Upper Ouse and Bedford Ouse abstraction licensing strategy

A strategy to manage water resources sustainably

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8 May 2017

We are the Environment Agency. We protect and improve the environment.

Acting to reduce the impacts of a changing climate on people and wildlife is at the heart of everything we do.

We reduce the risks to people, properties and businesses from flooding and coastal erosion.

We protect and improve the quality of water, making sure there is enough for people, businesses, agriculture and the environment. Our work helps to ensure people can enjoy the water environment through angling and navigation.

We look after land quality, promote sustainable land management and help protect and enhance wildlife habitats. And we work closely with businesses to help them comply with environmental regulations.

We can't do this alone. We work with government, local councils, businesses, civil society groups and communities to make our environment a better place for people and wildlife.

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Environment Agency
Horizon House, Deanery Road,
Bristol BS1 5AH
Email: enquiries@environment-agency.gov.uk
www.gov.uk/environment-agency

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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 Upper Ouse and Bedford Ouse catchment in the Anglian river basin district. The Upper Ouse and Bedford Ouse CAMS covers an area of approximately 3043km2, with the character of the land varying from the gently rolling upper catchment moving to more extensive river valley flood plains and flood meadows downstream. It stretches from Brackley in the South across to Letchworth in the East and Earith in the North.

Our approach ensures that River Basin Management Plan (RBMP) objectives for water resources activities are met and we avoid deterioration within this catchment.

We apply this approach to the water body in which the abstraction is located. It also applies to all downstream surface water bodies that may be affected by any reduction in abstraction-related flow, or adjacent groundwater bodies affected by any reduction in groundwater level.

Please see managing water abstraction on GOV.UK for the technical explanation, legal and policy requirements behind the Abstraction Licensing Strategy (ALS).

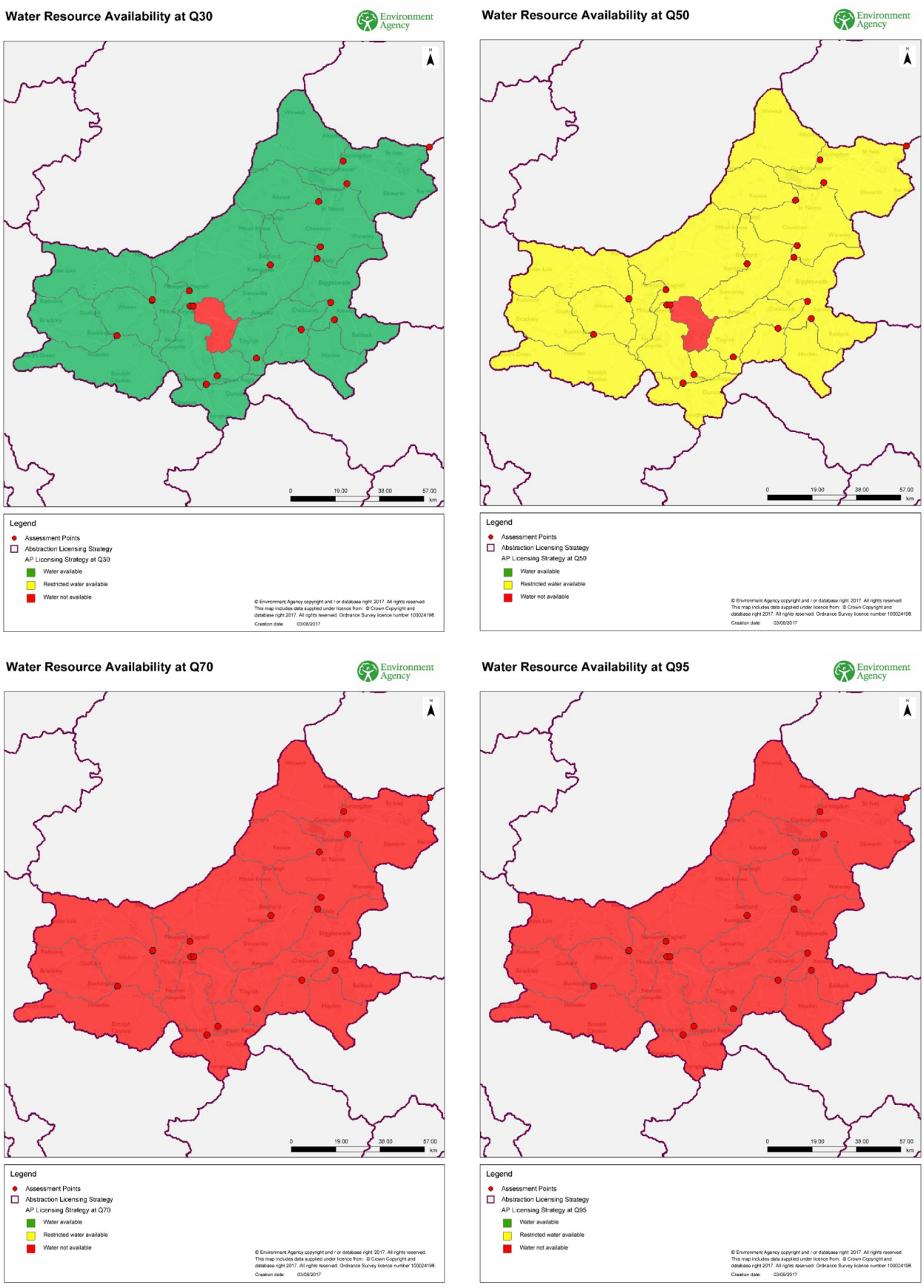
Please see the abstraction pages on GOV.UK for advice on who needs an abstraction or impoundment licence, and how to apply.

