Tyne Abstraction Licensing Strategy

(292_14) A strategy to manage water resources sustainably

March 2019

Version 3

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We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

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Contents

1. About the licensing strategy

This strategy sets out our approach to managing new and existing abstraction and impoundment within the Tyne catchment in the Northumbria river basin district. The Tyne ALS covers an area of approximately 2,993 km2. The area includes the catchments of the Rivers North and South Tyne, River Derwent, River Rede, River Allen (East and West) and River Team.

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

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

Please see Managing Water Abstraction for the technical explanation, legal and policy requirements behind the Abstraction Licensing Strategy (ALS).

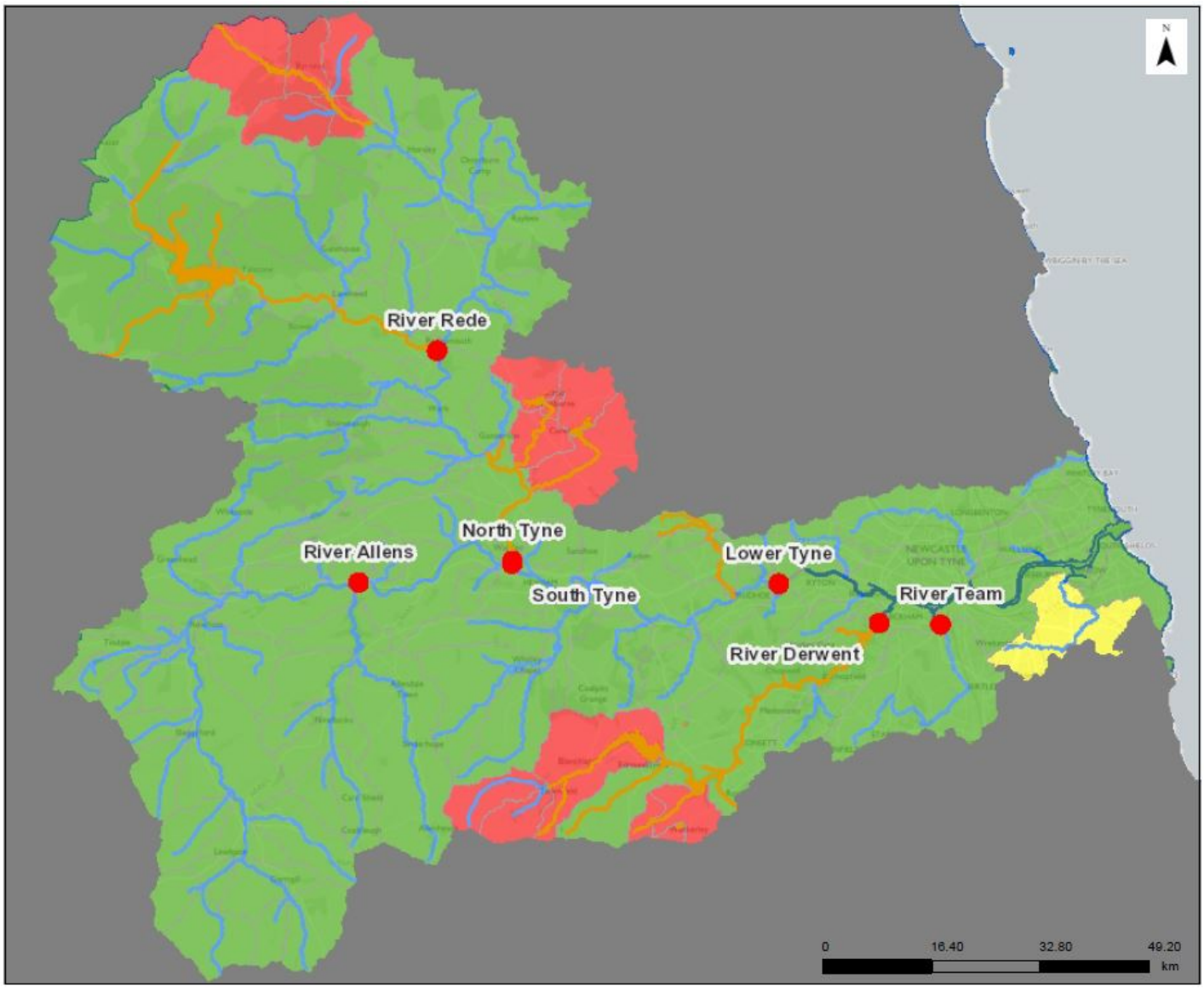
Please see abstraction pages on gov.uk for advice on who needs an abstraction or impoundment licence, and how to apply.

2. Water resource availability of the Tyne ALS

2.1. Resource availability

The water resource availability, calculated at four different flows, Q95 (the flow of a river which is exceeded on average for 95% of the time i.e. low flow), Q70, Q50, and Q30 (higher flow) for this ALS are presented and explained in Maps 1-4 and section 2.1.1 below.

Map 1 - Water resource availability colours at Q30 for Tyne ALS.



