

# AffinityWater

## Drought Plan

### Strategic Environmental Assessment - Post Adoption Statement



# Affinity Water



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# 1 Background and Context

## 1.1 Introduction

Affinity Water has updated their previous Drought Plan which was published in 2019. The Drought Plan (2022) sets out the measures Affinity Water will take to maintain continued supply to customers when water resources may become depleted following periods of low rainfall. The Drought Plan was adopted on 7 June 2023 by Affinity Water. The full Drought Plan as adopted, along with the Strategic Environmental Assessment (SEA) Environmental Report, are available online at: <https://www.affinitywater.co.uk/corporate/plans/drought-management>.

Under Environmental Assessment of Plans and Programmes Regulations 2004, a SEA is required to ensure that the environmental effects of the Drought Plan are considered.

The Affinity Water draft Drought Plan was published in June 2021 and was subject to public consultation where customers and stakeholders were able to provide feedback on the content and approach of the Drought Plan. Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) were not undertaken as part of the initial development of the draft Drought Plan. However, following the consultation feedback from Natural England, it was identified that these assessments were required to support the Drought Plan. SEA and HRA have therefore now been undertaken to feed into the development of the Drought Plan. This SEA Environmental Report has been prepared for the Drought Plan 2022 and documents the outcomes of the SEA process. The HRA (Ricardo, 2022) is documented in a separate report but has been used to inform the SEA process.

To support the Drought Plan, Environmental Assessment Reports (EARs) have been developed for each of the drought permit options. These provide a robust assessment of the potential environmental effects of implementation of drought permits, over and above those conditions that already exist under "normal", (i.e., licensed), baseline conditions, with the onset of a natural drought. A Habitats Regulations Assessment (HRA) (Ricardo, 2022) has also been carried out for the Drought Plan to assess effects on Natura 2000 sites. The EARs and HRA were used to inform the SEA.

This document is the SEA Post-Adoption Statement for the Drought Plan as required under the SEA regulations. It has been published alongside the final Drought Plan to outline:

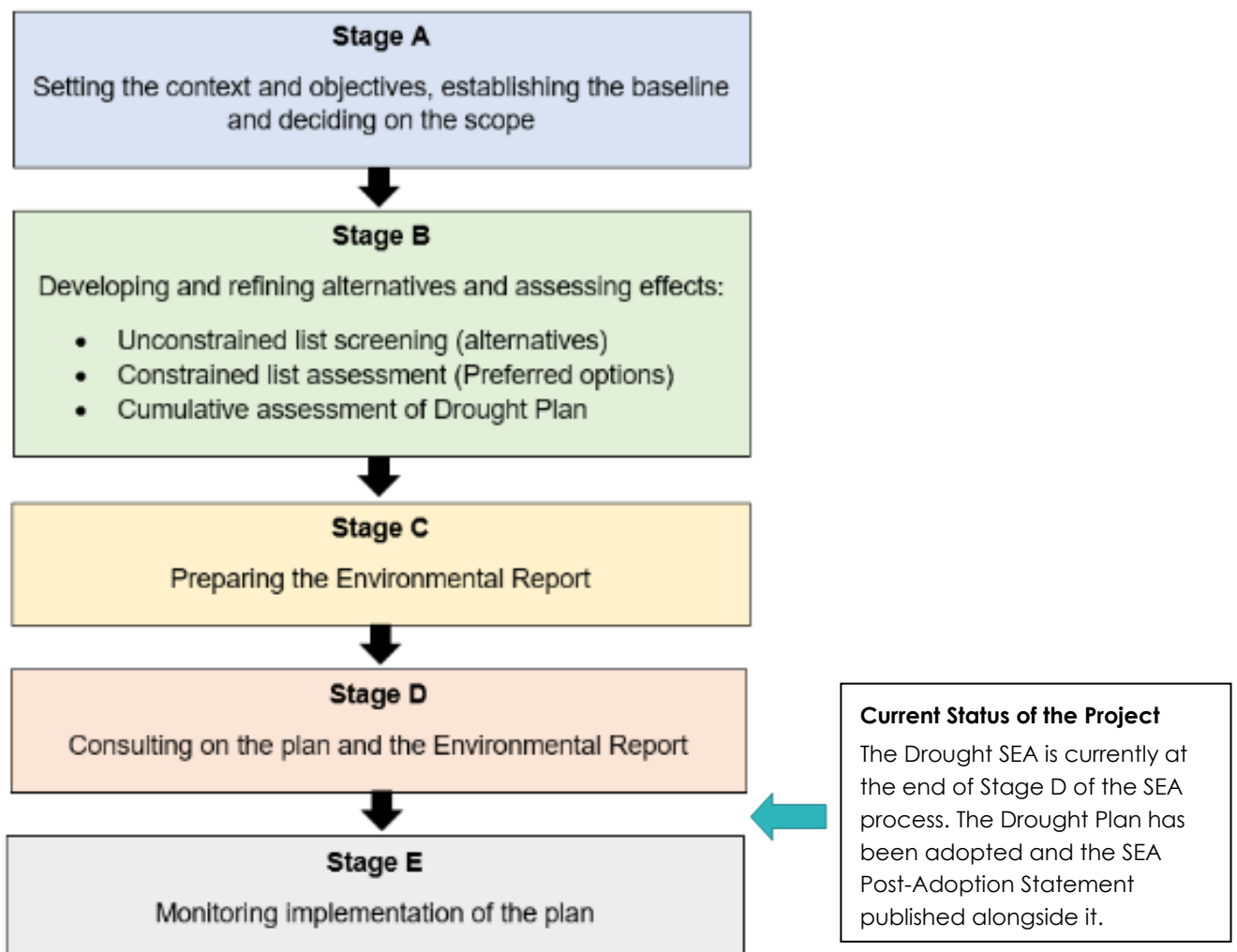
- how environmental considerations have influenced the development of the Drought Plan
- how consultee comments were taken into account

