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# Derwent and West Cumbria abstraction licensing strategy

A licensing strategy to manage water resources sustainably

February 2013

Reference number/code [Sector Code]

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# Foreword

Water is one of the most important resources that we have. Both surface water and groundwater are critical for people and the natural environment. This document sets out how we all need to manage water in the Derwent, West Cumbria areas to balance our various demands.

This licence strategy area is diverse, including rivers and lakes in the lake district fells as well as rivers in coastal areas. The catchment is largely rural with significant industrial water abstractors along the coast. Water resources in Cumbria are used for a range of activities including recreation, angling, industry, agriculture and public water supply.

Many of the rivers in the Derwent, West Cumbria area have high ecological value. It is important to maintain this high status whilst also supporting other needs in the catchment, such as the strategically important supply of water to Cumbria and other parts of the north west region.

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# 1. About the Licensing Strategy

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

The 2013 Derwent and West Cumbria CAMS supersedes the 2006 Derwent and West Cumbria strategy.

## **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 20m<sup>3</sup>/day (4 400 gallons) of water per day from a:

- river or stream
- reservoir, lake or pond
- 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
- whether the justification for the abstraction is reasonable
- the abstractor has considered water efficiency measures

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

by telephone on 03708 506 506

by email at [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

or visit our website at [www.environment-agency.gov.uk](http://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 Derwent and West Cumbria 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 refer to Managing Water Abstraction alongside this licensing strategy document.

## 2. Derwent and West Cumbria CAMS area

The Derwent and West Cumbria CAMS includes rivers rising in the Lake District fells and flowing to the Cumbrian coast. The River Derwent flows through Derwent Water and Bassenthwaite to the coast at Workington and is joined along the way by the rivers Greta, Cocker and Marron. The River Ehen flows from Ennerdale, and the River Irt from West Water. These rivers and the rivers Calder, Esk and Mite flow into the Irish Sea. There are a number of lakes and reservoirs within the CAMS area including Thirlmere reservoir, Crummock Water, Ennerdale Water, West Water and Bassenthwaite Lake. A detailed description of the main river reaches and assessment points is presented in Table 1.1.

The Derwent and West Cumbria CAMS area includes a range of different aquatic habitats, from fast flowing rivers and streams to the numerous tarns and lakes for which the area is famous. The local and national importance of the flora and fauna of the area is reflected in the number and variety of designated areas of conservation importance that lie within it.

The Derwent and West Cumbria CAMS area includes a range of habitats of high conservation value. Habitats in the area vary from upland fells and moorland in the Lake District to the relatively flat coastal plain of West Cumbria. The River Derwent and many of its tributaries are designated as a Special Area of Conservation (SAC) for its populations of salmon, otter, three types of lamprey, floating water-plantain and marsh fritillary butterfly. It is also designated for the diverse habitats it provides including the clear still waters of Bassenthwaite and the transition from mountain streams to a large meandering river.

There are a total of 77 Sites of Special Scientific Interest (SSSIs), which are of conservation importance on a national level, within the Derwent and West Cumbria CAMS area. Some of these sites are waterbodies, such as Buttermere and Over Water.

The Lake District National Park is renowned for its outstanding beauty and attracts large numbers of visitors each year. Conservation measures are undertaken in the park to preserve its diversity of landscape and wealth of wildlife. This CAMS area also includes part of the Solway Coast Area of Outstanding Natural Beauty (AONB).