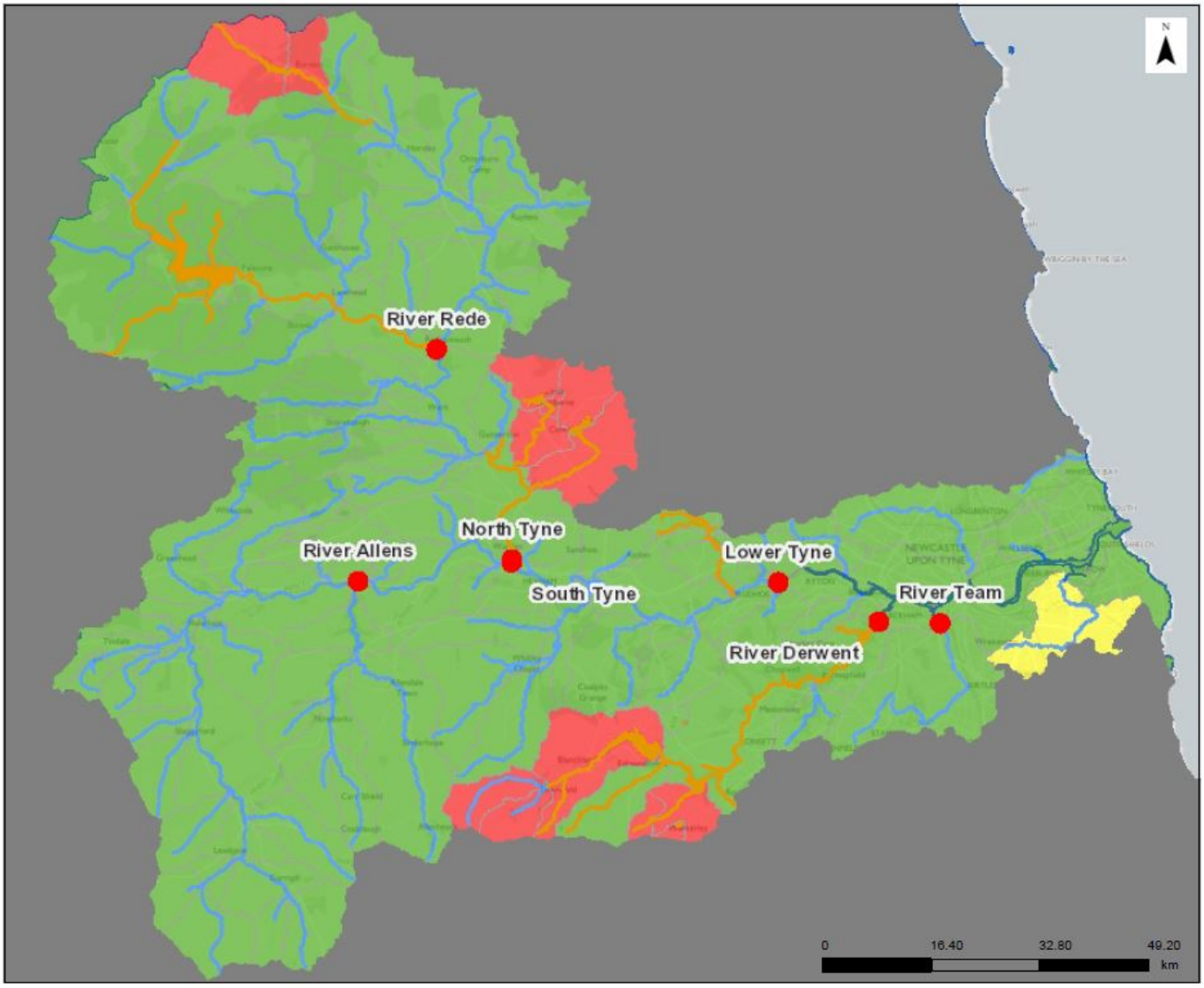
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q30:

- Water available
- Restricted water available
- Water not available

Map 2 - Water resource availability colours at Q50 for Tyne ALS.



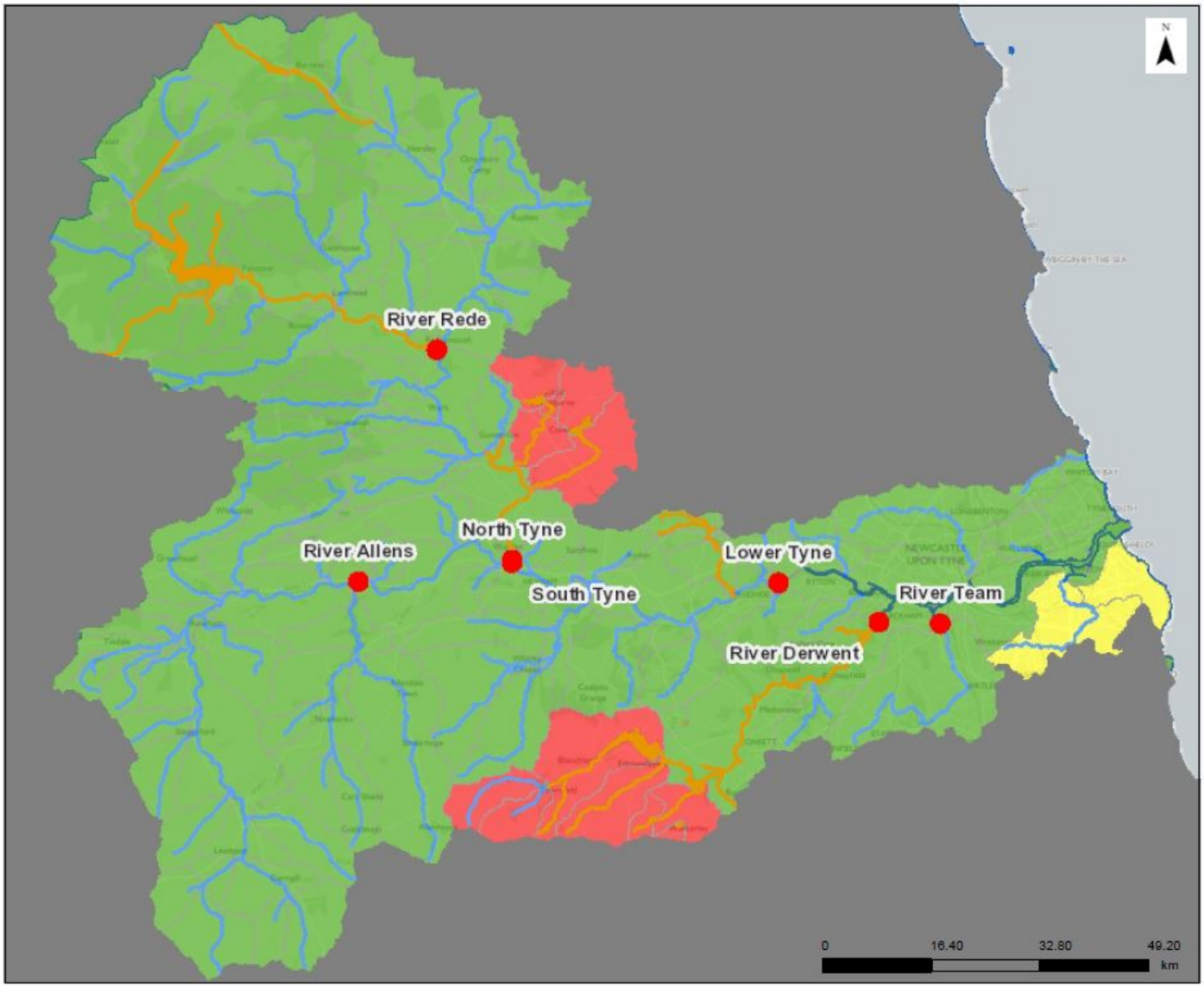
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q50:

- Water available
- Restricted water available
- Water not available

Map 3 - Water resource availability colours at Q70 for Tyne ALS.



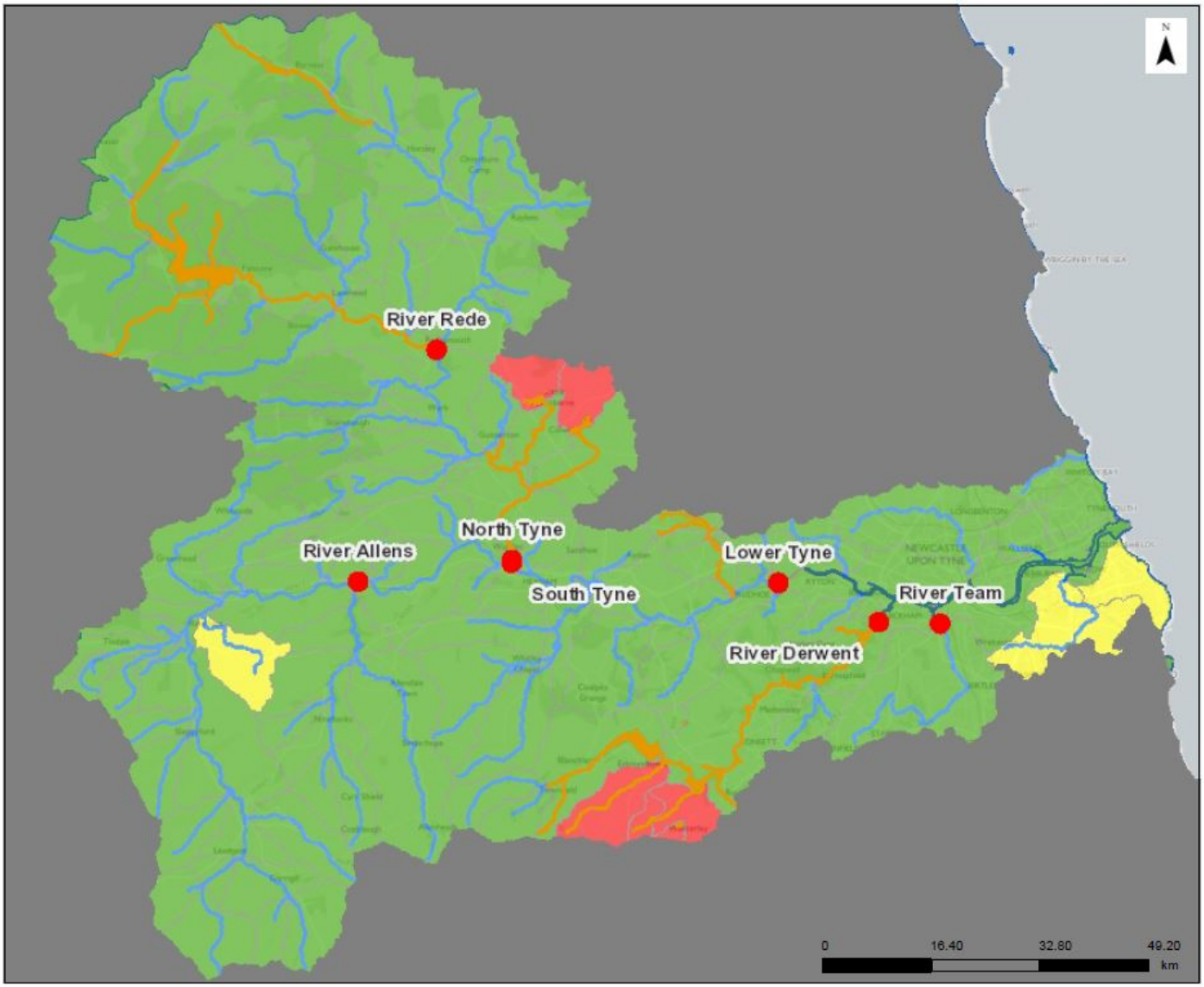
Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q70:

- Water available
- Restricted water available
- Water not available

Map 4 - Water resource availability colours at Q95 for Tyne ALS



Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Water Availability at Q95:

- Water available
- Restricted water available
- Water not available

2.1.1. Water resource availability colours and implications for licensing

Water available for licensing

Green 

There is more water than required to meet the needs of the environment.

New licences can be considered depending on local and downstream impacts.

Restricted water available for licensing

Yellow 

Full Licensed flows fall below the Environmental Flow Indicators (EFIs).

If all licensed water is abstracted there will not be enough water left for the needs of the environment. No new consumptive licences would be granted. It is likely we'll be taking action to reduce full licensed risks. Water may be available if you can ‘buy’ (known as licence trading) the entitlement to abstract water from an existing licence holder.

Water not available for licensing

Red 

Recent actual flows are below the EFI.

This scenario highlights water bodies where flows are below the indicative flow requirement to help support a healthy ecology in our rivers. We call this 'Good Ecological Status' (GES) or 'Good Ecological Potential' (GEP) where a water body is heavily modified for reasons other than water resources.

