



Tame, Anker and Mease Abstraction Licensing Strategy

A strategy to manage water resources sustainably

June 2022

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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.

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We can't do this alone. We work as part of the [Defra](#) group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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1. About the licensing strategy

1.1 Overview

This strategy sets out how we manage new and existing [abstractions](#) and [impoundments](#) within the Tame, Anker and Mease [catchment](#). This is in the Humber river basin district.

It ensures that we:

- meet [river basin management plan](#) (RBMP) objectives for water resources activities
- 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
- adjacent [groundwater](#) bodies affected by any reduction in groundwater level

[Managing water abstraction](#) describes the technical explanation, legal and policy requirements behind the abstraction licensing strategies ([ALS](#)).

Our online [abstraction pages](#) advise on:

- who needs an abstraction or impoundment licence
- [how to apply](#) for a licence

1.2 How is the licensing strategy set out?

This ALS provides an overview of how water is sustainably managed in the Tame, Anker and Mease catchment to:

- provide water for abstraction
- protect the environment

The following is a summary of what each section covers:

- [Catchment background](#) - sets out additional information about the catchment and the influences and pressures on water availability
- [Water resource availability](#) - explains how much water is available for abstraction in the catchment
- [How we manage water resource availability](#) - explains the local licensing approach for the catchment which is summarised in Tables 2 and 3. This includes the potential water available for licensing and the restrictions that would be required
- [Managing the catchment together](#) - details the actions we are taking where abstraction is currently unsustainable in the catchment. Approaches to ensure sustainable water management in the future are outlined, including information on licence trading
- [Related links](#) - are listed for further information on water resource management.
- [Abbreviations](#) – lists the full text of abbreviations used in this document
- [Glossary](#) – explains technical terms included throughout this document
- [Contact details](#) – how to get in touch

Note: whilst our assessment tools are continuously updated, we aim to update this document on a 3 year basis. Therefore some details within this document, for example [hands off flow](#) (HoF) values may be outdated. Use this document as a guide to water availability but for the most up to date information please [contact us](#).

1.3 Collaborative and sustainable water management

Our long term goal is to develop a stronger catchment focus for water resources. We are working with abstractors and catchment groups to:

- develop local solutions to existing pressures
- to prepare for the future

Catchment groups may include a variety of different partnership groups such as:

- abstractor groups
- local catchment partnerships
- priority catchment groups
- environmental groups

Since the autumn of 2018, we have been collaborating with local partners. In several priority catchments across England we have explored:

- modern and innovative ways of improving access to water
- alternative ways to achieving sustainable abstraction

This strategy is a tool to make informed decisions on the choices abstractors make about their use of water. We want this strategy to help abstractors plan their water use and become more resilient in the face of climate change.

2. Catchment overview

2.1 Landscape and land use

The catchment area covers much of the West Midlands conurbation, including:

- Birmingham
- parts of the Black Country
- Staffordshire to the north
- the county of Warwickshire to the east

It spans an area of approximately 3,136km². The catchment is very varied in its landscape, generally relatively low lying (between 50m and 290mAOD) and gently undulating.

The higher areas around the upper River Tame and River Rea, and the River Cole further downstream, have been heavily urbanised and modified. Away from the main urban areas the predominant land uses are pasture grassland and rough grazing. The river valleys are typically narrow and meandering with long river meadows extending into farmland. The River Blythe is recognised as a Site of Special Scientific Interest (SSSI), being a good example of a low land river on clay.

Moving downstream the land around the Rivers Tame and Anker becomes a fragmented landscape of pastoral and arable land intermixed with urban development. In this area the effects of quarrying are obvious with active and water-filled disused pits. Many of these are now used for water sports or informal recreation purposes and forming distinct wetland habitats that are important for nature conservation. The significance for nature conservation is recognised by designations:

- the Tame Valley Wetlands Nature Improvement Area
- Anker Valley with online SSSI lakes at Alvecote Pools formed from historic mining subsidence

Lea Marston lakes were created from a repurposed quarried area to create online purification lakes. These allowed sediments and contaminants in the River Tame to settle out and help improve downstream water quality.

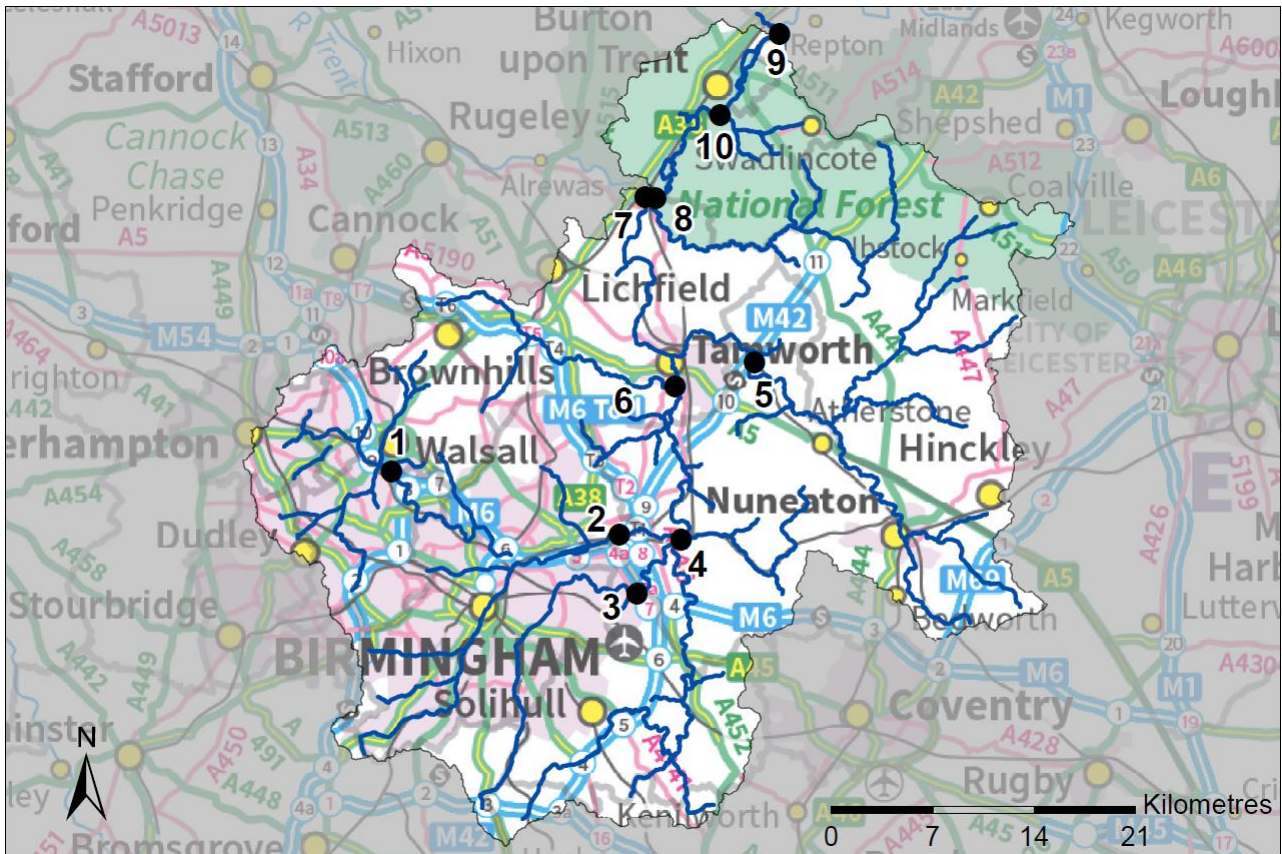
Further downstream the Tame joins the River Trent which meanders in a wide floodplain northeast through Burton upon Trent. Smaller streams drain directly into the Trent and have carved out more undulating landforms. The landscape is influenced by development including:

- the expansion of urban areas
- out of town retail developments
- industry

The main areas of arable farming are found on slightly elevated and better draining river terraces. The open floodplains of the area regularly flood and play a vital role in coping with the increased volume of water.

The eastern side of the catchment is comprised of the Mease and Sence lowlands. This is an area characterised by extensive areas of arable cultivation over gently rolling clay ridges and shallow valleys. The landscape is predominantly an open agricultural one, the most prominent features being the small villages and the Ashby Canal. The catchment also sits within the National Forest, an area of old and new mixed woodland plantations transforming areas of historic mining works. The River Mease itself is designated as a Special Area of Conservation (SAC) and a SSSI. It is a good example of an unmodified lowland river and having designated fish species bullhead and spined loach.

Map 1: Overview of the Tame, Anker and Mease catchment



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Legend

- Rivers
- Assessment Points (APs)

- AP1 River Tame upstream of Bescot gauging station
- AP2 River Tame at Water Orton
- AP3 River Cole at Coleshill
- AP4 River Blythe
- AP5 River Anker at Polesworth
- AP6 Bourne Brook
- AP7 River Tame downstream River Blythe to River Trent
- AP8 River Mease
- AP9 River Trent to River Dove
- AP10 River Trent at Drakelow

2.2 Water resources

The Tame, Anker and Mease catchment covers:

- the whole of the River Tame catchment to its confluence with the River Trent
- the Trent catchment from the River Tame confluence to the River Dove confluence

The headwaters of the River Tame flow from the upland areas of Walsall and Wolverhampton and are joined by the River Rea. This creates a wide, shallow valley to the east of the catchment. The catchment is heavily urbanised and the channel has been

significantly modified. The River Tame flows westwards through northern Birmingham. In the south of the catchment, the Rivers Cole, Blythe and Bourne flow through the urban fringe and join the River Tame north of Coleshill. The catchments of the River Bourne and River Blythe are drinking water protected zones. Water is stored at Shustoke Reservoir for transfer to Nuneaton, Atherstone, Bedworth and Coventry.

