

NW Drought Plan 2027 Habitats Regulations Assessment Screening Report

July 2026

NW DROUGHT PLAN 2027

HRA SCREENING REPORT

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Registered in England & Wales No. 2366703

Registered Office:

Northumbria House, Abbey Road, Pity Me, Durham DH1 5FJ

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1 INTRODUCTION

1.1 Background and Purpose of this Report

Under the Water Industry Act 1991, Northumbrian Water Group (NWG) is required to prepare and update a Drought Plan for each of its supply regions. This document focuses on the Northumbrian Water (NW) supply area. The Drought Plan must be approved by the Secretary of State for Environment, Food and Rural Affairs and made available for public consultation.

Our NW Drought Plan 2027 is a tactical plan which provides a comprehensive statement of the actions we will consider implementing during drought conditions to safeguard essential water supplies and minimise environmental impact within our supply area. The plan aligns with our Water Resources Management Plan (WRMP), which sets out the strategic approach to maintaining a supply-demand balance over a 25-year planning period.

A water company must ensure its Drought Plan meets the requirements of the Habitats Regulations before implementation. The requirement for a Habitats Regulations Assessment (HRA) is established through the Conservation of Habitats and Species Regulations 2017 (as amended). Under Regulations 63 and 105, any plan or project which is likely to have a significant effect on a European Site (either alone or in-combination with other plans or projects) and is not directly connected with, or necessary for, the management of the site, must be subject to a HRA to determine the implications for the site in view of its conservation objectives.

This HRA Screening Report has been prepared in support of the development of our Drought Plan 2027. Further information about HRA and the rationale for applying it to the Drought Plan is provided in Section 1.2.

1.2 HRA context

The amended 2017 Habitats Regulations created a national site network including:

- Special Areas of Conservation (SACs) designated under the Habitats Directive (92/43/EEC) and which target particular habitats (Annex 1) and/or species (Annex II) identified as being of European importance.
- Special Protection Areas (SPAs) classified under the Birds Directive (2009/147/EC) for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species).
- Designated Wetlands of international importance (known as Ramsar sites) do not form part of the national site network. However, many Ramsar sites overlap with SACs and SPAs, and may be designated for the same or different species and habitats. As a matter of policy, Ramsar sites are considered in the same way as SACs and SPAs.

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- The National Planning Policy Framework (NPPF)¹, states that potential Special Protection Areas (pSPA), possible Special Areas of Conservation (pSAC), and proposed Ramsar sites² on which the Government has initiated public consultation on the scientific case for their designation, should also be considered European Sites.

For ease of reference through this HRA report, the above designations are collectively referred to as “European Sites.” As per Natural England guidance, an HRA should also consider any European Marine Protected Areas (MPAs) within England’s inshore waters (out to 12 nautical miles) to support sites in achieving conservation objectives and to guide effective management.

1.3 The NW Drought Plan context

We supply water to approximately 2.7 million customers in the North East of England which extends from the Scottish border in the north to the Yorkshire border in the south and as far west as the Cumbrian border. The major population centres of Tyneside, Wearside and Teesside are in the area.

In accordance with our WRMP24³, the supply area comprises two Water Resource Zones (WRZs)⁴ known as the Kielder WRZ and the Berwick & Fowberry WRZ (see Figure 1.1 below). Berwick & Fowberry WRZ is in the far north of the supply area and covers about 1% of our customers and the Kielder WRZ covers the remaining 99% of customers. For more information on the WRZs see Northumbrian Water (2026)⁵.

¹ Department for Levelling Up, Housing and Communities (2024) National Planning Policy Framework. Available from: [National Planning Policy Framework - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/policies/national-planning-policy-framework) (Accessed February 2026)

² Defined by the Convention on Wetlands of International Importance, especially as waterfowl habitat (otherwise known as the 'Ramsar Convention'). <https://www.ramsar.org/>

³ Northumbrian Water (2024). *Water Resources Management Plan 2025–2030 (WRMP24)*. Available at: <https://www.nwg.co.uk/responsibility/environment/wrmp/wrmp-2025-2030/> [Accessed Jul 2025].

⁴ A WRZ is defined as the largest possible zone in which all resources, including external transfers, can be shared and hence the zone in which all customers experience the same risk of supply failure from a resource shortfall.

⁵ Northumbrian Water (NW) (2026) NW Drought Plan 2027 Strategic Environmental Assessment (SEA): Environmental Report

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Figure 1.1 Northumbrian Water supply area

2 DROUGHT PLAN DEVELOPMENT

2.1 Approach

The assessment of drought actions, both demand and supply-side, follows a structured two-stage approach designed to ensure that all potential actions are rigorously assessed for feasibility, effectiveness, and strategic alignment before inclusion in the Drought Plan.

