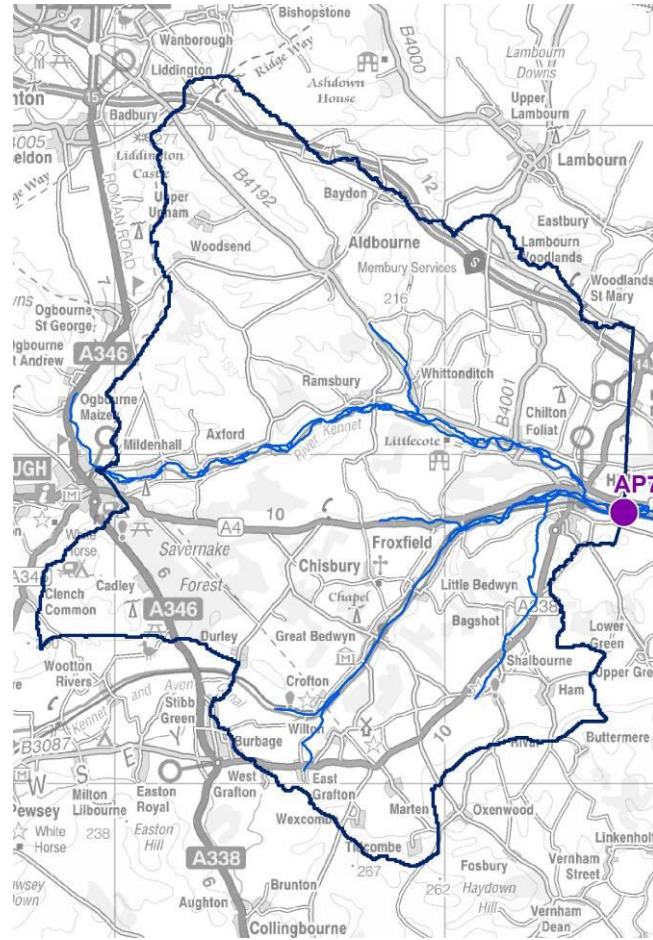
This status is overridden by the flow requirements of the Thames, which changes the status to 'Water not available for licensing'

This means that for new licences at AP7:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a dual HOF system to protect flows in the Kennet and the Thames. This consists of the Thames Q50 HOF and a local HOF (Q75 at Knighton gauging station, 163.5 MI/day).
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP8 – Lower Middle Kennet

The Lower Middle Kennet has local resource status of Water not available for licensing.

The status of the River Thames is also Water not available for licensing.

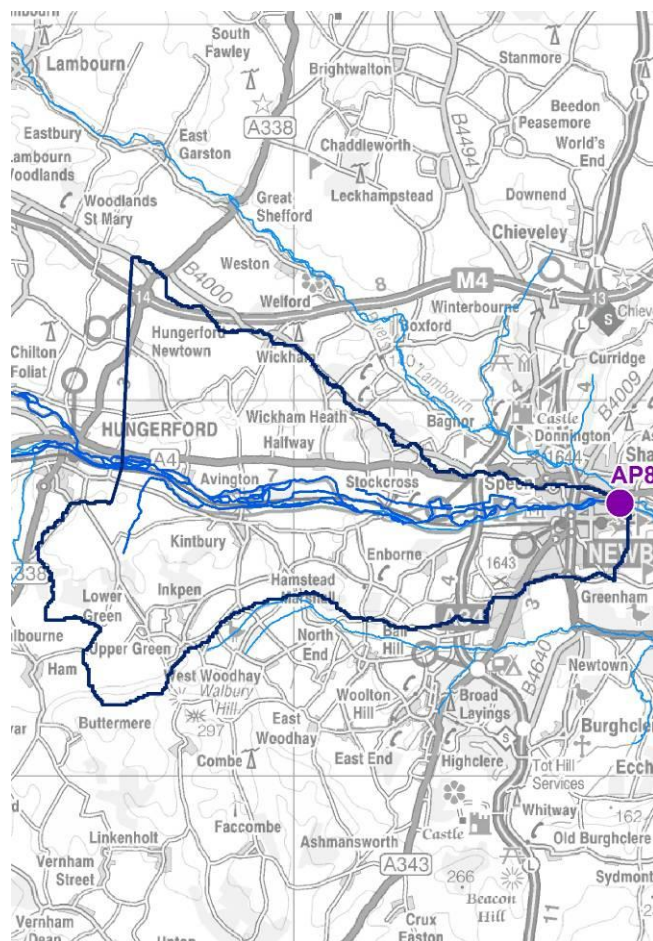
This means that for new licences at AP8:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a dual HOF system to protect flows in the Kennet and the Thames. This consists of the Thames Q50 HOF and a local HOF of Q75 as gauged at Newbury gauging station (223.3 ML/day).
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow, may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.