2. Water resource availability of the Upper Ouse and Bedford Ouse ALS

2.1. Resource availability

The water resource availability, calculated at four different flows, Q95 (lowest), Q70, Q50, and Q30 (highest) for this ALS are presented and explained in Map 1 and Table 1 below.

Licence renewals will continue to be considered with regard to environmental sustainability, justification of need, and efficient use of water. We must ensure that the licensing of abstraction is sustainable and won't cause deterioration in the ecology of our rivers, wetlands and estuaries or deplete groundwater resources. Section 4.2 contains more information on how our approach to renewing time limited licences will manage the risk of deterioration.



Map 1 Water resource availability colours for Upper Ouse and Bedford Ouse ALS

Table 1 explains the water resource availability colours and their implications for licensing

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. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment. Abstractions for non-consumptive uses can still be permissible in catchments where there are sustainability issues.
Restricted water available for licensing	Full Licensed flows fall below the Environmental Flow Indicators (EFIs). If all licensed water is abstracted there will not be enough water left for the needs of the environment. No new consumptive licences would be granted. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment. 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. Abstractions for non-consumptive uses can still be permissible in catchments where there are sustainability issues.
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/Potential (GES/P) (as required by the Water Framework Directive Note : we are currently taking action in water bodies that are not supporting GES / GEP). No further consumptive licences will be granted. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder. Abstractions for non-consumptive uses can still be permissible in catchments where there are sustainability issues.
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. More detail if applicable can be found in section 4.2.1 Surface Water. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment. There may be water available for abstraction in discharge rich catchments, you need to contact the Environment Agency to find out more. Abstractions for non-consumptive uses can still be permissible in catchments

	where there are sustainability issues.

Water availability is the same for surface water and groundwater in the Upper Ouse and Bedford Ouse ALS.