The first stage involves compiling a comprehensive, unconstrained list of potential drought actions. We have undertaken a broad screening exercise to identify all viable actions, regardless of current operational status or delivery constraints. Each action was assessed against a set of criteria to determine whether it should progress to detailed planning.

Drought actions that passed the initial screening were developed into a constrained list of implementable actions. This second stage ensures that each selected action is operationally ready, strategically aligned, and responsive to drought severity. Actions were categorised by intervention type (demand-side or supply-side) and aligned with drought severity levels (Level 1, Level 2, Level 3a, and Level 3b). These are summarised in Table 2.1. Level 0 - Business as usual (BAU) dry weather actions are also included. Level 4 falls under our Emergency Plan and is therefore excluded from this table.

This approach supports transparent decision-making and ensures that resources are focused on actions capable of delivering timely and measurable benefits during drought conditions. Full details of the process used to develop drought actions can be found in Section 2.2 of the NW SEA Report⁶.

⁶ Northumbrian Water (NW) (2026) NW Drought Plan 2027 Strategic Environmental Assessment (SEA): Environmental Report

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Table 2.1 Drought Plan demand and supply-side actions

Level	Demand-side actions	Supply-side actions
Level 0 (BAU)	Network optimisation to reduce output of Water Treatment Works (WTWs) which are supplied by a stressed water resource Customer communications As per our WRMP24 demand management selected options: ▪ Leakage detection and repair suite of options ▪ Water efficiency activity (non-household and household) ▪ Smart metering installations ▪ Government led interventions	Both WRZs: • Raw water and water treatment works optimisation • Coordination planning to minimise planned outage Kielder WRZ: • Operation of the Kielder Transfer Scheme
Level 1	Appeal for Restraint: ▪ Enhanced dry weather messaging ▪ Additional resource for find & fix leakage teams ▪ Encourage reporting of leaks ▪ Stop proactive flushing ▪ Optimising water supply and network to reduce output of WTWs which are supplied by a stressed water resource; as well as increased control over potable water storage levels ▪ High water use alerts to customers ▪ Water saving calculator promotion ▪ Target 15m head at the critical point in each pressure managed area	Kielder WRZ: • Road tankering from Whittle Dene WTW to service reservoirs to augment spring supplies at Allenheads and Carrshields WTW
Level 2	Temporary Use Bans (TUBs): ▪ Further additional resource to find & fix leaks ▪ Offer to repair the highest volume customer-side leaks	

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Level	Demand-side actions	Supply-side actions
	- Challenge illegal use - Water efficiency home audits to targeted areas - Education workshops - community and schools - Community outreach & business funding - Tourism support	
Level 3a	Non-Essential Use Bans (NEUBs): - Minimise WTWs outflows at all water stressed sourced WTWs and maximise elsewhere - Manage the network to use potable water stored as resilience for changeable demands, managing our network storage levels at low levels, increasing risk of maintaining supply to customers - Hard hitting communications - Target 10m head at the critical point in each pressure managed area - Installation of flow regulators to households - Shower device offering - Flow restrictors to non-households	Kielder WRZ: - Burnhope Reservoir compensation discharge reduction - Cessation of environmental spate flows from Derwent Reservoir and Fontburn Reservoir
Level 3b	- Reduce ships watering - Removal of Statutory Exceptions on TUBs and NEUBs - Manage Strategic Operational Plan (SOP) storage to low-low alarm levels, increasing risk of maintaining supply to customers - Seasonal tariffs for smart metered customers	Berwick & Fowberry WRZ: - Lower pumps in Murton, Thornton Mains and Bleak Ridge boreholes - Abstraction increase at Bleak Ridge borehole

3 APPROACH TO HRA

3.1 Objective

The objective of the HRA is to establish whether drought actions included in the NW Drought Plan 2027 are likely to have a significant effect on European Sites (alone or in combination with other supply schemes in the plan, or with other plans and projects), and where likely significant effects cannot be ruled out, applying the precautionary principle, to determine through Appropriate Assessment whether the option would adversely affect the integrity of the European Site(s).

The HRA has been undertaken in parallel with the Strategic Environmental Assessment (SEA) and Water Framework Directive (WFD) assessment to ensure an integrated approach to environmental assessment and has been used to inform the development of our Drought Plan 2027 to ensure its overall compliance with relevant legislation.

3.2 Overview of the HRA Stages

An overview of the HRA process is outlined below:

- Stage 1 – Screening;
- Stage 2 – Appropriate Assessment;
- Stage 3 – Derogation
 - Assessment of Alternative Solutions;
 - Imperative Reasons for Over-riding Public Interest (IROPI) and
 - Compensation.

