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# Bristol Water Drought Plan 2022 Strategic Environmental Assessment Post-Adoption Statement

Final report for Bristol Water

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# 1 Introduction

## 1.1 Background to the Drought Plan

Under the Water Industry Act 1991, Bristol Water Plc is required to prepare and update a Drought Plan for the approval of the Secretary of State for Environment, Food and Rural Affairs. The Drought Plan provides a comprehensive statement of the actions Bristol Water will consider implementing during drought conditions to safeguard essential water supplies to customers and minimise environmental impact. It is consistent with Bristol Water's Water Resources Management Plan, the objective of which is to set the strategic plan for ensuring a supply-demand balance over a 25 year planning period.

Bristol Water produced a draft Drought Plan in 2021 and held consultations in accordance with the Environment Agency Drought Plan Guidelines (DPG)<sup>1</sup> in 2021.

Following the period of public consultation, between 8 June and 13 July 2021, and review of the public consultation representations, Bristol Water prepared the Statement of Response<sup>2</sup>. The Statement of Response and the revised draft Drought Plan were submitted to the Secretary of State in September 2021 to determine whether the plan could be published. In April 2022, Bristol Water were directed to publish the final Drought Plan and accompanying documents.

### 1.1.1 The SEA Process

Bristol Water's draft Drought Plan 2021 was subject to Strategic Environmental Assessment (SEA) in compliance with the SEA Directive, as transposed in England by the Environmental Assessment of Plans and Programmes Regulations 2004 (the 'SEA Regulations'). The SEA Environmental Report was issued for public consultation alongside the draft Drought Plan in June 2021. The SEA Environmental Report was then updated in light of comments received, as set out in the published Drought Plan Statement of Response. Following approval of the Drought Plan for publication by the Secretary of State, this SEA Post-Adoption Statement is being issued to accompany the published plan.

### 1.1.2 Purpose of the SEA Post Adoption Statement

This SEA Post-Adoption Statement is produced in accordance with the provisions Part 4 of the SEA Regulation (see **Appendix A**). In accordance with Regulation 16 of the SEA Regulations, this SEA Post Adoption Statement describes:

- How environmental considerations have been integrated into the Final Drought Plan (Section 2)
- How the Environmental Report has been taken into account (Section 3)
- How responses to the SEA Environmental Report consultation have been taken into account (Section 4)
- Reasons for choosing the Final Plan as adopted, and why other reasonable alternatives were rejected (Section 3)
- The measures that are to be taken to monitor the significant environmental effects of implementation of the Final Plan (Section 5).

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<sup>1</sup> Environment Agency (2020) Water Company Drought Plan Guideline, December 2020 (Version 1.1)

<sup>2</sup> Bristol Water (2021) Draft Drought Plan Statement of response to public consultation. September 2021. Available at: <https://f.hubspotusercontent30.net/hubfs/7850638/Drought%20Plan%20Statement%20of%20Response%202021.pdf>, Accessed May 2022.

## 2 How Environmental Considerations have been integrated into the Drought Plan

The DPG requires that a drought plan sets out what actions a company will take before, during and after drought to maintain a secure supply of water. It also sets out how a company will assess the environmental effects of its actions to maintain supply and what actions will be taken to mitigate for any damage. The drought plan must set out how to monitor the effects of the actions taken under the drought plan. The plan must also set out what mitigation and compensation measures will be carried out to minimise the impact of the actions on the environment.

The SEA reviewed all the environmental and social effects of the full range of drought management measures included in Bristol Water's draft Drought Plan. Environmental considerations were incorporated into the development of Bristol Water's Drought Plan from the outset, including the preparation or update of Environmental Assessment Reports (EARs) for supply-side drought options.

The overall scope of the Environmental Assessment Reports met the requirements of the DPG, including information on likely changes in flow/level regime, assessment of likely impact on features that are sensitive to these changes and mitigation measures that may be required to prevent or reduce impacts on sensitive features. This work was carried out in consultation with the Environment Agency and Natural England.

SEA Screening confirmed that, taking a precautionary approach, Bristol Water's Drought Plan required both SEA and Habitats Regulations Assessment (HRA). Information from the detailed environmental assessments was used to inform both the SEA and HRA.

The HRA of Bristol Water's Drought Plan was undertaken in parallel with the SEA (as well as the Water Framework Directive (WFD) Assessment) and is reported separately in the HRA Report. The HRA Stage 1 screening process identifies whether each drought option in the drought plan (either alone, in combination or with other plans or projects) is likely to have significant effects on European designated sites, i.e. sites of international conservation importance. Those Drought Plan measures identified during HRA Stage 1 Screening as being likely to have a significant effect on a European site (either alone or in-combination) were subject to Stage 2 Appropriate Assessment. The findings of both the SEA and HRA have fed into the revision of the Drought Plan in an iterative process.