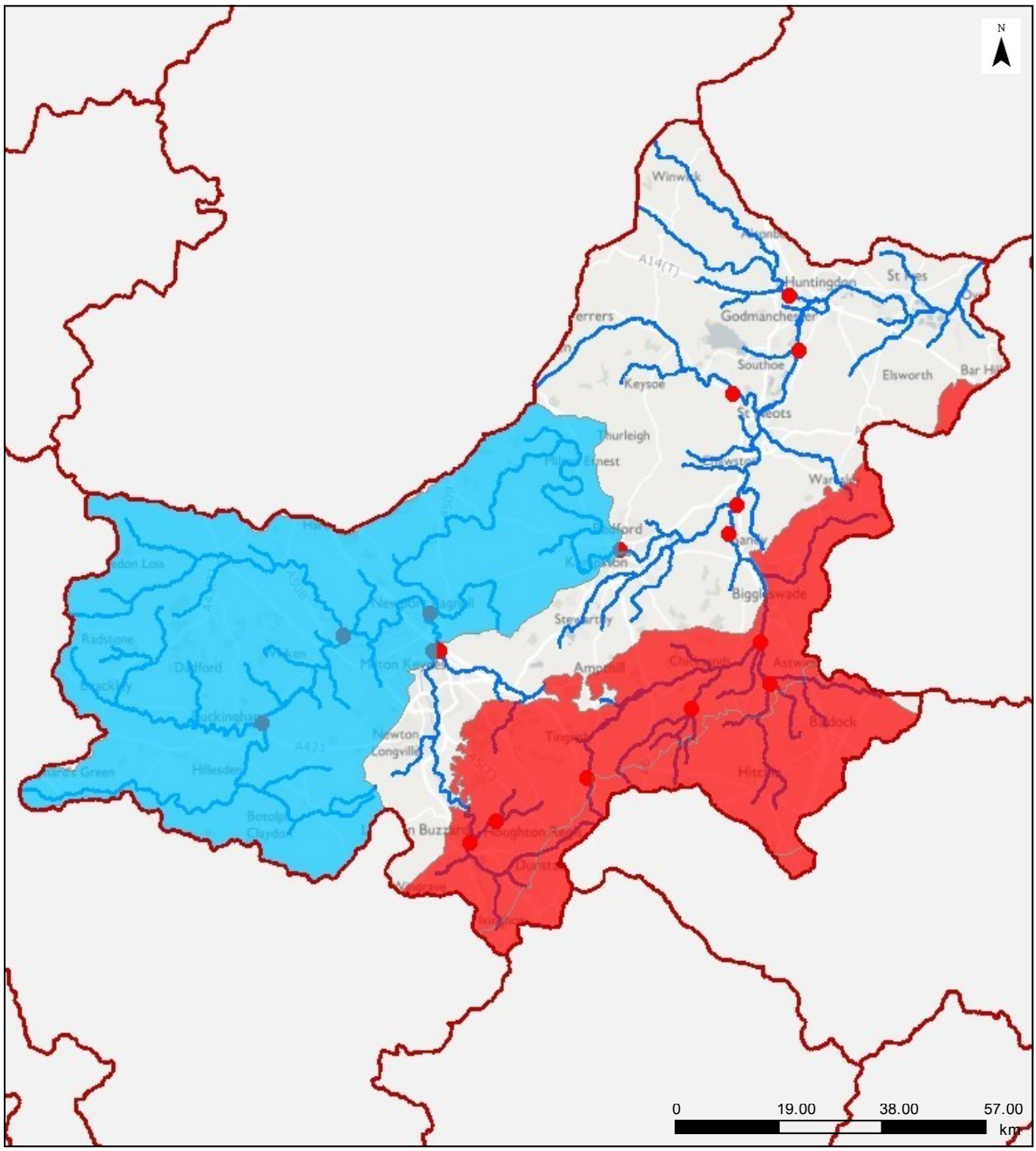
In certain areas, resource concerns over groundwater mean that the standard water resource availability colours have been overridden. Table 1a explains the groundwater resource availability colours, and Map 1a shows these colours for groundwater in the area.

Groundwater availability is guided by the surface water resource availability colours at low flows (Q95) - these take into account the impacts of groundwater abstraction on the surface water body. This is unless we have better information on principle aquifers or are aware of local issues we need to protect.

Table 1a explains the groundwater resource availability colours and their implications for licensing.

GWMU resource availability colour	Implication for licensing
Water available for licensing	Groundwater unit balance shows groundwater available for licensing. New licences can be considered depending on impacts on other abstractors and on surface water. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment.
Restricted water available for licensing	Groundwater unit balance shows more water is licensed than the amount available, but that recent actual abstractions are lower than the amount available OR that there are known local impacts likely to occur on dependent wetlands, groundwater levels or cause saline intrusions but with management options in place. In restricted groundwater units no new consumptive licences will be granted. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment. It may also be appropriate to investigate the possibilities for reducing fully licensed risks. Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder. In other units there may be restrictions in some areas for example, in relation to saline intrusion
Water not available for licensing	Groundwater unit balance shows more water has been abstracted based on recent amounts than the amount available. No further consumptive licences will be granted. Some time limited licence renewals may require changes to reflect historic annual usage in order to manage the risk of deterioration to the environment.

