**Water Resource Assessment**

**The need for a Water Resource Assessment**

Anglian Water is committed to supporting sustainable economic growth across the East of England. However, due to the impacts of climate change and to help protect the environment, the amount of water that businesses, including Anglian Water, can abstract is reducing. This situation is reducing our ability to be flexible with new requests to supply non-domestic connections which were not planned for in the Water Resources Management Plan 2025-2050 (WRMP24).

Whilst Anglian Water are taking steps to respond to this challenge with the construction of two new reservoirs and strategic pipeline transfers, these will take time to deliver. As such it is more crucial than ever that we work together with businesses, to ensure we are aware of their water demands for growth, and that demand management and water efficiency solutions are implemented to maximise what water is available.

Whilst Anglian Water has a statutory duty to supply water for domestic purposes (e.g., drinking water, hand-basins, toilets and showers) for non-household properties (e.g., schools, hospitals, offices, shops and hairdressers), there is no legal duty to provide water for non-domestic usage (e.g., agri-food production or car washes) where it might put at risk our ability to supply water for domestic purposes. Where we can provide this, we do so to support sustainable economic growth.

To recognise this position, Anglian Water has adopted a ‘Non-Domestic Water Requests Policy’ as set out in Appendix 1. As part of this Policy, we are asking all applicants who are requesting non-domestic water (as defined above) for non-household developments and properties to complete a Water Resource Assessment, so we can better understand water demands, water efficiency measures and more effectively forecast water supply requirements.

**Water Resource Assessment**

We prefer to be provided with a report detailing the Water Resources Assessment, which will be used to support the planning application process, including engagement with environmental regulators. To guide this, we have set out below the information we expect to be included.

For those that already have an existing site supply and discharge, and are seeking to amend or increase this, please complete all sections 1 through 4. For those without an existing site supply and discharge, please ignore section 2.

1. **Contact and site details**

|  |  |
| --- | --- |
| Applicant name |  |
| Applicant address |  |
| Applicant contact name |  |
| Applicant contact email |  |
| Applicant contact phone number |  |

|  |  |
| --- | --- |
| Agent name (if applicable) |  |
| Agent address |  |
| Agent contact name |  |
| Agent contact email |  |
| Agent contact phone number |  |

|  |  |
| --- | --- |
| Retailer name (if applicable) |  |
| Retailer address |  |
| Retailer contact name |  |
| Retailer contact email |  |
| Retailer contact phone number |  |
| Water SPID |  |
| Sewerage SPID |  |
| Trade Effluent DPID |  |

|  |  |
| --- | --- |
| Site address/location details |  |
| Site contact name |  |
| Site contact role |  |
| Site contact email |  |
| Site contact phone number |  |

|  |  |
| --- | --- |
| Site type / usage |  |
| Hours of production |  |
| Days of production |  |
| Peak production period |  |
| When will your connection be required |  |
| Number of full-time employees on site |  |
| Number of jobs supported by new/additional supply and discharge request |  |
| Financial investment linked to request |  |
| Project planning route and status - please provide details and timeframe |  |

1. **Existing site supply and discharge**

|  |  |
| --- | --- |
| **Non-domestic water demand** |  |
| **Mains (potable) water consumption** |  |  |
| Annual water consumption (m3/year) |  |  |
| Average daily water demand (m3/day) |  |  |
| Peak daily water demand (m3/day) |  |  |
| Peak hourly water demand (m3/hour) |  |  |
| **Borehole water consumption** |  |
| Annual water consumption (m3/year) |  |  |
| Average daily water demand (m3/day) |  |  |
| Peak daily water demand (m3/day) |  |  |
| Borehole licence reference (please attach) |  |  |
| **Other water consumption (specify source)** |  |
| Annual water consumption (m3/year) |  |  |
| Average daily water demand (m3/day) |  |  |
| Peak daily water demand (m3/day) |  |  |
| **Anglian Water/site water connection location (Grid ref)** |  |
| Meter Serial Number and size |  |  |
| Site water supply internal and external pipe diameters |  |  |
| Site water supply pipe length to first point of use |  |  |
| **On-site water storage volume**  |  |
| Effective water storage volume (m3) |  |  |
| Height above ground level of inlet to storage |  |  |
| Storage inlet control device (ball-valve, motorised valve, etc) |  |  |
| Percentage of process supplied by on-site water storage |  |  |

|  |
| --- |
| **Trade effluent** |
| Total trade effluent volume (m3/year) |  |
| Average daily trade effluent discharge (m3/day) |  |
| Peak daily trade effluent discharge (m3/day) |  |
| Trade effluent consent reference (if applicable) |  |
| Trade effluent connection location (Grid ref) |  |
| Trade effluent treatment plant description |  |
| Trade effluent composition |  |