The River Tame responds quickly to extreme rainfall events in the upper reaches where it is flashy in nature. Increased connection to floodplains by the time it reaches the confluence with the River Anker means a return to a slower, more rural response. As it flows northwards from Birmingham the River Tame is also joined by the Bourne Brook before flowing into the River Trent near Alrewas. The River Mease also flows into the River Trent near here; the latter then continues to flow north-east through Burton upon Trent. North of Burton, the River Dove flows into the River Trent and this marks the downstream point of the Tame, Anker and Mease catchment.

The area contains significant quantities of groundwater within the Permo-Triassic sandstone aquifers. These are high yielding, strategically important principal aquifers that support significant abstraction for:

- public supply
- industrial
- agricultural use

They also provide important flows to connected rivers and wetlands (known as baseflow). Such flows are particularly important during the drier seasons.

The area also contains strata with more variable permeability where water is encountered in sufficient but lower quantities, known as Secondary Aquifers. These may be capable of supporting smaller locally important abstractions for agriculture or domestic purposes. Over 65% of water licensed for [consumptive abstraction](#) in the catchment is from the Sandstone aquifers and other groundwater sources.

Overall, more sources are licensed for abstraction for agricultural purposes than for any other purpose but the largest volume is licensed for public water supply.

The [catchment data explorer](#) and Defra's [Magic Map](#) can help you explore and download information about the catchment and water environment.

2.3 Climate Change

Climate change will likely impact on the quantity and seasonal availability of water resources within the catchment.

The projected climate change impacts on rainfall and river flow for the Midlands Region by the 2050s are for:

- rainfall to decrease by 34% in the summer but increase by 29% in the winter
- low flows to be 65% lower but peak river flows to be 30% higher

Climate change projections are estimated using data from UKCP09, consistent with a 4°C rise by 2100. Further details on the assumptions used can be found in the [Environment Agency climate impacts tool](#).

2.4 Environment and Sustainability

Our licensing approach ensures that we avoid deterioration within this catchment in line with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (WFD). The WFD Regulations (2017) seek environmental objectives to

protect and enhance the water environment. It ensures the sustainable use of water resources for economic and social development.

We assess the impacts of new water abstraction applications to make sure that they comply with the WFD Regulations (2017). This includes ensuring water bodies will maintain a healthy ecology. If the ecology is not good, we ensure abstraction will not deteriorate the ecology further. WFD Regulations (2017) status is assessed at a water body scale. Water body WFD Regulations (2017) status can be:

- bad
- poor
- moderate
- good
- high

Groundwater body status is assessed with a separate set of tests, with the status reported as either good or poor.

3. Water resource availability in the Tame, Anker and Mease catchment

3.1 Surface water availability

The method for calculating the water resource availability is explained in [Managing water abstraction](#). Water availability is calculated at selected assessment points (APs). The maps show the water availability calculated at the AP; local water availability may differ.- There are 10 APs in the Tame, Anker and Mease ALS:

- AP1 covers the upper branches of River Tame, including the Ford Brook, upstream of Bescot gauging station
- AP2 covers most of the River Tame catchment upstream of the River Blythe, including the River Rea; a significant proportion of the catchment is underlain by Sherwood Sandstone
- AP3 covers the River Cole catchment upstream of Coleshill gauging station
- AP4 covers the River Blythe catchment upstream of its confluence with the River Cole; there is just a small outcrop of Sherwood Sandstone in this catchment
- AP5 covers most of the River Anker catchment, including the Wem Brook and River Sence; there are small areas across the catchment underlain by Sherwood Sandstone
- AP6 covers the Bourne/Black Brook catchment to its confluence with the River Tame
- AP7 covers the River Tame catchment to its confluence with the River Trent near Alrewas
- AP8 covers the River Mease catchment to its confluence with the River Trent. Much of the River Mease and its tributaries flow over outcrops of Sherwood Sandstone upstream of Clifton Campville
- AP9 covers the River Trent catchment to its confluence with the River Dove and marks the downstream limit of this catchment; the catchment is underlain by Sherwood Sandstone outcrops towards the bottom of the catchment
- AP10 covers the River Trent catchment upstream of Drakelow gauging station catchment

3.1.1 Water resource availability colours and implications for licensing

We use colours to represent different surface water availability at a range of flows:

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. Licences will be issued with a hands off flow (HoF) restriction to protect environmental requirements at lower flows.

Restricted water available for licensing

Yellow 

Full Licensed flows fall below the [Environmental Flow Indicator \(EFI\)](#).

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.

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 that recently abstracted by an existing licence holder.

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

Grey



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 4.1 Surface Water.

There may be water available for abstraction in discharge rich catchments, you need to [contact us](#) to find out more.

The water resource availability is calculated and the colour assigned at four different flows:

- Q95 – the flow of a river which is exceeded on average for 95% of the time (a low flow) - you would expect the river flow to be lower than Q95 on 18 days in an average year
- Q70 – the flow of a river which is exceeded on average for 70% of the time - you would expect the river flow to be lower than Q70 on 110 days in an average year
- Q50 – the flow of a river which is exceeded on average 50% of the time - you would expect the river flow to be lower than Q50 on 183 days in an average year
- Q30 – the flow of a river which is exceeded on average for 30% of the time - you would expect the river flow to be lower than Q30 on 256 days in an average year

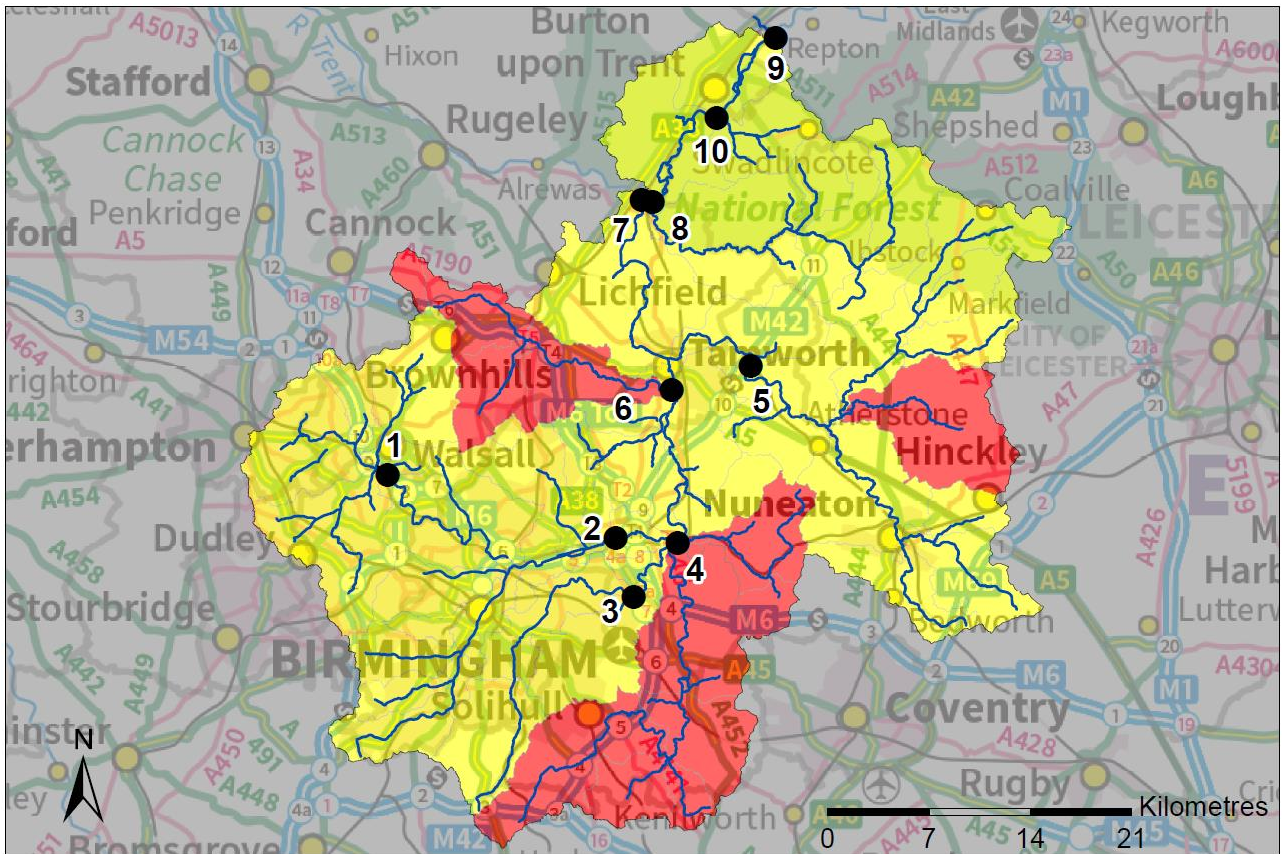
3.1.2 Water availability maps

The water availability colours for the Tame, Anker and Mease catchment are presented in Maps 2 to 5. Table 1 provides a summary of this information.

Assessment Point	Name	Q30	Q50	Q70	Q95
1	River Tame u/s Bescot GS	Water Available	Water Available	Water Available	Restricted Water Available
2	River Tame at Water Orton	Water Available	Water Available	Water Available	Restricted Water Available
3	River Cole at Coleshill	Water Available	Water Available	Water Available	Restricted Water Available
4	River Blythe	Water Available	Restricted Water Available	Restricted Water Available	No Water Available
5	River Anker at Polesworth	Water Available	Water Available	Water Available	Restricted Water Available
6	Bourne Brook	Restricted Water Available	Restricted Water Available	No Water Available	No Water Available
7	River Tame d/s River Blythe to Trent	Water Available	Water Available	Water Available	Restricted Water Available
8	River Mease	Water Available	Water Available	Water Available	Restricted Water Available
9	River Trent to River Dove	Water Available	Water Available	Water Available	Restricted Water Available
10	River Trent at Drakelow	Water Available	Water Available	Water Available	Restricted Water Available

Table 1: Summary of Maps 2 to 5 showing the water availability at each assessment point by flow category

Map 2: Water resource availability colours at Q95 for the Tame, Anker and Mease ALS.

