DROUGHT PLAN: ENVIRONMENTAL ASSESSMENT REPORT

River Ouse at Moor Monkton Drought Order

Report for: Yorkshire Water Services Ltd

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Glossary

Abstraction Licence

The authorisation granted by the Environment Agency (England) or Natural Resources Wales (for sites in Wales) to allow the removal of water from a source.

Biochemical Oxygen Demand (referred to as BOD)

The amount of oxygen that would be consumed if all the organic material in one litre of water were oxidised by bacteria and protozoa.

Compensation Releases

Water company licences that authorise abstractions from a reservoir may have conditions imposed, whereby specified amount of water has to be released into the watercourse, downstream of the reservoir in order to compensate the river for the abstraction.

Discharge Consent

A written consent issued by the Environment Agency permitting the discharge of specific pollutants into the aquatic environment. Discharge consents have conditions attached to them that limit the amount and concentration that can be discharged to ensure that there is no threat to the environment.

Drought Order

An authorisation granted by the Secretary of State (England) or Welsh Ministers (Wales) under drought conditions which imposes restrictions upon the use of water and/or allows for abstraction/impoundment outside the schedule of existing licences on a temporary basis.

Drought Permit

An authorisation granted by the Environment Agency (England) or Natural Resources Wales (for sites in Wales) under drought conditions which allows for abstraction/impoundment outside the schedule of existing licences on a temporary basis.

Environmental Drought

Environmental droughts arise from reduced water flows in rivers and streams. In the summer raised temperatures may further exacerbate drought conditions. Such conditions cause physiological stress to living organisms, the degree of stress increasing with drought severity and time.

Environmental Quality Ratio (EQR)

EQRs express the current condition of a biological quality element such as macroinvertebrates or fish. This is achieved by comparing the observed value of the appropriate metric (for example WHPTASPT) calculated from samples with the value of the same metric expected at WFD reference state.

Local Wildlife Sites (LWS)

Local Wildlife Sites are non-statutory designations. They are areas which are locally important for the conservation of wildlife. They are identified and selected for the significant habitats and species that they contain.

Lotic-Invertebrate Index Flow Evaluation (referred to as LIFE)

Is a method that allows the aquatic invertebrate community recorded at a site to be scored according to its dependence on current velocity. The LIFE value obtained can be compared to that predicted for the site under normal flow conditions and may show if the invertebrate community is experiencing flow related stress. Comparing observed and predicted scores for each gives an Environmental Quality Index (EQI) that is used as a measure of stress experienced at a site from low flow. A value of 1.0 indicates that the invertebrate community has the flow sensitivity predicted for the site. A value of less than 0.975 indicates the possibility of significant stress due to low flow.

Macroinvertebrate

Macroinvertebrates are small, but visible with the naked eye, animals without backbones (insects, worms, larvae etc.). Waterbodies have communities of aquatic macroinvertebrates. The species composition, species diversity and abundance in a given waterbody can provide valuable information on the relative health and water quality of a waterway.

Natural Environment and Rural Communities (NERC) Act Section 41

The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The NERC Act Section 41 list contains many of England's rarest and most threatened species. The lists are known as the Section 41 habitats of principal importance (also known as 'priority habitats') and the Section 41 species of principal importance (also known as 'priority species').

pH

A measure of the acidity of alkalinity of a liquid based on a logarithmic scale of concentration of hydrogen ions. < 7 is acidic, > 7 is alkaline.

Ramsar site

Internationally important wetland site.

Special Area of Conservation (SAC)

Special Area of Conservation – Designated under the European Habitats Directive (1991)

Special Protection Area (SPA)

Special Protection Area – Classified under the European Birds Directive (1979)

Site of Special Scientific Interest (SSSI)

A site given a statutory designation by Natural England or Natural Resources Wales because it is particularly important, on account of its nature conservation value.

Supply Drought

A supply drought occurs when water sources are at low levels due to a lack of rainfall. Water companies manage resources to ensure public supplies do not run out.

Walley Hawkes Paisley Trigg (referred to as WHPT)

Is a method that allows the aquatic invertebrate communities recorded at a site to be scored according to their tolerance to environmental pressures such as organic pollution. WHPT can be expressed as a score (the sum of values for each taxon in a sample), as an average score per taxon (ASPT) and as the number of scoring taxa (N-taxa). WFD status is based on ASPT and N-taxa. WHPT was introduced as the basis for the UK's river invertebrate status classification under the Water Framework Directive in the second River Basin Management Plans, published in 2015.

