Dŵr Cymru
Welsh Water

Phosphate position statement

NRW Special Area of Conservation (SAC) Phosphates

Summary

In January 2021, Natural Resources Wales (NRW) published evidence showing many riverine Special Areas of Conservation (SAC) waterbodies were failing phosphorous standards.

This statement details Welsh Water's latest position on this complex topic:

- Every area is different, and in some locations, there will be very little phosphate contribution from Wastewater Treatment Works (WwTW).
  - On the River Wye for example, 66% of the total Phosphate load comes from agricultural losses, with 25% from WwTW.
- In agreement with NRW, we have developed a phased programme over our next two investment periods – AMP7 (2020-2025) and AMP8 (2025-2030) - which sets out specific WwTW where we will carry out phosphate removal based on river quality data.
- With NRW we are carrying out modelling on the failing SAC rivers, expected to be completed by mid-2022.
  - This will determine the source apportionment and confirm our proportion of the load discharged, as well as confirming whether we're focusing on the right WwTW.
- It's important all parties develop a range of sustainable options rather than concentrating purely on end of pipe solutions which are expensive to implement and operate, and also unsustainable with regard to their carbon impact.
- Investing in catchment nature-based solutions (NBS) and managing nutrient/manure addition to farmland more carefully will have a more beneficial and sustainable impact for everyone.
- Our assessment of planning proposals continues to consider their impact on the hydraulic and biological capacity of the receiving WwTW. We also advise whether the WwTW currently has a phosphate permit or whether one will be in place by the end of the current investment period.

Introduction

NRW published evidence in January 2021 which showed that over 60% of riverine Special Areas of Conservation (SAC) waterbodies in Wales were failing against revised phosphorous standards.

The publication of the evidence package and the accompanying Interim Planning Guidance (subsequently updated to Planning Advice) resulted in a lot of unknowns for Welsh Water as well as the Local Planning Authorities (LPAs) and wider development industry, but since that time we have and continue to be fully engaged in the matter of phosphate impacts on riverine SACs in Wales. We are in regular liaison with the relevant stakeholders, including developer customers, NRW, Welsh Government and LPAs through national strategic working groups and on an individual basis, with the focus on identifying solutions to support economic development, and working to establish solutions to mitigate the impact of phosphates on the riverine SACs.

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Background

Agricultural losses from fertilisers & feed/manures along with sewage effluent, mining and quarrying and urban/transport (storm water run-off) are the largest source contributors of phosphorous to waterbodies.

To give an indication of the breakdown from the completed source apportionment modelling undertaken on the River Wye (Upper Wye sub-catchment), 66% of the total Phosphate load comes from agricultural losses, with 25% from Wastewater Treatment Works (WwTW) and 9% from other sources. It is important to note however that the breakdown is different in every river sub-catchment, and in some locations, there will be very little contribution from WwTWs.

Whilst we monitor phosphate outputs from our WwTWs that have phosphate permits in place, it is not our role to monitor the phosphate levels of watercourses – this is something that NRW (as the environmental regulator in Wales) is responsible for.

Our Investment Programme

We must ensure we meet new environmental obligations included within our capital investment programme (AMP7, 2020-2025), as identified through NRW's Water Quality National Environment Programme (NEP).

It is important to note that we understand the importance of balancing the need for investment with maintaining the affordability of our bills. Accordingly, it is our view that this investment will help to deliver the best benefits to the environment and to our customers whilst meeting our environmental regulator's expectations.

The NEP outlines the improvements we need to make to comply with environmental legislation and identifies WwTW where we need to invest in phosphate removal, either through the tightening of existing phosphate permits or the introduction of new phosphate permits. As such, we have developed a phased programme in agreement with NRW over AMP7 (2020-2025) and AMP8 (2025-2030), setting out those WwTW where phosphate removal will take place.

Our capital investment programme is based on the river water quality data we were provided with by our regulators, and their assessment of compliance against Water Framework Directive (WFD) and other environmental standards. The publication of the evidence package by NRW has changed these assessments and as such, we may need to adjust our programme within the envelope of the funding available.

Current work

Whilst not a requirement on us, in order to assist in moving this matter forward a joint NRW / Welsh Water programme of modelling has been developed looking at the failing SAC rivers. This work is well underway, and the method of modelling being utilised is the industry standard SAGIS (Source Apportionment Geographic Information System) tool. The purpose of the modelling work is to determine the source apportionment by modelling nutrient loads and concentrations from multiple sources, which will establish and confirm our proportion of the load discharged.