The SEA Post-Adoption Statement should be read in conjunction with the SEA Environmental Report (Mott MacDonald, 2022).

## 1.2 SEA Context

SEA works to inform the decision-making process through the identification and assessment of significant and cumulative effects a plan or programme may have on the environment. The SEA process is conducted at a strategic level and enables consultation on the potential effects of a plan with a wide range of stakeholders. Figure 1.1 shows the stages in the SEA process and where in the process the SEA for the Drought Plan is.

**Figure 1.1: SEA Process**





## 1.3 SEA Post Adoption Statement

The main purpose of the SEA Post-Adoption Statement is to demonstrate how the findings and recommendations of the SEA process were taken into account and how they influenced the development of the Drought Plan.

The SEA Regulations, Regulation 16 'Information as to adoption of plan or programme', sets out post-adoption procedures for plans and programmes that responsible authorities are required to follow. Regulation 16(3)(iii) and Regulation 16(4) determine that a statement is to be produced which contains particular information. The information requirements and where they have been covered in this SEA Post-Adoption Statement are presented in Table 1.1.

**Table 1.1: Requirements for the SEA Post-Adoption Statement**

<b>Regulation 16(4) requirements for the Statement</b>	<b>Where the requirements have been addressed in the Post-Adoption Statement</b>
How environmental considerations have been integrated into the plan or programme	Chapter 4 'Influence of the SEA Process'
How the environmental report has been taken into account	Chapter 4 'Influence of the SEA Process'
How opinions expressed in response to public consultation have been taken into account	Chapter 3 'Consultation Results' and Appendix A.1 and A.2
How the results of any trans-boundary consultations have been taken into account	Not applicable as trans-boundary consultation was not required
The reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with	Chapter 2 'Description and Context of the Drought Plan' and Chapter 4 'Influence of the SEA Process'
The measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme	Chapter 5 'Monitoring Programme'