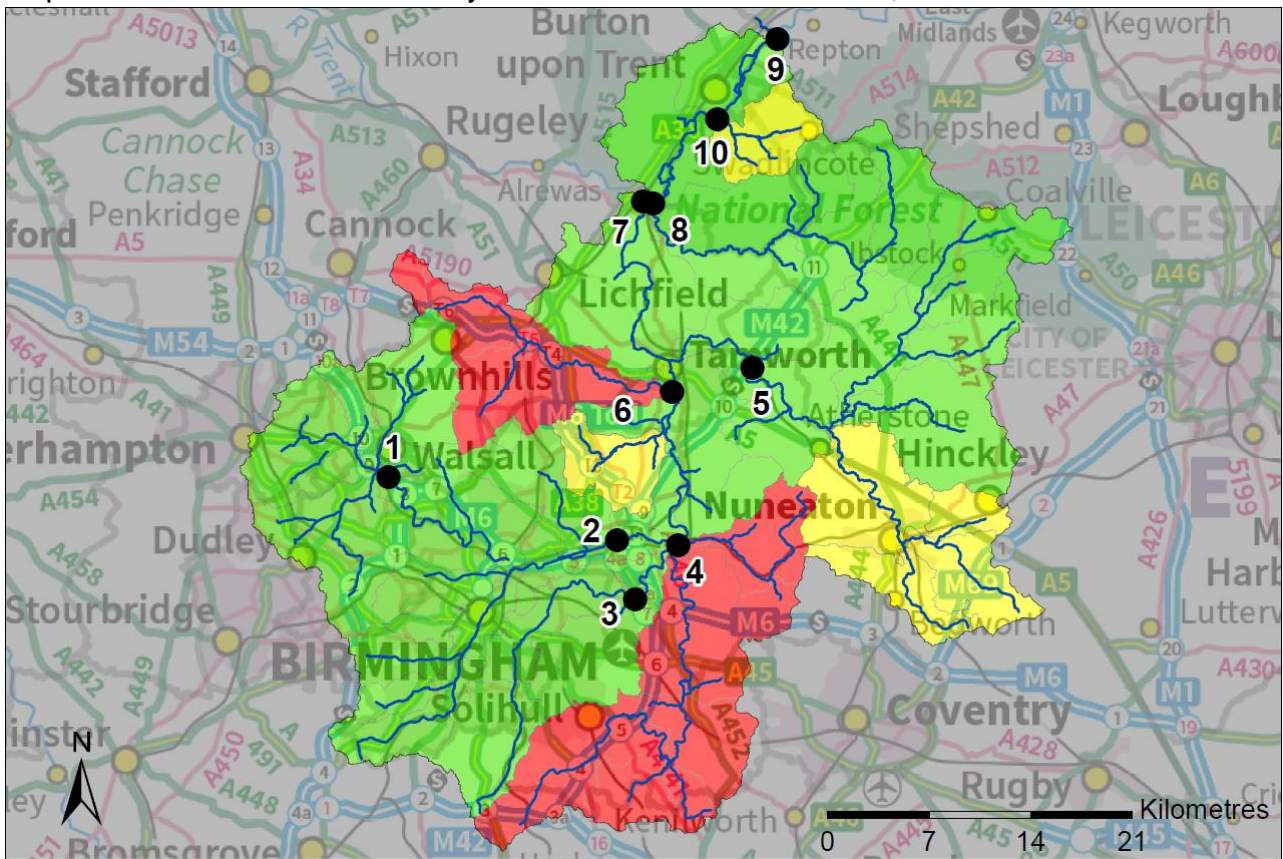


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Legend

- Assessment Points (APs)
- Rivers
- Water available
- Restricted water available
- Water not available

Map 3: Water resource availability colours at Q70 for the Tame, Anker and Mease ALS

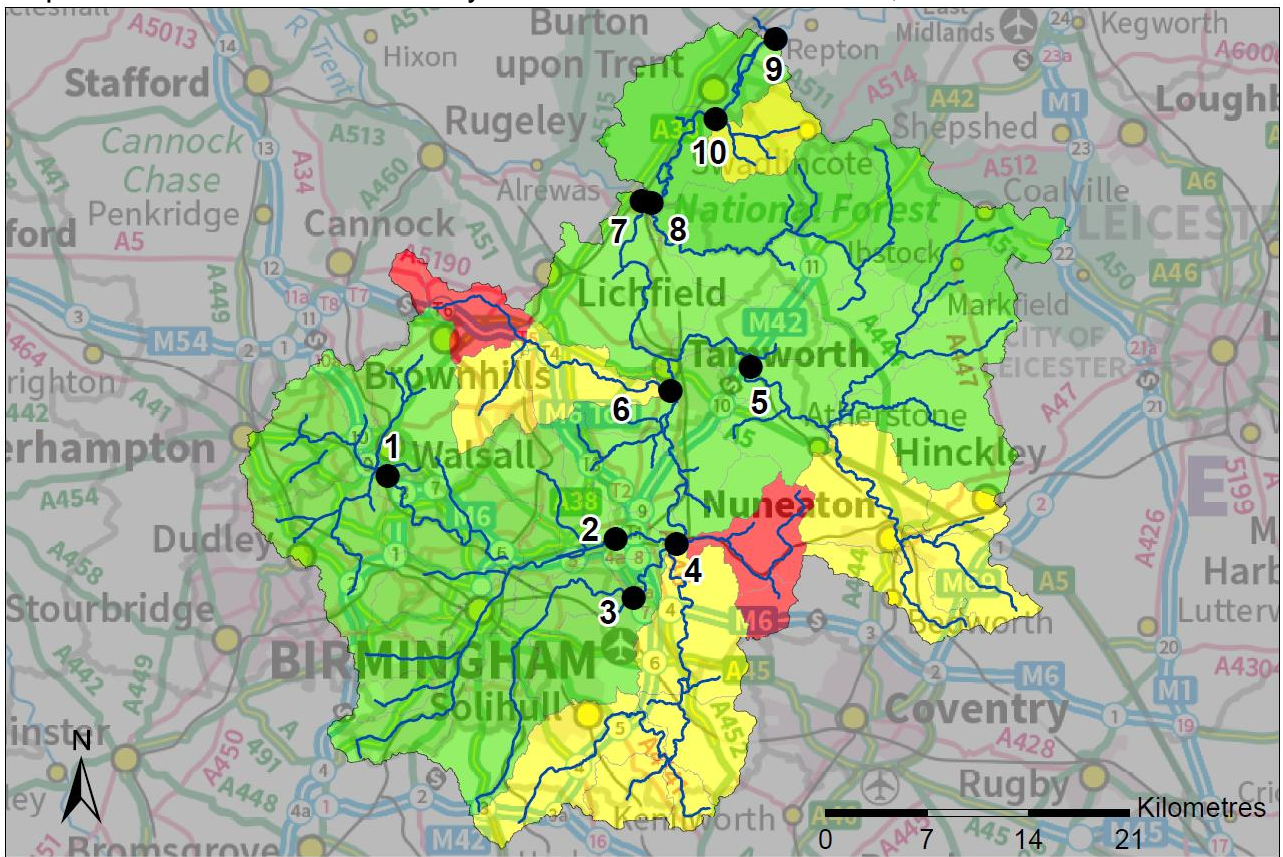


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Legend

- Assessment Points (APs)
- Rivers
- Water available
- Restricted water available
- Water not available

Map 4: Water resource availability colours at Q50 for the Tame, Anker and Mease ALS.

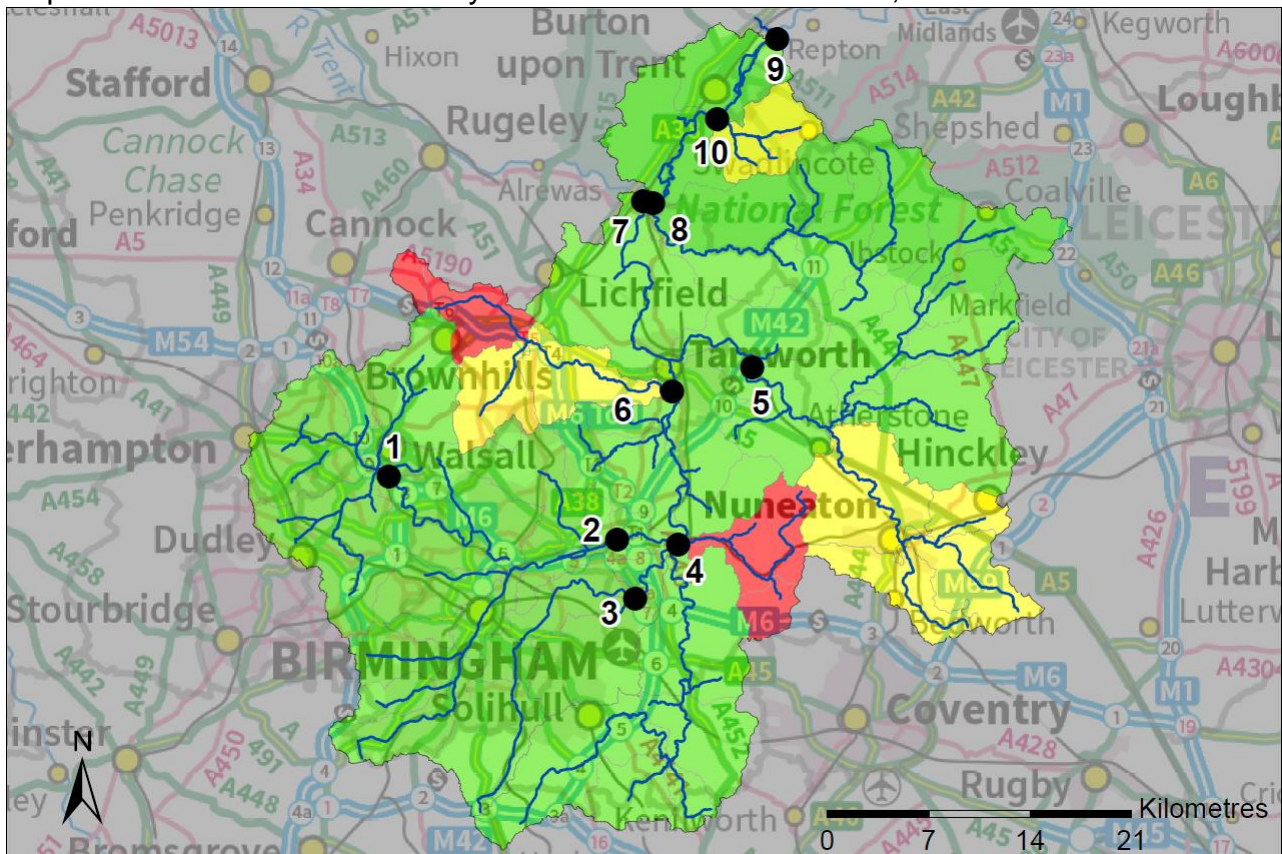


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Legend

- Assessment Points (APs)
- Rivers
- Water available
- Restricted water available
- Water not available

Map 5: Water resource availability colours at Q30 for the Tame, Anker and Mease ALS.