Abbreviations

AOD	–	Above Ordnance Datum
BOD	–	Biochemical Oxygen Demand
CIEEM	–	Chartered Institute of Ecology and Environmental Management
CSO		Combined Sewer Overflow
DPG	–	Environment Agency (2025) Drought Plan Guideline
EAR		Environmental Assessment Report
EcIA	–	Ecological Impact Assessment
EMP	–	Environmental Monitoring Plan
EQR	–	Ecological Quality Ratio
HoF		Hands off Flow
JNCC	–	Joint Nature Conservation Committee
LIFE	–	Lotic-invertebrate Index for Flow Evaluation
LNR	–	Local Nature Reserve
LWS		Local Wildlife Site
MCZ		Marine Conservation Zone
Ml	–	Megalitres (1Ml is equivalent to 1000 cubic metres or 1,000,000 litres)
NERC	–	Natural Environment and Rural Communities (refers to Section 41 of the Act)
NNR	–	National Nature Reserve
PSI		Proportion of Sediment-sensitive Invertebrates
PyWR		Python Water Resources: an open-source water resources simulation model
RBMP		River Basin Management Plan
RHS	–	River Habitat Survey
RICT		River Invertebrate Classification Tool
SAC	–	Special Area of Conservation
SPA	–	Special Protection Area
SRP		Soluble Reactive Phosphorous
SSSI	–	Site of Special Scientific Interest
TUB		Temporary Use Ban
WFD		Water Framework Directive: Council of the European Communities 2000 Directive 2000/60/EC (OJ No L 327 22.12.2000) (establishing a framework for Community action in the field of water policy). As transposed into UK law by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. Statutory Instrument 2003 No. 3242
WHPT	–	Walley Hawkes Paisley Trigg (see Glossary)
WwTW	–	Wastewater Treatment Works

Executive summary

This Environmental Assessment Report (EAR) provides an independent and robust assessment of the potential environmental effects of the implementation of Yorkshire Water Services Ltd's (YWSL) River Ouse drought option. The report has been prepared in support of YWSL's Drought Plan 2027.

The environmental assessment has been conducted in accordance with Government regulations and using the Environment Agency's 2025 Drought Plan Guideline (DPG)[1] and the Environment Agency's 'Environmental Assessment for Water Company Drought Plans' supplementary guidance.

In accordance with the DPG, the environmental assessment comprises the following components:

- an assessment of the likely changes in hydrology (flow/level regime) due to implementing the proposed drought options;
- identification of the key environmental receptors that are sensitive to these changes and an assessment of the likely impacts on these receptors;
- identification of mitigation that may be required to prevent or reduce impacts on sensitive receptors; and
- recommendations for baseline, in-drought and post-drought order monitoring requirements.

The environmental assessment focuses on the potential changes to water availability (levels and flows) and any consequent implications for geomorphology, water quality, ecology and other relevant environmental receptors, for example, landscape, navigation, recreation and heritage.

This EAR considers the impacts of River Ouse drought option in **Appendix A** and **Appendix B**, with a summary presented in **Sections** Error! Reference source not found. and Error! Reference source not found.. Cumulative impacts with other drought options listed in YWSL's Drought Plan 2027 are considered. The assessments undertaken confirm the receptors requiring consideration of monitoring and mitigation; which are summarised in **Section** Error! Reference source not found. and provided in full in the Drought Plan Environmental Monitoring Plan (EMP).

Throughout the environmental assessment process, YWSL have proactively engaged key stakeholders, including the Environment Agency and Natural England.

Key stakeholders will be further consulted throughout the drought permit/order application process

[1] Environment Agency (2025) Water Company Drought Plan Guideline, March 2025.

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Appendices

1. INTRODUCTION

1.1 PURPOSE OF DOCUMENT

Yorkshire Water Services Ltd (YWSL) is updating its Statutory Drought Plan, last published in April 2022 (the 'Drought Plan 2022'). The Draft 2027 Drought Plan will reflect the guidance provided in the Environment Agency's Drought Plan Guideline (DPG). The Environment Agency shared an updated draft DPG with water companies in July 2024 along with an updated draft of the supplementary guidance on the environmental assessment for water company drought planning. The guidance was subsequently consulted on and a final version, DPG2025[2], was provided in March 2025. The DPG requires that water companies must demonstrate in their drought plan that they have met their responsibility to monitor, assess and where possible mitigate for the environmental impact of all their supply side drought options, including drought permits and drought orders. Drought permits/orders are management actions that, if granted, can allow more flexibility to manage water resources and the effects of drought on public water supply and the environment. Ultimately, the environmental assessments should inform choices on when and how to use the different supply side drought options considered in a drought plan.

The objective of this Environmental Assessment Report (EAR) is to provide an independent and robust assessment of the potential environmental effects of the implementation of the River Ouse drought order. This EAR has been prepared in support of a drought order application in Summer 2025 to the Secretary of State, in accordance with the Water Resources Act 1991, as amended by the Environment Act 1995, the Water Act 2003 and subsequently the Water Act 2014.

The environmental assessment has been conducted in accordance with Government regulations and using the Environment Agency's DPG2025 and the 'Environmental Assessment for Water Company Drought Plans' supplementary guidance.

In accordance with the DPG, the environmental assessment comprises the following components:

- an assessment of the likely changes in hydrology (flow/level regime) due to implementing the proposed drought options.
- identification of the key environmental receptors that are sensitive to these changes and an assessment of the likely impacts on these receptors.
- identification of mitigation that may be required to prevent or reduce impacts on sensitive receptors.
- recommendations for baseline, in-drought and post-drought order monitoring requirements.

The methodology for this environmental assessment has been developed in consultation with the Environment Agency and is documented separately in 'YWSL's Drought Plan 2027 Environmental Assessment Methodology'[3]. A summary of the assessment approach is provided in **Section** Error! Reference source not found..