Source: The Environmental Assessment of Plans and Programmes Regulations 2004

## 2 Description and Context of the Drought Plan

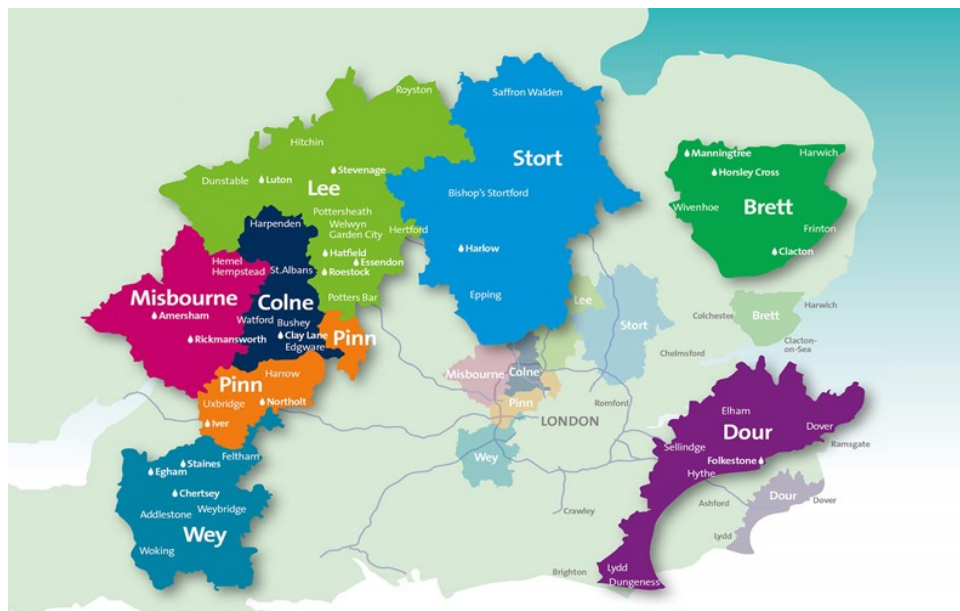
### 2.1 Background and Purpose

#### 2.1.1 Affinity Water

Water companies in England and Wales are required to prepare and maintain Statutory Drought Plans under Sections 39B and 39C of the Water Industry Act 1991, as amended by the Water Act 2003, and in accordance with the Drought Plan (England) Direction 2020. The purpose of Affinity Water's Drought Plan is to demonstrate what actions will be taken to protect public water supplies during a drought and how they intend to minimise any resulting environmental impacts.

Affinity Water is the largest water-only supplier in the UK. They provide on average 950 million litres of water each day to a population of more than 3.6 million people in parts of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hertfordshire, Surrey, the London Boroughs of Harrow and Hillingdon and parts of the London Boroughs of Barnet, Brent, Ealing and Enfield. Affinity Water also supply water to the Tendring peninsula in Essex and the Folkestone and Dover areas of Kent. The Water Resource Zones (WRZs) supplied by Affinity Water are named after local rivers and consist of the following: Colne, Lee, Misbourne, Pinn, Stort and Wey in the Central region; Brett in the East region; and Dour in the Southeast region<sup>1</sup>. The Affinity Water supply area is shown in Figure 2.1.

**Figure 2.1: Affinity Water supply area**



Source: Affinity Water (<https://www.affinitywater.co.uk/my-water/our-supply-area>)

<sup>1</sup> Affinity Water (2019). Drought Management Plan Annual Update 2019. 1 – 130.

Affinity Water have 130 groundwater sources, four river intakes on the River Thames, one impounding reservoir and a number of bulk supply imports from neighbouring water companies. Approximately 65% of the water Affinity Water abstracts is from groundwater sources and the remainder is from surface water. More specifically, in the Central region 60% of the water supply is from groundwater sources and 40% is from surface water or imported from neighbouring water companies. In the Southeast region, 90% of the water supply is from chalk groundwater sources and 10% is supplied from a shallow gravel aquifer located in Dungeness peninsular. In the East region, 80% of the water supply comes from groundwater sources and 20% is sourced from the River Colne. The Affinity Water region in the South-East of England is designated as an area of 'serious water stress' where future climate change and population growth are likely to place additional pressures on already scarce resources.

Water companies in England and Wales are required to prepare and maintain Statutory Drought Plans under Sections 39B and 39C of the Water Industry Act 1991, as amended by the Water Act 2003, and in accordance with the Drought Plan (England) Direction 2020.

Affinity Water have updated their Drought Plan which was previously published in November 2019. The Drought Plan 2022 will cover the period from 2022 to 2027. The purpose of a drought plan is to describe the actions that Affinity Water will take before, during and after a drought event and when they will be implemented. It outlines how water resources will be monitored, and how water resources will be forecasted in a developing drought. The drought actions outlined in the Drought Plan aim to safeguard supplies for customers, protect the environment and work with customers and stakeholders to understand the environmental and operational impacts of drought, as well as explaining how Affinity Water's customers can help.

The Drought Plan includes the following main areas of action:

- Actions to reduce demand
- Actions to protect the environment
- Actions to maintain supply (including drought permits)

A number of the actions within the Drought Plan have been developed and refined more than others at this stage. The SEA has not assessed all the options which are outlined within the Drought Plan as it is more appropriate to assess the environmental implications of detailed actions at the time these actions are required for implementation. The impact of these actions will be affected by prevailing conditions and context within which the actions are being progressed. As the options are brought forward and developed, they will be subject to relevant and appropriate environmental assessment.