Ground Water Resource availability colours



Legend

- Abstraction Licensing Strategy

GWMU Licensing Strategy

- Case by case basis
- Water available
- Restricted water available
- Water not available
- Assessment Points
- Rivers

Creation date: 21/07/2017

Map 2 ground water availability in the Upper Ouse and Bedford Ouse ALS

2.2. Resource reliability

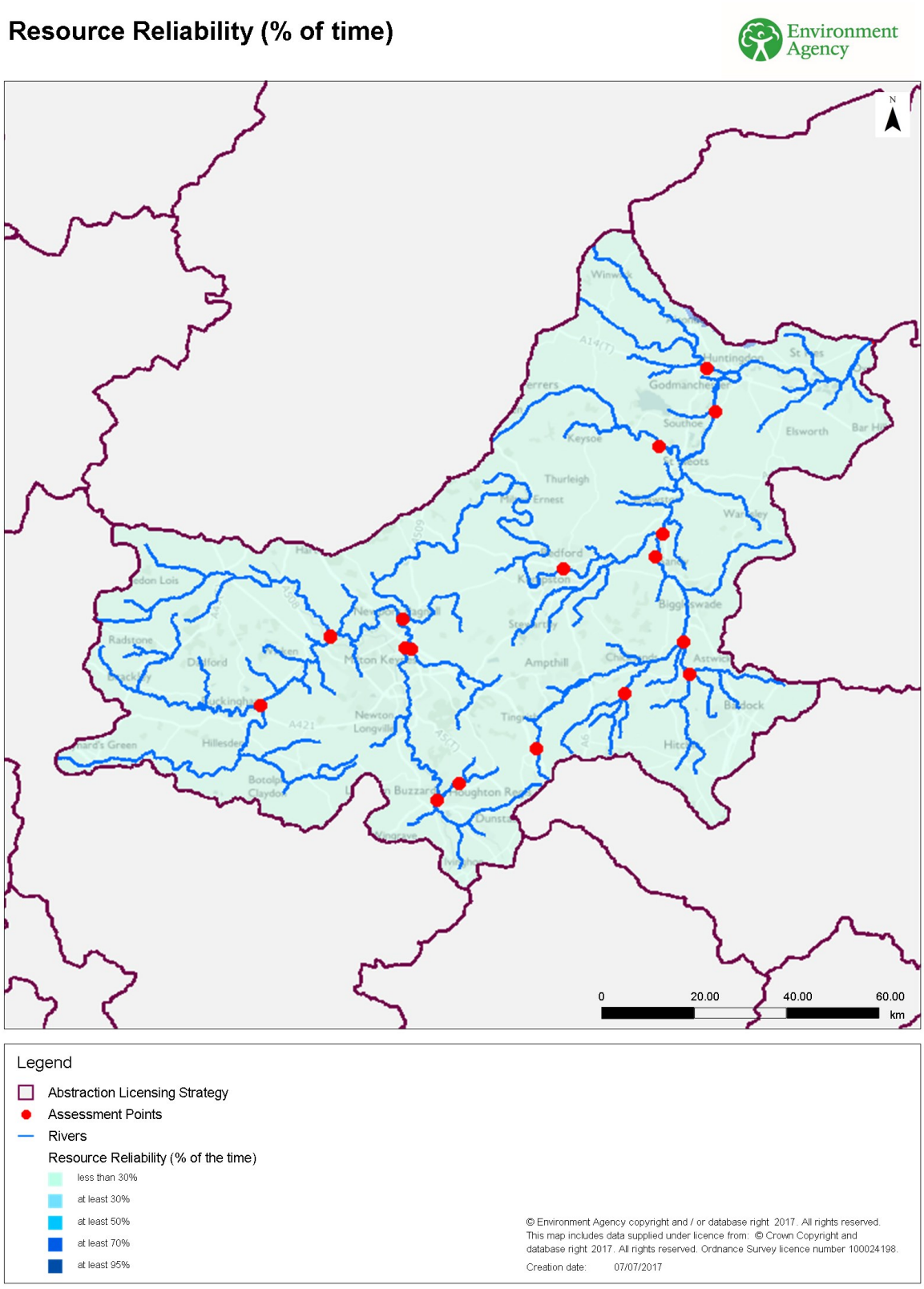
If you want to apply for a licence, it's worth considering the reliability of your abstraction.

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.

Table 2 shows the resource availability colour associated with the percentage reliability of consumptive abstraction. Map 3 gives an indication of the resource availability in Upper Ouse and Bedford Ouse area expressed as a 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



Map 3 Water resource reliability expressed as percentage of time available

2.3. Other considerations for availability and reliability

When we grant a licence, it doesn't mean that we guarantee a supply of water. Because we have to protect the environment and the rights of other abstractors, we may have to add constraints to licences such as 'hands off flow' (HoF) conditions. These conditions specify that if the flow in the river drops below what's needed to protect the environment, abstraction must reduce or stop. So, in dry years, restrictions are likely to apply more often, which will affect the reliability of supply.