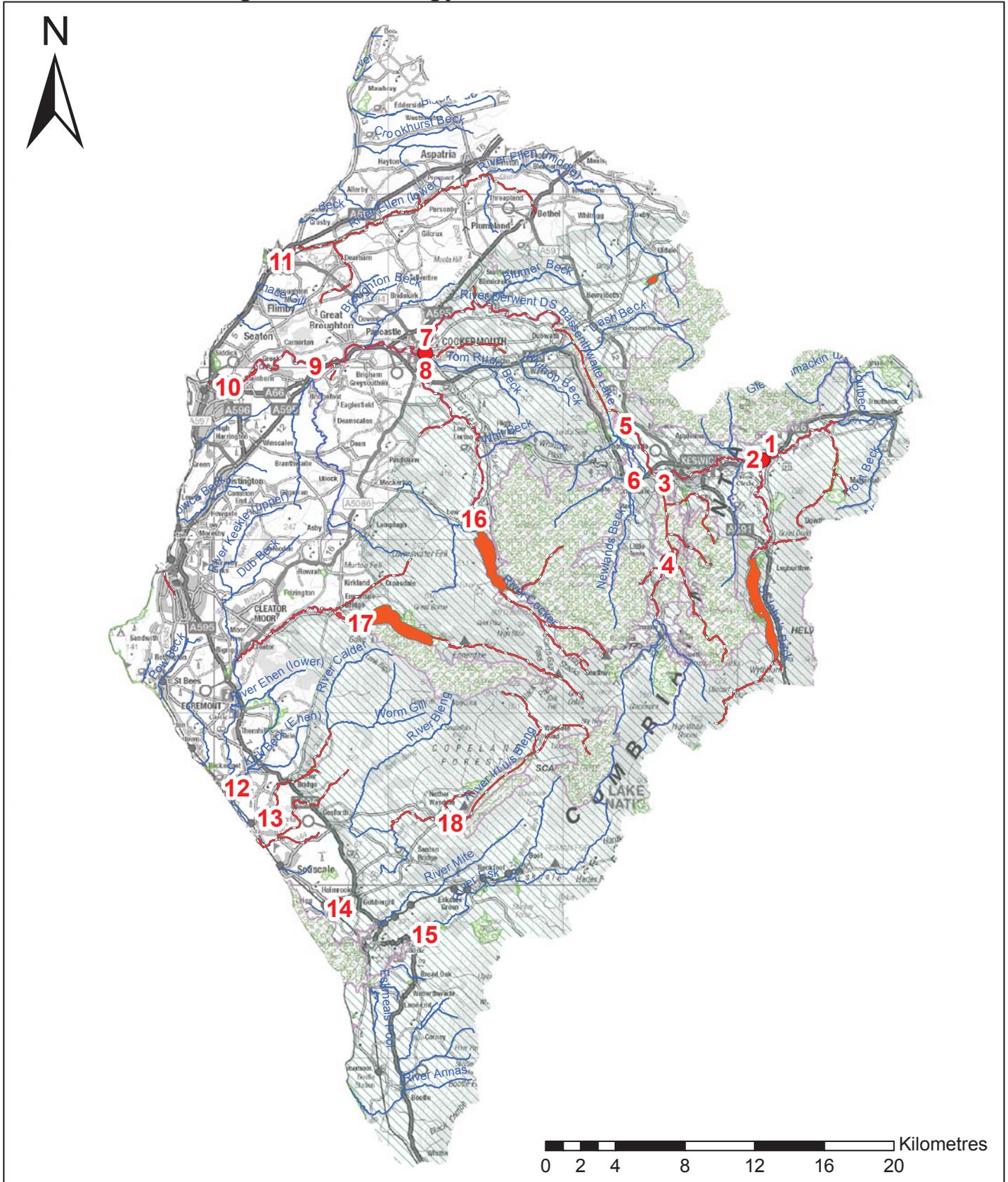
This CAMS area is largely rural, but there are significant industrial water abstractors along the coast. Throughout the area small-scale water abstraction is important for a range of uses including agriculture, hydropower, campsites and private water supply.

The largest water abstractions within this CAMS area are from lakes and reservoirs. Water from West Water is used at the Sellafield site. Public water supply for the area is mainly from Crummock Water and Ennerdale, along with a number of smaller reservoirs. Thirlmere is used to supply water locally and elsewhere in the North-West.

The urban centres which are in this CAMS catchment include Keswick, Cockermouth and Maryport, Workington and Whitehaven on the coast.

Map 1 shows the Derwent and West Cumbria area with designated sites.

# Map1 Derwent and West Cumbria Catchment Abstraction Management Strategy Area



## Legend

### Designated Sites

-  Ramsar
-  SAC
-  SPA
-  SSSI
-  National Parks
-  Derwent and West Cumbria Assessment Points
-  Heavily Modified and Artificial Lakes
-  Heavily Modified and Artificial Rivers
-  Derwent and West Cumbria Rivers

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Creation date: November 2012

# 3. Water resource availability of the Derwent and West Cumbria 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). For example, Q95 is flow that is equalled or exceeded for 95% of the time. It's termed a low flow because only 5% of the time is flow less than this.

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

### 3.2.1 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 Table 1.

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 may contain a modified lake and/or reservoir that influence the downstream flow regime of the river.

We'll add any conditions necessary to protect flows to a new licence during the licence determination procedure. We'll base these on the water resource availability colours from high to low flows. Table 1 lists the implications for licensing for each water resource availability colour.

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 will be considered depending on local and downstream impacts.
Restricted water available for licensing	Full Licensed flows fall below the EFIs. 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 / GEP. 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	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 4.3.1 Surface Water. There may be water available for abstraction in discharge rich catchments; you need to contact the Environment Agency to find out more.