We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP9 – River Lambourn

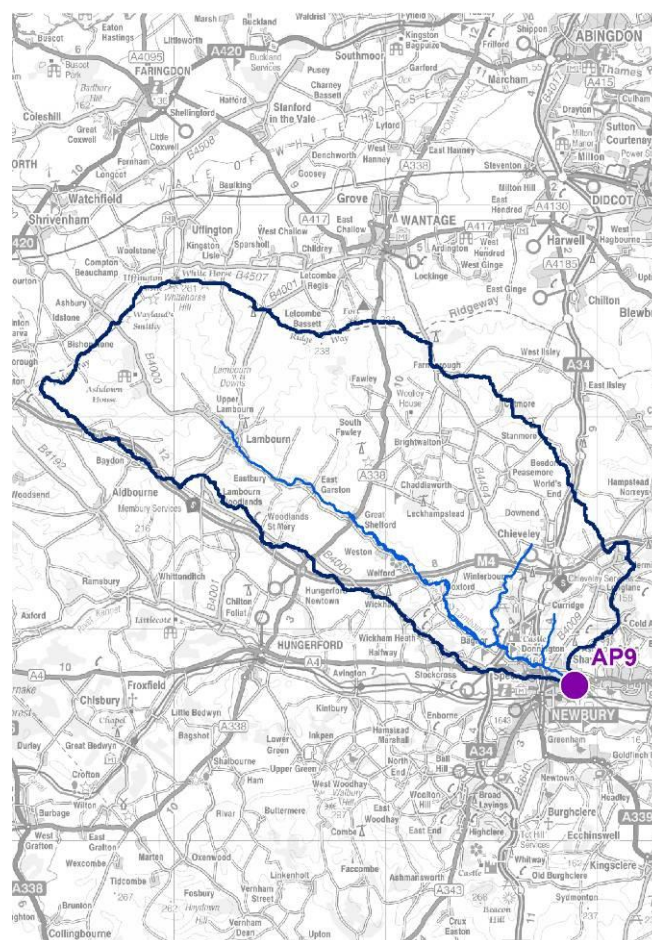
The River Lambourn has a local resource status of ‘restricted water available for licensing’. This status is overridden by the flow requirements of the Thames, which changes the status to ‘Water not available for licensing’

This means that for new licences at AP9:

- No new consumptive licences will be granted at low flows.
- Water is only available during periods of high flow.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a dual HOF system to protect flows in the Lambourn and the Thames. This consists of the Thames Q50 HOF and a local HOF of Q74 (86.4 MI/day) gauged at Shaw gauging station.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years’ notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP10 – River Enborne

The Enborne has local resource status of ‘water available for licensing’.

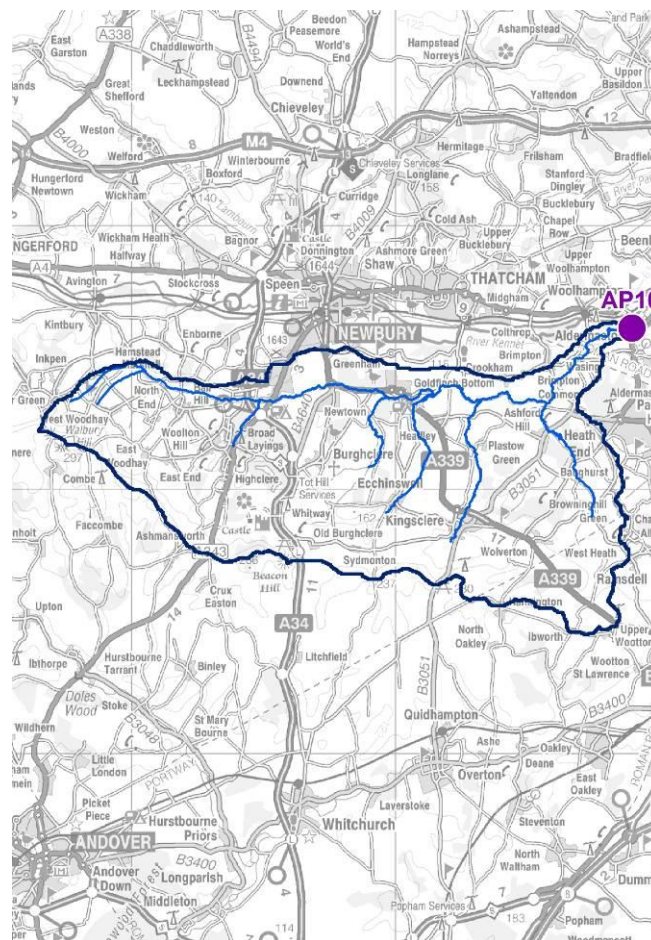
This status is overridden by the flow requirements of the Thames, which changes the status to ‘Water not available for licensing’