The assessments undertaken in this EAR confirm the receptors that require consideration of mitigation and the appropriate monitoring triggering mitigation. Appropriate mitigation actions identified are both available and practicable and reflect previous agreement with the Environment Agency (see **Section** Error! Reference source not found.). The methodologies and details for monitoring and mitigation requirements are documented in the standalone document 'YWSL's Draft Drought Plan 2027 Environmental Monitoring Plan (EMP)'. A summary of the monitoring and mitigation requirements are included in **Section** Error! Reference source not found. of this EAR.

This EAR should be read alongside the Methodology and EMP documents.

[2] Environment Agency (2025) Water company drought plan guideline. March 2025.

[3] Ricardo (2025). Yorkshire Water Drought Plan 2027 Environmental Assessment Methodology. Report for Yorkshire Water Services Ltd. February 2025.

1.2 BACKGROUND TO STUDY

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 subsequently the Water Act 2014), which set out the short operational steps a company will take before, during and after a drought. The Water Industry Act 1991 defines a Drought Plan as 'a plan for how the water undertaker will continue, during a period of drought, to discharge its duties to supply adequate quantities of wholesome water, with as little recourse as reasonably possible to drought orders or drought permits'.

Yorkshire Water Services Limited (YWSL) published their current statutory Drought Plan in April 2022 (the 'DP 2022') which encompasses the period 2022-2027. Drought Plans are updated every five years to remain relevant and align with updated guidance. As a result, YWSL are now in the process of revising their statutory Drought Plan for the period 2027-2032. The Drought Plan (England) Directions set out the timescales for publication of the Drought Plans. The updated directions for Draft Drought Plan 2027 are yet to be published but it is anticipated that water companies will submit these to the Secretary of State in October 2025.

This EAR has been prepared in support of YWSL's Draft Drought Plan 2027. Following a period of public consultation, a Final Drought Plan will be published in 2026. The Drought Plan provides a comprehensive statement of the actions YWSL will consider implementing during drought conditions to safeguard essential water supplies to customers and minimise environmental impact.

The Drought Plan provides a comprehensive statement of the actions YWSL will consider implementing during drought conditions to safeguard essential water supplies to customers and minimise environmental impact. Drought Plans encompass a number of drought options that will only be implemented if and when required. Each drought is different in terms of its severity, season, location and duration and each combination of these factors may require a bespoke reaction in terms of measures. In the context of drought planning, individual drought options are taken to constitute alternatives.

1.3 CONSULTATION

The purpose of these studies, as well as informing any future assessment process and providing a generic template, is to allow a more considered consultation process and to encompass consultees' concerns in a timely manner, avoiding the time constraints necessary for an actual drought permit/order application.

Throughout the preparation and submission of the Final Drought Plan 2022, YWSL proactively engaged with key stakeholders and regulators regarding the scope and outcomes of the environmental assessment, including with the Environment Agency and Natural England. Discussions were also held between YWSL and the Environment Agency on the scope of monitoring/mitigation in Autumn 2018 following a period of prolonged dry weather. These discussions identified certain issues around the appropriateness and practicality of YWSL's monitoring-led mitigation plan as set out in its Draft Drought Plan 2019 EMP. The outcome of these discussions and resulting agreements informed the basis of the approach for the update of the environmental assessments and EMP for the Drought Plan 2022.

Throughout 2024 and to date, YWSL have held a number of meetings with the Environment Agency during the early stages of the preparation of the Draft Drought Plan 2027, including several meetings focused on the proposed approach to the environmental assessments which are documented in the Drought Plan 2027 Environmental Assessment Methodology[4]. Proactive consultation will continue to be conducted for the Draft Drought Plan 2027 submission.

Further consultation with key stakeholders will be undertaken throughout the drought order application process.

1.4 CONTENT OF REPORT

The structure of this EAR is provided below with reference to other relevant documents.

[4] Ricardo (2025). Yorkshire Water Drought Plan 2027 Environmental Assessment Methodology. Report for Yorkshire Water Services Ltd. February 2025.

Section 1: **Introduction**

Section 2: **Drought management proposals** - including an overview of YWSL's water supply system, drought planning, the need for the applications, alternative options and proposed drought order details.

Section 3: **Approach to environmental assessment** - description of the approach to assessing environmental impacts and identification of mitigation and monitoring requirements, with reference to the details which are provided in YWSL's Drought Plan 2027 Environmental Assessment Methodology[5].

Section 4: **Drought options overview: River Ouse at Moor Monkton** - overview of drought order conditions.

Section 5: **Physical environment effects: River Ouse at Moor Monkton** - baseline assessment of physical environment and assessment of potential changes in the physical environment as a result of the drought option, and from cumulative operation with options described in other EARs. Detailed information is provided in **Appendix A** and summarised in Section 5.

Section 6: Receptors **assessment, monitoring and mitigation: River Ouse at Moor Monkton** - impact assessment on environmental receptors, identification of mitigation and monitoring requirements, including cumulative reaches. Detailed information is provided in **Appendix B** and in YWSL's Drought Plan EMP and summarised in Section 6. **Appendix C** summarises the full suite of monitoring and mitigation measures as detailed in the EMP.

Appendices

Appendix A Physical Environment

Appendix B Environmental Receptors

Appendix C Environmental Monitoring and Mitigation Measures

[5] Ricardo (2025). Yorkshire Water Drought Plan 2027 Environmental Assessment Methodology. Report for Yorkshire Water Services Ltd. February 2025.