Whilst this document may say that water is available for abstraction, this doesn't guarantee that all applications will be successful. This is because we have to determine each application on its own merits, and local factors may mean we're either unable to grant a licence as applied for, or even at all.

New licences within an ALS are usually given a Common End Date (CED), which allows them to be reviewed at the same time. The next CED for this ALS is 31 March 2028 and the subsequent one is 31 March 2040.

2.4. Impoundments

Applications for impoundments will be dealt with on a case by case basis. Find more information on GOV.UK.

3. How we manage abstraction in the Upper Ouse and Bedford Ouse ALS

3.1. Assessment points

We assess surface water flows at Assessment Points (APs), which are significant points on a river, often where two major rivers join or at a gauging station. APs cover multiple surface water bodies.

Where groundwater abstractions directly impact on surface water flows, the impact is measured at the surface water AP.

Table 3 gives an indication of how much water is available for further abstraction and the associated restrictions we may have to apply to new and varied abstraction licences from the main river. Tributaries to the main river may be subject to different restrictions and quantities and will be assessed locally on a case by case basis.

Each HoF is linked to an AP and is dependent on the resource availability at that AP. In some cases additional restrictions may apply to licences where there is a more critical resource availability downstream to protect the ecological requirements of the river. This is detailed in the last column of Table 3 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 3 are the APs in the Upper Ouse and Bedford Ouse ALS area. Reading across the columns you can see the potential HoF that may be applied to a licence, the number of days water may be available under this restriction and the approximate volume of water in Ml/d that may be available. In cases where there is water available at all flows we may apply a Minimum Residual Flow (MRF) to protect very low flows. We'll decide this on a case by case basis.

Table 3. Summary of licensing approach for the assessment points of UPPER OUSE AND BEDFORD OUSE Abstraction Licensing Strategy.

AP	Name	Water Resource Availability Colour	HOF Restriction (Ml/d)	Number of days per annum abstraction may be available	Approx volume available at restriction (Ml/d)	Is there a gauging station at this AP?	Additional restrictions
1	Earith	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	732.5 (Q34)	124	95.4		
2	Brampton	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	31.9 (Q34)	124	60.6	Brampton New Weir	
3	Offord	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	672.0 (Q33)	120	38.0	Offord/Offord Ultrasonic	* see below
4	Kym	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	22.8 (Q33)	120	38.0	Meagre Farm	* see below
5	Roxton	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	812.4 (Q33)	120	38.0	Roxton	* see below
6	Ivel	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	220.0 (Q33)	120	38.0	Blunham	Millbridge Common Brook HoF of Q95 at Blunham be added to time limited licences **

							* see below
7	Flit and Campton	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	105.2 (Q33)	120	38.0		* see below
8	Hiz	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	55.5 (Q33)	120	8.2	Arlesey	* see below
9	Campton Brook	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	17.9 (Q33)	120	16.0		* see below
10	Flit	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	17.2 (Q33)	120		Shefford	* see below
11	Bedford	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	708.3 (Q33)	120	38.0		* see below
12	Newport Pagnell	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	382.5 (Q33)	120	38.0	Newport Pagnell Mill	* see below
13	Broughton Brook	Q30 (Red) Q50 (Red) Q70 (Red) Q95 (Red)	12.4 (Q23)	83	6.2	Broughton	* see below
14	Ouzel	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	149.6 (Q33)	120	38.0	Willen	* see below
15	Clipstone	Q30 (green)	15.8 (Q33)	120	16.3	Clipston	* see below

		Q50 (Yellow) Q70 (Red) Q95 (Red)					
16	Leighton Buzzard	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	61.9 (Q33)	120	38.0	Leighton Buzzard	* see below
17	Tove	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	96.9 (Q33)	120	38.0	Cappenham	* see below
18	Ouse	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	254.4 (Q33)	120	38.0		* see below
19	Buckingham	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	98.4 (Q33)	120	38.0		* see below
20	Twins	Q30 (Green) Q50 (Yellow) Q70 (Red) Q95 (Red)	115.2 (Q33)	120	38.0		* see below

* A low flow condition will be included to protect the public water abstraction at Offord and additional local HOFS may be applied.

** Millbridge Common Brook

To prevent the deterioration of flows to below the EFI target and hence to change this waterbody to "does not support good" in the future, it is proposed that a HoF of Q95 at Blunham be added to time limited licences, or licences with time limited elements, which authorise summer abstraction from surface water in the Millbridge Common Brook waterbody. The imposition of a Q95 HoF is very unlikely to have any effect on winter abstraction in the waterbody. Blunham gauging station is on the River Ivel, and is the nearest downstream gauging station.