The SEA has involved the assessment of the following with further detail presented in Sections 2.1.2 and 2.1.3 respectively:

- Actions to reduce demand (Temporary Use Bans (TUBs) and Non-essential Use Bans (NEUBs))
- Actions to maintain supply (drought permits)

### 2.1.2 Actions to Reduce Demand

During a period of drought, water companies can impose TUBs restrictions on customer' water use to help to reduce demand. They allow essential supplies to be maintained and also help to conserve water resources for later in a drought and reduce the environmental impacts of abstraction during this critical period. The Water Use (Temporary Bans) Order 2010 provides detailed definitions of uses, exemptions and conditions in relation to these powers. A summary of measures under TUBs include:

- Watering a garden using a hosepipe
- Cleaning a private motor-vehicle using a hosepipe
- Watering plants on domestic or other non-commercial premises using a hosepipe
- Cleaning a private leisure boat using a hosepipe
- Filling or maintaining a domestic swimming or paddling pool
- Drawing water, using a hosepipe, for domestic recreational use
- Filling or maintaining a domestic pond using a hosepipe; and
- Filling or maintaining an ornamental fountain
- Cleaning walls, or windows, of domestic premises using a hosepipe
- Cleaning paths or patios using a hosepipe
- Cleaning other artificial outdoor surfaces using a hosepipe

If a drought continues to worsen, water companies can then apply to further increase water restrictions. NEUBs are an additional set of measures that water companies can be granted powers to impose further restrictions on water use in relation to commercial operations. Measures included under NEUBs can be summarised as:

- Watering outdoor plants on commercial premises
- Filling or maintaining a non-domestic swimming or paddling pool
- Filling or maintaining a pond
- Cleaning non-domestic premises
- Cleaning a window of a non-domestic building
- Operating a mechanical vehicle-washer
- Cleaning any vehicle, boat, aircraft, or railway rolling stock
- Cleaning industrial plant

- Suppressing dust
- Operating cisterns in any building that is unoccupied or closed

### 2.1.3 Actions to Maintain Supply

Drought permits are an option available to water companies during serious drought events (drought trigger 3 or greater). They are actions which, if authorised by the Environment Agency under drought conditions, allow for an additional source of water outside the schedule of an existing licence on a temporary basis once available demand-side options have been exhausted.

Due to the potential for environmental impacts from drought permits, the decision to use them is not taken lightly, and Affinity Water have not needed to use them in any of their three regions in the past as there has not been a drought serious enough in their operational history to necessitate the requirement for them. Drought permits are considered as a last resort, however they form a key part of mitigation planning for serious drought events. Affinity Water's current level of service means that drought permits would only be used for drought events equivalent to or greater than a 1 in 40 years return period. Affinity Water's WRMP 2019 (WRMP19) has committed to an increased resilience without the need for drought permits, and Affinity Water's planned level of service from 2024 onwards will be for a 1 in 200 year return period event or greater. Through their WRMP24 process they will ultimately plan to move towards a 1 in 500 year return period resilience level without the need for drought permits.

Drought permits are one of the last remaining options set out in the Drought Plan and would be used once all other non-emergency options have already been implemented. The decision to apply for these would only happen in the event that the drought situation is serious enough to pose a risk to public water supplies. In most circumstances the drought itself will have already caused significant environmental impacts, and many river reaches in their area are likely to already be dry. In these cases, the impacts caused by the implementation of drought permits will predominantly be concentrated around possible delays in recovery of flows, rather than reductions in flows. The EARs set out proposals to monitor the effects of the Drought Plan if drought permit implementation is required. The monitoring proposals are focused on water and biodiversity which corresponds to the main effects identified in the SEA, and the outputs of the monitoring will help to inform the implementation of mitigation if required.

## 2.2 Drought Plan Assessment

A two phased approach has been implemented for the SEA of the Drought Plan to assess the positive and negative effects as follows:

- **Phase One:** Preliminary assessment of the unconstrained list of potential drought permit options – this was a pre-cursor to the SEA full assessment and involved assessing the unconstrained list of options to identify risks and opportunities to support decision-making on the options to take forward into the constrained list. The unconstrained list includes a range of potential drought permit options that could be selected (these are the alternative options)
- **Phase Two:** Full SEA assessment of the constrained list taken forward into the Drought Plan (the Preferred options), including drought permits and TUBs and NEUBs, and cumulative effects assessments of the Drought Plan (if the preferred drought permit options, and TUBs and NEUBs, were implemented together).

Further information on the methodology and the assessment results for both these phases are summarised in the sections below. It should be noted that the options within the Drought Plan will be implemented during a drought period and the drought will already be resulting in environmental effects. The SEA has focussed on assessing the effects of the implementation of the options within the Drought Plan rather than assessing the effects of the drought.