2. DROUGHT MANAGEMENT PROPOSALS

See Appendix A which provides details of the drought management proposals.

3. APPROACH TO ENVIRONMENTAL ASSESSMENT

3.1 OVERVIEW

The environmental assessment of the drought options in this report has been prepared in accordance with Environment Agency's 2025 DPG; specifically, the Environment Agency's 'Environmental Assessment for Water Company Drought Plans - supplementary guidance'. The approach to environmental assessment and the bespoke assessment methodologies used have been developed in consultation with the Environment Agency and are documented separately in YWSL's Drought Plan 2027 Environmental Assessment Methodology[6] ('the Methodology').

Depending on the particular ongoing water resources drought, different management options may be available and the full range of drought permits/orders may not be used by YWSL at the same time. This EAR considers the impacts of implementation of the River Ouse at Moor Monkton drought order.

The Environment Agency's 2025 DPG requires the completion of environmental assessment and production of an environmental monitoring plan for each of the supply side actions included in a drought plan. The environmental assessments should also include any mitigation measures that could be implemented. The Methodology provides detailed approaches to the specific requirements of the DPG which are:

- Setting out the Zone of Influence (ZOI) and timing of the drought options (see **Section 3.4** of the Methodology) and the likely changes to the hydrology (or hydrogeology) due to a proposed action (**Section 3.5** of the Methodology).
- Identifying the key receptors of the environment which are likely to be affected by these changes and assess their sensitivity (see **Section 3.6** of the Methodology).
- Assess the likely impact on these receptors, allocate a level of confidence in your assessment and set out the actions you will take to reduce uncertainty (see **Section 3.7** of the Methodology).
- Mitigating against the potential impacts and where datasets are considered insufficient to undertake an environmental assessment, it is the responsibility of the water company to implement environmental monitoring to generate the information required (see **Section 3.8** of the Methodology).

The overall approach taken in completing the environmental assessment to demonstrate an understanding of the impact on the environment of implementing the proposed drought options is illustrated in **Figure 3-1.**

Results of the assessment have also informed the Habitats Regulations Assessment (HRA) and Strategic Environmental Assessment (SEA) which support YWSL's Draft Drought Plan 2027 and are documented separately. Outcomes of any subsequent assessment, i.e. as documented in this report, will be continually reviewed in terms of implications for SEA and HRA.

The Environment Agency's 2025 DPG also requires water companies to 'consider the combined environmental effects of your supply side drought options, and where relevant, the combination effects of your actions with those of neighbouring water companies and other abstractors'. The SEA and HRA for a drought plan as a whole should inform these combined assessments.

3.2 LIMITATIONS OF ASSESSMENT

Details on the quality of the data collected and used in the assessment, limitations and any assumptions made, are included in the relevant technical appendices (**Appendix A** and **B**).

For receptors where the assessment remains uncertain because of data limitation, the requirement for additional targeted monitoring has been considered and is documented in YWSL's Drought Plan EMP.

[6] Ricardo (2025). Yorkshire Water Drought Plan 2027 Environmental Assessment Methodology. Report for Yorkshire Water Services Ltd. February 2025.