Note: we are currently taking action in water bodies that are not supporting GES or GEP. We will not grant further licences. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder.

Heavily Modified Water Bodies (HMWBs) (and/or discharge rich water bodies

Orange

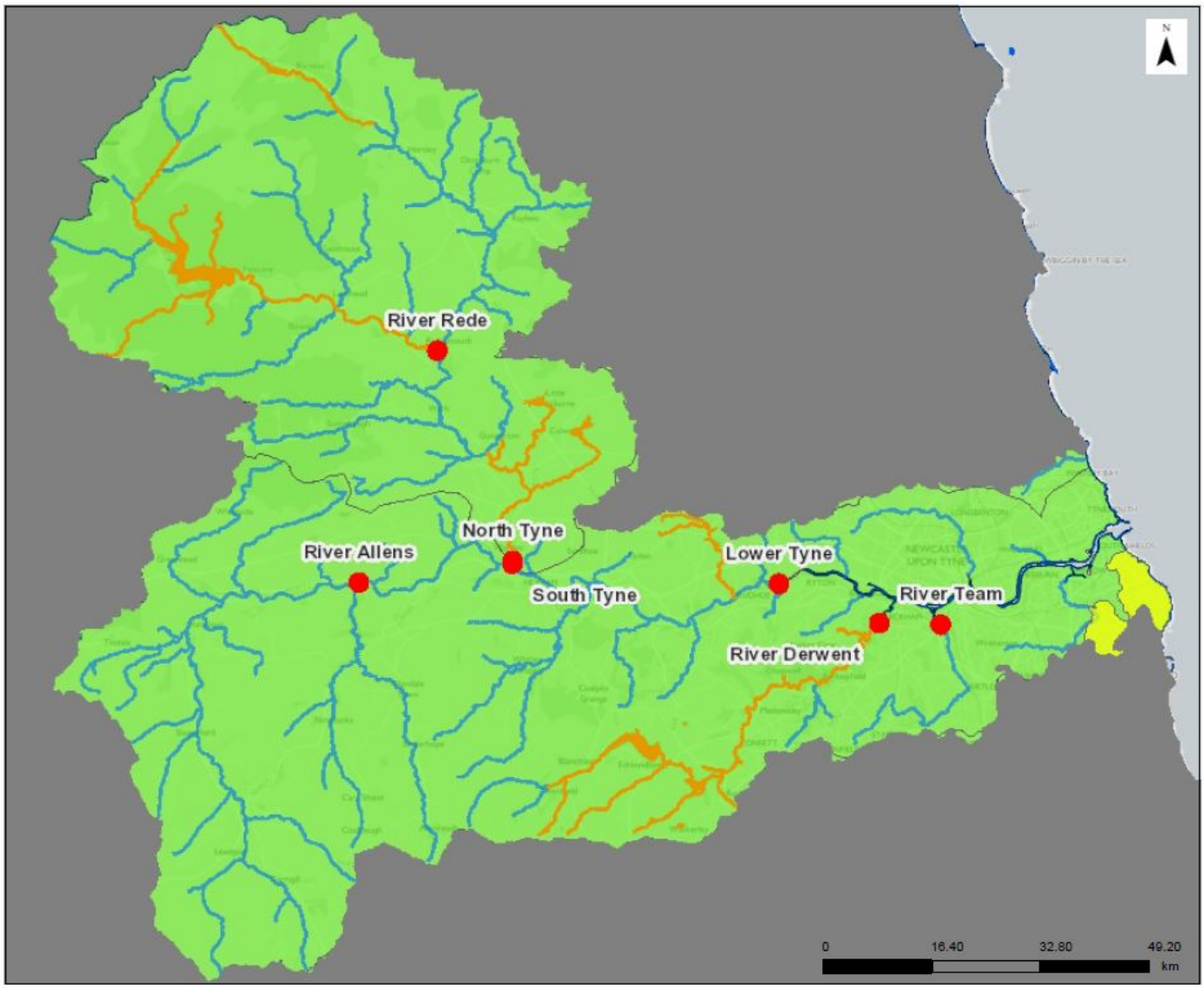
These water bodies have a modified flow that is influenced by reservoir compensation releases or they have flows that are augmented. These are often known as ‘regulated rivers’. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on these operating agreements. More detail if applicable can be found in section 4.2.1 Surface Water

There may be water available for abstraction in discharge rich catchments, you need to contact the Environment Agency to find out more.

2.2. Groundwater resource availability

In certain areas, resource concerns over groundwater mean that the standard water resource availability colours have been overridden. Section 2.2.1 explains the groundwater resource availability colours, and Map 5 shows these colours for groundwater in the Tyne area.

Map 5 - Groundwater Resource Availability for Tyne ALS.



2.2.1. Groundwater resource availability colours and implications for licensing

Water available for licensing

Green

Groundwater unit balance shows groundwater available for licensing. New licences can be considered depending on impacts on other abstractors and on surface water.

Restricted water available for licensing

Yellow

Groundwater unit balance shows more water is licensed than the amount available, but that recent actual abstractions are lower than the amount available OR that there are known local impacts likely to occur on dependent wetlands, groundwater levels or cause saline intrusions but with management options in place.

In restricted groundwater units no new consumptive licences will be granted in impacted areas. It may also be appropriate to investigate the possibilities for reducing fully licensed

risks. Water may be available if you can ‘buy’ (known as licence trading) the entitlement to abstract water from an existing licence holder.

In other units there may be restrictions in some areas e.g. in relation to saline intrusion

Water not available for licensing

Red 

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

We will not grant further licences.