3.2. Groundwater

On major aquifers we may, where appropriate, we divide the area into groundwater management units, which are sub-divisions of the groundwater bodies. In these cases we use the information and assessments on these units to determine water availability and licence restrictions.

Where groundwater abstractions directly impact on surface water flows, including reduction of base flow, the impact is measured at the surface water AP. In these cases, restrictions may be applied to licences, such as Hands off Level (HoL) conditions. The HoL is a groundwater level below which an abstractor is required to reduce or stop abstraction.

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

Table 4 Licence restrictions on groundwater abstractions in the Upper Ouse and Bedford Ouse Abstraction Licensing Strategy area

Groundwater management unit	Licence restriction
Upper Bedford Ouse Woburn Sands	No Water available for new comsumptive licences
Upper Bedford Ouse Oolite	Case by Case basis - restricted water available and linked to the surface water status.
Upper Bedford Ouse Chalk	No Water available for new comsumptive licences

Upper Bedford Ouse Oolite -

The status of groundwater resources within the parts of the Oolite aquifer covered by the Oolite Groundwater Management Unit is 'restricted water available for licensing', linked to the surface water status and we are able to consider applications for new groundwater licences on a case-by-case basis. It should be noted that both the quality and quantity of water available from the confined Oolite aquifer is likely to worsen the further away an abstraction is located from the outcrop area in the valley of the River Ouse. Water which has not received recent recharge becomes mineralised from prolonged contact with rocks, and flow pathways within the aquifer are poorly developed, decreasing yields.

3.3. Level dependent environments

There are no Level Dependent Environments (LDE) in this CAMS catchment. There are, however, some Internal Drainage Boards (IDB) that operate within it.

The Buckingham and River Ouzel IDB, the Bedfordshire and River Ivel IDB and the Alconbury and Ellington IDB are all part of the Bedford Group of Drainage Boards. This is a consortium of statutory bodies providing local storm water management by undertaking watercourse maintenance and improvement and provision of advice and direction to local authorities as part of the Town and Country planning procedure. There are also the Bluntisham and Swavesey IDBs which are both part of the Middle Level Commissioners and Over and Willingham IDB.

The IDBs in this CAMS area are located along the main rivers and in the lowland areas surrounding the rivers and tributaries. The primary purpose of the IDBs is flood protection. Unlike the IDBs in the Cam and Ely Ouse CAMS and the Old Bedford including Middle Level CAMS, the IDBs in this CAMS are not primarily for agricultural purposes and do not control level dependent areas. Therefore there are not any LDE within this CAMS.

Supported Rivers

The River Hiz Low Alleviation support scheme, commissioned in 1996, is the main river support scheme operational in this area. The scheme was devised to help alleviate flows in the Upper Hiz and the River Oughton near Hitchin. Low flows have been attributed to abstraction of groundwater for Public Water Supply to meet the demands for water in the area. Spring flows have been reduced in the Upper Hiz, resulting in drying out of the stream, particularly during periods of drought.

The Environment Agency and Affinity Water (formerly Veolia Water Central) operate the scheme. The primary objectives are:

- to enhance the wetland ecology of Oughtonhead Common (a former SSSI)
- to improve the amenity of the Upper Hiz
- to maintain secure water supplies for the residents of Hitchin

Canals

The Grand Union Canal bisects the Upper Ouse part of the CAMS area between Stoke Bruerne and Ivinghoe forming 53km of navigable canal.

Abstraction from the Tove and the Great Ouse to the canal is determined by an operating agreement between the Environment Agency and the Canal and River Trust (formerly British Waterways). This permits abstraction from the River Tove to the Grand Union Canal near Stoke Bruerne in proportion to the flow as measured at Cappenham Gauging Station, and when flows drop permits a switch to abstraction from the River Great Ouse at Cosgrove.

Flow information from the River Tove at Cappenham is sent via email by the Environment Agency to the Canal and River Trust on a weekly basis. This information is used to determine the rate of permitted abstraction from each site. The Canal and River Trust maintain records of the quantities abstracted from the River Tove and River Great Ouse and send them to the Environment Agency on a regular basis.

3.4. Heavily modified water bodies

The majority of the watercourses within the catchment are classified as HMWB. The main rivers have been given this classification due to the presence of flow control structures such as sluices and gauges on the channels.