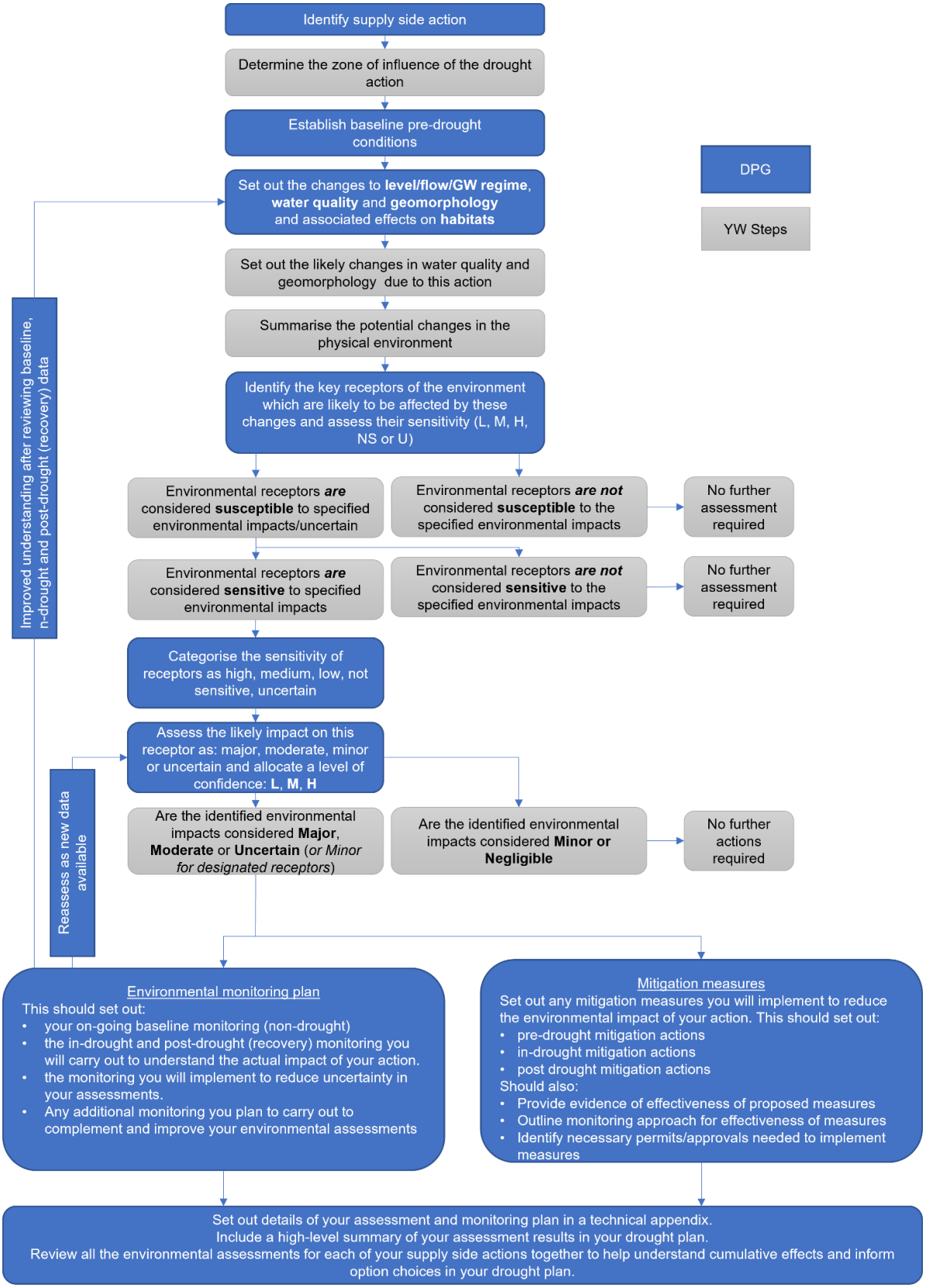

Figure 3-1 Approach to undertaking environmental assessments as identified in the 2025 DPG. Steps in blue are 2025 DPG tasks. Tasks indicated in grey are YWSL tasks

4. DROUGHT OPTION OVERVIEW

4.1 DROUGHT ORDER DESCRIPTION

This EAR assesses the potential impacts on the environmental receptors of the River Ouse catchment during the period of implementation the River Ouse at Moor Monkton drought order as summarised in **Table 4-1**.

Further details on the existing arrangements at the site and the proposed drought option are found in **Appendix A**, Section A2. The study area is illustrated in **Figure 4-1**.

Table 4-1 River Ouse at Moor Monkton drought order description

Abstraction Water Source	NGR	Normal Abstraction Ml/d[7]	Proposed Drought Option Abstraction Ml/d	Benefit Ml/d
Ouse	SE525576 (Intakes 1 and 2) SE527576 (Intake 3)	300Ml/d when flows in Ouse (measured at Skelton downstream) are more than 1,000Ml/d 150Ml/d when flows in Ouse are between 650 and 1,000Ml/d 72Ml/d when flows in the Ouse are between 400 and 650Ml/d 10Ml/d when flows in the Ouse are less than 400Ml/d	300Ml/d when flows in Ouse (measured at Skelton downstream) are more than 1,000Ml/d (No change) 210Ml/d when flows in Ouse are between 650 and 1,000Ml/d 132Ml/d when flows in the Ouse are between 400 and 650Ml/d 70Ml/d when flows in the Ouse are less than 400Ml/d	Up to 60

[7] 1Ml/d is 1 million litres per day

Figure 4-1 Overview of the River Ouse at Moor Monkton Drought Order

Insert Figure 4.1

4.2 POTENTIALLY IMPACTED REACHES

The zone of influence associated for a drought option is defined through hydrological effects. Within the overall zone of influence, reaches are then defined on a hydrological basis. Section 3.4 of YWSL's Drought Plan 2027 Environmental Assessment Methodology[8] sets out this approach in detail. The reach for the River Ouse drought order has been defined previously during the environmental assessment of YWSL past drought plans. **Table 4.2** provides details of this reach, which is illustrated in **Figure 4-1**, and in a schematic below in **Figure 4-2**.

Table 4-2 River Ouse drought order reach details

Reach name	Watercourse name	Reach start	Reach end	Down-stream reach	Drought option River Ouse at Moor Monkton
Ouse 1	River Ouse	Moor Monkton	Naburn Lock	N/A	✓

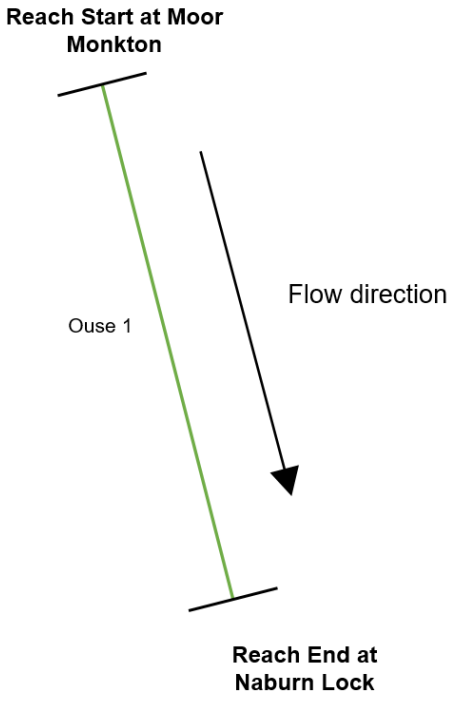

Figure 4-2 River Ouse drought order reach schematic

[8] Ricardo (2025). Yorkshire Water Drought Plan 2027 Environmental Assessment Methodology. Report for Yorkshire Water Services Ltd. February 2025.