Due to the nature of the statutory processes underpinning water company drought management, a Drought Plan must include all measures that the company may progressively need to take as the severity of a drought increases, including those that would only be needed in the worst possible drought. These measures will typically have very significant environmental effects, but are extremely unlikely to be required during the 5-year lifetime of the Drought Plan. As a result, Drought Plans generally encompass a basket of measures that may need to be implemented to take account of the unpredictable occurrence of a drought event, and thus the actual impact of the plan over its life is subject to significant uncertainties.

Bristol Water's Drought Plan therefore includes a range of possible measures to allow Bristol Water to respond to different severities and durations of drought events in the most appropriate way. Due to the differing nature of drought events and consequent different needs for implementing the range of available management measures, it is impossible to predict in advance which and how many of the measures will actually be required.

The effects identified by the SEA were integrated into the draft Drought Plan that was issued to Defra in March 2021. The outputs of the SEA provided a comparative assessment of the environmental effects of implementing each drought management measure. Bristol Water used the SEA findings, along with operational and other factors, to determine the order of implementation of each drought management measure (as identified in Table 7 of the Drought Plan).

For example, the SEA assists in the identification of the likely significant environmental effects of Bristol Water's drought options and determines how any adverse impacts might be mitigated. Additionally, the SEA identified combinations of measures that may give rise to cumulative effects (adverse and

beneficial). The SEA also provides information on the relative environmental performance of alternatives, and is intended to make the decision-making process more transparent.

Further consideration of the environmental and social effects, and prioritisation of drought management measures, was given following receipt of the consultation responses to the draft Drought Plan and/or the SEA Environmental Report, as described in Bristol Water' Drought Plan Statement of Response.

The SEA can, therefore, be used to support the timing and implementation of drought options within the Drought Plan.

### 3 How the Environmental Report Influenced the Drought Plan

The findings of the SEA Environmental Report (and associated HRA and WFD assessment) were used by Bristol Water to help inform the development of its Drought Plan. The scale and magnitude of adverse and beneficial effects identified by the SEA for each potential drought management measure were used to inform the phasing and timing of the implementation of each measure against a series of drought management triggers based on the company's combined raw water reservoir storage levels.

The SEA, HRA and WFD findings led to the exclusion of three drought permit options due to the findings of the potential for adverse effects presented in the draft Drought Plan as well as taking account of consultation responses (as described in Bristol Water's Drought Plan Statement of Response). The three drought measures have been moved to the group of drought actions that would only be considered in the event of an extreme drought (see Section 4.4 of the Drought Plan).

As stated in Section 2, the Drought Plan does not define specific programmes of measures which the SEA can influence (as is the case with Water Resource Management Plans (WRMPs)). However, the Environmental Report, HRA Screening Report and WFD Assessment Report provide a source of information to be used, together with operational considerations, to assist in assigning order of implementation in a drought as well as the inclusion and exclusion of options (for example as demonstrated in Section 4.3 and Section 4.4.10) of the Drought Plan. This information comprises effects of the individual options and cumulative effects. The importance of this is demonstrated with respect to the drought permit options, where it is identified that all three will result in a reduction in river flow or level due to a reduction in compensation flow/prescribed flow to downstream watercourses or increase abstraction from groundwater which will influence river flows. The drought permits are, however, located in different catchments, and consequently the affected river reaches have different characteristics; in addition, the timing and duration of drought permit implementation differs. The order of implementation will therefore differ depending on the nature of the drought.

Bristol Water will consult with the Environment Agency and Natural England during any future drought event to prioritise, where possible, actions where the environmental impact would be least damaging. Further details can be found in the communications plan, Section 6 of the Drought Plan.

In addition to informing the effects of drought management measures and the sequencing of their implementation at this stage, the SEA also provides an additional information source and a comparative assessment of the environmental effects of different drought management measures for use during an actual drought event to aid decision-making. The Bristol Water Drought Management Group will use the SEA information, alongside the detailed Environmental Assessment Reports for the drought permit measures and operational considerations, to determine the precise measures to be implemented and their optimal timing.

## 4 Consultation and Changes Made to the Drought Plan

### 4.1 Consultation on the SEA

The SEA process comprised several consultation stages, as follows:

- An SEA Scoping Report was issued on 18 December 2020 to statutory consultees and opinions were sought on the proposed scope and level of detail proposed for the SEA. A five week consultation period was provided which ended on 25 January 2021.
- The SEA Environmental Report was published with the Draft Drought Plan on Bristol Water's website on 8 June 2020 for a five-week period for public consultation. A draft HRA Screening Report (which informed the SEA) was published at the same time.
- A Statement of Response, including responses to comments made by the statutory consultees and the public on the SEA Environmental Report and the HRA Screening Report, was published on Bristol Water's website on 14 September 2021.
- The updated SEA Environmental Report was published with the Final Drought Plan 2022 on Bristol Water's website. A Final HRA Screening Report and WFD Assessment report were also published at the same time.
- This SEA Post-Adoption Statement is being published now that the Final Drought Plan 2022 is available on Bristol Water's website.

Changes to the Drought Plan made as a result of consultation are described in the Statement of Response document.