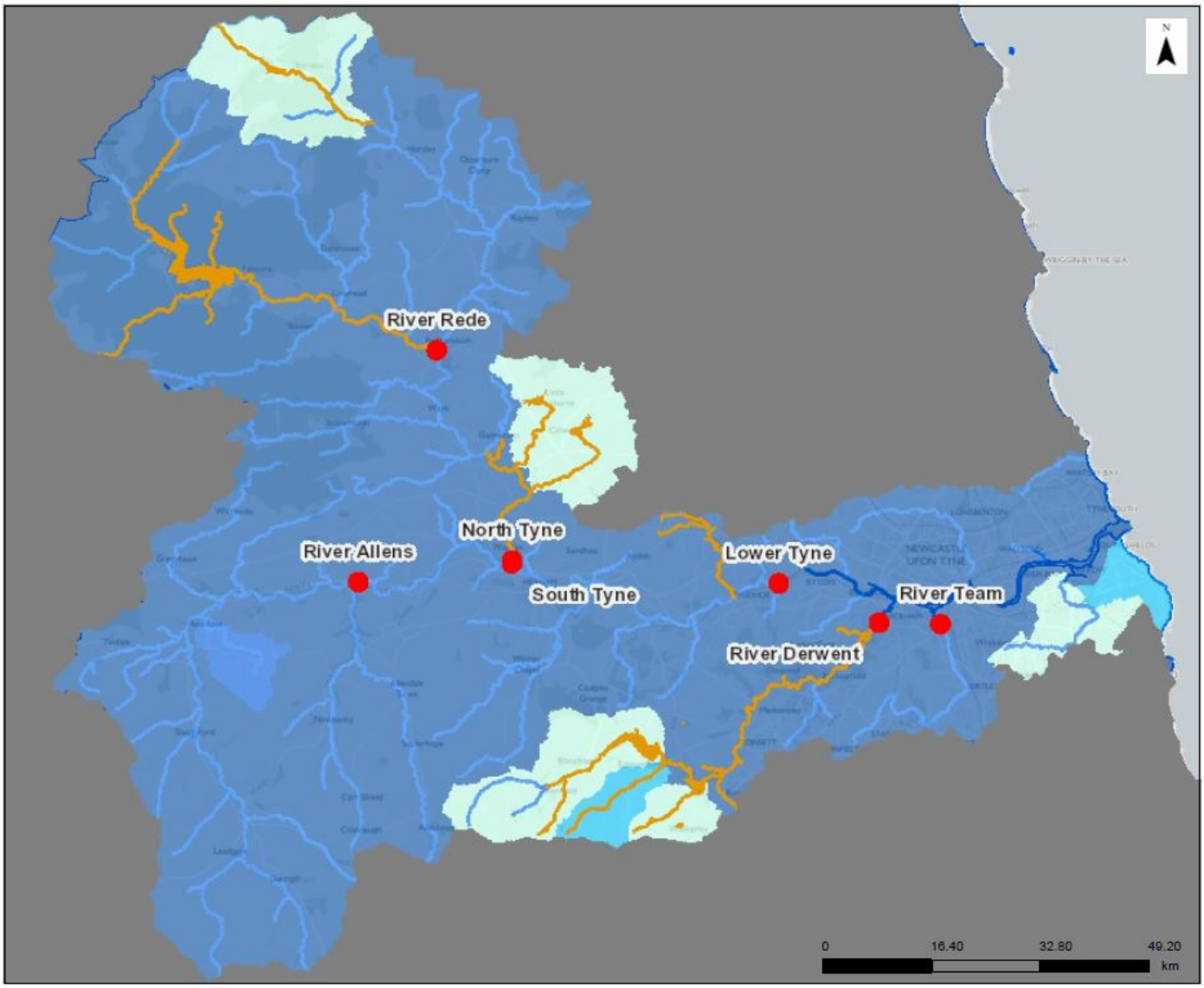
2.3. Resource reliability

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

By assessing the quantity of water available at different flows it’s possible to see when there is a surplus or deficit of water and the associated reliability of an abstraction. This is an indication only; actual reliability of a licence will be discussed when you apply.

Map 6 gives an indication of the resource availability for consumptive abstraction in Tyne area expressed as a percentage of time.

Map 6 - Water resource reliability of the Tyne ALS expressed as percentage of time available



Legend:

- Assessment Points
- Heavily Modified and Artificial Rivers
- Heavily Modified Artificial lakes
- Rivers

Percentage of the time additional consumptive resource may be available:

- Consumptive abstraction available less than 30% of the time
- Consumptive abstraction available at least 30% of the time
- Consumptive abstraction available at least 50% of the time
- Consumptive abstraction available at least 70% of the time
- Consumptive abstraction available at least 95% of the time

2.4. Other considerations for availability and reliability

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

There may also be restrictions on new groundwater abstractions in some locations if they pose a risk to existing water users or groundwater dependent features. For example, we may impose a "Hands Off Level" (HoL). A HoL restricts abstraction when water levels drop below a certain level in a borehole or well.

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 31st March 2030 and the subsequent one is 31st March 2042.

2.5. Impoundments

Applications for impoundments will be dealt with on a case by case basis. More information may be found on our water management web pages on gov.uk.

3. How we manage abstraction in the Tyne ALS

3.1. Assessment points

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

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

Table 1 gives an indication of how much water is available for further abstraction and the associated restrictions we may have to apply to new and varied abstraction licences from the main river. Tributaries to the main river may be subject to different restrictions and quantities and will be assessed locally on a case by case basis.

Each HoF is linked to an AP and is dependent on the resource availability at that AP. In some cases additional restrictions may apply to licences where there is a more critical resource availability downstream to protect the ecological requirements of the river. This is detailed in the last column of Table 1 if applicable.

All abstraction licence applications are subject to an assessment to take account of any local and downstream issues and may be subject to further restrictions.

Reading from top to bottom in Table 1 are the APs in the Tyne ALS area. Reading across the columns you can see the potential HoF that may be applied to a licence, the number of days water may be available under this restriction and the approximate volume of water

in Ml/d that may be available etcetera. In cases where there is water available at all flows we may apply a Minimum Residual Flow (MRF) to protect very low flows. We'll decide this on a case by case basis.