### 2.2.1 Phase One: Preliminary Assessment

The preliminary assessment was a pre-cursor to the SEA full assessment and involved assessing the unconstrained list of options to identify risks and opportunities to support decision-making on the options to take forward into the constrained list within the Drought Plan.

The preliminary assessment involved the assessment of 27 unconstrained drought permit options for the Drought Plan using a Red-Amber-Green (RAG) approach to identify options with high environmental risks. A set of criteria was developed based on the Water Resources South East (WRSE) regional plan and Affinity Water WRMP24 environmental assessment processes which have been fully consulted on and agreed with stakeholders and regulators. The RAG assessment considered both construction effects (if any additional infrastructure was required) and operational effects such as impacts on water quality, designated sites and wildlife. Additional environmental assessments, including the HRA and the EARs, were used to feed into biodiversity, flora and fauna, and water topics within the preliminary assessment where available. The Preliminary Assessment Report presents the methodology used and the results of the assessment. It can be found in the Drought Plan SEA Environmental Report (Appendix I).

### 2.2.2 Phase Two: Full SEA

Following the identification of the constrained list from the preliminary assessment, a full SEA was undertaken for nine drought permit options. The SEA also involved the assessment of the TUBs and NEUBs options for each of the nine WRZs. The options subject to the full SEA process are presented in [Table 2.1](#).

**Table 2.1: Summary of the constrained list of options subject to full SEA**

Option Type	Region	Code	Waterbody/ catchment	Volume	Description
Drought permit	Central	THUN	River Rib	4.91	Abstraction increase, including relaxing licence flow constraint
Drought permit	Central	WHIH	River Beane	14.82	Sustainability reduction site.
Drought permit	Central	RUNGS	River Lea <sup>2</sup>	5.3	New drought permit site not included in DMP19
Drought permit	Central	PICC	River Gade	6.4	Sustainability reduction site
Drought permit	Central	AMER	River Misbourne	8	Sustainability reduction site
Drought permit	Central	FULL	River Mimram	9.09	Sustainability reduction site
Drought permit	Southeast	SLYE	River Dour	3.5	Removal of hands-off level constraint
Drought permit	Southeast	SDRE	River Dour	2	Removal of hands-off level constraint
Drought permit	Southeast	SBUC	River Dour	2	Removal of low flow constraint and cessation of augmentation
TUBs	WRZ 1 – 9	N/A	N/A	N/A	Restrictions on domestic customers
NEUBs	WRZ 1 – 9	N/A	N/A	N/A	Restrictions on commercial customers

Affinity Water are currently developing their WRMP24 and are also undertaking SEA as part of that process. A SEA Scoping Report (Mott MacDonald, 2021) was prepared to satisfy the requirements of the Scoping Stage and has been consulted on and fully agreed with the Statutory Consultees (Natural England, Environment Agency and Historic England). It was agreed with the Statutory Consultees that the

<sup>2</sup> Although RUNGS is situated within the Lea topographic catchment, this source is in the greensand aquifer and therefore would not significantly impact flows in the Lea

WRMP24 Scoping Report can be used to inform the SEA for the Drought Plan. As such, a separate SEA Scoping Report was not required for the Drought Plan SEA.

The approach to the assessment was aligned with what is set out in the WRMP24 Scoping Report which follows the WRSE regional plan process. The WRSE regional plan process has formed the basis of the SEA assessment with the same methodology and SEA Framework used to assess the potential positive and negative effects of the Drought Plan. The assessment was based on a qualitative nine-point scale to describe the significance of effects.

For each score, a commentary section was completed to provide a record of decision and summary of potential effects. Suggestions for recommendations and mitigation were discussed during the assessment and recorded.

To determine the environmental effects of the preferred options within the Drought Plan, the following tasks were undertaken:

- Options level environmental assessments of the constrained list of options
  - Assessments undertaken as part of WRSE were reviewed and updated with additional information, including information presented within the EARs
- Cumulative effects assessment of the Drought Plan
  - The cumulative effects of the options within the Drought Plan were assessed
  - The cumulative effects of the Drought Plan with other plans were assessed



## 3 Consultation

### 3.1 Consideration of Consultation Comments

#### 3.1.1 Updates to the Drought Plan Following Consultation

The draft Affinity Water Drought Plan was published in June 2021 and was subject to public consultation where customers and stakeholders were able to provide feedback on the content and approach. SEA and HRA were not undertaken as part of the initial development of the draft Drought Plan. As part of the consultation process, Natural England identified that SEA and HRA were required to support the development of the Drought Plan. As such, SEA and HRA have now been undertaken. The consultation comments received as part of the initial consultation period have been considered and the Drought Plan was amended where required to take these into account.