This modelling work is expected to be completed by mid-2022, and once complete we will review the findings along with NRW in order to determine whether our investment in phosphate removal at WwTW in the current and next AMP is targeted at the right locations.

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Multi-stakeholder approach

Whilst we're endeavouring to play our part in this matter, it is important that all parties develop a range of sustainable options rather than concentrating purely on end of pipe solutions which are expensive to implement and operate, and also unsustainable with regard to their carbon impact. In some catchments end of pipe solutions can play their part, but once the ongoing source apportionment work is completed, we will need to work with developers, LPAs, land managers as well as NRW to deliver a range of options including nature-based solutions.

It is our view that investing in catchment nature-based solutions (NBS) such as planting buffer strips alongside rivers and creating wetlands, as well as managing nutrient/manure addition to farmland more carefully to better manage runoff into rivers will have a more beneficial and sustainable impact for everyone.

To that end, we are wholly supportive and more than willing to play our part in the proposed Nutrient Management Boards (NMBs) that are being set up and will be chaired by the LPAs. The primary objective of each NMB is to coordinate existing and identify and deliver new actions to secure overall improvements in water quality through the reduction of all source contributors, in doing so achieving the phosphorus conservation objective targets for the SACs.

Given our role as a statutory sewerage undertaker, it is important to set out some key factors regarding taking NBS forward:

- Until the source apportionment modelling work is completed, including testing the scenarios and agreeing with NRW whether our AMP8 capital investment needs to be moved to different locations,
  we are unable to agree to an NBS approach at any WwTW;
- The key mechanism for taking forward any NBS proposal is via the NMB. The LPAs are more suited to deal with developers directly and the Councils themselves are best placed to install any NBS and administer the nutrient credit platform to enable development to come forward.
- As a statutory sewerage undertaker, we are unable to provide any form of advice on NBS design or build as this is outside of our remit, though we can outline the approach to NBS in Herefordshire where the LPA and the Wye and Usk Foundation (WUF) (an environmental charity) have led on the design and administration of a NBS approach at some of our WwTW.

We are also part of the Better River Quality in Wales Taskforce which includes Hafren Dyfrdwy, WG, NRW and Ofwat. The task force has been established to help improve river water, investigating and evaluating the current approach to the management and regulation of storm overflows, which will then lead to future action. Together the group is developing a roadmap and action plan of commitments to:

- reduce the adverse impact of any overflow discharges on the environment, taking regulatory action where required to deliver improvements
- gather greater evidence of the impact on our rivers through improved monitoring of both the discharge and the receiving water
- work with the public and stakeholders to improve the understanding and role of storm overflows in Wales.

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Planning and new development

As a statutory consultee in the Town and Country Planning process in Wales, Welsh Water is consulted and provide responses on all relevant planning applications regarding new development.

We are in regular dialogue with both the Development Management and Planning Policy sections of each LPA impacted by the Planning Advice to offer support and advice from our perspective as a sewerage undertaker, including advising on the status of our WwTW with phosphate permits, and the provision of GIS spatial data to assist in their considerations.

Our assessment of planning proposals considers whether there is sufficient capacity with both our water and wastewater systems to accommodate the new development. With regard to WwTW it considers the impact the foul flows will have on the hydraulic and biological capacity of our Works to enable us to continue to meet our consents to discharge treated effluent into watercourses.

Accordingly, our interaction with the planning application consultation process since the publication of the Interim Planning Guidance (and subsequent update to Planning Advice) has continued to consider the impact of the proposal on the hydraulic and biological capacity of the receiving WwTW. We also advise as to the whether the WwTW currently has a phosphate permit or whether one will be in place by the end of the current AMP.

NRW's current position in relation to planning application response as outlined in their Planning Advice advises that where the phosphate permit on a WwTW has an Appropriate Assessment (AA) that was undertaken by NRW prior to the publication of the evidence package, as this Assessment does not take account of the new information or the tighter phosphorus targets for the respective SACs then the impact on the SAC cannot be ruled out. Consequentially, additional mitigation is required. This does not alter our approach to the planning process and is a matter for the developer to consider in liaison with the LPA and NRW.

We continue to play our part in meaningful engagement on this matter, through our source apportionment modelling work and through our liaison with stakeholders including NRW, LPAs and the Welsh Government, as well as our membership of national strategic working groups.