Although all the water bodies in the catchment are classed as heavily modified, there are two rivers that are shown as heavily modified due the presence of River support schemes. They are the River Hiz (see Supported Rivers Section) and the Diddington Brook (downstream of Grafham Water). The Diddington brook has been classified HMWB as the downstream flow depends on water released from Grafham. Diddington Brook has not been sourced by Grafham Water since summer 2011due to contamination of an alien species in the reservoir.

There are also two Reservoirs deemed heavily modified and they are the Grafham Water and Foxcote reservoirs.

3.5. Protected areas

European 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 Areas (SPA), which provide 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.

There are several protected sites in the Upper Ouse and Bedford Ouse CAMS catchment that are dependent on water levels and hence sensitive to abstraction. In the catchment the rivers are generally slow flowing, clay and alluvial, although the headwaters of the River Hiz rise in the Chilterns and are Chalk streams. The rivers in this area have carved wide river valleys, and have deposited vast quantities of Alluvial Sands and Gravels.

The river valleys have mostly been modified and developed for agriculture, urbanisation or industry. As a result, semi-natural wet grassland, such as flood meadows and other neutral grasslands, with their characteristic plants, are rare.

Table 5 SSSIs in the Upper Ouse and Bedford Ouse ALS

SSSI Name	Designation
St Neots Common	Wet Grassland habitat dependent on maintained water levels and flooding.
Brampton Racecourse	Wet Grassland habitat dependent on maintained water levels and flooding.
Portholme (also SAC)	Lowland wet grassland community. Winter and early spring inundated by flood waters.
Flitwick Moor	Remnant of eutrophic valley mire and large wetland. Fen habitat.
Stevington Marsh	River valley hillside site for wetland plant communities created by springs and flushes.
Nares Gladley Marsh	River valley hillside site for wetland plant communities created by springs and flushes.
Southill Lake and Woods	River valley hillside site for wetland plant communities created by springs and flushes.
Grafham Water	Wetland site and reservoir

Immediately downstream of the CAMS area are the Ouse Washes. The Ouse Washes are designated as a SSSI, SPA, SAC and Ramsar Site for its many water-dependent habitats and species. Although the site is outside of the area, the Upper Ouse and Bedford Ouse CAMS assesses the effect on these features because they are dependent on the water that flows down the Great Ouse into the site. Any policies derived for the CAMS take account of the Ouse Washes designation. The Wash,(a SSSI, SAC and SPA) is also downstream of the CAMS area. Although the sites are outside the CAMS areas the effect on these features are also assessed and included, as the Wash is dependent on water that flows down the Great Ouse.

4. Managing existing licences

4.1. Water rights trading

We want to make it easier to trade water rights. A water rights trade is where a person sells all or part of their water right, as defined by their abstraction licence(s), to another person on a permanent or temporary basis. In the majority of cases a trade will involve a change in abstraction location and/or use which we will need to approve through the issue or variation of abstraction licences.

In licensing trades, as with new abstraction licences, we need to make sure that we don't cause any deterioration in water body status both within the water body / bodies where the trade will take place or to downstream water bodies. The table below provides a guide to the potential for trading in water bodies of a particular ALS water resource availability colour, as shown on map 3.

Table 6.Water resource availability colours and their implications for trading

ALS 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. We will not permit licence trades in water bodies where we are taking action to prevent deterioration unless the trade is consistent with achieving water body objectives.
Water not available for licensing	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 go to GOV.UK.

4.2. Taking action on unsustainable abstraction

Actions to tackle unsustainable abstraction in the Upper Ouse and Bedford Ouse ALS on surface water bodies where flow does not support good ecological status, or potential if the water body is heavily modified and on managing the risk of deterioration or correct instances of serious damage include:

- actions under the water industry national environment programme
- revocations of licences for non-use
- reductions of under-used and unused licences
- changes to licences time-limited until 2018 as detailed in the paragraphs below:

Abstraction licence renewals

During the renewal process we will take into account the current licence conditions, for example, whether there is a Hands off Flow (HoF) condition protecting low flows, and past licence use when deciding if changes are required. A HoF specifies that if the flow in the river drops below that which is required to protect the environment, abstraction must stop until flows recover.

We will aim to issue renewed licences to our Abstraction Licensing strategies, (previously known as Catchment Abstraction Management Strategies - CAMS) common end date where:

- all the sustainability issues in the catchment are resolved
- renewal of time-limited licences does not pose a risk of deterioration in ecological status
- the quantities are justified
- the water is used efficiently

A shorter time limit may be required where there are residual risks to the sustainability of catchments.