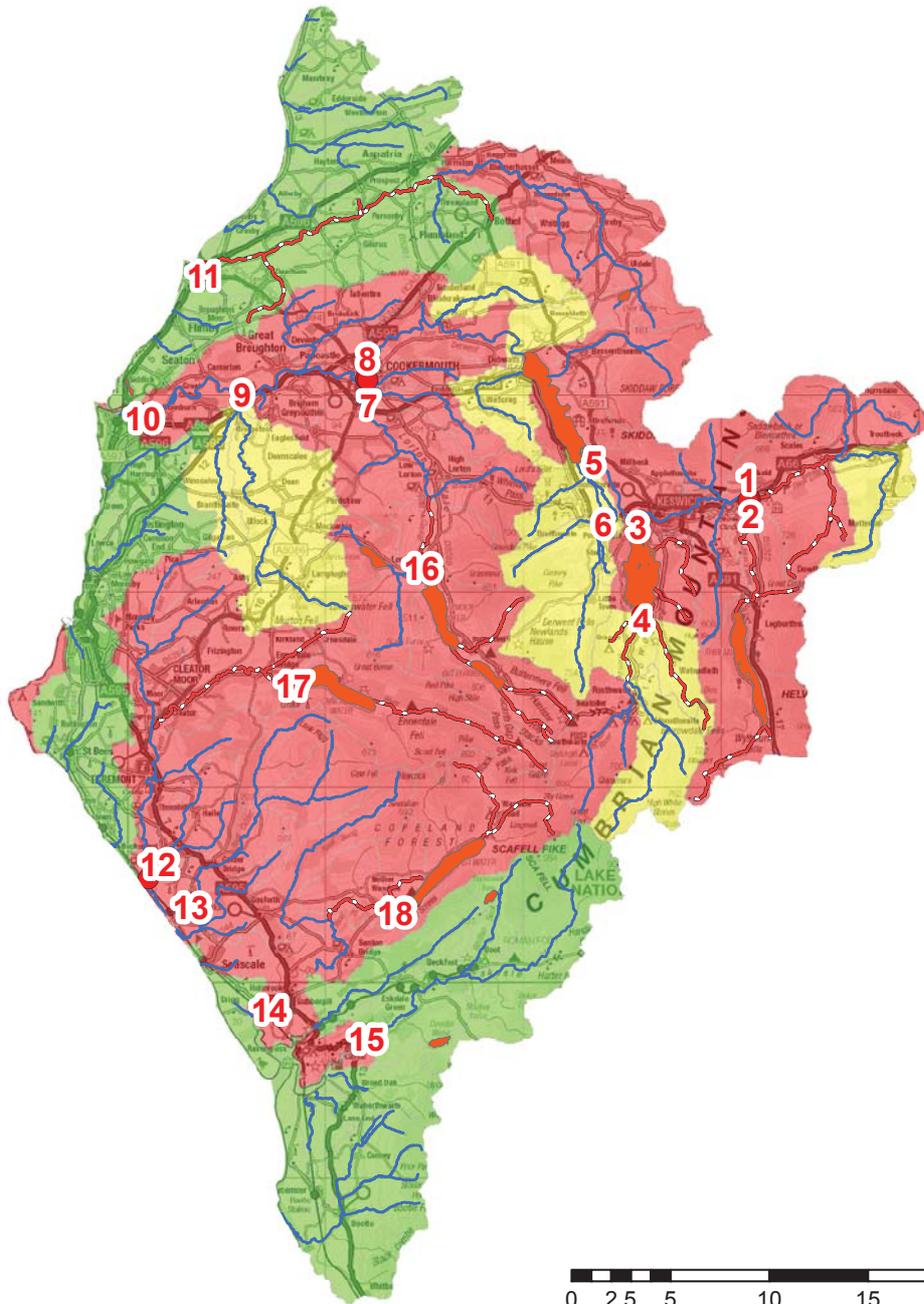
**Table 1 Implications of water resource availability colours.**

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.

At some water bodies it may appear that water is available at low flows (Q95) but unavailable at high flows (Q30). This may be due to existing abstractions that take large volumes of water, within their licensed limits, during times of high flow but at low flows may be subject to Hands off Flow conditions. These conditions require that abstraction stop when a specified flow occurs in the river in order to protect existing users and the environment. Also, some reservoirs are required to release a specific amount of water at all times, known as a compensation flow. During times of low flows, this compensation flow supports the river and can maintain flow in the river at times when it may have naturally run dry.

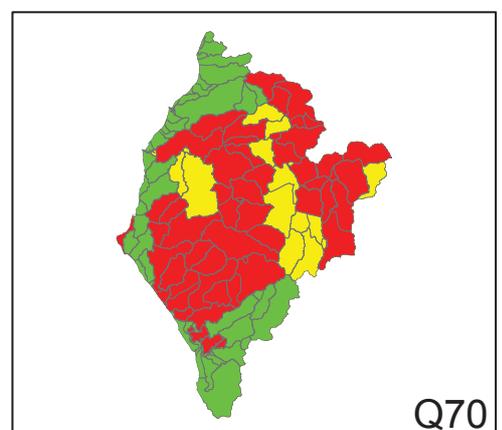
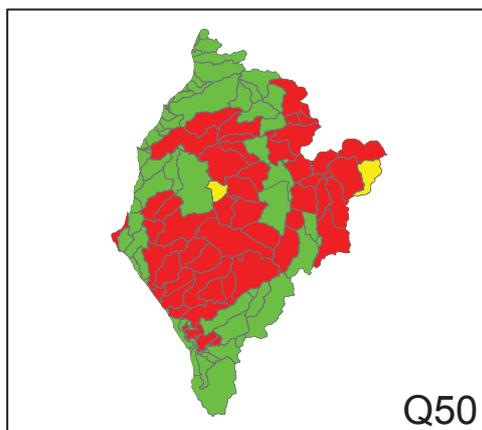
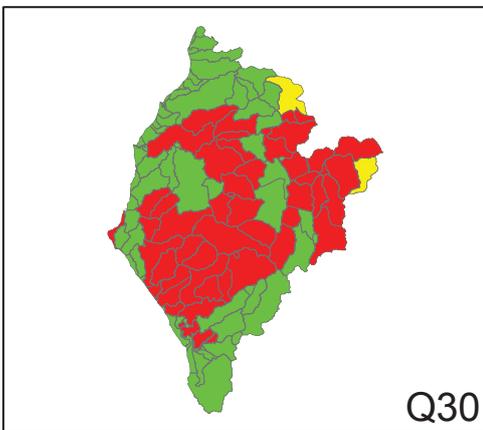
Map 2 shows the water resource availability colours in Derwent and West Cumbria area.