A number of European Sites fall within, or are connected to, our supply area, hereafter referred to as the 'Plan Area.' Under the Habitats Regulations, Competent Authorities, i.e. any minister, government department, statutory undertaker, public body, or person holding public office, have a general duty, in the exercise of any of their functions to have regard to the Habitats Regulations. NWG is undertaking the HRA as competent authority for preparation of its Drought Plan in accordance with UKWIR Guidance⁷,

The Water Company Drought Plan Guideline 2025⁸ (for England and Wales) indicates that water companies must demonstrate in their drought plans that they have met their responsibility to monitor, assess and where possible mitigate for the environmental impact of all supply-side drought actions. Environmental assessments for supply-side drought actions should also include any mitigation measures planned to be implemented. Water companies must ensure that their environmental assessments meet all the expectations set out in the relevant environmental legislation, including the Habitats Regulations.

⁷ UK Water Industry Research (2021) Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15). Available at: [Environmental Assessments for Water Resources Planning](#)

⁸ Water company drought plan guideline, June 2025, Environment Agency, Defra. Available online:

<https://www.gov.uk/government/publications/water-company-drought-plan-guideline-2025/water-company-drought-plan-guideline-2025>

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The purpose of screening (i.e. this report documenting Stage 1 of the HRA process) is to identify whether activities associated with plans or projects not directly connected with or necessary to the management of a European Site, either acting individually or in-combination with other plans or projects, could result in Likely Significant Effects (LSEs) on any European Sites.

All potential effects between activities associated with the plans or projects and the ecological components of European Sites must be considered. At Stage 1 Screening, the burden of evidence is to show, on the basis of objective information, and beyond reasonable scientific doubt, that the proposed plan or project will have no LSEs on a European Site. If the effect is significant, or is not known, it would trigger the need for Stage 2 Appropriate Assessment (AA).

In the context of Stage 1, when applying the “test of significance”, the test is of the “likelihood” of effects rather than the “certainty” of effects. In accordance with the Waddenzee Judgement (Case C-127/02)⁹, a likely effect is one that cannot be ruled out based on objective information and is underpinned by the precautionary principle and the test of beyond reasonable scientific doubt. This test therefore sets a low bar: a project or plan should be considered “likely” to have an effect if the competent authority is unable (on the basis of objective information) to exclude the possibility that the project or plan could have significant effects on any European Site, either alone or in-combination with other plans or projects. An effect is considered to be ‘significant’ if it could undermine a European Site’s conservation objectives.

If the Stage 1 Screening has determined that Stage 2 AA is required, the competent authority then considers the effects of the project or plan on the integrity of the European Site(s). Specifically, it must be determined if the project or plan will adversely affect the integrity of a European Site(s) either individually or in-combination with other plans and projects in view of the site conservation objectives. Where potential adverse effects on site integrity (AESI) are identified, mitigation measures are proposed to avoid adverse effects, as appropriate (as required under the provisions of Article 6(3)).

Following Stage 2 AA, if AESI remain following the application of mitigation, or uncertainty remains and the project/plan is to be progressed, an Assessment of Alternative Solutions (i.e. Stage 3 of the HRA process) is required under the provisions of Article 6(4) of the Habitats Directive. This process examines the alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European Site. If no alternatives exist, or all alternatives would result in adverse effects on the integrity of a European Site, then either the process moves to the next stage (i.e. Stage 4 – Imperative

⁹ Case C-127/02. Judgment of the Court (Grand Chamber) of 7 September 2004. Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij. Reference for a preliminary ruling: Raad van State - Netherlands. Directive 92/43/EEC -Conservation of natural habitats and of wild flora and fauna - Concept of “plan” or “project” - Assessment of the implications of certain plans or projects for the protected site.

Reasons of Over-riding Public Interest (IROPI)) or the project or plan should be abandoned.

In the case where the provisions of Article 6(3) cannot be met (i.e. that a project or plan will not result in AESI, either alone or in combination with other projects or plans, on any European Site) the provisions of Article 6(4) are used (i.e. Stage 4 – IROPI). If, in light of an assessment of IROPI, it is determined that the project or plan should proceed despite AESI, compensatory measures must be secured and implemented to ensure the coherence of the European Site network is maintained.

3.3 Application of the HRA Process at Plan Level versus Project Level

The methodology for undertaking Stage 1 Screening can be applied at both project and plan level. The suitability of the data and information used and any decisions flowing from its use in the assessment of any project or plan must meet the provisions and requirements of the Habitats Regulations. The strategic assessments at the plan level will inevitably be undertaken at a higher level than would be the case for projects.

Importantly, the key distinction between plan and project level HRA relates to the:

- Geographic specificity (that is, from generally described regions at the plan level to a defined and fixed location/route at the project level); and
- Duration and timing of impacts (which are usually not known at plan level).

Each individual drought action would be considered a separate ‘project’ for the purposes of the Habitats Regulations, while the HRA of the Drought Plan constitutes a plan level assessment of the overarching framework that promotes these projects.

Therefore, the scale and nature of the assessment is based on the best available information at either project or plan level, whilst meeting the provisions and requirements of the Habitats Directive.