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Legend

- Assessment Points (APs)
- Rivers
- Water available
- Restricted water available
- Water not available

3.2 Groundwater resource availability

Groundwater availability is guided by the surface water resource availability unless we:

- have better information on principal aquifers
- are aware of local issues we need to protect

For the principal aquifers in the Tame, Anker and Mease ALS area, water availability has been assessed using a number of tests. This assessment may also include:

- consideration of available monitoring data
- surface water availability
- the need to protect groundwater dependent features including designated conservation sites

For secondary aquifers, where we typically have less information, groundwater availability is guided by the surface water availability.

In certain areas, resource concerns over groundwater mean that the standard water resource availability colours have been overridden.

Under the WFD Regulations (2017), aquifers are designated as named groundwater bodies (GWBs). We may divide GWBs into groundwater management units (GWMUs). In the case of principal aquifers, we use the information and assessments on these units to determine water availability and licence restrictions. Within the Tame, Anker and Mease catchment, groundwater has been assessed using both GWBs and GWMUs to represent the water resource status for groundwater. GWMU water availability status may be overridden to support GWB objectives.

The Permo-Triassic Sandstone is a strategically important aquifer within the Tame, Anker and Mease ALS Area. Designated as a Principal Aquifer, it provides a large proportion of the population in the West Midlands and surrounding areas with its drinking water supply. The Permo-Triassic Sandstone has a large outcrop area within the Tame, Anker and Mease catchment, which has been split into 3 GWBs and 10 different GWMUs (see Map 6 and Table 3):

- Tame Anker Mease - PT Sandstone Birmingham Lichfield GWB covering the following GWMUs:
 - Lichfield
 - Shenstone
 - Sutton
 - Birmingham
- Tame Anker Mease - PT Sandstone Burton GWB covering the following GWMUs:
 - Measham
 - Burton
 - Coleorton
 - Warton
- Tame Anker Mease - PT Sandstone Nuneaton GWB covering Nuneaton GWMU
- The Carboniferous Meriden GWMU

The following Secondary groundwater bodies also outcrop within the Tame Anker and Mease ALS Area:

- Tame Anker Mease - Secondary Combined (GB40402G990800)
- Tame Anker Mease - Coal Measures Swadlincote (GB40402G303600)
- Tame Anker Mease - Coal Measures Black Country (GB40402G992400)

3.2.1 Groundwater resource availability colours and implications for licensing

We use colours to represent different groundwater availability:

Water available for licensing

Green 

Groundwater management unit balance shows groundwater is available for licensing. New licences can be considered depending on their impacts on other abstractors and providing there will be no significant impact on:

- surface water flows
- dependent wetlands
- groundwater levels
- causing saline intrusions

Restricted water available for licensing

Yellow



Groundwater management 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:

- surface water flows
- dependent wetlands
- groundwater levels
- saline intrusions

but with management options in place.

In restricted groundwater management units no new consumptive licences will be granted where the groundwater balance and/or:

- surface water flows
- groundwater dependent wetlands

are at risk of becoming unsustainable as a result of existing licensed abstraction. It will be appropriate to take action to reduce 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. Please refer to Section 5.3.

There may be restrictions in some areas, for example in relation to saline intrusion or surface water flows. Where flow impacts are a concern a hands off flow may be applied.

Water not available for licensing

Red

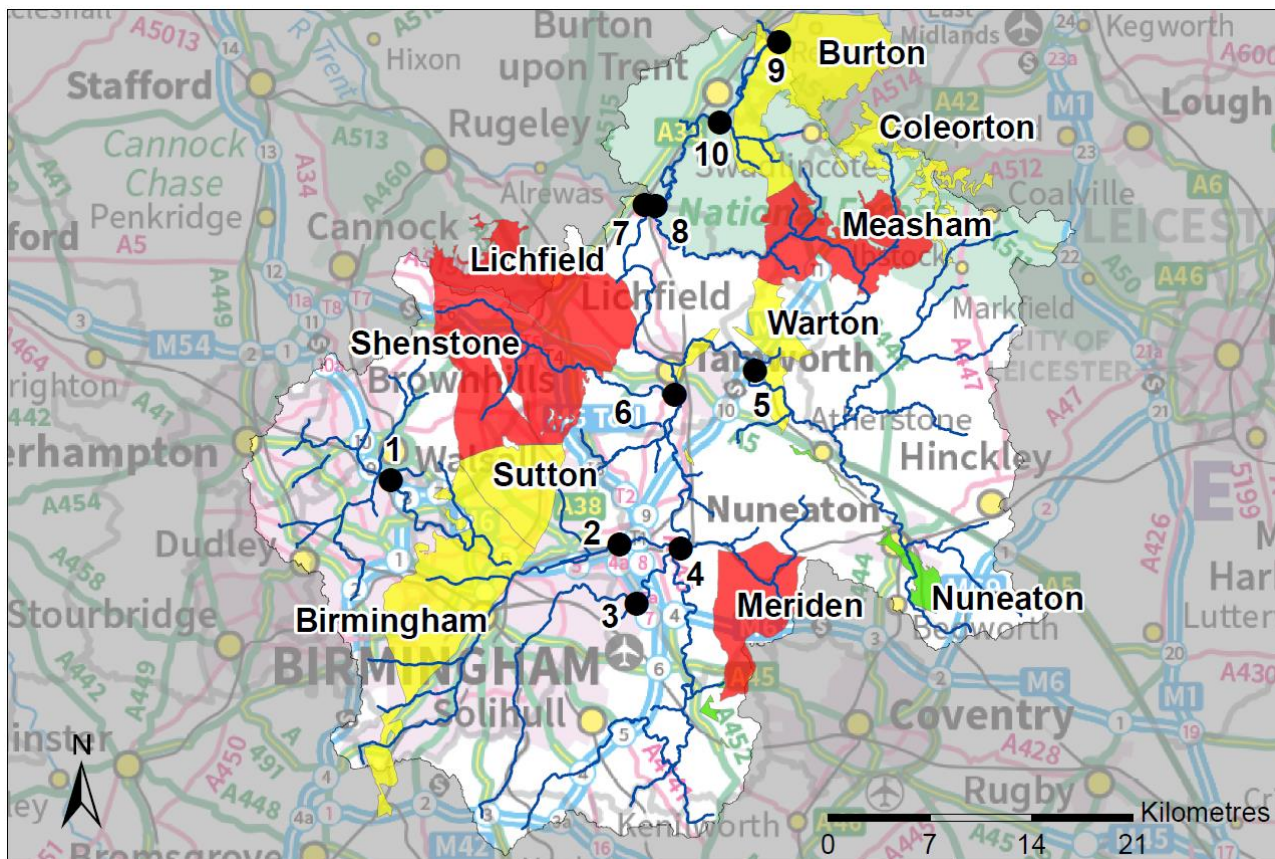


Groundwater management unit balance shows more water has been abstracted, based on recent amounts, than the amount available.

We will not grant further consumptive licences. It will be appropriate to take action to reduce 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. Please refer to Section 5.3.

3.2.2 Groundwater availability map

Map 6: Groundwater availability colours for the GWMUs in the Tame, Anker and Mease ALS.