# Map 2 Derwent and West Cumbria CAMS Water Resource Availability Colours



Q95

0 2.5 5 10 15 20 25 Kilometres



## Legend

- Derwent and West Cumbria Assessment Points
- Heavily Modified and Artificial Lakes
- Heavily Modified and Artificial Rivers
- Derwent and West Cumbria Rivers

- Derwent and West Cumbria Water Bodies
- Water Available
- Limited Water Available
- No Water Available

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### 3.2.2 Groundwater

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

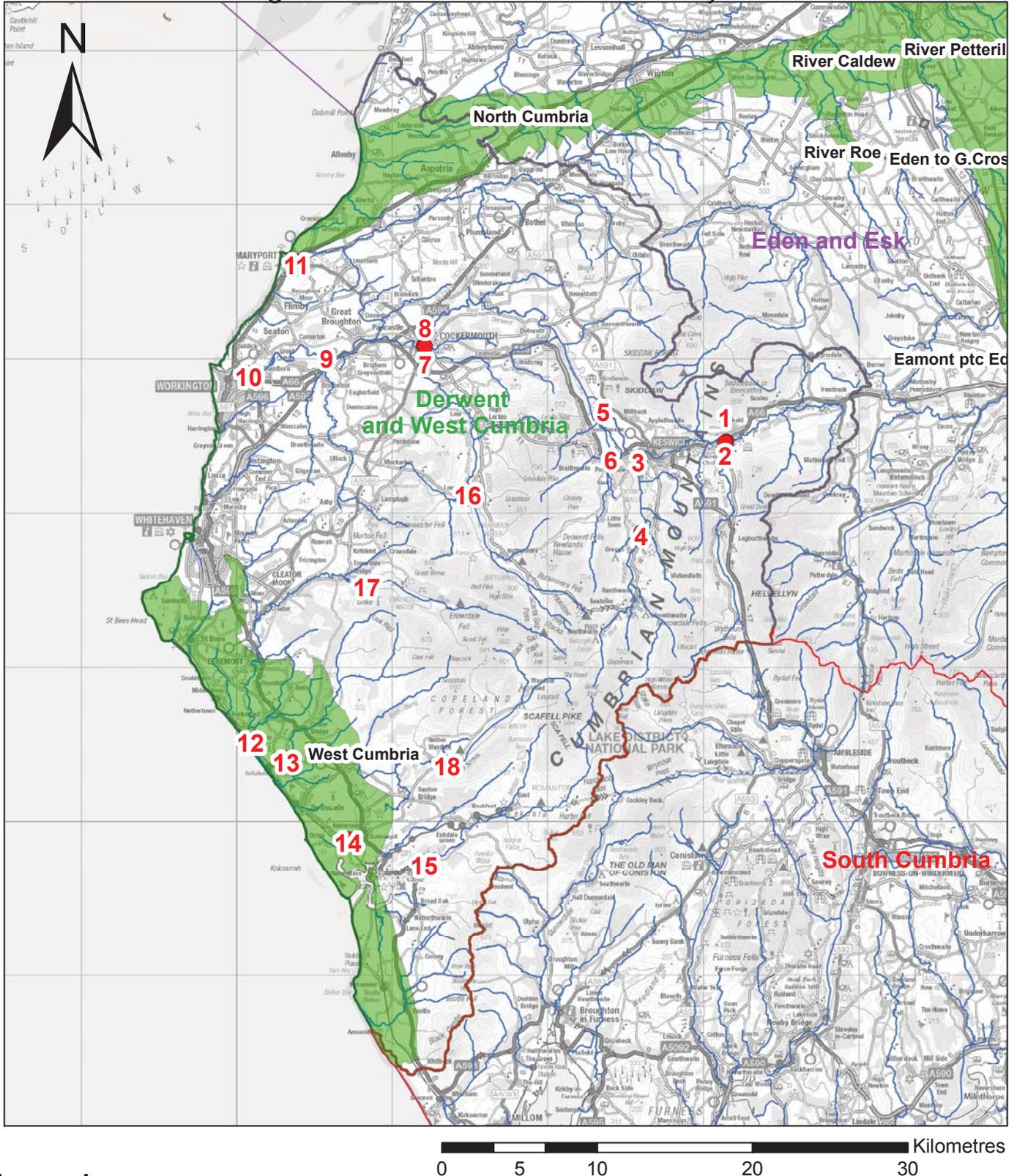
Please refer to section 4.3.2 for further information

Map 3 shows the water resources availability colours in Derwent and West Cumbria area, specifically for groundwater.

GWMU resource availability colour	Implication for licensing
Water available	Groundwater unit balance shows groundwater available for licensing. New licences can be considered depending on impacts on other abstractors and on surface water.
Restricted water available	<p>Groundwater unit balance shows more water is licensed than the amount available, but that recent actual abstractions are lower than the amount available <b>OR</b> that there are known local impacts likely to occur on dependent wetlands, groundwater levels or cause intrusions but with management options in place.</p> <p>Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder.</p> <p>In other units there may be restrictions in some areas e.g. in relation to saline intrusion</p>
Water not available	<p>Groundwater unit balance shows more water has been abstracted based on recent amounts than the amount available.</p> <p>No further consumptive licences will be granted.</p>

**Table 2 Implications of water resource availability colours**

# Map 3 Derwent and West Cumbria CAMS Groundwater Management Unit Resource Availability



## Legend

- Derwent and West Cumbria CAMS APs
  - Derwent and West Cumbria Rivers
- | GWMU   | CAMs Area   |
|--|---|
| <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Water Available            | <span style="border: 1px solid green; display: inline-block; width: 20px; height: 10px;"></span> Derwent and West Cumbria |
| <span style="background-color: #FFFF00; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Restricted Water Available | <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> South Cumbria              |
| <span style="background-color: #FF0000; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Water Not Available        | <span style="border: 1px solid purple; display: inline-block; width: 20px; height: 10px;"></span> Eden and Esk            |

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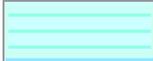
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### 3.3 Resource reliability

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.