AP	Name	Water Resource Availability	HOF Restriction (Ml/d)	Number of days per annum abstraction may be available	Approximate volume available at restriction (Ml/d)	Is there a gauging station at this AP?
1	River Team	Water Available for Licensing	4.5 (MRF)	365	22.8	Yes (Team Valley)
2	River Derwent	Limited Water Available for Licensing - see comment 1 (below)	1258.3	310	0	Yes (Rowland's Gill)
3	Lower Tyne	Water Available for Licensing	728.9	365	114.8	Yes (Bywell)
4	South Tyne	Water Available for Licensing	355.9	292	106.9	Yes (Haydon Bridge)
5	River Allens	Water Available for Licensing	64.8	292	17.4	No
6	North Tyne	Water Available for Licensing	687.8	365	114.8	No
7	River Rede	Water Available for Licensing - see comment 2 (below)	101.5	292	39.3	Yes (Rede Bridge)

Table 1 Summary of licensing approach for the assessment points of the Tyne ALS.

Comment 1 - Water Availability Assessment at AP 2 (Derwent)

The maps in Section 2.1 indicate that there may be limited or no water available at all flows (Q95-30) downstream of Derwent Reservoir. As releases from Derwent reservoir, and the associated catchwater on Burnhope Burn, are typically constant (expect for any additional spill, which rarely occurs), much of the natural variability in river flows is removed. The reduction in flows has classified some of the waterbodies downstream as having no water available; this lack of availability is known to be a greater issue at Medium and High Flows than at Low flows. Each new application will however be dealt with on a case by case basis.

Comment 2 - Water Availability Assessment at AP 7 (Rede)

The maps in Section 2.1 indicate that there may be limited or no water available at higher flows (Q50-70) downstream of Catcleugh Reservoir. As releases from the reservoir are constant (expect for any additional spills, which can be substantial), some of the natural variability in river flows is removed. The reduction in medium flows has classified some of the waterbodies downstream as no water available, however each new application will be dealt with on a case by case basis.

3.2 Groundwater

For principal aquifers we may divide the area into groundwater management units (GWMU), which are equal to or sub-divisions of 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.

Three groundwater bodies are located within the Tyne catchment. The Tyne Carboniferous Limestone (GB40302G702700) and Tyne Carboniferous Limestone and Coal Measures (GB40302G701500) lie wholly in the catchment. A limited area of the Wear Magnesian Limestone lies within the Tyne ALS area around south Tyneside.

The Wear Magnesian Limestone forms the northern promontory of the Magnesium Limestone GWMU. At present only the Wear Magnesian Limestone is thought to be at risk of being impacted by existing abstractions (fully licensed quantities), restricting water availability in some areas.

3.2.1. Licence restrictions on groundwater abstractions in the Tyne ALS area

Wear Magnesian Limestone (GB40301G703900)

The Wear Magnesian Limestone groundwater body extends into the south eastern corner of the Tyne ALS area. The water body has been assessed as having Restricted Water Available and the following restrictions apply:

Saline Intrusion	A 5km buffer zone is in place along the coast. The groundwater body is at risk from saline intrusion. The buffer is to mitigate groundwater abstraction causing saline intrusion and to protect groundwater status. New applications should be located outside this zone or demonstrate that new abstractions will not result in saline intrusion.
Connection with Surface Water	New and existing licences should not cause a detrimental impact to the ecology of surface waters from a reduction in flow. Existing abstractions may be capped at 'Recent Actual' volumes if 'Fully Licensed' volumes are deemed too risky.
Yield Limitation	Applicants will need to demonstrate that yields are sustainable and are not restricted by local conditions.
Water Quality Impact from Coal Measures Connectivity	Due to concern about the dissolution of minerals into groundwater from the mixing of water from the coal measures, applicants will need to demonstrate that new abstractors will not cross connect aquifers. Connectivity between the aquifers will increasing the risk of deterioration in the water quality of the overlying Magnesian Limestone aquifer and reduce effectiveness of mitigation measures already in place to protect water quality.

Table 2 - Summary of Licence Restrictions associated with the Wear Magnesian Limestone.

3.3. Heavily modified water bodies

The Tyne ALS Area includes Kielder reservoir, which is located on the River North Tyne and is Northern Europe's largest man-made lake. It has a surface water area of 1086 hectares and a capacity of 200,000 Ml. Most of the releases from the reservoir are made for the generation of renewable energy from hydropower. However, river regulation releases can also be made from Kielder reservoir to maintain the flow of the Rivers North Tyne and Tyne. Water is released into the River North Tyne and then, via the abstraction at Riding Mill pumping station and the Kielder Tunnel, can be released into the Rivers Wear and Tees. Releases are made so that river flows below major abstraction points on the Rivers Tyne, Wear and Tees are kept above a prescribed minimum known as the Minimum Maintained Flow (MMF). An Operational Agreement has been developed to manage the releases from Kielder Reservoir. Information on this and the weekly hydropower releases from Kielder Reservoir are available at https://www.tynereleasekielder.co.uk.

As a result of the river regulation benefit from this transfer system, a section of the main River North Tyne and the Main River Tyne is considered a Supported Source under Schedule 1 of the Scheme of Abstraction Charges (2018 / 2019). Higher charges will be

applied to abstractions that are associated with this section of river unless a Hands Off Flow (HOF) restriction is in place

Water can also be released from the Tyne -Tees Tunnel into the River Derwent below Derwent Reservoir to replace the compensation flow at times when the reservoir contents are low. At all other times the compensation water is released directly from Derwent Reservoir.