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- Water Available GWMU
- Restricted Water Available GWMU
- No Water Available GWMU
- Assessment Points (APs)
- Rivers

3.3 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
- the associated reliability of an abstraction

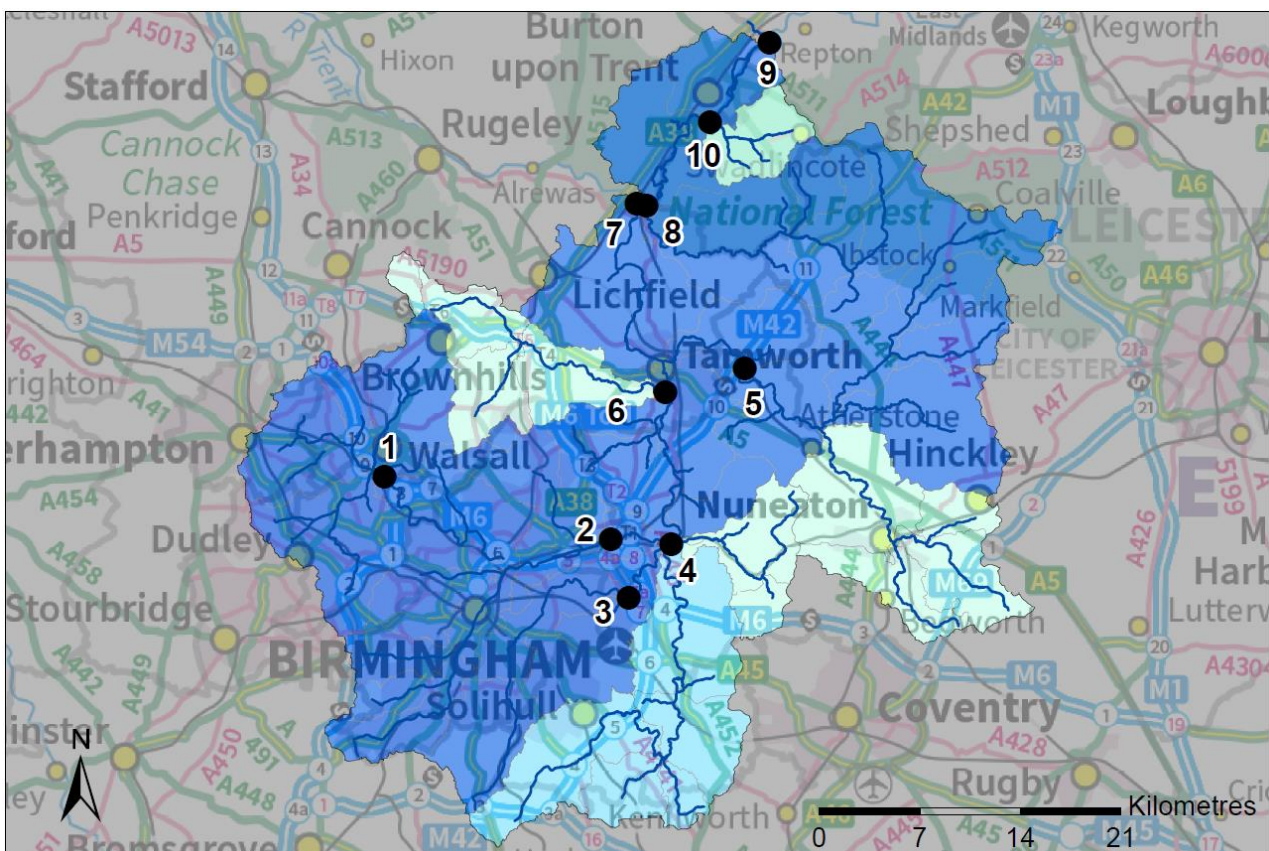
This is an indication only. Actual reliability of a licence will be discussed when you apply.

Map 7 gives an indication of the resource availability for [consumptive abstraction](#) in Tame, Anker and Mease area expressed as a percentage of time. In this catchment:

- AP1: Consumptive abstraction is available at least 70% of the time
- AP2: Consumptive abstraction is available at least 70% of the time
- AP3: Consumptive abstraction is available at least 70% of the time

- AP4: Consumptive abstraction is available at least 30% of the time
- AP5: Consumptive abstraction is available at least 70% of the time - except from the River Anker upstream of the River Sence where consumptive abstraction is available less than 30% of the time
- AP6: Consumptive abstraction is available less than 30% of the time
- AP7: Consumptive abstraction is available at least 70% of the time - except from the River Bourne and Darnford Brook, where it is available less than 30% of the time
- AP8: Consumptive abstraction is available at least 70% of the time
- AP9: Consumptive abstraction is available at least 70% of the time
- AP10: Consumptive abstraction is available at least 70% of the time - except from the Darklands Brook where it is available less than 30% of the time

Map 7: Surface water resource reliability in the Tame, Anker and Mease ALS expressed as percentage of time available



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● Assessment Points (APs)

— Rivers

Resource availability (% of the time)

less than 30%

at least 30%

at least 50%

at least 70%

at least 95%

3.4 Other considerations for resource availability and reliability

We will add constraints to licences such as hands off flow (HoF) conditions to protect:

- the environment
- 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. In dry years, restrictions are likely to apply more often. This will affect the reliability of supply.

There is no guarantee that we will grant licences even where water is available for abstraction. This is because we have to determine each application on its own merits. Local factors may mean we're either unable to grant a licence as applied for, or even at all.

New licences within a catchment 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 2038 and the subsequent one is 31 March 2050. The River Mease has a different CED of 31 March 2026 due to ongoing work addressing water quality issues in the catchment.

3.5 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](#).

4. How we manage water availability in the Tame, Anker and Mease ALS

4.1 Surface water

We assess surface water flows at assessment points (APs). These are significant points on a river, often where 2 major rivers join or at a gauging station. APs cover multiple surface water bodies.

To protect the environment we will issue licences with a condition referred to as a hands off flow (HoF). It means that if flows in the river drop below that which is required to protect the environment, abstraction must stop, hence 'hands off flow'.

Each HoF is linked to an AP and is dependent on the assessment of the river at that AP and downstream. This determines the water resource availability at that AP. In some cases additional restrictions may apply to licences where there is a more critical resource availability downstream. This is 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.

Where groundwater abstractions directly impact on surface water flows, the impact is measured at the surface water AP. Surface waters are supported by groundwater where they interact with aquifers:

- springs feed headwaters or contribute further downstream
- baseflow supports flow through riverbeds along the watercourse route

Groundwater abstractions can lower the water table. This could reduce groundwater inputs via springs and baseflow so reducing surface water flows and impacting ecology. The potential for groundwater abstraction to affect groundwater and surface water connectivity is included in the assessment of the groundwater resource status and risk.

In this catchment the Lichfield/Birmingham, Burton, and Nuneaton groundwater bodies comprise the Sherwood Sandstone principal aquifers. Groundwater abstraction from these either impact or has the potential to impact the water courses that rise on them or flow across them. Key APs where surface water flows over Sherwood Sandstone and which are likely to be impacted by this groundwater abstraction are identified in Section 3.1.

Table 2 gives an indication of:

- how much water is available for further abstraction from surface water
- the associated restrictions we may have to apply to new and varied abstraction licences from the main river

Depending on the nature of the catchment, tributaries to the main river may be subject to different restrictions and quantities. This may be assessed locally on a case-by-case basis.

Reading from top to bottom in Table 2 are the APs in the Tame, Anker and Mease ALS area. Reading across the columns you can see:

- the location of the AP
- the water resource availability status of that AP
- the potential HoF that may be applied to a licence
- the number of days water may be available under this restriction
- the approximate volume of water in Ml/d that may be available

- any other information or local restrictions

Across the River Trent catchment the water resource strategies are driven by the need to protect downstream river levels. At the bottom of the fluvial River Trent at North Muskham flows of 2,650Ml/d are needed to safeguard river levels for navigation. This also protects flows further downstream into the Humber Estuary SAC.

All HoFs in the catchment have been set at local gauging stations at flows which are equivalent to, or higher than, 2,650Ml/d at North Muskham. Where watercourses need further protection of flows due to unfavourable local water resource situations, we have set their HoFs at a suitable higher flow.

The conditions in Table 2 apply to new or varied consumptive abstractions. They may not apply if the abstraction is [non-consumptive](#) or if the licence results in an overall environmental benefit. Formal variations to increase the volume licensed will be subject to the same conditions as new licences on the increased part of the licence only.

We may also require the installation of a correctly-sized intake screen and a fish or eel pass. These help mitigate the impact where an abstraction creates a delay or barrier to the movement of fish or eel.

Licences will be issued to the Tame, Anker and Mease Common End Date (CED) of 31 March 2038. A shorter time limit or changes to the licence conditions may be required where there are risks to the sustainability of catchments. A time limit of 31 March 2026 will apply to new abstractions or increases to existing licensed abstraction in the River Mease catchment.

Where environmental sustainability is not in question renewal of time limited licences will be considered subject to local considerations and the following criteria:

- there is a continued justification of need for the water
- the water is used efficiently

Where these 2 criteria are met but the abstraction of water is unsustainable we will require licence changes to reflect historic usage. There is more information on the renewal of time-limited licences in Section 5.1.

The strategy outlined in Table 2 depends on the resource situation remaining as it is currently. Changes to major abstractions or discharges in the catchment may result in a change to this licensing strategy or to the volumes of water available.

The volumes stated are the maximum acceptable volume at that point; less water will be available upstream and from tributaries due to reduced flows. All volumes applied for will be assessed individually to ensure the impacts are sustainable both locally and further downstream.

AP	Name	AP National Grid Reference	Water Resource Availability	HoF Restriction	Number of days per annum abstraction may be available	Approximate volume available at restriction	Additional restrictions
1	River Tame u/s Bescot GS	SP0124095802	Water available for licensing	85.4MI/d at Bescot	303	7.6MI/d	
2	River Tame at Water Orton	SP1695191443	Water available for licensing	197MI/d at Water Orton	328	9.5MI/d	
3	River Cole at Coleshill	SP1817087359	Water available for licensing	29.7MI/d at Coleshill	270	2.6MI/d	
4	River Blythe	SP2119191109	Water available for licensing	100MI/d / 0.718mAOD at Castle Farm	110	6MI/d	
5	River Anker at Polesworth	SK2627703347	Water available for licensing	92.3MI/d at Polesworth	310	23.5MI/d	Closed upstream of the River Sence due to quality failures and the need to maintain flows.
6	Bourne Brook	SK2078001677	Water not available for licensing	N/A	0	0MI/d	Closed to further abstraction.
7	River Tame d/s River	SK1872214758	Water available for licensing	1520MI/d at Drakelow	328	See AP9	The River Bourne and

AP	Name	AP National Grid Reference	Water Resource Availability	HoF Restriction	Number of days per annum abstraction may be available	Approximate volume available at restriction	Additional restrictions
	Blythe to Trent						Darnford Brook will remain closed to further abstraction. Abstractions from Langley Brook may need increased restrictions, this will be assessed on a case-by-case basis.
8	River Mease	SK1945214662	Water available for licensing	19.3MI/d at Clifton Hall (winter only)	145 (during Nov-March only)	3.3MI/d	The catchment is open in winter (November-March) only. An end date of 31 March 2026 will apply to new and increased licensed abstraction.
9	River Trent to River Dove	SK2798225964	Water available for licensing	1520MI/d at Drakelow	328	69MI/d	The Darklands Brook will remain closed

AP	Name	AP National Grid Reference	Water Resource Availability	HoF Restriction	Number of days per annum abstraction may be available	Approximate volume available at restriction	Additional restrictions
							to further abstraction.
10	River Trent at Drakelow	SK2389220413	Water available for licensing	1520MI/d at Drakelow	328	See AP9	

Table 2 Summary of licensing approach for the assessment points of the Tame, Anker and Mease ALS.