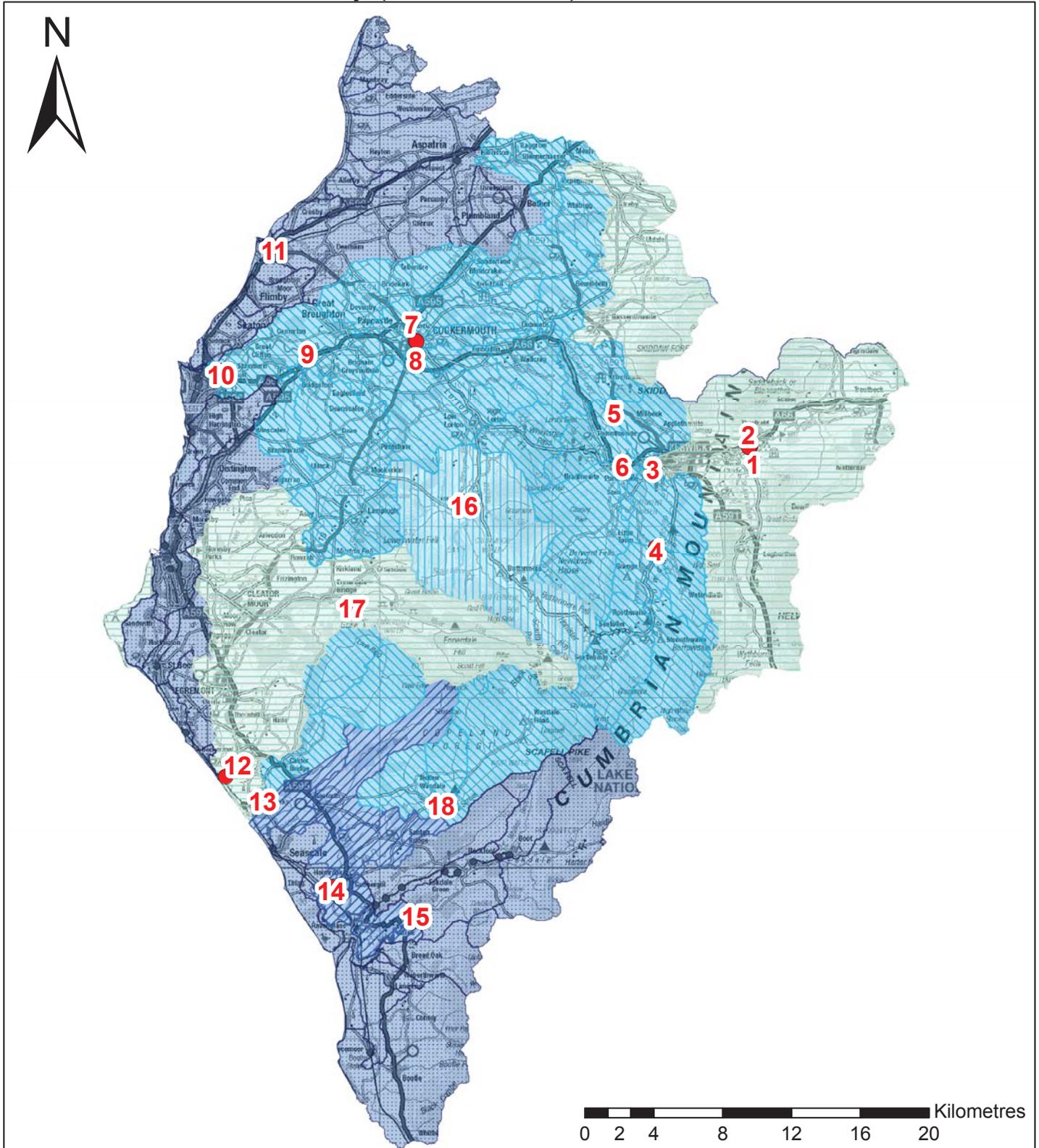
The availability of water for abstraction within a river varies greatly from high to low flows. By assessing the quantity of water available at different flows it is possible to see when there is a surplus or deficit of water and the associated reliability of an abstraction. This is an indication only; actual reliability of a licence will be discussed on application.

Table 3 shows the resource availability colour associated with the percentage reliability of consumptive abstraction. Map 3 gives an indication of the resource reliability in Derwent and West Cumbria area expressed as percentage of time.