1. **New (or additional needs) site supply and discharge requirements**

|  |  |
| --- | --- |
| **Water demand**  |  |
| Quantity of water requested for domestic purposes (m3/day) |  |  |
| Quantity of water requested for non-domestic (process) purposes (m3/day) |  |  |
| Any water required for the purposes of firefighting |  |  |
| Quality of water required i.e. potable or non-potable |  |  |
| Average daily demand (m3/day) |  |  |
| Peak daily demand (i.e. the highest volume we might have to supply in a day in m3/day) |  |  |
| Diurnal and annual profile (m3) |  |  |
| Timescales to require the water, including any ‘ramping up’ to the full volumes e.g. construction needs and timescales |   |  |
| **Trade effluent** |  |
| Total trade effluent volume (including existing if appropriate) (m3/year) |  |  |
| Average trade effluent volume (including existing if appropriate) (m3/day) |  |  |
| Peak trade effluent volume (including existing if appropriate) (m3/day) |  |  |
| Project planning route and status – please provide details and timeframe |  |  |

1. **Water efficiency measures**

As set out above, and in Anglian Water’s Non-Domestic Water Requests Policy, there is a need to make best use of what water is available across the region, through implementation of water efficiency measures. We expect evidence of high levels of water efficiencies that you are considering implementing as part of your development and processes.

Potential ideas and solutions that we would want evidence on include:

* Maximisation of existing onsite resources (e.g. own borehole)
* Consideration of non-water based or close-loop cooling systems
* Capture and reuse of water from water-based cooling systems e.g. blowdown
* Sharing of resources with neighbouring facilities, considering all water-based resources such as steam, water/effluent reuse, rainwater harvesting
* Specification of highly rated white goods
* Sub-metering on site
* Evidence of water audit systems
* Infrastructure or systems that could manage the timing of water take e.g. onsite storage and control system, production flexibility
* Onsite measures to improve the water environment e.g. wetland

Please set out below what steps you have undertaken or will implement to ensure your processes and development are as water efficient as possible:

|  |
| --- |
|  |

**Appendix 1: Anglian Water’s Non-Domestic Water Requests Policy**



**Anglian Water’s Non-Domestic Water Requests Policy**

**June 2023**

**1.0 Executive Summary**

The East of England is the driest part of the country and climate change is making summers hotter and drier. To help protect the environment, the Environment Agency (EA) is reviewing abstraction licences and reducing the amount of water that businesses including Anglian Water can abstract from the environment. As a result, **the gap between the demand for water and our supply (aka headroom) has shrunk.**

This situation is reducing our ability to be flexible with new requests to supply non-domestic connections which were not planned for in the Water Resources Management Plan (WRMP). However, where our supplies allow, we will endeavour to help businesses in whatever way we can to meet their needs and continue to serve the communities and economies they support.

To respond to both this challenge, and a growing population, Anglian Water is building a new strategic pipeline to move water around our region. We have also developed plans to build two new reservoirs to increase water supply. These solutions will take time to deliver, and so it is more crucial than ever that all homes and businesses are water efficient, to reduce the overall demand for water, to meet government targets and to ensure there is enough water to go around.

**2.0 Background**

# 2.1 Anglian Water

Anglian Water serves 20% of the total landmass of England and Wales and covers the largest geographical area of any water company. The Anglian Water region is the driest area in the country, receiving around two thirds of the average national rainfall. The population in the East of England has increased by 8.3% between 2011-2021, according to census data, which is the highest rate of growth in the UK. At Anglian Water we are committed to catering for this population growth and subsequently enabling growth in the economy. Agriculture and agri-food processing are vital industries in the East of England and require high volumes of water.

# 2.2 The EA’s Abstraction Reduction Strategy

Water abstraction from the environment provides essential water for public water supply, agriculture and industry. However, unsustainable levels of abstraction impact the ecology and resilience of our rivers, wetlands and aquifers. Having the right flow in our rivers and protecting groundwater levels is essential to supporting healthy ecology, enhancing natural resilience to drought, and ensuring that rivers continue to support recreation and wellbeing . The Environment Agency (EA)’s abstraction reduction strategy is therefore essential for the health of our environment, but it does present some challenges for both ourselves and other businesses, especially as changes have been made to the EA’s approach since we developed our last long term water resources management plan.