4.2 Groundwater

Principal aquifers are designated as named groundwater bodies (GWB). We may divide principal aquifers into groundwater management units (GWMU), which are sub-divisions of the groundwater bodies. In these cases we use the status and objectives of GWBs together with information and assessments on GWMUs to determine water availability and licence restrictions. GWMU water availability status may be overridden to support GWB objectives.

Where groundwater abstractions directly impact on surface water flows the impact is measured at the surface water AP. This includes where the impact reduces baseflow. In these cases, restrictions may be applied to licences, such as hands off level (HoL) conditions or hands off flow (HoF) conditions. The HoL is a groundwater level below which an abstractor is required to reduce or stop abstraction. The HoF is a flow in a connected watercourse, 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.

Licence restrictions on groundwater abstractions in the Tame, Anker and Mease ALS area

As set out in Section 3.2 there are 10 GWMUs as well as superficial deposits within the boundary of the Tame, Anker and Mease catchment. Section 3.2.1 describes the groundwater resource availability colours and the implications for licensing.

Table 3 details water availability status for these GWMUs and the superficial deposits. It sets out the restrictions that might be applied to abstractions likely to impact on groundwater-dependent environments. Overall, limited water is available for licensing from groundwater sources. This is to protect groundwater resources, river baseflow and dependent environments and manage the status and risk of the groundwater body where necessary.

Groundwater body and status	Groundwater management unit	Resource availability colour and licence restrictions on groundwater abstractions
Tame Anker Mease - PT Sandstone Birmingham Lichfield This groundwater body is considered to be Poor quantitative status and is at risk of deterioration.	Lichfield Shenstone	Red - Water Not Available for Licensing. No new consumptive abstractions will be granted. Opportunities to reduce fully licensed risks will be taken. Time limited licence renewals will require changes to reflect historic usage in order to manage the risk of future deterioration to the environment.
Tame Anker Mease - PT Sandstone Birmingham Lichfield This groundwater body is considered to be Poor quantitative status and is at risk of deterioration.	Sutton Birmingham	Yellow - Restricted water available for licensing. These GWMUs are in a larger GWB that is at Poor Quantitative status and is at Risk of Deterioration. No new consumptive licences will be granted as this would increase the risk of deterioration in the groundwater body. It will be appropriate to take action to reduce fully licensed risks.

Groundwater body and status	Groundwater management unit	Resource availability colour and licence restrictions on groundwater abstractions
		<p>In addition, all of the available resource in the Birmingham GWMU is licensed and actual abstraction is very close to the sustainable threshold. Groundwater from Sutton GWMU is important for maintaining groundwater dependent streams and wetlands which are designated SSSIs within Sutton Park.</p> <p>Opportunities to reduce fully licensed risks will be taken. Time limited licence renewals will require changes to reflect historic usage. This is in order to manage the risk of future deterioration to the environment.</p>
<p>Tame Anker Mease - PT Sandstone Burton</p> <p>This groundwater body is considered to be good quantitative status but is at risk of deterioration.</p>	Measham	<p>Red - Water Not Available for Licensing.</p> <p>No new consumptive abstractions will be granted.</p> <p>Opportunities to reduce fully licensed risks will be taken. Time limited licence renewals will require changes to reflect historic usage. This is in order to manage the risk of future deterioration to the environment.</p>
<p>Tame Anker Mease - PT Sandstone Burton</p> <p>This groundwater body is considered to be good quantitative status but is at risk of deterioration.</p>	Burton Coleorton Warton	<p>Yellow - Restricted water available for licensing.</p> <p>These GWMUs are in a larger GWB that is at good status but is at Risk of Deterioration. No new consumptive licences will be granted as this would increase the risk of deterioration in the groundwater body. It will be appropriate to take action to reduce fully licensed risks.</p> <p>Licence trades will be considered only with abstraction licences located within 'Water Not Available for Licensing' GWMUs. This will help to improve overall sustainability. Trades will only be considered if the applicant can clearly demonstrate that the new abstraction will not compromise GWB objectives or result in deterioration.</p>
<p>Tame Anker Mease - PT Sandstone Nuneaton</p> <p>This groundwater body is considered to be good quantitative status and is</p>	Nuneaton	<p>Green - Water available for licensing</p> <p>This GWMU is very small with a limited available resource. We will only support small individual applications of <0.2 MI/d where the applicant can clearly demonstrate</p>

Groundwater body and status	Groundwater management unit	Resource availability colour and licence restrictions on groundwater abstractions
probably not at risk of deterioration.		<p>that the development will have no adverse impact on:</p> <ul style="list-style-type: none"> • protected rights • lawful users • any groundwater dependent water features and conservations sites <p>and will not compromise GWB objectives. If there is the potential to impact surface water flows a HoF may be applicable.</p> <p>Part of this GWMU outcrops in the Blythe catchment: the Meriden sandstone unit. This part of the Nuneaton GWMU is closed to further abstraction. This is because it provides baseflow to the River Blythe which is at risk for much of the time due to over-licensing. Therefore baseflows must be protected.</p>
<p>Tame Anker Mease - Secondary Combined</p> <p>This groundwater body is considered to be good quantitative status and is probably not at risk of deterioration.</p>	Meriden	<p>Red - Water Not Available for Licensing.</p> <p>Meriden GWMU is a designated Principal Aquifer which lies within the much larger Secondary Combined GWB. The GWB is at good status and is Probably Not at Risk of Deterioration. The water availability reflects the water balance within the Meriden GWMU (Principal Aquifer) and the need to protect flows within the River Blythe SSSI. This GWMU provides baseflow to the River Blythe which is at risk for much of the time due to over-licensing. Therefore baseflows must be protected and no new consumptive licences will be granted.</p> <p>The remainder of the Secondary Combined GWB will remain open to further abstraction on a case-by-case basis as detailed in the Secondary Aquifers section.</p>

Table 3 Summary of licensing approach for the GWMUs of the Tame, Anker and Mease ALS.

Secondary Aquifers

New groundwater licence applications for abstraction outside of the principal aquifers will continue to be assessed on a case-by-case basis. Consideration will include potential impacts on:

- existing water users
- groundwater dependent terrestrial ecosystems

- groundwater resources
- surface water level and flow

We must ensure that no deterioration of the water environment is allowed to occur.

4.3 Protected sites

The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations) provides a very high level of protection to:

- 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

Designation Name	Site Name
Special Area of Conservation	River Mease Ensor's Pool
Site of Special Scientific Interest	Alvecote Pools, Ashby Canal, Bentley Park Wood, Berkswell Marsh, Biddulph's Pool & No Man's Bank, Birches Barn Meadows, Brook Meadow, Darley Green, Chasewater Heaths, Clayhanger, Clowes Wood & New Fallings Coppice, Coleshill & Bannerly Pools, Edgbaston Pool, Ensor's Pool, Hoar Park Wood, Jockey Fields, Middleton Pool, Newton Burgoland Marshes, River Blythe, River Mease, Stubbers Green Bog, Sutton Park, Swan Pool & the Swag, Whitacre Heath

Table 4 SACs and SSSIs in the Tame, Anker & Mease catchment

Ramsar sites (internationally important wetland sites), SACs and SPAs are referred to collectively as European sites. Sites of Special Scientific Interest (SSSI) also carry a high level of environmental importance. The Tame, Anker and Mease catchment has 2 SACs and many SSSIs linked to the water resources of the Tame, Anker and Mease catchment – these are shown in Table 4.

Conservation objectives are the main objectives for European and SSSI protected sites to maintain at, or to reach, favourable condition. These are set by Natural England. The process for setting targets is described through the Joint Nature Conservation Committee approved '[Common Standards Monitoring Guidance](#)' (CSMG). Natural England use these targets to assess the condition of European and SSSI protected sites. These quantitative targets are considered by Natural England as a pre-requisite for achieving the conservation objectives for European or SSSI designated sites. We have a duty to have regard to Natural England's advice when determining licence applications that may impact on a designated site.

We will consider the impact of all new abstraction applications on these sites. We may need more detailed supporting information when a licence application could impact on a designated conservation site. A Habitats Regulations Assessment may be required.

5. Managing the catchment together

5.1 Actions being taken on unsustainable abstraction

[Managing water abstraction](#) gives details on:

- what an unsustainable abstraction is
- the measures available to resolve environmental issues caused by abstraction

There are a series of actions that we are taking to address unsustainable abstraction. These are listed here and are followed by work that has been done in individual catchments and any subsequent action to be taken.

Revocation for non-use / reduction of underused licences

There is a large volume of water licensed within abstraction licences that has not been abstracted for a number of years. This limits water availability for those that need it. In some cases it also presents a significant environmental risk if abstraction were to be restarted. We will continue to target these unused and underused licences in the catchment. The aim is to reduce licensed abstraction which is not being used. This helps to remove the risk of future deterioration and may release unused water for future licensing.

During the 3 phases of the unused licence programme we have contacted the holders of 132 abstraction licences in the Tame, Anker and Mease area. The sum of water reduced or revoked so far is 6,858,972 cubic metres per year.