Guidance from the European Commission (EC) (EC 2021a)¹⁰ and the judgment of the European Court of Justice in the case of EC v the UK, (Case C – 6/04)¹¹ are helpful in understanding how the EC believes plans could have a significant effect on a European Site. Based on this guidance, a plan may affect a European Site by:

- Proposing or resulting in particular types of change that are inherently damaging;
- Proposing or resulting in a magnitude of change that would be damaging because the scale of effect would be so great;
- Proposing or resulting in a magnitude of change that in the proposed location would be damaging;

¹⁰ European Commission, 2021. Guidance Document. The strict protection of Community interest under the Habitats Directive.

¹¹ Case C-6/04 Commission v United Kingdom of Great Britain and Northern Ireland.

- Resulting in cumulative or in-combination effects that would be damaging, whether arising from a programme of similar or different proposals within the plan itself, or from the interaction of proposals in this plan with those in other plans or projects;
- Blocking options for future plans and proposals;
- Providing the justification for damaging change; and
- Failing to foresee damaging effects that would occur later in a programme.

In the case of the Drought Plan, the strategic assessment at the plan level does not provide consent for any future activities arising from the plan, nor of any future iterations of the plan itself. However, undertaking the HRA at the plan level demonstrates that the protection of the European Site network has been appropriately considered and that compliance with the Habitats Regulations is achievable within the remit of the plan.

Furthermore, should Stage 1 and/or Stage 2 of the HRA process be undertaken for any future activities defined by, or relevant to the Drought Plan, the project level HRA screening will have regard to the HRA undertaken for the Drought Plan as a whole.

4 STAGE 1 SCREENING

4.1 Introduction

The purpose of this section is to assess or ‘screen’ the Drought Plan to identify elements of it for which LSEs on a European Site can, or cannot, be ruled out.

Screening has been informed by a desk study of all relevant environmental information and involved the following steps, which align to UKWIR 2021 guidance¹²:

- Determination of whether the proposed plan (i.e. the Drought Plan) is directly connected with or necessary to the management of a European Site (Section 4.2);
- Identification of European Site(s) in the hydrological Zone of Influence (Zol) for each drought action (Section 4.3) (where applicable);
- Assessment of the elements of the Plan with potential to lead to LSE (Section 4.4)
- Assessment of LSEs on European Site(s), alone and in-combination (Section 4.5);
- Summary of the Stage 1 Screening (Alone effects) (Section 4.6);
- Potential in-combination effects of the Drought Plan (Section 4.7).

4.2 Is the Drought Plan Exempt from HRA?

HRA is required for all plans and projects that are not directly connected with, or necessary to, the management of European Sites. The overarching objective of the Drought Plan is to ensure the continued supply of potable drinking water during periods of low summer riverine flows, reduced groundwater levels, and subsequent recovery. It is not concerned with the nature conservation management of the European Sites and therefore is not considered to be connected with, or necessary to, their management. As such, it is necessary to proceed with Stage 1 Screening of the Drought Plan.

4.3 Identification of European Sites

European Sites that could be connected to a drought action, either through an existing hydrological pathway (surface water or groundwater), mobile qualifying feature species (and any functionally linked land associated with those species) or sensitive habitat were identified for each drought action.

Where Environmental Assessment Reports (EARs – see below) have been produced for a drought action, the hydrological Zol was determined for each drought action and used to determine potential interactions with European Sites and their qualifying features. Where hydrological Zols have not been identified in an EAR, the precautionary principle was applied, by which any European Site with a conceivable link to the operation of the drought action was screened into Stage 1. These sites were identified using GIS datasets to map the locations and boundaries of European Sites within or adjacent to our WRZs using

¹² UK Water Industry Research (2021) Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15). Available at: [Environmental Assessments for Water Resources Planning](#)

publicly available data from Natural England. Any European Site with a conceivable link to the operation of the drought action was screened into Stage 1.

A number of European Sites lie close to the modelled Zol for some of our drought actions. These sites have been excluded from assessment where there is no pathway to effect, typically because the qualifying features of these sites are terrestrial habitats and species that do not interact with the Zol of any of our drought actions.

The attributes of the European Sites, which contribute to and define their integrity, have been considered with reference to Standard Data forms for SACs and SPAs and Information Sheets for Ramsar sites. Analysis of these information sources has enabled the identification of the sites' qualifying features. Additional information, including Article 12 and 17 reporting, site conservation objectives, supplementary guidance, Site Improvement Plans, and the supporting Site of Special Scientific Interest's favourable condition tables, has been used to identify those features that define each site's current conservation status, integrity and specific sensitivities. This evidence base was used to assess how the drought actions may affect each European Site. The locations of our supply-side actions were also mapped in order to establish their geographical proximity to the European Sites.