Further consultation was also undertaken as part of the SEA process as discussed in Sections 3.1.2 and 3.1.3.

#### 3.1.2 WRMP24 Scoping Report Consultation

It was agreed with the Statutory Consultees that the WRMP24 Scoping Report could be used to inform the SEA for the Drought Plan. As such, a separate SEA Scoping Report was not required for the Drought Plan SEA. The WRMP24 Scoping Report was issued for formal consultation for a seven-week period from 26 July 2021 to the following key consultees: Natural England, Environment Agency, Historic England and Ofwat. The consultation period allowed stakeholders to comment on the proposed scope and approach for the SEA of the WRMP24.

Given the WRMP24 Scoping Report was used to inform the Drought Plan SEA, the comments received from the formal consultation process have therefore been taken into account in the preparation of the Environmental Report. The comments and the resulting updates are detailed in Appendix A.1.

The consultation responses received as part of the SEA Scoping Stage of the WRSE regional plan process have also been reviewed. All the relevant comments made by the Statutory Consultees have been addressed within the Environmental Report.

#### 3.1.3 Environmental Report Consultation

The SEA Environmental Report was published for consultation with the Statutory Consultees (Natural England, the Environment Agency and Historic Environment) between April – May 2022. This allowed the Statutory Consultees to review and comment on the contents of the Environmental Report.

A consultation log of responses (Appendix A.2) has been produced to record the comments received from the Statutory Consultees and the action taken to address them. The Environmental Report has been updated to reflect consultation comments received as part of this process.

The SEA Environmental Report was published for an eight-week public consultation between 13<sup>th</sup> June and 8<sup>th</sup> August 2022. This provided an opportunity for the public to review and comment on the contents of the Environmental Report. No comments were received during the public consultation therefore no further action was required for the SEA Environmental Report or the Drought Plan.

## **4 Conclusions and Influence of the SEA Process**

### 4.1 Conclusions of the SEA

The SEA undertaken for the Drought Plan has helped to identify the likely positive, negative, and uncertain effects. The main conclusions from the assessment of the TUBs, NEUBs, and drought permits options, alongside the cumulative effects assessment are presented in the sections below.

#### 4.1.1 Actions to reduce demand (TUBs and NEUBS)

There is no construction related works associated with TUBs and NEUBs options therefore all the effects identified are related to the operational phase. Overall, the TUBs and NEUBs options have the potential to result in positive effects for biodiversity by conserving water in the natural environment, however there may be some localised habitats which are negatively affected by a temporary loss of watering. There is also likely to be positive effects in delivering reliable water supplies to customers given the options aim to conserve water for essential use during periods of drought. The implementation of these options may result in negative effects for the visual amenity of the townscape and landscape given water will be restricted for garden watering, decorative fountains, and the cleaning of buildings. Considering these effects on townscape assets, and on certain domestic and commercial activities, implementation of TUBs and NEUBs may have minor negative effects on the health and wellbeing of the local community and the maintenance and enhancement of local tourism. High levels of communication before, during, and following the implementation of these measures is key to mitigating negative effects.

#### 4.1.2 Actions to maintain supply (drought permits)

Out of the nine drought permit options, only one option (RUNGS) has minor construction works associated with it. The potential for minor negative construction related effects were identified for this option for the SEA objectives on biodiversity, water environment, air quality, carbon, population and health, and material assets due to potential generation of dust, visual intrusion, construction traffic, and disturbance to people and wildlife.

The remainder of the effects identified for the drought permits are associated with their implementation within the operational phase. The assessment identified no potential effects for the SEA objectives on soil or landscape across all the drought permits. Neutral effects were also identified for the historic environment as there were not identified to be any sensitive above ground assets in proximity to the drought permit sites. However, there are potential for effects where preserved organic and palaeoenvironmental remains, or known or unrecorded and deeply buried archaeology, are present. It should also be noted that drought permits will be implemented in severe drought conditions and the additional impact of the drought permits on these assets above the drought itself is not likely to be significant. Further baseline collection and assessment may be required at a more detailed stage to explore the hydrological influence around the drought permits in relation to these types of assets.