Water Industry National Environment Programme (WINEP) and Asset Management Plans (AMP)

Through these programmes we work with the water companies to investigate and deliver environmental improvements. These are needed to meet Water Framework Directive and national targets. Water companies will be carrying out investigations in AMP7. This is to understand the risk of deterioration due to planned sustained increases in abstraction from their sources. They will have to implement changes to prevent deterioration before deterioration is predicted to occur.

Restoring Sustainable Abstraction (RSA)

This is the Environment Agency's programme of work to review unsustainable abstraction. This includes water abstractions which cause or potentially cause actual flows to fall short of the EFIs and result in environmental damage. We have been changing or revoking abstraction licences in order to achieve a sustainable abstraction regime.

Changing Licences to Prevent Deterioration

The Environment Agency must take action to prevent water bodies from deteriorating. This is in accordance with its duties under the Water Environment (WFD) (England and Wales) Regulations 2017 to prevent water bodies deteriorating in status. The Environment Agency's principal intervention to prevent deterioration is to reduce licensed quantities. The scale of any reduction is dependent on the deterioration risk and how current levels of abstraction impact the environment. Licence changes to prevent deterioration will need to commence as part of the renewal of time limited abstraction licences. Changes to licences held by statutory water undertakers to prevent deterioration will normally be progressed through the Water Industry National Environment Programme. Changes to permanent licences not held by statutory water undertakers will be progressed as and

when circumstances allow. Further changes may be required to licences to meet other environmental obligations in addition to preventing deterioration.

Serious Damage

In order to be classified as being at serious damage a surface water body must meet the following 3 criteria:

- be identified as being Band 3 non-compliant for flow - this means that they are experiencing severe levels of abstraction pressure causing recent actual flows to fall into deficit against the EFI
- have an overall WFD Regulations (2017) status of less than 'good'
- have the abstraction of water and subsequent low flows confirmed as the reason for not achieving 'good' WFD Regulations (2017) status

New applications for abstraction from waterbodies that are classified as being at, or at risk of, serious damage will be assessed on a case-by-case basis. This is to ensure that no deterioration of the water environment is allowed to occur.

In the Tame, Anker and Mease catchment there is currently one surface waterbody confirmed as being at serious damage. This is the Crane Brook. Another waterbody is at risk of serious damage; this is the Bourne/Black Brook.

For a groundwater body, serious damage occurs when:

- there is a deterioration in combined overall WFD Regulations (2017) groundwater body status from good to poor
- there is a deterioration in combined overall WFD Regulations (2017) groundwater status from poor (low confidence) to poor (high confidence)
- the WFD Regulations (2017) Groundwater Dependent Terrestrial Ecosystem (wetlands) test is assessed as poor

A groundwater body is at risk of serious damage where the full licensed conditions could result in:

- the deterioration in combined overall WFD Regulations (2017) groundwater body status from good to poor
- the deterioration in combined overall WFD Regulations (2017) groundwater status from poor (low confidence) to poor (high confidence)

Tame Anker Mease - PT Sandstone Birmingham Lichfield groundwater body is considered to be Poor quantitative status and is at risk of further deterioration. This is due to the volume of water licensed above that which is actually abstracted (licensed headroom). This groundwater body is also considered to be at risk of serious damage. Increased abstraction, using up a proportion of the licensed headroom, may result in a change in status from poor (low confidence) to poor (high confidence).

Tame Anker Mease - PT Sandstone Burton groundwater body is considered to be good quantitative status but is at risk of deterioration. Take up of licensed headroom would result in the groundwater body deteriorating from good to poor status, so it is at risk of serious damage.

Changes to time limited licences

Where environmental sustainability is not in question renewal of time limited licences will be considered subject to local considerations and the following criteria:

- there is a continued justification of need for the water
- the water is used efficiently

Where these two criteria are met but the abstraction of water is unsustainable we will require licence changes to reflect historic usage. To manage the risk of future deterioration to the ground or surface water body we would not wish to see growth into licensed headroom. This would result in a sustained increase in abstraction and damage to the environment. We may also issue renewed licences with a short time-limit.

Water availability colours for surface water at Q95, Q70, Q50 and Q30 can be found on maps 2 to 5. They can also be found for each Groundwater Management Unit on map 6.

Surface water abstraction licences


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

Water available for licensing

Green 

We will consider renewing the licence at the same quantities, subject to the renewal criteria. The waterbody, and downstream waterbodies, need to have environmentally sustainable rates of water abstraction - both now and at times when abstractors take their full licensed quantities of water.

Restricted water available for licensing

Yellow 

On renewal of abstractions in waterbodies where full licensed flows have fallen below the EFI, we may seek to reduce unused portions of licensed quantities. This is to reduce the risk of surface water bodies becoming unsustainable at fully licensed rates of abstraction. It will also help to prevent the ecology deteriorating compared to the River Basin Management Plan (RBMP) 2015 baseline.

Water not available for licensing

Red 

These surface water bodies are already subject to unsustainable rates of abstraction. We will need to renew the licences with measures to help restore that waterbody to a sustainable level of abstraction.

On renewal, time limited licences may be capped at historic maximum abstraction. This will reduce the risk of abstraction from surface water bodies becoming increasingly unsustainable at fully licensed rates of abstraction. It will also help to prevent the ecology deteriorating compared to the River Basin Management Plan (RBMP) 2015 baseline. We will also consider more restrictive terms and conditions such as hands off flow/level conditions.

Where measures are still under investigation, licences are likely to be renewed with a cap at historic maximum uptake. They may also be time-limited to an earlier date.

Groundwater abstraction licences

Individual Groundwater Management Unit status and water availability is summarised in Section 4.2.

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

Water available for licensing

Green



We will consider renewing the licence at the same quantities. The groundwater body/groundwater management unit, overlying rivers and associated wetland habitats need to have environmentally sustainable rates of water abstraction - both now and at times when abstractors take their full licensed quantities of water.

Restricted water available for licensing

Yellow



Groundwater/surface water bodies and/or the groundwater management unit in which the groundwater abstraction sits are at risk of deterioration. Time limited renewals will require licence changes to reflect historic usage and reduce the fully licensed risk in order to manage the risk of deterioration.

Water not available for licensing

Red



Groundwater/surface water bodies and/or the groundwater management unit in which the groundwater abstraction sits are already subject to unsustainable rates of abstraction. We will renew the licence with measures to help restore a more sustainable level of abstraction. These measures could be licence quantity reductions or hands off flow/level conditions. Where 'water body' scale measures are still under investigation, then licence changes to reflect historic usage and a short time-limit will be applied. Requirements for any further licence changes (reductions, HoFs etc) can then be assessed on the subsequent renewal.

5.2 Action that has been taken on unsustainable abstraction in this catchment

Five Regional Groups have been created to develop long-term water resources plans up to 2050 and beyond. The Tame, Anker and Mease area falls in the Water Resources West group. The area covered by this group includes the North-West, the Midlands and cross-border catchments between Wales and England. It is a multi-sector group that includes representatives from the water companies, NFU, Canal and River Trust and Energy UK.

The Regional Groups have been tasked with considering the challenges and producing multi-sector regional plans. These will set out how water supply and demand will be managed over the long-term for people, businesses and agriculture, whilst protecting the environment. They will need to understand environmental needs and develop the long-term environmental destination for water resources by:

- ensuring no deterioration
- addressing unsustainable abstraction
- improving environmental resilience in the face of climate change

The regional plans will set out the actions that water companies and other abstractors will need to take to reach the long-term environmental destination.

We have provided information to this group to help them identify catchments with existing or potential problems.

This catchment also lies within water company supply zones which have been classified by DEFRA as being under serious water stress. This is where the current or future demand for water is a high proportion of the rainfall available to meet that demand. The classification informs:

- water companies on whether to consider metering
- local authorities on whether to request more stringent consumption standards in new developments

The following actions are also being undertaken in the catchment:

Rivers Blythe and Bourne

In AMP6 Severn Trent were required to implement 2 schemes to improve:

- fish passage past upper Shustoke Reservoir on the River Bourne
- their weir at Whitacre on the River Blythe

They have also installed eel compliant screens at intakes and diversions. The River Blythe is subject to a high flow HoF while the River Bourne is closed to further abstraction.

Bourne/Black Brook

South Staffs Water carried out investigations during previous AMP cycles. These appraised the impacts of their groundwater abstraction on brook flows and options to improve flows. Currently, there is not a cost-beneficial solution to improve flows affected by water company groundwater abstraction and the environmental issues identified remain. Although South Staffs Water cannot deliver a scheme in AMP6, the site will remain live. There is still a sustainability issue to be resolved and the situation about what is feasible may change in the future.

River Mease

There is a proposal to transfer effluent from Packington and Measham sewage works out of the River Mease catchment by 2027. This is part of a strategy to deliver water quality objectives for the River Mease Special Area of Conservation (SAC).

However, there is currently insufficient understanding regarding the impact of the proposed transfers on downstream river flow targets.

Therefore, within WINEP 2020-2025, an investigation will quantify the impact of the planned transfers on river flow and identify appropriate mitigation measures. The scope of this investigation was agreed between Severn Trent Water Limited, the Environment Agency and Natural England.

The river remains open to further abstraction in the winter. Any new applications for abstraction licences will require a Habitats Directive Risk Assessment to review the potential impact on the River Mease SAC.

New or upwardly varied licences in the catchment will be given an end date of 31 March 2026. This will allow any changes to be made as a result of the investigation and the identification of mitigation measures.

Darnford Brook

Investigations into the impacts of their groundwater abstraction on brook flows will be carried out by South Staffs Water in AMP7.

Tame Anker Mease - PT Sandstone Lichfield Birmingham (Lichfield, Shenstone, Sutton and Birmingham GWMUs)

This groundwater body is considered to be at overall poor status and at risk of deterioration.