4.3 WFD WATERBODIES IN STUDY AREA

The study area and focus of the environmental assessment covers the WFD waterbodies listed in **Table 4-3**. The WFD waterbodies are also illustrated on **Figure 4-1**.

Table 4-3 WFD waterbodies considered in the assessment

Drought Option	Reach	WFD Waterbody
River Ouse at Moor Monkton	Ouse 1	River Ouse from River Nidd to Stillingfleet Beck (GB104027069593)

5. PHYSICAL ENVIRONMENT EFFECTS: RIVER OUSE AT MOOR MONKTON

Potential impacts on the physical environment due to the River Ouse at Moor Monkton drought order are summarised below in **Table 5-1**. Full details are provided in **Appendix A**.

Table 5-1 Summary of potential changes in the physical environment as a result of the River Ouse at Moor Monkton drought option

Reach	River flow impact	Flow depleted reaches and risks*	Risk to river habitats	Risk to water quality
Ouse 1	Moderate impacts (summer) Negligible impacts (winter)	None	Minor	Moderate

* the length of flow depleted reach is indicated where appropriate. 'Flow depleted reach' refers to the length between the abstraction and discharge point of non-consumptive licences (e.g. aquaculture, hydro-power).

6. RECEPTORS ASSESSMENT, MONITORING AND MITIGATION: RIVER OUSE

6.1 SUMMARY OF IMPACTS

Potentially sensitive receptors (environmental receptors) have been identified within each impacted reach considering the level of impact on the physical environment identified in **Section 5** and **Appendix A**. This sensitivity assessment has been used to identify receptors which have been considered for detailed assessment. Both these stages are documented in full in **Appendix B**.

Potential impacts on environmental receptors due to the River Ouse at Moor Monkton drought order are summarised below in Error! Reference source not found..

Table 6-1 Summary of potential impacts to environmental receptors as a result of the River Ouse at Moor Monkton drought option

Reach	Ouse 1	Ouse 1 Cumulative
	Significance of Impact[9]	Significance of Impact[10]
Designated Sites		
Naburn Marsh SSSI	Negligible	Negligible
Clifton Ings and Rawcliffe Meadows SSSI	Negligible	Negligible
Church Ings SSSI / LWS	Negligible	Negligible
Acaster South Ings SSSI	Negligible	Negligible
Fulford Ings SSSI	Negligible	Negligible
NERC Habitats and Local Wildlife Sites		
River Ouse LWS	Minor	Minor
Bishopthorpe Ings LWS	Negligible	Negligible
Gollie Ponds LWS	Minor	Minor
Middlethorpe Crematorium LWS (4-3)	Negligible	Negligible
Naburn Hall Meadow / Ings LWS	Negligible	Negligible
Clifton Ings LWS	Negligible	Negligible
Rawcliffe Ings Dyke LWS	Negligible	Negligible
NERC and Notable Species Receptors		
Tansy Beetle *(Chrysolina graminis)*	Negligible	Negligible
Diving Beetle *(Oreodytes davisii)*	Minor	Minor
Caddisfly *(Potamophylax rotundipennis)*	Minor	Minor
Mayfly *(Nigrobaetis niger)*	Minor	Minor
Caddisfly *(Rhyacophila septentrionis)*	Minor	Minor
Alderfly *(Sialis nigripes)*	Minor	Minor
Water vole (*Arvicola amphibious)*	Negligible	Negligible
Otter (*Lutra lutra)*	Negligible	Negligible
Atlantic salmon (*Salmo salar)*	Negligible	Negligible
Brown trout (*Salmo trutta)*	Negligible	Negligible
Brook lamprey (*Lampetra planeri)*	Minor	Minor
European eel (*Anguilla anguilla)*	Negligible	Negligible
Sea lamprey (*Petromyzon marinus*)	Moderate	Moderate
Barbel (*Barbus barbus)*	Negligible	Negligible
River lamprey (*Lampetra fluviatilis)*	Moderate	Moderate
Bullhead (*Cottus gobio)*	Negligible	Negligible
Grayling (*Thymallus thymallus)*	Negligible	Negligible
WFD Status Receptors - GB104027069593 Ouse from River Nidd to Stillingfleet Beck		
Fish	Minor	Minor
Invertebrates	Minor	Minor

[9] Risk of Deterioration for WFD receptors
[10] Risk of Deterioration for WFD receptors

6.2 MONITORING AND MITIGATION

The Environment Agency's 2025 DPG requires YWSL to set out a monitoring plan following assessment of the sensitivity and impacts associated with drought options, as indicated in Error! Reference source not found.. In particular the DPG indicates that any drought plan should be accompanied by an EMP that sets out:

- on-going baseline monitoring to inform sensitivity and impact assessments.
- the monitoring that will be implemented to reduce uncertainty identified in the assessment of either the sensitivity of the environment or impacts on receptors considered in the detailed assessment.
- the in-drought and post-drought (recovery) monitoring that will be carried out to understand the actual impact of drought options.