4.4 Elements of the Plan with Potential to Lead to LSE

The text of the Drought Plan was assessed to determine if any aspect could affect a European Site. Within a typical plan, much of the text often introduces the plan area, provides background on current conditions and challenges, and presents next steps for implementing the proposed plan. This type of text can often be screened out as it cannot conceivably have an impact on European Sites (Tyldesley and Chapman 2013)¹³.

The remaining sections of a proposed plan often contain the aims and objectives, and it is considered possible that these could have the potential to impact European Sites. The elements of the Drought Plan with the potential to lead to LSE are the drought actions themselves. Several environmental assessments are included in the Drought Plan including EARs (Section 4.5.2) and strategic assessments (SEA and WFD) to help assess the risk of contributing towards LSE.

Our Drought Plan 2027 proposes a number of drought actions which would make more water available for supply than is available under normal licensed conditions. Drought actions include demand-side actions (e.g. water use restrictions), and supply-side actions such as continued utilisation of existing licensed water sources within NW's resource base and drought permits/orders to allow access to additional water resources.

Demand-side drought actions are designed to reduce the demand for water and the actions available to NW are consistent across all resource zones (see Table 2.1). These actions seek to reduce demand from public and business consumption during drought periods and may reduce the need for abstraction from the natural environment. Demand-side actions do not introduce new abstraction, discharge or physical works pathways capable of affecting qualifying features and will not result in a LSE on European Sites.

¹³ Tyldesley, D., and Chapman, C., 2013. The Habitats Regulations Assessment Handbook: DTA Publications Limited.

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Therefore, no demand-side actions are taken forward for further assessment of LSE, and the remainder of this section will focus on supply-side drought actions only.

Supply side drought actions are actions introduced during the course of a drought to increase the amount of water available for supply. Our supply-side drought actions are listed in Table 4.1.

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Table 4.1 Supply-side actions within the Drought Plan 2027 (no Level 2 drought actions proposed)

Drought Level	Drought Action	WRZ	Detail
Level 0	Raw water and WTWs optimisation	All	Operations are reconfigured to prioritise water from non-stressed sources by optimising treatment works supply, adjusting distribution system valving, and deploying network support units to transfer water from alternative treatment works and relieve pressure on stressed sources.
	Coordination planning to minimise planned outage	All	Defer planned maintenance during drought or bring forward works early if they improve water resource availability.
	Operation of the Kielder Transfer Scheme	Kielder	Reduce abstraction from more environmentally sensitive sources and make greater use of Kielder Reservoir, in conjunction with the Tyne Tees Transfer, to maintain flows and support abstractions on the Rivers Tyne, Wear and Tees, utilising existing assets and abstraction licences within their current operational conditions.
Level 1	Tankering of water	Kielder	Road tankering from Whittle Dene WTW to service reservoirs to augment spring supplies at Allenheads and Carrshields WTW, if required.
Level 3a	Burnhope Reservoir compensation reduction	Kielder	Reduce compensation discharge from Burnhope Reservoir, while concurrently increasing releases from the Tyne Tees Tunnel at Frosterley, by the same volume, to maintain River Wear flows downstream.
	Derwent spate release suspension	Kielder	Temporarily cease environmental spate releases and revert to baseflow compensation discharges at Derwent Reservoir.
	Fontburn spate release suspension	Kielder	Temporarily cease environmental spate releases and revert to baseflow compensation discharges at Fontburn Reservoir.
Level 3b	Groundwater source optimisation	Berwick and Fowberry	Lower borehole pumps at Murton borehole, Thornton Mains borehole and Bleak Ridge borehole
	Bleak Ridge abstraction increase	Berwick and Fowberry	Increase daily and annual abstraction volumes at Bleak Ridge borehole.

4.5 Assessment of LSE on European Sites

4.5.1 Source Pathway Receptors

In determining the likelihood of significant effects on European Sites from any drought action, particular consideration has been given to the possible source-receptor pathways through which effects may be transmitted from activities associated with the drought actions to the qualifying features that contribute to the integrity of the European Sites (e.g. groundwater or surface water catchments, air, etc.). Table 4.2 identifies the impact pathways that drought actions could conceivably have on European Site qualifying features. Screening for LSEs has been determined on a proximity basis for many types of potential impacts, taking account of the known location of each drought action relative to each European Site and the hydrological connectivity between the action and the site.

All of the drought actions included in the Drought Plan 2027 are changes to current operations and require no construction. As such only operational effects are considered in this assessment.