Our approach will depend on whether it is a surface water or a groundwater time-limited licence.

Surface water licences

Surface water licences will be renewed on the following broad principles around environmental sustainability:

As a minimum, all surface water licences will need a HoF to protect the ecological needs of a river at low flows. Low flows are defined as the Q95, which is the amount of flow in a river that is exceeded 95% of the time. To calculate the amount of water required to support the ecology of a river at low flows we use a tool called the Environmental Flow Indicator (EFI).

Subject to having a HoF condition that protects low flows, where there are no other sustainability issues in the surface water bodies influenced by the abstraction, the quantities are justified and the applicant has demonstrated that the water is being used efficiently, then the application would be renewed on same terms to the relevant CAMS common end date.

In surface water bodies where a low flow HoF doesn't help to resolve all of the sustainability issues in the catchment, renewed licences will be time-limited to 31 March 2024. Further changes may be needed after 2024 to protect the ecology at higher flows.

Alternative management arrangements may be needed for some locally specific catchments. For example, in level controlled areas like the Fens, a Hands off Level may be applied upon renewal.

Groundwater licences

Groundwater licences will be renewed on the following broad principles around environmental sustainability:

We will consider renewing the licence at the same quantities when the aquifer, overlying rivers and associated wetland habitats have environmentally sustainable rates of water abstraction both now, and at times when abstractors take their full licensed quantities of water.

If there is a risk that the ecology could be adversely affected at fully licensed rates of abstraction, then we will cap the licence at the historic maximum uptake to reduce the risk of ecological deterioration from the 2015 RBMP baseline. The standard period for assessing the historic

maximum rate of an abstraction will be the last 10 years, or longer where appropriate. This means that for agricultural licences, annual differences in climate and cropping patterns are taken into account.

If both the groundwater and/or surface water bodies are already subject to unsustainable rates of abstraction, we will need to renew the licence with measures to help restore that waterbody/groundwater body to a sustainable level of abstraction. These measures could be licence reductions or Hands off Flow/level conditions. Where measures are still under investigation, then a licence would be renewed with a cap at historic maximum uptake and time-limited to 31 March 2024. Further licence changes may be required after 2024.

If you wish to discuss the renewal of your current licence then please contact your local Environment Agency office.

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 means that unlimited supplies of water can be abstracted, even in areas that are water stressed.

Defra, the Welsh Government, the Environment Agency and Natural Resources Wales have consulted jointly on an intended approach to remove most exemptions from abstraction licensing and to bring these abstractions under licensing control (New Authorisations).

A light-touch, risk based approach is proposed to bring the majority of exempt abstractors into the licensing system to help balance the needs of all abstractors and the environment. This will enable more effective water management by ensuring that all significant activities influencing the availability of water and its impact on the environment are undertaken in a sustainable way. Defra propose to begin bringing New Authorisations into the licensing system. Some abstractions that are considered low risk will remain exempt.

The main activities that will be impacted by the changes include:

- transferring water from one inland water system to another by a navigation, harbour or conservancy authority
- abstraction of water into internal drainage districts
- dewatering mines, quarries and engineering works
- warping
- 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
- geographically exempt areas
- the majority of abstractions covered by Crown and visiting forces exemptions

Defra are still developing their policies to resolve some of the issues raised during the consultation process. They 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've included them in our assessments to consider how they impact on the catchment.

5. List of abbreviations

ALS	Abstraction Licensing Strategy
AP	Assessment Point
CED	Common End Date
Defra	Department of Environment Fisheries and Rural Affairs
EFI	Ecological Flow Indicator
GEP	Good Ecological Potential
GES	Good Ecological Status
GW	Groundwater
HMWB	Heavily Modified Water Body
HoF	Hands off Flow
HoL	Hands off Level
Ml/d	Megalitres per day
Q95	The flow of a river which is exceeded on average for 95% of the time.
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
WFD	Water Framework Directive

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 (such as water and sewage) into surface waters.
Environmental flow indicator	Flow indicator to prevent environmental deterioration of rivers, set in line with new UK standards set by UKTAG.
Groundwater	Water that is contained in underground rocks.
Hands off flow	A condition attached to an abstraction licence which states that if flow (in the river) falls below the level specified on the licence, the abstractor will be required to reduce or stop the abstraction.
Hands off level	A river 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.
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 at which assessments are completed for WFD.

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