As indicated in Error! Reference source not found.; the DPG also requires YWSL to set out a mitigation plan following the assessments of potential impacts associated with each drought management action. In particular the DPG indicates that any drought plan should be accompanied by an EMP that sets out:

- mitigation measures to reduce adverse impacts on the environment of supply side drought options; and
- compensation measures for adverse effects that remain after mitigation measures have been applied.

The DPG requires that this information is set out as a separate document alongside, and linked to, each environmental assessment.

The assessments undertaken in this EAR confirm the receptors requiring consideration of mitigation and appropriate monitoring triggering mitigation. YWSL's Drought Plan EMP provides a comprehensive description of the schedule of monitoring and trigger-based mitigation agreed as relevant and practicable based on the nature and timing of permit/order implementation. The mitigation and monitoring proposals will act as a safeguard that responds and is responsive to both predicted and unpredicted drought impacts.

The monitoring and mitigation recommendations have been developed through agreement with the Environment Agency, in particular during 2018, 2020, 2022 and most recently in May 2025 (see Section 1.3). Consultation between YWSL and the Environment Agency will be ongoing, and the EMP will be updated as required to reflect future agreements.

The EMP also documents the baseline monitoring recommendations which have been identified as required following the completion of the environmental assessment. Baseline monitoring will ensure that sufficient baseline data is available to inform the sensitivity and impact assessment and to reduce any uncertainty in the assessment.

A summary of the monitoring and mitigation recommendations for the River Ouse at Moor Monkton drought order is provided in **Table 6-2**Table 6-3. **Appendix C** provides a description of each monitoring and mitigation measure with reference to the codes used in **Table 6-2**Table 6-3.

Table 6-2 Summary of recommended monitoring for the River Ouse at Moor Monkton drought option

Code	Description	Measure Included?
Baseline Monitoring		
BMON_H	Routine flow/levels	✓
BMON_WQ	Routine WQ	✓
BMON_E1	Macroinvertebrate	✓
BMON_E2	Fisheries (including Lamprey)	✓
BMON_E3	Habitat Walkover mapping	✓
On-set of Environmental drought		
ODMON_WS	River condition walkover survey	Site 1: 500m located within SE56535532 to SE57035525
In-Drought (during drought option implementation)		
IDMON_WSE	Surveillance walkover (habitat quality and ecological stress)	Site 1: 500m located within SE56535532 to SE57035525
IDMON_WSWQ1	Surveillance walkover (water quality and ecological stress)	x
IDMON_WSWQ2	CSO monitoring	Rawcliffe York STW [YWS01989] at SE686234 Riverside Gardens/CSO [27/24/0465] at SE5569654982 Jubilee Terrace CSO [C4958] at SE58995254 Grosvenor Terrace CSO [27/24/0452] at SE5997252840 Skeldergate Bridge CSO [27/24/0426] at SE6032851287 Terry Avenue CSO [27/24/0427] at SE6048351022 Trafalgar Street/CSO [1282] at SE6022750108 Fishergate/ CSO [27/24/0421] at SE60745451000 The Esplanade York CSO [27/24/0205] at SE59195240 Lendal Hill CSO [27/24/0417] at SE6001551986 Marygate Lane CSO [27/24/0449] at SE5973352285 Queens Staith CSO [27/24/0459] at SE6019251592 Marygate Landing CSO (No2) [C4957] at SE5974352059 Knavesmire Road/CSO [27/24/0437] at SE5926050438
Post-Drought (Drought Options Removed)		
PDMON_E1	Macroinvertebrate	✓
PDMON_E2	Fisheries	✓

Table 6-3 Summary of recommended mitigation measures for the River Ouse at Moor Monkton drought option

Code	Description	Measure Included?
In–Drought (During Drought Option Implementation)		
IDMIT_H1	Third-party abstraction	x
IDMIT_H2	Temporary cessation for SSSI's	x
IDMIT_WQ1	Improving the effluent quality	x
IDMIT_WQ2	Short–term relaxation of drought permit/order flow reduction	✓
IDMIT_E1	Gradual or temporary adjustments to abstraction or compensation flows	✓
IDMIT_E2	Aeration of watercourse	✓
IDMIT_E3	Refuges	x
IDMIT_E4	In-stream structures	x
IDMIT_E5	Inspection and clearing of screens	✓
IDMIT_E6	Fish/crayfish rescue and relocate	x
Post–Drought (Drought Options Removed)		
PDMIT_E1	Habitat enhancement	✓
PDMIT_E2	Freshets	x
PDMIT_E3	Barrier modification	✓
PDMIT_E4	Coarse fish restocking	x

APPENDICES

Appendix A Physical Environment

Appendix B Environmental Receptors

Appendix C Environmental Monitoring and Mitigation Measures

APPENDIX A PHYSICAL ENVIRONMENT

Insert Appendix A – Physical Environment

APPENDIX B ENVIRONMENTAL RECEPTORS

Insert Appendix B – Environmental Receptors

APPENDIX C ENVIRONMENTAL MONITORING AND MITIGATION MEASURES

Table C1-1 Monitoring and mitigation measures included in the YWSL Draft Drought Plan EMP