This means that for new licences at AP10:

- No new consumptive licences will be granted at low flows to protect the requirements of the Thames.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years’ notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP11 – Foudry Brook

The Foudry Brook has local resource status of 'water available for licensing'.

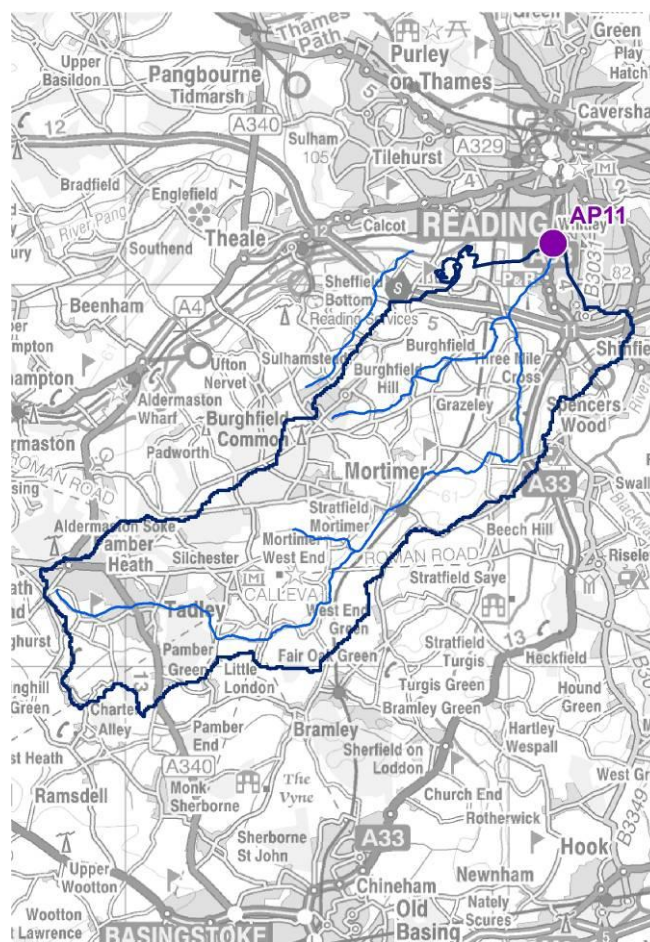
This status is overridden by the flow requirements of the Thames, which changes the status to 'Water not available for licensing'

This means that for new licences at AP11:

- No new consumptive licences will be granted at low flows to protect the requirements of the Thames.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct impact and immediate impact on river flow may be permitted all year, providing the level of resource use allows, but may have restrictions such as prescribed groundwater level. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years' notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



AP12 – Lower Kennet

The Lower Kennet has local resource status of ‘water available for licensing’.