We also have three public water supply groundwater licences which require closure by June 2024. A further two public water supply groundwater sources have been identified at potential risk of closure by 2030. This, as well as the other pressures on our water supply, adds even greater pressure to the gap between demand for water and our ability to supply.

# 2.3 Water Resource Management Plans (WRMPs)

Every 5 years water companies create a WRMP which sets out how water companies intend to achieve a secure supply of water for customers and a protected and enhanced environment. This includes consideration of which abstraction licences are being reduced or removed and predictions for requirements from new homes and businesses. There have always been requests for new or increased water connections after the WRMP has been drafted and we build in an element of flexibility into the plan for unforeseen changes. However, due to the changes in the EA’s abstraction reduction strategy the number of requests received by Anglian Water for non-domestic connections has increased in the last year as business are also having their licences reduced or revoked, or simply cannot access any other source of water. At the same time we have seen new requests related to the ‘onshoring’ of production following Brexit and other supply chain issues, as well as new demands relating to net zero ambitions.

**3.0 How can Anglian Water Help?**

Anglian Water has a statutory duty to supply water for domestic purposes. This means we are legally obliged to supply water to all household properties as well as any domestic requirements (e.g., drinking water, hand-basins, toilets and showers) of non-household properties. In many cases, domestic demand will be the only requirement for non-household properties (e.g., schools, hospitals, offices, shops and hairdressers). Non-domestic demand refers to water use for industrial processes, (e.g., agri-food production or car washes), and there is no legal requirement for us to supply for this type of water usage where it might put at risk our ability to supply water for domestic purposes.

Although Anglian Water do not have a statutory obligation to supply for non-domestic purposes in these circumstances, we factor this into our WRMP and we do everything we can to support businesses in the region, with the help of the water retail market. However, as described above, the situation is now changing, due to water supply being squeezed by abstraction reduction, climate change and a fast-growing population. Therefore, where new and unplanned non-domestic requests are received, there might be the need to decline in order to protect existing supplies and the environment. However, we are always willing to provide practical support and advice on navigating the regulation and the EA’s abstraction reduction strategy to businesses in our region.

**4.0 What can your water retailer do to help?**

The water retailer is the main point of contact for any water related issues or advice a business might need. We would always advise businesses contact them first and foremost to discuss water supply. Water retailers can provide information, including on how to become more water efficient and make the water you already have go further.

**5.0 What can businesses do to help?**

The cheapest and most sustainable solution to the region’s water resource problem is to collectively reduce our water consumption. Water efficiency measures can be an extremely effective way to free up water resources for business expansion or new connections. Anglian Water have an ambitious smart metering roll out programme across the region for all homes and businesses which help customers change their behaviour and become more water efficient. For our largest business customers, we offer smart meter data down to 15-minute intervals.

Water efficiency audits should be undertaken before new water supplies are requested. This could include installing water efficient devices (e.g., aerated taps and shower heads, low flush or air flush toilets) and efficient white goods (e.g., dishwashers and washing machines). Water demand can also be reduced through fitting smart meters, which measure water usage and provide regular readings, helping to identify leaks and tracking water consumption. Meters can also help support and encourage behavioural change.

In many cases, water reuse can also be a good option for reducing demand for water. Water reuse generally refers to the capture, treatment (if required) and use of alternative water supplies for non-potable purposes. It includes rainwater and surface water harvesting, greywater recycling and wastewater recycling. Water reuse technologies have the potential to save significant amounts of water, especially in situations where non potable water could be used in production.

**6.0 What we need from government?**

There are several things Anglian Water is calling on the government to do to help address this challenge and protect water resources:

1. Include every sector in a national campaign to reach the 20% water demand reduction target published in the Environment Act 2021.
2. Introduce a mandatory water efficiency labelling system for water using products, similar to the scheme already in place for energy using products.
3. Tighten building regulations and enforcement so that new homes are built to ambitious water efficient standards, as set out in the government’s EIP (Environment Improvement Plan) 2023.
4. Make a commitment to link water efficiency with existing and new energy efficiency policies and retrofitting programmes.
5. Recognise the need to create new headroom to enable non-domestic growth.
6. Support us in delivering large scale strategic water resources options (for example, Anglian Water’s two new reservoirs and new pipelines).