Baseline Monitoring - to ensure an adequate baseline dataset exists to describe non-drought conditions for those receptors likely to be impacted by drought permit/order implementation and to fill any data gaps and reduce uncertainty identified during the environmental assessment	
BMON_H	EA/YWSL to continue monitor river flows and levels/reservoir levels and spill at key monitoring sites
BMON_WQ	EA to continue routine water quality monitoring at existing network of sites on current monthly programme, which includes those on un-impacted reaches suitable as control sites.
BMON_E1	Macroinvertebrate monitoring at a number of locations, including rivers potentially affected by drought measures; to continue in low flow/drought years pending agreement with the EA regarding aquatic species welfare.
BMON_E2	Fish (including Lamprey) monitoring at a number of locations, including rivers potentially affected by drought measures; to continue in low flow/drought years pending agreement with the EA regarding aquatic species welfare.
BMON_E3	Walkover surveys of to map habitat distribution and quality, identifying drought sensitive habitats such as areas of riffle, pools and artificial features as well as features relevant to key ecological receptors like lamprey and salmonids. Results to be captured by annotated walkover maps.
On-set of Environmental drought – monitoring leading to selection and implementation of appropriate mitigation measures	
ODMON_WS	Walkover surveys of habitat quality and identification of drought sensitive habitats such as areas of riffle, pools and artificial features such as weirs and sluices that may be isolated or impassable during low flows. Results to be captured by annotated walkover maps, photography and completion of a 'River Conditions Observation Form - Low Flows' form.
In-Drought (during drought option implementation) – monitoring leading to selection and implementation of appropriate mitigation measures	
IDMON_WSE	Surveillance walkover surveys of habitat quality and ecological stress, recording signs of environmental problems (reaches to match those in ODMON_WS)
IDMON_WSWQ1	Targeted surveillance walkover surveys of water quality and ecological stress local to 'significant' water quality pressures', to include water quality spot sampling in priority areas such as pools and weirs where aquatic species may become isolated during low flows.
IDMON_WSWQ2	Discharge validation at key outfalls and downstream, where triggered by review of monitoring data. On site walkover will validate whether key CSOs are spilling, or have been recently, observe for signs of fish stress and take spot water quality sampling at additional locations including at locations of potential fish stress.
In-Drought (During Drought Option Implementation) – Mitigation	
IDMIT_H1	Negotiation with the licence holder of a temporary reduction of third party abstractions presenting 'significant' impacts to sensitive features, including financial compensation by Yorkshire Water.
IDMIT_H2	At identified SSSIs, mitigation would comprise the temporary cessation of impacting drought options by Yorkshire Water and SSSI assent from Natural England.
IDMIT_WQ1	Improving the effluent quality from Yorkshire Water WwTWs presenting 'significant' impacts to sensitive features, thereby reducing the water quality pressure (ammonia and oxygen balance) on the impacted features.

IDMIT_WQ2	Short–term relaxation of drought permit/order flow reduction to dilute/disperse a build up of water quality pressures identified during walkover surveys IDMON_WSWQ1.
IDMIT_E1	Gradual or temporary adjustments to abstraction or compensation flows to prevent stranding, displacement, or stress in sensitive aquatic species (e.g. fish, macroinvertebrates, white–clawed crayfish).
IDMIT_E2	Aeration of watercourse where significant mortality or change in species abundances are likely to be attributed to water quality deterioration.
IDMIT_E3	Creation of alternative refuges in deeper water where walkover surveys identify the loss of important deep-water habitat or high densities of fauna in refuges (fish, white-clawed crayfish, water vole)
IDMIT_E5	Regular inspection and clearing of screens to ensure they retain their correct working function (fish, white–clawed crayfish)
IDMIT_E6	Rescue of individuals or groups, in consultation with the EA or NE as appropriate, and relocation to suitable habitat where they are seen to be in distress or where artificially high densities are likely to result in significant impacts (fish, white–clawed crayfish). Measures will be taken to ensure biosecurity at all times. It should be noted that movement of crayfish requires licensing which can take up to 8 weeks. Movement of crayfish would only take place after consultation agreeing that this was the best course of action.
Post-Drought (Drought Options Removed) – Monitoring	
PDMON_E1	Macroinvertebrate monitoring at a number of locations, including rivers following implementation of drought measures; pending agreement with the EA regarding aquatic species welfare.
PDMON_E2	Fish monitoring at a number of locations, including rivers following implementation of drought measures; pending agreement with the EA regarding aquatic species welfare.
Post-Drought (Drought Options Removed) – Mitigation	
PDMIT_E1	Enhancement of habitat beyond the impacted reach (macroinvertebrates, fish, fine-lined pea mussel, white-clawed crayfish, water vole)
PDMIT_E2	Provision of artificial freshets to ensure fish are capable of migrating where survey identifies insufficient water depth or volume across structures to facilitate migration (fish)
PDMIT_E3	Modification to barriers and/or flows to improve passage where walkover survey identifies insufficient water depth or volume at obstacles (fish)
PDMIT_E4	Restocking of coarse fish from the catchment where monitoring indicates loss of fish abundance or recruitment (fish)

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