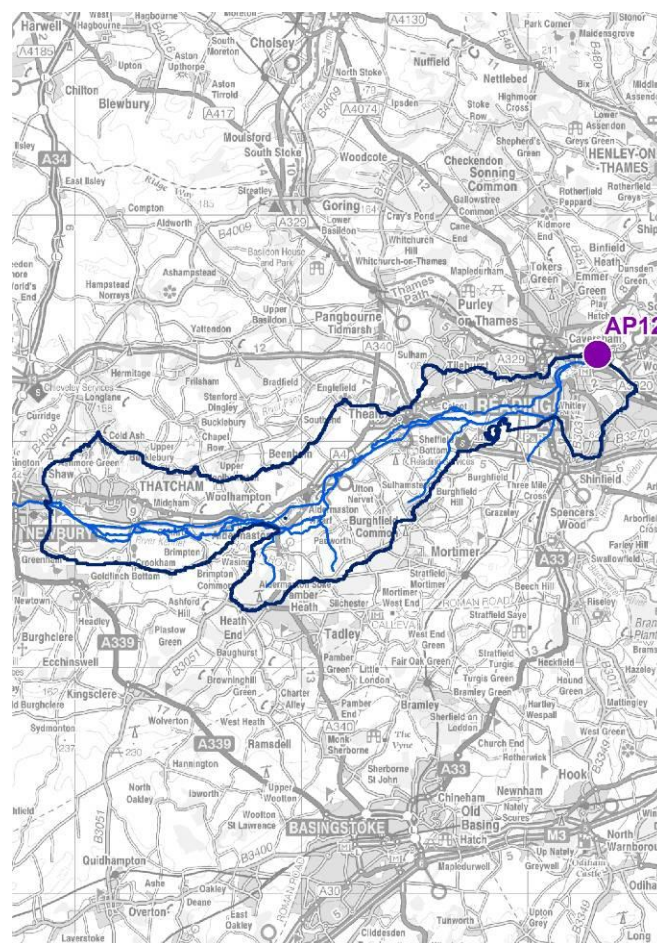
This status is overridden by the flow requirements of the Thames, which changes the status to ‘Water not available for licensing’

This means that for new licences at AP12:

- No new consumptive licences will be granted at low flows to protect the requirements of the Thames.
- All new consumptive surface water and groundwater licences in direct hydraulic continuity with surface water will be subject to a Thames Q50 HOF, 1780 ML/day as gauged at Kingston gauging station on the Lower Thames.
- Consumptive groundwater licences, which do not have a direct or immediate impact on river flows may be permitted all year, providing the level of resource use allows. However restrictions such as prescribed groundwater levels may be applied. Restrictions will be determined case-by-case based on the nature and scale of the abstraction.
- Licences for non-consumptive purposes or with a net benefit to the environment may be granted irrespective of the resource availability status.
- All licences will be time limited to the CAMS common end date.

Renewals and management of existing licences

- There will be a presumption of renewal, subject to the other renewal criteria and local considerations.
- Time-limited licences may be renewed with more restrictive terms and conditions. For example, the licensed quantity may be reduced to reflect actual abstraction.
- We will endeavour to give six years’ notice of non-renewal, or of renewal on more restrictive terms that impact significantly on the use of the licence



Important local features and protected areas that may affect water availability

This strategy involves the comparison of flows arising from specific licensing and abstraction scenarios against those necessary to meet the environmental needs of that particular stream type (the EFI). It is after this comparison that water availability for each AP catchment is determined.

There may arise situations wherein this EFI offers only an *approximation* of the water needs for that particular catchment. Consequently water availability for a defined point may differ from that reported for the wider catchment. This is due to the presence of Sites of Special Scientific Interest (SSSIs), Biodiversity Action Plan areas (BAPs) and other such areas designated and protected under schemes independent of any licensing strategy. Such areas may have their own specific flow or level requirements that differ to the wider catchment.

These protected areas are managed separately from the licensing strategies. Abstraction licence applications within catchments where such areas exist will be considered on a case-by-case basis. The likely impacts of any proposed abstraction and the needs of any nearby protected areas will need to be assessed before any licence is granted. Applicants are advised to contact the Environment Agency for further information prior to submitting an application.

4.5 Opportunities for licence 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 do not cause any deterioration in WFD water body status both within the water body / bodies where the trade will take place or to downstream water bodies. The table below provides a guide to the potential for trading in water bodies of a particular CAMS water resource availability colour, as shown in Figure 2

Table 4 Opportunities for licence trading

CAMS water resource availability colour	Our approach to trading
High hydrological regime	Opportunities for trading water rights will be limited
Water available for licensing	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	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
Water not available for licensing	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	Opportunities for trading will depend on local operating agreements and local management.

To find out more about licence trading please go to our [website](#).

4.6 New Authorisations

The Water Act 2003 brought all significant water abstraction under licensing control. This will result in trickle irrigation, dewatering of mines, quarries, engineering works and construction sites, abstractions related to Internal Drainage Districts, navigation abstraction and abstraction for ports and harbour authorities and other local exemptions coming into the licensing regime.