Resource	Percentage of the time additional consumptive resource may be available
	Consumptive abstraction available <b>less than</b> 30% of the time.
	Consumptive abstraction available <b>at least</b> 30% of the time.
	Consumptive abstraction available <b>at least</b> 50% of the time.
	Consumptive abstraction available <b>at least</b> 70% of the time.
	Consumptive abstraction available <b>at least</b> 95% of the time.
	Not assessed

**Table 3 Percentage reliability of consumptive abstraction**

# Map 4 Derwent and West Cumbria CAMS ResourceReliability (% of the time)



## Legend

- Derwent and West Cumbria Assessment Points
-  Water Resources available less than 30%
-  Water Resources available at least 30%
-  Water Resources available at least 50%
-  Water Resources available at least 70%
-  Water Resources available at least 95%

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# 4. How we manage abstractions in the Derwent and West Cumbria area

## 4.1. Water abstraction the Derwent and West Cumbria area

Agriculture is the dominant land use in the Derwent, West Cumbria and Duddon CAMS, including extensive hill farming in the Lake District National Park, whilst elsewhere dairy farming is the dominant practice, particularly in the Waver and Wampool and Duddon catchments. There is also some arable farming in the Waver and Wampool area, however, this is relatively limited compared to other parts of the country.

The majority of industry in the Derwent, West Cumbria area is located on the west coast and in the Furness area in the south. Industrial activity is varied, largely based on manufacturing, including paper mills, plastic films, beds and beer. Much of this industry requires water and some of the key abstractors in the CAMS area are industrial. The second largest employer in Cumbria, the Sellafield site, requires water for various processes at the site. Whilst many factors affect the viability of these businesses, availability of appropriate amounts of water will be key to their future.

## 4.2 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 Derwent and West Cumbria 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 licence application process**

Anyone wanting to take more than 20m<sup>3</sup>/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 holder's needs 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.

## **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.

For existing licences, where current abstraction is less than licensed i.e. more water could be legally abstracted, we may take action to limit such an increase if we think this will lead to deterioration of the ecology of 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 flow caused by abstraction. 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**

You normally need an impoundment licence to construct, alter, repair or remove an impoundment structure. These structures include weirs, fish passes and sluices.

We will consider every case on its individual merits, and will normally only approve an application to install new structures in a watercourse if one or more of the following apply:

- it is demonstrated to our satisfaction that there are over-riding social or economic reasons for the structure(s) in line with our sustainable development remit and there is no reasonable alternative;
- we agree that the impacts on flood risk, ecology and morphology will not be significant or will be adequately mitigated against or compensated for;
- we accept that the watercourse or floodplain has been modified or degraded, and restoration or enhancement using in-channel structures is justified and acceptable to flood risk management and ecological interests;
- there are important strategic or operational reasons to monitor or regulate river levels and flows, and alternative methods are not technically or financially viable.

If we approve the application and it is appropriate to do so, we will seek mitigation or compensation to ensure environmental impacts and residual damage are minimised.

If we believe it is justified, practical and economic, we may seek the removal or modification of structures that have an adverse effect on flood risk or on the ecology, morphology and visual amenity of a river.

### **Hydropower**

Hydropower schemes harness the energy from flowing water to generate electricity, using a turbine or other device. Sustainable, small scale hydropower has a small but important part to play in meeting UK renewable energy targets.

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](#).

## 4.3 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.

The next CED for Derwent and West Cumbria CAMS is **31<sup>st</sup> March 2014** and the subsequent one is **31<sup>st</sup> March 2026**

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

### 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'.

Please refer to table 4 for hands off flows for each assessment point.

### 4.3.1 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.

Table 4 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.

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.

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 4 are the APs in the Derwent and West Cumbria 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.

AP	Name	Water Resource Availability Colour	HoF Restriction (MI/d)	Number of days abstraction may be available	Approximate volume available at restriction (MI/d)	Is there a gauging station at this AP	<sup>1</sup> Discharge Rich Catchment
1	Glendera mackin	Water unavailable for licensing	<b>FULLY LICENSED</b>				
2	St Johns Beck	Water unavailable for licensing	<b>IN DEFICT ON WATER BALANCE</b>				
3	River Greta	Water unavailable for licensing	<b>IN DEFICT ON WATER BALANCE</b>				
4	River Derwent ptc Derwent Water	Water available	82.0	283	25.9	No	
5	River Derwent ptc Bass Lake	Water unavailable for licensing	<b>FULLY LICENSED</b>				
6	Newlands Beck	Water available	31.5	c. 290	11.9	No	
7	River Derwent ptc River Cocker	Water unavailable for licensing	<b>FULLY LICENSED</b>				
8	River Cocker ptc River Derwent	Water unavailable for licensing	<b>OVER LICENSED &amp; OVER ABSTRACTED</b>				

AP	Name	Water Resource Availability Colour	HoF Restriction (MI/d)	Number of days abstraction may be available	Approximate volume available at restriction (MI/d)	Is there a gauging station at this AP	<sup>1</sup> Discharge Rich Catchment	
9	River Marron	Water available	35.0	290	9.9	No		
10	River Derwent	Water unavailable for licensing	OVER LICENSED					
11	River Ellen	Restricted water available	16.7	365	2.2	No	Yes	
12	River Ehen	Water unavailable for licensing	OVER LICENSED & OVER ABSTRACTED					
13	River Calder	Water unavailable for licensing	OVER LICENSED & OVER ABSTRACTED					
14	River Irt	Water unavailable for licensing	HABITAT REVIEW OF CONSENTS					
15	River Esk	Water available	12.8	365	0.8	No		

**Table 4 HoFs for the assessment points of Derwent and West Cumbria CAMS**

The overall water availability colour for an assessment point may differ to the colours shown in map 2 for the water availability at different flows. This is because map 2 does not take into account the fact that water available may be made up of discharges from existing abstractors. The Environment Agency has no control over the continued operation of discharges and so cannot guarantee reliability of these. At present the Environment Agency cannot grant licences for water that is made up from discharges. However, decisions about an application will be made on a case by case basis. Customers wishing to enquire about the availability of a source should contact us for further details.