Overall, all nine of the drought permits have the potential to result in negative effects on aquatic ecology, chalk rivers and Natural Environment Rural Communities Act (NERC) species. These hydrological assessments were based on groundwater modelling, and are associated with some uncertainty, due to limitations with calibration, particularly under low flow conditions. The assessments are therefore considered to be conservative and representative of a worst-case scenario, rather than the most likely outcome. There are three options (PICC, AMER and FULL) which are identified to have potential effects on nationally and locally designated sites (including Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs)). The effects identified for these sites in relation to drought permit implementation include the potential for a reduction in the quality or extent of the habitat as a result of drawdown and the potential for the influx of opportunistic terrestrial species as the site may undergo succession should recharge rates not be sufficient. However, it should be noted that these effects have been identified on a precautionary basis. It is likely that many of the river reaches identified as being impacted would already be dry at the time of drought permit implementation, and therefore impacts are more likely to be on recovery times when flows return after a drought has ended. The HRA Stage 1 Screening (Ricardo, 2022) identified no likely significant effects for all options on Natura 2000 sites, excluding THUN where the Stage 2 Appropriate Assessment (AA) went on to identify no significant impacts on the integrity of the Lee Valley Special Protection Area (SPA) and Ramsar. The HRA was also subject to consultation and the response received from Natural England confirmed agreement

with the conclusions. The implementation five of the drought permit options (THUN, AMER, FULL, PICC and WHIH) have the potential to result in the spread of INNS.

There is potential for all of the options, excluding RUNGS, to have negative effects on the water environment given possible impacts on flows and water quality. All the drought permit options are anticipated to increase the resilience of water supplies during a drought period therefore positive effects are identified for maintaining supply to customers. There is potential for minor negative effects on climatic factors given the options are likely to generate operational carbon and by abstracting water during a drought period, they have the potential to reduce the resilience of the natural environment to climate change. Minor negative effects on recreation were also identified for three (THUN, FULL and WHIH) of the nine drought permit options.

#### 4.1.3 Cumulative Effects Assessment

An assessment of the potential cumulative effects of the Drought Plan has also been undertaken. This has included an assessment of the options within the Drought Plan alongside an assessment of the effects of the Drought Plan with other plans and programmes. For the TUBs and NEUBs options, positive cumulative effects on biodiversity were identified given they may conserve water across the water resource zones (WRZs), however there is also potential for negative effects from a loss of watering. There may be minor negative cumulative effects on soil quality across the WRZs from TUBs and NEUBs implementation. Positive cumulative effects may occur for the water environment and the resilience of supplies given they will contribute to a reduction in the amount of water required for supply and they allow for the continued delivery of water during drought periods. There may be some negative cumulative effects on landscape and townscape given water will be restricted for watering public and private gardens, use of ornamental fountains, cleaning of building exteriors and windows. There may also be negative cumulative effects as a result of the NEUBs options being implemented across WRZs as they could affect the setting of historic gardens or landscape attached to heritage assets. The implementation of the TUBs and NEUBs options across the WRZs at the same time have the potential to result in negative cumulative effects on the local community as a wider population will be affected. There is also potential for negative cumulative effects on recreation and tourism as a result of the implementation of the TUBs and NEUBs options across the WRZs.

For the drought permit options, the assessment identified that the simultaneous implementation of the FULL, WHIH and THUN have the potential to have cumulative effects on biodiversity and the water environment as a result of potential impacts on the River Lea. There is also potential for cumulative effects on biodiversity and the water environment from the simultaneous implementation of SLYE, SBUC and SDRE, however it should be noted that the requirement for these drought permits is unlikely and therefore it is unlikely that they will be implemented at the same time. The potential for negative cumulative effects were identified for climatic factors as a

result of the operational carbon and that the options have the potential to reduce the resilience of the local environment to climate change. There is also potential for cumulative effects on recreation. Potential positive cumulative effects were identified for securing water supplies, allowing for continued and resilient delivery during drought periods. No cumulative effects associated with drought permit options were identified for the SEA objectives on soil, flood risk, air, landscape, historic environment, or material assets.

The cumulative assessment of the Drought Plan with other plans identified that there is not likely to be cumulative effects with other company Drought Plans. However, there is potential for the Thames Water abstraction at Lee Navigation at New Gauge to have cumulative effects with the Affinity Water permits affecting the River Lea. However, given the Affinity Water abstraction is groundwater, effects are likely to be indirect. An assessment of the cumulative effects of the Drought Plan and the Affinity Water WRMP24 could not be undertaken given it is still being developed. Similarly, the WRSE regional plan and other water companies' WRMP24 are also currently being developed. Local Authorities' Local Development Plans set the context for development and there is potential that the planned growth could increase demand for abstraction during periods of drought. WRMP modelling has informed the Drought Plan and has taken into account any known growth. Increased demand from growth is offset within WRMP by demand management.