As a result we'll be able to manage water resources more effectively by ensuring that all significant activities influencing the availability of water and its impact on the environment are undertaken in a sustainable manner.

Government are still developing their policies as to how to resolve some of the issues raised during the consultation process. Government will publish their proposals before new regulations are implemented and expect to do this at least 3 months before commencement so that we can issue guidance to those affected by the changes.

Where we have details of these abstractions we have included them in our assessments to consider how they impact on the catchment.

4.7 Restoring Sustainable Abstraction

Where water abstractions cause or potentially cause actual flows to fall short of the EFIs and result in environmental damage, we may need to change or even revoke existing abstractions in order to achieve a sustainable abstraction regime. Within the Kennet and Vale of White Horse CAMS there are 4 water bodies in which recent actual flows have fallen below the EFI. The abstraction licences within these water bodies that cause these issues are being investigated as part of the RSA programme. Investigations into the impact caused by these licences, individually or cumulatively, will result in options being developed with licence holders on how to improve sustainability. Investigations will include a cost/benefit analysis. Information on how licences in the RSA programme are dealt with can be found in our [Step by Step guide](#) on our website.

4.8 Water Framework Directive water bodies under investigation

In addition to the RSA programme, we are investigating whether reduced water flow may be causing problems under the Water Framework Directive (WFD). About four percent of rivers in England and Wales are failing to support WFD good ecological status due to pressures from over-abstraction.

Glossary of terms

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 Unit	Point at which the flow from upstream catchment is assessed.
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 (i.e. water, sewage, etc.) into surface waters.
Environmental flow indicator	Flow indicator to prevent environmental deterioration of rivers, set in line with new UK standards set by UKTAG.
Full licence	A licence to abstract water from a source of supply over a period of 28 days or more
Groundwater	Water that is contained in underground rocks.
Hands off flow	A condition attached to an abstraction licence which states that if flow (in the river) falls below the level specified on the licence, the abstractor will be required to reduce or stop the abstraction.
Hands off level	A river flow or borehole (groundwater) level below which an abstractor is required to reduce or stop abstraction.
Impoundment	An impoundment is a structure that obstructs or impedes the flow of inland water, such as a dam, weir or other constructed works.
Protected right	Means a right to abstract, which someone has by virtue of the small abstractions exemptions defined in the Water Act 2003 or by virtue of having an abstraction licence. The right protected is the quantity that can be abstracted up to that allowed by the exemption or the terms of the licence. The small abstraction exemptions defined by the Water Act 2003 are for domestic and agricultural purposes (excluding spray irrigation) not exceeding 20 m ³ /d.
Surface water	This is a general term used to describe all water features such as rivers, streams, springs, ponds and lakes.
Transfer licence	A licence to abstract water from one source of supply over a period of 28 days or more for the purpose of; <ol style="list-style-type: none"> 1. transferring water to another source of supply; or, 2. transferring water to the same source of supply, but at another point, in the course of dewatering activities in connection with mining, quarrying, engineering, building or other operations (whether underground or on the surface); without intervening use.
Water body	Units of either surface water or groundwater at which assessments are completed for WFD.

List of abbreviations

AMP	Asset Management Plans
AP	Assessment Point
ASB	Abstraction Sensitivity Bands
AWB	Artificial Water body
CAMS	Catchment Abstraction Management Strategies
CED	Common End Date
Defra	Department of Environment Fisheries and Rural Affairs
EA	Environment Agency
EFI	Ecological Flow Indicator
FL	Full Licensed (scenario)
GEP	Good Ecological Potential
GES	Good Ecological Status
GW	Groundwater
HES	High Ecological Status
HMWB	Heavily Modified Water Body
HoF	Hands off Flow
HoL	Hands off Level
LDE	Level Dependent Environment
MI/d	Megalitres per day
maOD	Metres above ordnance datum
Q95	The flow of a river which is exceeded on average for 95% of the time.
RA	Recent Actual (scenario)
RSA	Restoring Sustainable Abstraction
RBMP	River Basin Management Plans
SAC	Special Areas of Conservation
SPA	Special Protection Areas
SSSI	Sites of Special Scientific Interest
SW	Surface water
UKTAG	United Kingdom's Technical Advisory Group
WB	Water body
WFD	Water Framework Directive
WRGIS	Water Resources Geographical Information System

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