

## WYE WATER QUALITY

### *Purpose*

To update members on current situation with water quality in the River Wye, pending a presentation at the next meeting.

### *Recommendations*

That the JAC:

- A. Notes the current situation and activities of partner organisations in relation water quality issues in the River Wye and its tributaries.
- B. Welcomes the offer of the Environment Agency and Natural Resources Wales for a presentation at the next meeting on 5<sup>th</sup> July.

### *Key Issues*

- The water quality of the Wye, particularly in relation to Phosphate levels, remains a critical issue in the Wye Catchment.
- The concentration of pollutants, particularly phosphates, in the Wye catchment, exacerbated by warm weather and any reduction in water quantity, can lead to algae blooms on the Wye.
- In 2019 Natural England advised that plans or projects that result in potentially damaging nutrient loading to the Wye, among other catchments in England, would require an Appropriate Assessment under the Habitats Directive.
- Natural Resources Wales completed a review in December 2020 which confirmed that more than 60% of the Welsh Wye is now failing limits for phosphate.
- The Wye Nutrient Management Board, hosted by Herefordshire Council, is the lead body coordinating collaborative effort on the issue.
- The Environment Agency and Natural Resources Wales have agreed to give a presentation on water quality issues at the next JAC meeting on 5th July.

### *Reasons*

In July 2020 the JAC received an update on the water quality and quantity issues following the extensive algal bloom on the Wye in both Spring 2020 and Summer 2019.

The Wye Nutrient Management Plan (NMP) was published in 2014 to reduce phosphate levels in the River Wye SAC to below the set limit by 2027, in line with the final date for achieving good ecological status set by the Water Framework Directive. The Wye NMP

identified that inputs from sewage treatment works typically represented the most significant source of phosphate although inputs from livestock were also significant. The Wye Nutrient Management Board was established to oversee the NMP comprising; Herefordshire Council, Powys Council, Natural England, Natural Resources Wales, the Environment Agency, Dwr Cymru Welsh Water, Wye and Usk Foundation, National Farmers' Union, Farm Herefordshire and the County Land and Business Association.

The River Lugg is a tributary of the River Wye Special Area of Conservation (SAC) and is itself an SAC for its lower reaches. The mouth of the River Lugg forms the northern extent of the Wye Valley AONB on the Wye. The River Lugg is currently exceeding its limits for phosphates, as a result of water pollution from both 'point' source (in particular sewage outlets) and 'diffuse' source (in particular agricultural run-off).

The Wye and Lugg Monitoring Dashboard contains a range of data and analysis of the situation, primarily to provide an overview for members of the Nutrient Management Board: <https://environment.maps.arcgis.com/apps/Cascade/index.html?appid=1dc5b2adc99e48b095950055f2785d7a>

### ***Implications***

Natural England concluded in 2019 that there is reasonable scientific doubt as to whether the NMP provides adequate mitigation to reduce phosphate levels and consequently there is limited scope for the approval of planning applications that give rise to additional damaging effects on the integrity of the SAC.

Herefordshire Council has set out guidance to help with planning applications and the provision of suitable information, such as requirements for mains sewers, septic tanks, treatment plants and cesspits, etc.

Natural Resources Wales (NRW) recently completed a review of rivers in Wales and has confirmation that more than 60% of the Welsh Wye is now failing limits for phosphate, see: <https://naturalresources.wales/about-us/news-and-events/news/nrw-issues-new-advice-to-safeguard-the-river-wye-special-area-of-conservation/?lang=en>. NRW published a Planning Position Statement (which is appended) and they are now liaising with the relevant local Planning Authorities; Monmouthshire and Powys County Councils and the Brecon Beacons National Park Authority to examine what impact this will have on their respective planning processes. These authorities are also now joining the Wye Nutrient Management Board.

In practice this will mean that each and every project, plan or permission within the Wye Catchment may be required to demonstrate that it has a neutral, or better, impact on reducing the phosphate levels in the Wye and its tributaries.

Meanwhile the Wye & Usk Foundation (WUF), NFU, Farm Herefordshire and partners in the agricultural supply chain and farming community have continued work on finding ways to reduce the amount of phosphate entering the rivers. In addition, WUF are monitoring closely the phosphate levels in various tributaries where the Wye's algal bloom has started in recent years. This will help better understand the problem and ensure that remedial work takes place in the right places.

In addition, RePhoKUs is a research project led by Lancaster University that aims to re-focus phosphorus use in the UK food system in order to achieve sustainable phosphorus use and deliver valued ecosystem services such as clean water and biodiversity. The project is

studying the Wye as one of three catchments in the UK that are all suffering from phosphorus pollution to varying degrees. The project will undertake the first ever phosphorus vulnerability assessment of the UK's food system, bringing together experts in catchment science, adaptive capacity and food system vulnerability. The researchers note that use of phosphorous within UK agriculture is very inefficient which leads to large wastage causing nutrient pollution or eutrophication in inland and coastal waters. For further information see <http://wp.lancs.ac.uk/rephokus/> and their introductory video about the Phosphorus Story [https://www.youtube.com/watch?v=8Ia\\_KKj-UN0](https://www.youtube.com/watch?v=8Ia_KKj-UN0).

Welsh Water are currently working on Drainage and Wastewater Management Plans (DWMPs) that will identify sewerage and wastewater treatment needs over the next 25 years. The first iteration of the DWMPs will be completed by the end of 2022 and will be a key source of information for Welsh Water's 2025-2030 investment plans.

Wye Valley AONB staff have been active members of the Wye Catchment Partnership and there are several AONB projects that attempt to address some of the contributing factors, such as reducing soil erosion and agricultural run-off into the river:

- Natural Flood Management (NFM) projects in tributaries and sub-catchments of the Wye in Monmouthshire and Gloucestershire have a dedicated Lower Wye Project Officer, Nickie Moore, supported by the WUF Catchment Advisors, working with farmers and giving advice and grants for land management and NFM improvements.
- Two WUF Catchment Advisors have been seconded to the Wye Valley AONB Unit as part of the Restoring Our Amazing River (ROAR) project with WUF, Herefordshire Wildlife Trust and the Herefordshire Rural Hub, covering Herefordshire and Gloucestershire. They have been focusing on advising farmers and preparing Farm Plans to help secure other grants to improve land management practices. Unfortunately the contract for one of the Advisors ends on March 31<sup>st</sup>.
- details of the new Farming in Protected Landscapes programme and the forthcoming Environmental Land Management scheme are awaited, but it is anticipated that these schemes will help address some of the issues and contribute to reducing soil erosion and agricultural run-off into the river.

The AONB Partnership will continue to collaborate with those involved with the river and those that can influence the conservation and enhancement of the natural beauty of the area, for the benefit of the people and the wildlife of the Wye Valley.

## ***Background***

Phosphorus is a key nutrient required for crop and livestock production. The silty soils of the Wye Catchment are phosphorus rich and highly dispersive meaning that runoff from the land into rivers can cause nutrient pollution or eutrophication. Such losses and the resulting pollution are expected to be exacerbated by climate change. Eutrophication is very costly to society and devalues many ecosystem services linked to water quality including water quantity for drinking, biodiversity and recreation.

The Water Framework Directive and the Habitats Directive are European Regulations. The European Union (Withdrawal) Act 2018 ends the supremacy of EU law in UK law, and converts directly applicable EU legislation (in particular, EU Regulations and Decisions) as it stands at the moment of exit into domestic law, and preserves legislation previously made in the UK to implement EU obligations. The legislation therefore continues to have the same effect that it had before the UK left the EU, unless or until it is changed by Parliament.