Across the Tyne ALS area, 18 waterbodies are designated as Heavily Modified as the result of a recognised impact on flows associated with reservoir impoundment, river regulation and / or strategic transfers:

WBID:	Waterbody Name:	
GB103023075340	River Rede from source to Cottonshope	These waterbodies include, or are immediately downstream of, Catcleugh Reservoir. Catcleugh Reservoir, in conjunction with a number of linked reservoirs, is used for water supply. As a result of the reservoir the flow regime of the river is impacted. The reservoir has a compensation release of 13.6 Ml per day and generally spills each winter. A transfer pipeline also provides a direct connection between Catcleugh Reservoir and Hallington, Colt Crag and Whittle Dene reservoirs on the Barrasford Burn, Erring Burn and Whittle Burn.
GB103023075261	Rede from Cottonshope Burn to Bellshiel Burn	
GB103023074890	Barrasford Burn Catchment	Waterbody includes Colt Crag and Little Swinburn reservoirs, and a transfer pipeline connection to Catcleugh Reservoir. These reservoirs, in conjunction with a number of linked reservoirs, are used for water supply. As a result of the reservoirs the flow regime of the river is impacted. Little Swinburn reservoir has a compensation release of 0.95 Ml per day.
GB103023075770	Whittle Burn Catchment	Waterbody includes the Whittle Dene complex of reservoirs (Great Northern, Harlow Hill (Western), Lower and Great Southern), and a pipeline connection to Catcleugh Reservoir. These reservoirs, in conjunction with a number of linked reservoirs, are used for water supply. As a result of the reservoirs the flow regime of the river is impacted. There is no fixed compensation flow from the reservoirs but natural inflow to the reservoirs is diverted downstream ensuring flows are maintained.

GB103023075120	Plashetts Burn Catchment	These waterbodies all lie in the catchment of Kielder Water. Further, the lower reaches of most of these waterbodies constitute part of the Kielder Water impoundment. The reservoir is used for river regulation and hydropower production. As a result of the reservoir the flow regime of the river downstream is impacted. The reservoir also has a compensation release of 114 Ml per day.
GB103023075110	Belling Burn Catchment	
GB103023074970	Cranecleugh Burn Catchment	
GB103023074950	Little Whickhope Burn Catchment	
GB103023075011	Lewis Burn from Source to N Tyne (Kielder)	
GB103023075081	N Tyne from Source to Lewis Burn	
GB103023075070	North Tyne from Lewis Burn to Tarset Burn	
GB103023074960	North Tyne from Tarset Burn to River Rede	Waterbody is downstream of Kielder Reservoir. As a result of the reservoir the flow regime of the river downstream is impacted.
GB103023074920	North Tyne from River Rede to Gunnerton Burn	Waterbody is downstream of Kielder Reservoir. As a result of the reservoir the flow regime of the river downstream is impacted.
GB103023075802	N Tyne from Barrasford to S Tyne confluence	Waterbody is downstream of Kielder Reservoir. As a result of the reservoir the flow regime of the river downstream is impacted.
GB103023074770	River Derwent from Nookton Burn to Burnhope Burn	Waterbody includes Derwent reservoir, and a connection to the River Tyne via the Kielder Transfer Tunnel. The reservoir, in conjunction with a number of other reservoirs, is used for water supply. As a result of the reservoir the flow regime of the river downstream is impacted. The reservoir has a compensation release of 24.0 Ml per day, plus very intermittent overspill.
GB103023074760	Burnhope Burn from Source to River Derwent	Waterbody includes a catchwater for Derwent reservoir. As a result of the catchwater, most of the water flow from the Burnhope Burn is diverted into Derwent reservoir and therefore flow is lost from the Burn.

GB103023074790	River Derwent from Burnhope Burn to River Tyne	Waterbody is immediately downstream of Derwent Reservoir, and the associated catchwater on Burnhope Burn. As a result of the reservoir and its catchwater the flow regime of the river is impacted
GB103023074740	Horsleyhope Burn Catchment	Waterbody includes Hisehope and Smiddy Shaw reservoirs. These reservoirs, in conjunction with Derwent reservoir, are used for water supply. As a result of the reservoirs the flow regime of the river is impacted. There is no constant compensation release from either reservoir.

Table 3 - Summary of Heavily Modified Water Bodies within the Tyne ALS

3.4. Protected areas

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

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

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

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

In the Tyne ALS area, there are over 100 conservation sites that have been designated in relation to the character of the Water Environment. These sites can be identified using the MAGIC mapping interface available at www.magic.defra.gov.uk.

The following sites are notable as they comprise distinct areas of riverine environment. Applications for surfacewater abstraction in these locations, if eligible, would require a more restrictive assessment than that described in section 2 of this document.

Feature:	Name:	Sub-catchment:
SSSI	Alston Shingle Banks	South Tyne
SAC	Tyne and Nent (SAC)	South Tyne
SSSI	River Nent at Blagill (SSSI)	South Tyne
SSSI	Burnfoot River Shingle and Wydon Nabb (SSSI)	South Tyne
SAC	Tyne and Allen River Gravels (SAC)	South Tyne
SSSI	Tipalt Burn (SSSI)	South Tyne
SSSI	Allen Confluence Gravels (SSSI)	South Tyne
SSSI	Ninebanks River shingle (SSSI)	South Tyne

SSSI	River West Allen at Blackett Bridge (SSSI)	South Tyne
SSSI	Beltingham River Shingle (SSSI)	South Tyne
SAC	Roman Wall Loughs (SAC)	North Tyne
SSSI	Roman Wall Loughs (SSSI)	North Tyne

Table 4 - Summary of designated sites within the Tyne ALS that are notable for distinct areas of riverine environment.

Applications for groundwater abstraction would also need to be rigorously considered in relation to the potential impact to any groundwater fed designated sites.

4. Managing existing licences

4.1. Water rights trading

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

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

To find out more about licence trading please go to our water management web pages on gov.uk

Guide to the potential trading in water bodies of a particular ALS water resource availability colour

High hydrological regime

Blue 

Opportunities for trading water rights will be limited.

Water available for licensing

Green 

Allow trades of recent actual abstraction and licensed abstraction, but little demand for trading expected within water body as water available for new abstractions.

Restricted water available for licensing

Yellow 

There may be opportunities for licence holders to trade up to their full licensed quantities, but the quantities of water available to trade may be restricted once levels of actual abstraction reach sustainable limits. We will not permit licence trades in water bodies where we are taking action to prevent deterioration unless the trade is consistent with achieving water body objectives.