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Table 4.2 Potential impact pathways of drought actions

Impact pathways	Examples of operations responsible for impacts
Habitat loss or fragmentation	Reduction in downstream flows resulting from changes in abstraction rates or compensation releases may reduce the wetted area of the channel, lead to localised drying of the river and/or increase the fragmentation of habitats, for example through decreasing the passability of in-channel structures to migratory fish. These effects are only likely to be significant where the operation of the drought action extends within the same ground or surface water catchment as the European Site. However, these effects are dependent on hydrological connectivity between the drought action and the European Site, whether the drought action is up- or downstream from the European Site, and the presence of water dependent habitats and species.
Disturbance	Operation of drought actions has the potential to result in increased human activity at water abstraction and reservoir sites. Mobile qualifying feature species may be affected through increased visual and noise disturbance. This effect is only likely to be significant where activities related to the drought action are undertaken within a European Site and in the presence of mobile qualifying feature species.
Changes in water quality (toxic/non-toxic)	Reduction in downstream flows resulting from changes in abstraction rates or compensation releases may reduce the dilution effects of riverine base flow. Changes to physicochemical quality of riverine flow may include changes in thermal regime, nutrient level and turbidity. These effects are only likely to be significant where the operation of the drought action extends within the same ground or surface water catchment as the European Site. However, these effects are dependent on hydrological connectivity between the drought action and the European Site, and whether the drought action is up- or downstream from the European Site.
Changes in water quantity	An increase in abstraction (or reduction in compensation flow) can modify the water volume and flow variation downstream. Changes to water quantity have the potential to alter aquatic habitat and species distribution, affect geomorphological process, in-channel hydraulics and result in changes to the ability of the watercourse to support qualifying features. These effects are only likely to be significant where the operation of the drought action extends within the same ground or surface water catchment as the European Site. However, these effects are dependent on hydrological connectivity between the drought action and the European Site, and whether the drought action is up- or downstream from the European Site.
Changes in hydrogeology	Changes in abstraction of groundwater sources has the potential to affect surface water flows in groundwater catchments that have close connectivity to fluvial catchments. An increase in groundwater abstraction may reduce the water quantity (see above) available to the fluvial environment. These effects are only likely to be significant where the operation of the drought action extends within the same ground or surface water catchment as the European Site. However, these effects are dependent on hydrological connectivity between the drought action and the European Site, and the scale of the change in groundwater abstraction.
Invasive non-native species (INNS)	A reduction in flow as a result of abstraction or change to compensation flow may provide an opportunity for INNS to establish in previously wetted watercourse margins or areas of slower flowing water. These effects are only likely to be significant where the operation of the drought action extends within the same ground or surface water catchment as the European Site.

4.5.2 Environmental Assessment of Drought Plan 2027

For our Drought Plan 2027, EARs have been produced for those supply-side actions requiring a drought order/permit and for the Kielder Transfer Scheme, which was carried out at the request of the Environment Agency. As a result, we have EARs for the operation of the Kielder Transfer Scheme, the reduction in compensation flow from Burnhope Reservoir¹⁴, cessation of environmental spate releases at Fontburn¹⁵ and Derwent¹⁶ reservoirs, and the increase in abstraction at Bleak Ridge¹⁷ (Table 4.1). Environmental assessment for all other drought actions is included in our SEA and WFD¹⁸.

Our EARs have been carried out according to guidance in the UKWIR (2021)¹⁹ and Environment Agency (2025)²⁰. This assessment includes the following stages:

- an assessment of the likely changes in flow/level regime due to implementing the drought action;
- identification of the environmental features that are sensitive to these changes and an assessment of the likely impacts on these features;
- identification of mitigation that may be required to prevent or reduce impacts on sensitive features; and,
- recommendations for baseline, in-drought and post-drought monitoring requirements with each drought action.

The initial stage of each EAR determines the zone and extent of hydrological influence of each drought action both on an individual basis and taking into account cumulative effects of simultaneous action deployment, where actions were located within the same catchment, and across catchments.

The EARs considered the cumulative effects of other discharges and abstractions using abstraction licence and discharge consent information supplied by the Environment Agency.

A sensitivity assessment was undertaken as part of the EARs, alongside GIS to identify sites and features which could be impacted by drought action implementation. This included European Sites (SAC, SPA and Ramsar). The assessment considered the susceptibility of each site/feature to hydrological impacts (flow/level changes) in order to evaluate the sensitivity of each site/feature, and whether it was taken forward for further consideration in the environmental assessment. Consideration of susceptibility in the case of SACs, SPAs and Ramsars identifies qualifying features and whether, or to what extent,

¹⁴ Northumbrian Water (2026) Environmental Assessment Report: Burnhope Reservoir Drought Action

¹⁵ Northumbrian Water (2026) Environmental Assessment Report: Fontburn Reservoir Drought Action

¹⁶ Northumbrian Water (2026) Environmental Assessment Report: Derwent Reservoir Drought Action

¹⁷ Northumbrian Water (2026) Environmental Assessment Report: Bleak Ridge Drought Action

¹⁸ Northumbrian Water (NW) (2026). NW Drought Plan 2027 Strategic Environmental Assessment (SEA) Environment Report. WN025_0000-JAC-ZZ-ZZ_000-DOC-TV-0010.