<sup>1</sup> **Discharge Rich** - there may appear to be water available, however this water could be made up of discharges from existing users which the Environment Agency has no control over their continued operation. This means that the input of water is classed as unreliable and at this present time is not available for licensing. An update on the situation is due to be announced early 2013.

The information below for each assessment point gives an indication of whether licenses will be renewed.

### **Water available**

- AP4, River Derwent ptc Derwent Water
- AP6, Newlands Beck
- AP9, River Marron
- AP15, River Esk

The following assessment points have water available:

Using table 4 and assessment point 15 as an example, the following will apply where water is available for licensing:

For Assessment Point 15, there is water available. There is 0.8 MI/d available for unconstrained licensing. Following this, further licences will be issued with hands off constraints.

This means that for **new** licences:

- There is water available for unconstrained abstraction;
- We will continue licensing the available resource and then implement the Hands off Flow (HOF) constraints
- There is a time limit of **31<sup>st</sup> March 2026**

For existing licences:

There is a presumption of renewal, subject to the other renewal criteria and local considerations. Renewals may be subject to minor changes including the addition of water efficiency conditions.

### **Restricted Water Availability**

The following assessment points have restricted water available:

- AP5, River Derwent ptc Bass Lake
- AP7, River Derwent ptc River Cocker
- AP11, River Ellen

This means that for **new** licences:

- No new unconstrained licences will be granted
- Water may only available during periods of medium to high flows with HoF constraints
- There is a time limit of **31<sup>st</sup> March 2026**
- No impact on existing licence holders

## **Water Unavailable for licensing**

The following assessment points have no water available:

- AP1, Glenderamackin
- AP2, St John's Beck
- AP3, River Greta
- AP8, River Cocker ptc River Derwent
- AP10, River Derwent
- AP12, River Ehen
- AP13, River Calder
- AP14, River Irt

These units are closed to new consumptive abstractions. The only way we would consider a new licence would be as a result of licence trading. Please see section 4.4 for further details.

### **Further Information...**

For further information about the availability of water at specific locations, please enquire using the following contact details

by telephone on 03708 506 506  
by email at [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
or visit our website at [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

### 4.3.2 Groundwater

Where groundwater (GW) abstractions directly impact on surface water flows, the impact is measured at the surface water AP. Restrictions may be applied to these licences. See Table 5.

On major aquifers we have divided the area into groundwater management units. We use the information and assessments on these units to determine water availability and licence restrictions.

Where groundwater abstractions are likely to impact surface water features, or reduce baseflow to a river, a Hands off Level condition may be applied to the abstraction. This is a groundwater level below which an abstractor is required to reduce or stop abstraction.

Waterbodies with a negative amount available and status 'Restricted Water Available' may be due to the fact water that has been licensed but is not abstracted and so we will still consider small abstractions that do not impact the environment or existing users. Please contact us for further information.

Groundwater Management Unit	Licence Restriction	Amount available (Ml/d)	Reason for restriction
West Cumbria	Water available	45.4	

**Table 5: Licence restrictions on groundwater abstractions in the Derwent and West Cumbria CAMS area**

### 4.3.3. Estuaries/Coast

The Derwent and West Cumbria Coastline is approximately, 106km. This includes the Esk, Irt, Derwent and Ellen estuaries. Abstractions from the Sea are not licensable unless they are clearly in a dock, channel, creek, bay, estuary or arm of the sea and so a licence application must be made for the majority of the Derwent and West Cumbria Coastline.

For all estuarine abstractions, we require abstraction intakes to be fitted with screens (to 3mm) to prevent eels and elvers being abstracted from the estuary. This is because the estuaries are an obvious migratory route for eels and is required under the Eels (England and Wales) Regulations 2009.

Applications made in designated sites (SAC, SPA, SSSI) will be given further scrutiny to avoid impacts on habitats and the environment.

## 4.4 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 on map 2.

CAMS water resource availability colour	Our approach to trading
High hydrological regime	Opportunities for trading water rights will be limited
Water available	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	Initially, we will allow trades of recent actual abstraction and licensed abstraction but post trade recent actual abstraction must remain sustainable. The current level of recent actual abstraction means there is a risk that in the future we may only be able to trade recent actual abstraction.
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.

**Table 5 Environment Agency approach to water trading**

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

## 4.5 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 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 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.

## 4.6 Restoring Sustainable Abstraction (RSA)

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. 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.

In the Derwent and West Cumbria Area, the following work is being carried out as part of the RSA programme:

- Overwater: Water abstraction to cease when lake drops
- Dash Beck: Increased river flow to improve salmon and trout habitat
- St John's Beck: Gravel management plan
- River Derwent (Workington): Review of licences to protect salmon and other migratory fish.
- Helvellyn Gill: Gravel management plan
- Ben Gill and River Ehen: Stream to be reconnected to River Ehen after 40 years, to provide coarse sediment for habitat formation.
- Ennerdale and River Ehen:
  - Review of existing licences
  - Staged water releases to keep River at natural flows
  - Water releases to cleanse river bed for young pearl mussels

## 4.7 Heavily Modified Water Bodies

The catchment contains a number of heavily modified water bodies that are heavily modified for flow. These are predominately associated with reservoirs or lakes managed for public water supply or currently exempt canal abstractions. Flows downstream may be governed by agreements but most will suffer from reduced flows especially at low flows. As a result opportunities for abstraction on these reaches will be limited to high flows.