Water not available for licensing

Red 

We will only trade recent actual abstraction but no increase in recent actual abstraction is permitted in water body. Licensed abstraction will be recovered for the environment.

HMWBs

Orange

Opportunities for trading will depend on local operating agreements and local management.

4.2. Taking action on unsustainable abstraction

4.2.1. Action being taken on unsustainable abstraction in the Tyne ALS Area.

AP 2: Derwent

The upstream reservoirs - Derwent Reservoir plus the catchwaters on Burnhope Burn and Black Burn, Hisehope Reservoir and Smiddy Shaw Reservoirs - are known to have an impact on the flow regime at this Assessment Point. Measures delivered by Northumbrian Water Ltd, through the Water Industry National Environment Program, are aiming to amend the releases from the impoundments in this catchment to provide a more variable flow regime. This may result in more water being available for licencing at higher flow conditions.

AP 6: North Tyne

Kielder Reservoir is known to have an impact on the flow regime at this Assessment Point. Measures have been put in place to mitigate the impact of the reservoir releases and further investigation will continue, through the Water Industry National Environment Program and other programs, to continually to assess and adapt the management regime for Kielder Reservoir.

4.2.2. Action being taken on unsustainable groundwater abstraction

Tyne Carboniferous Limestone and Coal Measures (GB40302G701500)

Groundwater levels within the Coal Measures are currently being managed by the Coal Authority across much of the Tyne catchment to prevent widespread mine water pollution of ground and surface waters. The depression of water levels is likely to be impacting flow availability in some surface waters e.g. River Don however this is preferable to the alternative pollution risks. At present mine water schemes are not incorporated into our Water Availability Assessments, this is currently under review. We will work with the Coal Authority in order to obtain sufficient information to understand the impact of their mine water management and identify where surface water flows are impacted. Any new abstractions in catchments overlying the Coal Measures may need to undertake an assessment to demonstrate availability and reliability of the resource e.g. Stanley Burn. Applicants will need to demonstrate that any new abstraction does not interconnect poor quality groundwater (mine water) with surface water. Treatment may be required if transferring water from groundwater source to a surface water source.

4.3. Regulating currently exempt abstraction

As the abstraction licensing system in England and Wales developed over the past 50 years, certain abstractions have remained lawfully exempt from licensing control. This meant that unlimited supplies of water could be abstracted, even in areas that are water stressed.

This means that those exempt abstractions could potentially take unlimited amounts of water, irrespective of availability and without regard to impacts on the environment or other abstractors.

Following two public consultations Government have introduced new Regulations to take effect from 1st January 2018. The Water Resources (Transitional Provisions) Regulations 2017 have removed the majority of previous exemptions from licensing control, and current exempt abstractors will now require a licence to lawfully abstract water.

The main activities affected are:

- transferring water from one inland water system to another in the course of, or as the result of, operations carried out by a navigation, harbour or conservancy authority;
- abstracting water into internal drainage districts;
- dewatering mines, quarries and engineering works, except in an emergency;
- warping (abstraction of water containing silt for deposit onto agricultural land so that the silt acts as a fertiliser);
- all forms of irrigation (other than spray irrigation, which is already licensable), and the use of land drainage systems in reverse (including transfers into managed wetland systems) to maintain field water levels;
- abstracting within currently geographically exempt areas, including some rivers close to the borders of Scotland; and
- abstractions covered by Crown and visiting forces (other than Her Majesty the Queen and the Duchies of Cornwall and Lancaster in their private capacity).

The Tyne ALS Area has previously been considered to be a geographically exempt area. This meant that licences have historically not been required for abstractions from underground strata and springs provided that the quantity abstracted did not exceed 1,000,000 gallons per year (4546 m3/year), with a daily rate not exceeding 50,000 gallons per day (227 m3/day) (Northumbrian Water Act (NWA, 1981). From the 1st January 2018, the controls governing abstraction from ground and surface waters in the Tyne ALS Area have been the same as those in the rest of England and Wales, with only abstractions that do not exceed 20 m3/day being exempt.

Where we have details of previously exempt abstractions, we will endeavour to include them in our assessments to consider how they impact on the catchment.

5. List of abbreviations

ALS
Abstraction Licensing Strategy.

AP
Assessment Point.

CED
Common End Date.

Defra
Department of Environment Fisheries and Rural Affairs.

EFI
Ecological Flow Indicator.

GEP
Good Ecological Potential.

GES
Good Ecological Status.

GW
Groundwater.

HMWB
Heavily Modified Water Body.

HoF
Hands off Flow.

HoL
Hands off Level.

Ml/d
Megalitres per day.

SAC
Special Areas of Conservation.

SPA
Special Protection Areas.

SSSI
Sites of Special Scientific Interest.

UKTAG

United Kingdom's Technical Advisory Group.

WB

Water body.

6. Glossary

Abstraction

Removal of water from a source of supply (surface or groundwater).

Abstraction licence

The authorisation granted by the Environment Agency to allow the removal of water.

Assessment point

A significant point on a river, often where two major rivers join or at a gauging station.

Catchment

The area from which precipitation and groundwater will collect and contribute to the flow of a specific river.

Consumptive abstraction

Abstraction where a significant proportion of the water is not returned either directly or indirectly to the source of supply after use. For example for the use of spray irrigation.

Discharge

The release of substances (for example, water, treated sewage effluent) into surface waters.

Environmental flow indicator

Flow indicator to prevent environmental deterioration of rivers, set in line with new UK standards set by UKTAG.

Groundwater

Water that is contained in underground rocks.

Hands off flow

A condition attached to an abstraction licence which states that if flow (in the river) falls below the level specified on the licence, the abstractor will be required to reduce or stop the abstraction.

Hands off level

A river flow or borehole (groundwater) level below which an abstractor is required to reduce or stop abstraction.

Impoundment

A structure that obstructs or impedes the flow of inland water, such as a dam, weir or other constructed works.

Surface water

This is a general term used to describe all water features such as rivers, streams, springs, ponds and lakes.

Water body

Units of either surface water or groundwater which we use to assess water availability.

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