¹⁹ UK Water Industry Research (2021). Environmental Assessment Guidance for Water Resources Management Plan and Drought Plans. Report Ref. No2.1/WR/02/15 ISBN:978-1-84057-913-0

²⁰ Environment Agency. 2025. Environmental assessment for water company drought planning supplementary guidance. Available online: <https://www.gov.uk/government/publications/water-company-drought-plan-guideline-2025/water-company-drought-plan-guideline-2025#environmental-assessment-monitoring-and-mitigation>

they are water dependent, and likely to be impacted by a drought action's implementation. This consideration was cognisant of the appropriate baseline conditions against which an impact would be likely to arise (often severe drought conditions).

The outcomes of these assessments have informed the final version of this HRA Screening. Our EARs and SEA provide the technical evidence base for the environmental baseline and hydrological modelling available at the time of writing. A Regulation 63 test of LSE has then been independently applied as part of this assessment. While our EAR and SEA documents may be reviewed and updated periodically in line with the Environment Agency supplementary guidance, the conclusions of our HRA Screening are based on the current, agreed versions of those assessments.

4.6 Stage 1 Screening Results (Alone)

Excluded from the Stage 1 screening are supply-side Level 0 (BAU) drought actions as listed in Table 4.3. All supply-side actions operating within existing permits and / or licences (tankering of water and lowering of borehole pumps) have also been excluded from Stage 1 screening as they will have been previously subject to environmental assessment as part of the licensing process and our Drought Plan does not introduce changes that materially alter the existing baseline (Table 4.3).

Of the drought actions assessed via an EAR, Kielder, Derwent and Burnhope Reservoir drought actions were not found to have a hydrological Zol that interacted with any European Sites, therefore there was no potential pathway to effect (Table 4.3). These drought actions have therefore been screened out of further Stage 1 assessment. Only Fontburn Reservoir was found to have a Zol which interacts with any European Sites (Northumberland Marine SPA).

Fontburn Reservoir drought action comprises stopping environmental spate flow releases from Fontburn Reservoir when under drought conditions and reverting to the licensed baseline compensation flow, which remains unchanged. The drought action would only be implemented during severe or exceptional drought conditions when lower-level drought measures have been exhausted and there is a significant risk to maintaining secure public water supply. The drought action results in temporary reductions in flow variability (flow depth, velocity and wetted perimeter) during periods when spate releases would otherwise occur. The proposed cessation of environmental spate releases from Fontburn Reservoir will reduce the availability of water to the Rivers Font and Wansbeck, and the Wansbeck Estuary. These changes are short-term, localised and reversible, and baseline conditions would be restored following reinstatement of the normal flow regime.

Northumberland Marine SPA, which is designated to protect the feeding, resting and loafing areas used by breeding seabirds (Table 4.4), lies at the downstream end of the hydrological Zol of the Fontburn Reservoir drought action, over 40 km from the reservoir. Whilst a potential change in sedimentation arising from the drought action has been predicted, changes within the River Wansbeck are localised in nature, temporary and within the range of natural variability. Effects on sediment transport arising from the drought action are not anticipated to extend into the marine environment and are likely to be negligible compared with the influence of the Wansbeck Barrage. Furthermore, many of

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the qualifying features of the SPA (individual species and the seabird assemblage) are not dependent on the estuarine mudflats for feeding, resting or loafing²¹, although tern species and some of the other species of the qualifying assemblage (eg. eider) might use the mudflats and the estuary channel on occasion. Therefore, the absence of a credible impact pathway to qualifying features and their supporting habitats results in a conclusion of no effect on the Northumberland Marine SPA.

Table 4.3 Determination of the need for inclusion of each supply-side drought action for the Stage 1 HRA assessment.

Drought Level	Drought Action	Method of Environmental Assessment	Further HRA assessment required
Level 0	Raw water and WTWs optimisation	SEA	No – as Level 0 actions all operate within existing permits/consents previously subject to environmental assessment and there is no pathway to affect European Sites
	Coordination planning to minimise planned outage	SEA	No – as Level 0 actions all operate within existing permits/consents previously subject to environmental assessment and there is no pathway to affect European Sites
	Operation of the Kielder Transfer Scheme	EAR	No – as Level 0 actions all operate within existing permits/consents previously subject to environmental assessment and there is no pathway to affect European Sites
Level 1	Tankering of water	SEA	No – limited water quantities transferred between water treatment works with no pathway to affect European Sites
Level 3a	Burnhope Reservoir compensation reduction	EAR	No – no European Sites within the Zol of the drought action
	Derwent cessation of environmental spate flows	EAR	No – no European Sites within the Zol of the drought action
	Fontburn cessation of environmental spate flows	EAR	Yes – alone and in-combination as a new drought action with the potential to modify downstream water availability to downstream European Sites
Level 3b	Lowering borehole pumps at Murton borehole, Thornton Mains borehole and Bleak Ridge borehole	SEA	No – drought action operated within existing permits/consents previously subject to environmental assessment and there is no pathway to affect European Sites
	Bleak Ridge abstraction increase	EAR	No – no European Sites within the Zol of the drought action

²¹ Natural England (2023). Northumberland Marine SPA: Supplementary Advice.