### 4.2 Consultation Responses

The responses to the consultation on the Draft Drought Plan which relate to the SEA, HRA and WFD were included in the Statement of Response that was published on Bristol Water's website in September 2021 and can be found at the link below:

[Draft Plan Statement of Response](#)



## 5 Mitigation and Monitoring of the Drought Plan

### 5.1 Overview

Consideration of mitigation measures and monitoring of potential effects has been an integral part of the SEA process. Key stages of the SEA process include Task B5: *Mitigating adverse effects*, Task B6: *Proposing measures to monitor the environmental effects of plan or programme implementation* and Stage E: *Monitoring the significant effects of the plan or programme on the environment*. The SEA Directive also requires the significant environmental effects of implementing a plan to be monitored. The sections below describe:

- how these tasks have been addressed;
- how Bristol Water intends to ensure that the mitigation measures and monitoring plans are implemented for any adverse effects that are identified; and
- the means by which the environmental performance of the Drought Plan 2022 can be assessed.

#### 5.1.1 Mitigation Measures

Mitigation may be defined as a measure to limit the effect of an identified significant impact or, through the most successful application, avoid the adverse impact altogether, the latter being the preferred option.

Consideration of mitigation measures has been an integral part of the SEA process. The SEA appraisals have been based on residual impacts, i.e. those impacts likely to remain after the implementation of reasonable mitigation. Certain assumptions have been made regarding this:

- Where suitable mitigation measures are known and identified (e.g. as informed through existing EARs and other assessments) these have been taken into account, such that the resultant residual effect has been determined.
- In line with recommendations made in the UKWIR SEA Guidance<sup>3</sup>, the SEA appraisals have assumed the implementation of reasonable mitigation measures, such as the use of good construction practice. This is particularly applicable to the Honeyhurst Well option where some construction work would be needed.

During implementation of a specific drought management measure, appropriate monitoring will be undertaken to track any potential environmental and/or social effects which will in turn trigger deployment of suitable and practicable mitigation measures as may be available.

The HRA Appropriate Assessment of the supply-side measures identified various mitigation measures to avoid adverse effects on European site integrity. Bristol Water will consult with Natural England and the Environment Agency to further develop these mitigation measures should any of these options be required in a drought.

As identified by the SEA, if the Honeyhurst Well option were to proceed, Bristol Water will also engage with Historic England to discuss the proposed pipeline route once further design work has been carried out to discuss any potential adverse heritage risks and any mitigation measures, including where feasible, re-routing of the pipeline to avoid adverse heritage effects in accordance with national planning policy. Similarly, in relation to the construction work required for the Honeyhurst Well option, Bristol Water will work closely with Natural England and the planning authorities regarding measures to

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<sup>3</sup> UKWIR (2021) Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (prepared by Ricardo Energy & Environment for UKWIR).

mitigate potential adverse landscape and visual amenity effects including appropriate screening measures.

### 5.1.2 Monitoring Requirements

Monitoring is required to track the potential environmental effects of the drought management measures so as to confirm any effects that may materialise and, where applicable, to trigger deployment of mitigation measures.

Drought Plans encompass a basket of measures that will only be implemented if and when required because of the unpredictable occurrence of a drought event, and thus the actual impact of the plan over its life is subject to very significant uncertainties.

Bristol Water's Drought Plan includes a range of possible measures to allow Bristol Water to respond to a particular drought in the most appropriate way. It is impossible to predict in advance which and how many of the measures will be required to respond to each particular drought event. Correspondingly, it is therefore difficult to prescribe precise monitoring activities for the effects of the Drought Plan as whole, and it is more appropriate to consider monitoring requirements for drought management measures with significant environmental or social effects should they be implemented during an actual drought.

In relation to demand management measures, it is recommended that monitoring of customer effects is carried out during and after the implementation of any demand management measures to assess their effectiveness and confirm the effects predicted in this Environmental Report. This is likely to take the form of structured surveys with a statistically valid sample of household and/or non-household customers, as applicable. UK Water Industry Research (UKWIR) guidance is available on methods for assessing the effectiveness and impact of water use restrictions on customers.

Bristol Water has committed to being 'permit ready' for the drought permits which are put forward in the final drought plan, subject to confirmation through work being carried out for the WRMP that they are still required. This includes updates of the existing EARs and production of an EAR for the Honeyhurst Well option. The EARs include monitoring requirements in relation to hydrology, water quality, hydromorphology and aquatic ecology commensurate with the scale and magnitude of the potential adverse effects.

Similarly, relevant environmental baseline data would need to be collated in respect of the Honeyhurst Well supply augmentation measure to help provide the context for monitoring before, during and after implementation of this measure in an actual drought to confirm the predicted effects set out in this Environmental Report.

Monitoring requirements are set out in the Environmental Monitoring Plan that accompanies the Drought Plan.

## 6 Availability of Documents

### 6.1 Overview

The adopted Drought Plan 2022 and accompanying SEA documentation is available on Bristol Water's website at:

<https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/>



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