#### 4.1.4 Mitigation

Mitigation measures have been identified through the SEA process, the HRA process and the EARs. Each drought permit option has specific mitigation and monitoring proposals set out in an Environmental Monitoring Plan (EMP) contained within the EARs.

Provision for monitoring of the effects of the Drought Plan is set out in the Drought Permit EMPs (included within the EARs). The recommendations focus on those environmental features that are assessed as most at risk of adverse effects from the proposed drought permits based on the outcome of the environmental assessment. The EMP monitoring proposals are focused on water and biodiversity which corresponds to the main effects identified in the SEA. A summary of the monitoring proposals is presented in Chapter 5 with full details on monitoring found in the EARs.

The EARs are not published on Affinity Water's website due to national security restrictions, however summaries are provided in the Drought Plan and appendices, and the information in them has been used to inform the SEA work as stated above. Should you wish to view the EARs, they are available at the Affinity Water head office; Affinity Water, Tamblin Way, Hatfield, AL10 9EZ. You can arrange an appointment to view these documents by contacting [dmpconsultation@affinitywater.co.uk](mailto:dmpconsultation@affinitywater.co.uk).

In the event that an application for a drought permit is required, Affinity Water will make the associated documents including the EARs are publicly available.



## 4.2 Influence of the SEA on the Drought Plan

### 4.2.1 Phase One: Preliminary Assessment

The preliminary assessment assessed the unconstrained list (27 options) to confirm if the already identified constrained list (nine options) were suitable for inclusion within the Drought Plan. It was identified that the nine drought permit options which were initially included within the Drought Plan were appropriate to be taken forward into the constrained list and have these were then subject to the full SEA assessment.

### 4.2.2 Prioritisation of Drought Permit Options

As part of the full SEA, the individual drought permit assessments and the cumulative effects assessment have been used to prioritise the implementation of the drought permit options. As discussed previously the implementation of drought permit options will only be taken forward once other demand and supply side measures have been implemented. It should be noted that the conclusions of the EARs and SEAs in the Central region are based on the model outputs of the Hertfordshire Chalk model which has some limitations and as a result, the conclusions are generally highly conservative and/or uncertain, representing the worst-case scenario rather than the expected outcome.

The drought permit options are split across the Central region and the Southeast Region. In the Central region, the drought permits are split into a further two categories based on the planned priority of use. The SEA recommends that the Category 1 drought permits are implemented in the following order: THUN, WHIH and RUNGS. The Category 2 permits are then recommended to be implemented as follows: PICC, AMER and FULL.

For the Southeast region, the modelling carried out for WRMP19 did not indicate a deficit which would require the use of drought permits in this region. The decision was made to not remove them from the Drought Plan completely, but to retain three as a contingency volume. It is highly unlikely that these drought permits will be required. However, the SEA recommended that SBUC and SDRE are implemented first followed by SLYE.

## 5 Monitoring Programme

### 5.1 Monitoring Proposals

Provision for monitoring of the effects of Affinity Water Drought Plan is set out in the Drought Permit EMPs (included within the EARs). Recommendations focus on those environmental features that are assessed as at most risk of adverse effects from the proposed drought permits (based on the outcome of the environmental assessment). The EMPs set out monitoring required for the:

- Baseline environment;
- The on-set of drought conditions;
- During-drought permit implementation (and any potential mitigation measures); and
- Post-drought permit (and any potential mitigation and/or compensation measures).

Monitoring will help to inform the implementation of mitigation and the EMPs include surface and groundwater quality and water level monitoring and ecological monitoring and walkover surveys including fish communities (including NERC and notable species), macroinvertebrates, macrophytes, and species (e.g. water voles) (see EARs for further details). The EMP monitoring proposals are focused on water and biodiversity which corresponds to the main effects identified in the SEA. Full details on monitoring can be found in the EARs.

As noted within the Environmental Report, Affinity Water have never required to apply for the implementation of a drought permit and as such, there is limited baseline information on the impacts of their implementation. Modelling has therefore been undertaken and assessment has taken a conservative approach to determine potential effects. If drought permits are required, the collection of such baseline data will be addressed through the EARs and monitoring plans set out in the EMPs developed for each of the drought permits.



## **A. Consultation Responses**

### **A.1 WRMP24 Scoping Report**







## **A.2 Environmental Report**