<https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9020325&SiteName=northumberland+marine&SiteNameDisplay=Northumberland+Marine+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=7>

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Table 4.4 Screening of supply-side drought actions for impacts on European Sites.

Action	European Site (within Zol)	Qualifying features	Pathway to effect	Potential for effects on Qualifying Features	Potential LSE (alone)	Potential LSE (in-combination)
Fontburn Reservoir cessation of spate releases	Northumberland Marine SPA UK902325 (within Zol) ^{22, 23}	Sandwich tern Common tern Arctic tern Roseate tern Little tern Puffin Guillemot Seabird assemblage (breeding)	The hydrological Zol extends 40 km to the North Sea (via the River Font and River Wansbeck). Supporting habitat for qualifying features includes mudflat ²⁴ . The geomorphological assessment identified minor, short-term reductions in sediment transport, with potential for localised fine sediment deposition and reduced mobilisation of marginal deposits. However, these changes are spatially limited, temporary and remain within the range of natural variability, and therefore are not expected to result in measurable changes to mudflat extent or function. No effects on supporting habitats are predicted. Consequently, the qualifying bird species dependent on these habitats are also not expected to be affected.	No	No	No

²² Natural England (2015) Site Improvement Plan: Northumberland Coastal (SIP157). Available: <https://publications.naturalengland.org.uk/publication/5340976100933632> Accessed May 2026

²³ Natural England (2016). European Sites Conservation Objectives for Northumberland Marine SPA (UK9020325). Available: <https://publications.naturalengland.org.uk/publication/4891545554649088> Accessed May 2026

²⁴ Northumbrian Water (2026) Environmental Assessment Report: Fontburn Reservoir Drought Action

4.7 Potential In-combination effects of the Drought Plan

The EARs considered the potential hydrological effects arising from the simultaneous deployment of drought actions both within the same catchments, and across different catchments. Potential cumulative effects arising from interactions with other non-public water supply abstractions were also considered, as were potential indirect water quality effects associated with reduced dilution.

In accordance with the Habitats Regulations, this assessment has therefore considered the in-combination effects of the drought actions in our Drought Plan with other plans and projects that could have an impact on the European Sites identified within this HRA.

The SEA has a full list of other plans and projects assessed for in-combination effects in the Plan Area. Fontburn Reservoir is the only drought action with a potential pathway to effect but is assessed as no LSE on qualifying features of European Sites. The absence of an effect from the Fontburn Reservoir drought action and from the other drought actions indicates that there can be no in-combination effects on the simultaneous use of drought actions within the NW Drought Plan, nor with other plans and projects.

5 CONCLUSIONS

Stage 1 screening of our Drought Plan 2027 has indicated that LSEs can be ruled out for all of the demand-side drought actions as none of the actions directly or indirectly affect any European Site.

Nine supply-side drought actions are included in the Drought Plan, with five subject to individual assessment via EARs. Those supply-side actions excluded from individual assessment include two relating to existing water supply options (optimisation and coordination planning) and one that is separately licensed (lowering of pumps at Murton, Thornton and Bleakridge boreholes) and therefore are independently environmentally assessed by the regulators. A fourth drought action, tankering of water from Whittle Dene, involves very limited quantities of water transferred between water treatment works. At no stage does this activity introduce a credible hydrological or ecological pathway capable of affecting European Sites and as such was screened out of the Stage 1 assessment.

Following assessment via EARs, a further four supply-side drought actions were excluded from this Stage 1 assessment due to the absence of interaction between the hydrological Zol for each action and any European Sites. These were Burnhope Reservoir (compensation reduction), Derwent Reservoir (spate release reduction), operation of the Kielder Transfer Scheme and Bleak Ridge (abstraction increase). It was concluded for these actions that there is no credible pathway to impact and therefore no potential for LSE.

The only supply-side drought action identified as having a potential pathway to a European site is the Fontburn Reservoir (cessation of compensation spate flows) drought action. The Northumberland Marine SPA is at the downstream end of the hydrological Zol of this drought action, over 40 km from the reservoir. Localised and temporary changes in sedimentation within the River Wansbeck as a result of the drought action are predicted to be within the range of natural variability. Effects are not anticipated to extend into the marine environment and the absence of a credible impact pathway to the seabird qualifying features of the SPA allows a conclusion of no effect and no LSE on Northumberland Marine SPA.

The absence of effects on European Sites from all drought plan actions removes the potential for in-combination effects arising from the Drought Plan and the delivery of other strategic plans and projects within the Drought Plan area.

The Stage 1 HRA screening assessment has concluded, beyond reasonable scientific doubt, that the Drought Plan 2027 will not result in likely significant effects on any European Site, either alone or in-combination.