Under the River Basin Management Plan for the North West, private, public and voluntary/third sector organisations will work together to ensure that these water bodies can achieve their full environmental potential.

## 4.8 Habitats Directive

Under the Habitats Regulations we have assessed the effects of existing abstraction licences and will assess new applications to make sure they are not impacting on internationally important nature conservation sites. These sites are known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). If your current licence has been reviewed under this legislation to assess its impact you will already know about the review. If we haven't contacted you yet then your licence is either not near a SAC/SPA or isn't having an impact on these sites. If our assessment shows that a new application could have an impact on a SAC/SPA we have to follow strict rules in setting a time limit for that licence. These are:

- We may be able to grant the licence but only with a short time limit. This allows us to monitor the impact of the abstraction on a SAC/SPA and change the licence if necessary;
- If we can't determine that your application will not affect the site we have to either put conditions on the licence so that it cannot affect the site or refuse the application. If we grant the licence we may ask you to monitor its impact;
- If our assessment shows that there isn't an impact on the site we will manage the application according to the principles in this document.
- When assessing new licence applications, we will consider any impacts on the Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs) and Ramsar sites as displayed in Map 1.

The River Derwent and many of its tributaries are designated as a SAC (Special Area of Conservation) for its populations of salmon, otter, three types of lamprey, floating water-plantain and marsh fritillary butterfly. It is also designated for the diverse habitats it provides including the clear still waters of Bassenthwaite and the transition from mountain streams to a large meandering river.

There are a total of 80 Sites of Special Scientific Interest (SSSIs), which are of conservation importance on a national level, within the Derwent, West Cumbria area. Some of these sites are water bodies, such as Buttermere and Over Water.

**PLEASE NOTE: due to the majority of watercourses having European designations, all new applications will undergo heavy scrutiny so as not to cause ecological deterioration to existing aquatic environments.**

## 5. Strategy actions

In the first round of CAMS we highlighted where there was room for improvement as far as sustainable abstraction was concerned. A list of actions to be carried out before the next CAMS update was published in the first licence strategy document. Updates on the progress of those actions have been posted annually on the [CAMS website](#).

Table 7 shows progress on the actions from first round of the Eden and Esk CAMS

Table 8 shows new actions for the Eden and Esk CAMS proposed as a result of the latest assessment of resources.

Action	AP unit	Partner	Start	Finish	Progress
We will continue to promote more efficient use of water throughout the CAMS area.	All	United Utilities NFU Industry Private Abstractors	2007	2013	We continue to work closely with water companies and abstractors to continually promote water efficiency.
We will review data from gauging stations and spot gauging in the catchment, better to understand the flows in the river and improve benchmark flow for the next CAMS	AP4 & AP5	None	2007	2013	Presently we use a combination of static flow gauging stations or mobile flow measuring devices in order to provide the best data available.
Following the decision to implement changes to licences under the Habitats Directive Review of Consents, we will monitor the rivers so as to be in a position to establish the success of those changes.	AP4, AP5, AP12 & AP14	United Utilities Aberdeen University Natural England	2007	Ongoing	Studies are ongoing including sediment movement experiments, studying fish, macro-invertebrates and pearl mussel populations, and monitoring temperature, and flow.

**Table 7 Progress on the actions from 1<sup>st</sup> round of the Derwent and West Cumbria CAMS**

Measures	WRMU	Start	Finish	Progress
We are reviewing the potential impact of abstractions on sensitive habitats within the West Cumbria area.		2013	On going	We will continue to work closely with our partners including United Utilities, Natural England and West Cumbria Rivers Trust along with the local community, to find a sustainable solution
Investigate waterbodies that are over-licensed and have fallen below the EFI.	All waterbodies	2013	2016	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.
Monitoring groundwater levels	All waterbodies	2013	2016	Our Groundwater team continue to monitor groundwater levels and review licence applications.
Investigation into the feasibility of licensing discharge flows.	All waterbodies	2013	2013	We are currently in the process of agreeing legislation for licensing discharges. Guidance is due to be rereleased early 2013.
Conduct a review all the Environmental Flow Indicators at each assessment point to ensure the correct hands off flow constraints are in place to protect the river ecology	All waterbodies	2013	2015	As new data becomes available and better understanding of the hydroecology at each site, we will review the environmental flow indicators to ensure the most appropriate hands off flow constraints are in place to prevent damage to the existing river ecology from new and existing abstractions.

**Table 8 New measures arising from the latest assessment of resources in the Derwent and West Cumbria CAMs**

# 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 ecological 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
Gauging Station	A point along a river or lake where river flows and levels are measured.
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 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.
Minimum Residual Flow	The minimum flow condition that can be placed on a license to protect very low flows.
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 <sup>3</sup> /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; <ul style="list-style-type: none"> <li>1. transferring water to another source of supply; or,</li> <li>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.</li> </ul>
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)
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
maOD	Metres above ordnance datum
MRF	Minimum Residual Flow
Ptc	Prior to confluence
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
WB	Water body
WFD	Water Framework Directive

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