Unsustainable groundwater abstraction and associated environmental impacts occur as a result of historical permanent licences also known as licences of right. The groundwater resource balance is unsustainable resulting in level and flow impacts on groundwater, surface water or wetland systems. No new consumptive abstractions will be granted. We will take opportunities to reduce fully licensed risks.

Groundwater abstraction has resulted in reduced groundwater levels and flow impacts on surface watercourses. The abstraction is predominantly by water companies and particularly in catchments in the northern half of this groundwater body. Previous investigations into groundwater abstraction impacts have been undertaken on:

- Crane Brook
- Burntwood Brook
- Bourne/Black Brook
- Fotherley Brook

Currently, the water company has not identified a cost-beneficial solution to improve flows in these watercourses affected by groundwater abstraction. Previous action on groundwater abstraction was implemented to protect the status of watercourses and a Site of Special Scientific Interest in the centre of Lichfield.

To prevent further deterioration of this groundwater body and flows in the associated surface watercourses, we will take the following actions:

- no new consumptive abstractions will be granted and we will take opportunities to reduce fully licensed risks
- new authorisations will be determined based on historic use
- time limited licences will be capped to reflect historic use
- only accept licence trades if the trade is consistent with achieving water body objectives
- seek a voluntary approach to change permanent non-water company licences
- seek to address unused and underused groundwater abstraction licences to reduce licensed headroom to reduce the risk of deterioration defined by the WFD Regulations (2017)

Water companies will undertake further investigation of a number of sources. These aim to identify the measures required to comply with the WFD Regulations (2017) no deterioration requirements and implement sustainability changes where required.

Tame Anker Mease – Permo-Triassic Sandstone Burton

The Tame Anker Mease - PT Sandstone Burton Groundwater Body currently has good overall quantitative status. It is at risk of deterioration as a result of unused headroom on historical permanent licences also known as licences of right. To protect the overall status of the groundwater body no new consumptive licences will be granted. We will take appropriate action to reduce fully licensed risks. The River Mease system, which is designated as a SAC and SSSI, flows over the central outcrop area of this groundwater

body. So, it is additionally important to control groundwater abstraction to protect flows within this watercourse and the status of these conservation designations.

To protect the overall status of the groundwater body and flows in the River Mease (designated SAC and SSSI), we will take the following actions:

- no new consumptive licences will be granted and we will take appropriate action to reduce fully licensed risks
- new authorisations will be determined based on historic use
- time limited licences will be capped to reflect historic use
- only accept licence trades if the trade is consistent with achieving water body objectives
- seek a voluntary approach to change permanent non-water company licences
- seek to ensure that the water company will adhere to its responsibilities under the WFD Regulations (2017) no deterioration requirements
- seek to address unused and underused groundwater abstraction licences to reduce licensed headroom to reduce the risk of deterioration defined by the WFD Regulations (2017)

Tame Anker Mease - Secondary Combined

The Tame Anker Mease - Secondary Combined Groundwater Body is currently at good quantitative status and is probably not at risk of deterioration. The Meriden Groundwater Management Unit sits within this much larger groundwater body. This GWMU has the status of Water Not Available for licensing. This is due to the overall water balance and the need to protect flows within the River Blythe Site of Special Scientific Interest. No new consumptive licences will be granted and it will be appropriate to take action to reduce fully licensed risks.

5.3 Water rights trading

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. This could be on a permanent or temporary basis. In the majority of cases a trade will involve a change in abstraction location and/or use. 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. This is both:

- within the water body / bodies where the trade will take place
- to downstream water bodies

This section provides a guide to the potential for trading in water bodies of a particular ALS water resource availability colour. Water resource availability colours are shown in maps 2 to 5 (surface water) and map 6 (groundwater).

Guide to potential trading based on water resource availability

Water available for licensing

Green 

There may be opportunities to allow trades of recent actual abstraction and licensed abstraction. But little demand for trading is expected as water is available for new abstractions.

Restricted water available for licensing

Yellow 

There may be opportunities for licence holders to trade up to their full licensed quantities. But the quantities of water available to trade may be restricted once levels of actual abstraction reach sustainable limits. We will not permit licence trades in water bodies or groundwater management units where we are taking action to prevent deterioration. The exception to this is if 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 the water body/groundwater management unit. Licensed abstraction will be recovered for the environment.

HMWBs

Grey 

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

Groundwater rights trading

The principles detailed in Section 5.3 apply to permanent trading of groundwater within the same GWMU. The following additional principles apply for the permanent trading of groundwater between Groundwater Management Units (GWMU) within the same Groundwater Body (GWB):

- the trade must be compatible with this abstraction licensing strategy for the recipient GWMU and surface water bodies
- there is a presumption against trading between GWMUs that are in deficit (Restricted Water Available or No Water Available) - see Section 4.2
- licence trades will only be considered where the recipient GWMU water balance is in surplus (Water Available) - see Section 4.2
- the trade must not result in deterioration of the status on any groundwater body or surface water body test
- the trade should be compatible with the ambition to maintain good or the pathway to achieving good status - the ambition should be realistic and cost beneficial
- the trade must not cause any environmental damage
- the trade must not derogate any protected right and must have due regard to lawful users - a pump test is likely to be required to assess potential impacts on these and other water features
- there is a presumption against trading to a non-compliant surface water body
- the receiving trade abstraction point(s) must consider the distributed impact across surface water bodies - there is a presumption against trading where the distributed impact results in depleting flows within a non-compliant surface water body

To find out more about licence trading please go to our [water management web pages](#).

[Help for trading water rights map](#): this may help abstractors to identify potential trades - it provides information on nearby licences and an indication of the potential for a trade.

6. Related links

[Agriculture and Horticulture Development Board \(AHDB\) website](#) - provides information on effective use of water on livestock farms_

[Catchment Based Approach community website](#) - provides further information on the catchment based approach

[Catchment Sensitive Farming](#)_ advice to help farmers and land managers reduce water and air pollution from land

[UK Centre for Ecology and Hydrology Water Resources Portal](#) - is an interactive portal presenting information on the latest hydrological situation across the UK

[Environment Agency, how to apply for a water abstraction or impoundment licence web pages](#) - provide all the information needed to go through the application process to get a licence

[Environment Agency manage your water abstraction or impoundment licence online web service](#) - allows abstractors to view and share licence information and submit abstraction returns

[Environment Agency priority catchments website](#) - provides further information about the priority catchment work

[Environment Agency National Framework for Water Resources](#) - explores England's long-term water needs and the importance of planning at the regional scale and link to the catchment scale

[Environment Agency and Cranfield University's guide to planning, designing, constructing and commissioning a water storage reservoir](#) – if you are considering an irrigation reservoir

[Environmental Land Management schemes: overview](#) - of 3 new schemes that will reward environmental land management: Sustainable Farming Initiative, Local Nature Recovery, Landscape Recovery

[Farming rules for water from April 2018](#)_ – details of the new 'farming rules for water' for all farmers in England

[Linking Environment and Farming \(LEAF\) Simply Sustainable Water guide](#) – explains 6 simple steps for managing water quality and industrial use

[National Farmers' Union web pages](#)_ – provides useful information on all aspects of farming including irrigation

[Natural England's website](#) provides further information on protected sites and species

[River Mease Partnership website](#) contains information about the river and ongoing work

[Severn Trent's Environmental Protection Schemes \(STEPS\)](#) offer support for investment in tailored solutions to help tackle diffuse water pollution and to protect and maintain biodiversity and the natural environment

[The UK Irrigation Association](#)_ - provides a range of irrigation information resources_

Waste and Resources Action Programme website has [guidance on water efficiency in the food and drink industry](#)

Waster and Resource Action Programme website has a [roadmap towards water security for food and drink supply](#)

7. List of abbreviations

ALS

Abstraction Licensing Strategy

AMP

Asset Management Plan

AP

Assessment Point

CaBA

Catchment Based Approach

CED

Common End Date

Defra

Department of Environment Food and Rural Affairs

EFI

Ecological Flow Indicator

GEP

Good Ecological Potential

GES

Good Ecological Status

GW

Groundwater

GWB

Groundwater Body

GWMU

Groundwater Management Unit

HMWB

Heavily Modified Water Body

HoF

Hands off Flow

HoL

Hands off Level

MI/d

Megalitres per day

RBMP

River Basin Management Plan

SAC

Special Area of Conservation

SPA

Special Protection Area

SSSI

Site of Special Scientific Interest

UKTAG

United Kingdom's Technical Advisory Group

WB

Water body

WINEP

Water Industry National Environment Programme

8. 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.

Asset Management Plan

Every five years Ofwat assesses water company business plans, including spending and investment. The Water Industry National Environment Programme (WINEP) is included in the business plans and is considered by Ofwat in the determination of water company prices. The WINEP consists of investigations, monitoring, options appraisals and schemes to improve, prevent deterioration and protect the water environment. These form part of a water company's Asset Management Plan (AMP). We are currently in AMP7 with measures being delivered between 2020 and 2025.

Catchment

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

Catchment based approach

Partnership working at the river catchment scale to deliver a range of environmental, social and economic benefits while protecting our precious water environments for the benefit of all.

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.

Deterioration

Deterioration is a change in the class of any one of the quality elements used to determine the WFD Regulations (2017) status in a water body from its existing class to the class below, or any deterioration within the lowest class. It is not change within a class unless already in the lowest class.

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.

Headroom (licensed)

The difference between the volume of water which has been licensed and that which is actually abstracted.

Impoundment

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

Maximum peak abstraction

The maximum volume of water abstracted in any one year during the representative abstraction period.

Non consumptive abstraction

An abstraction which doesn't result in a loss of water to any part of the catchment.

Recent actual average abstraction

The total volume of water abstracted during the representative recent actual period divided by the number of years in that period.

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

Water Industry National Environment Programme 2020-2025

A schedule of environmental enhancement obligations, drawn up by the Environment Agency and signed off by the Secretary of State at Department of Environment, Food and Rural Affairs.

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