**Water quality and water infrastructure: follow-up call for evidence**

**National Landscapes Association: About us**

The National Landscapes Association is a national charity who work to make sure the UK’s most outstanding landscapes are beautiful, thriving places that all people feel they can be part of. We support the UK’s network of National Landscapes to help them to be as effective as possible.

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**Sent by email to:** Environmental Audit Committee EACOM@parliament.uk

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• **What are the priorities for water infrastructure investment? Is Ofwat facilitating adequate investment in improving water quality and water security?**

Several rivers in National Landscapes, which are our nation’s areas of outstanding natural beauty are not achieving good ecological status under the Water Framework Directive. Chalk streams are one of the UK’s most unique habitats. There are 24 chalk streams in the North Wessex Downs and Chilterns National Landscapes that are monitored by the Water Framework Directive. As of 2019, 0 were in Excellent condition and only 3 in Good ecological condition.

There is a significant issue with phosphate levels in the River Axe which is having a harmful impact on wildlife within the river. Of particular concern are the areas that are designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). Many parts of the Axe River within the Blackdown Hills and East Devon National Landscapes have are only rated as ‘moderate’ quality for biological and physico-chemical elements; no water bodies achieve a ‘good’ ecological status.[[1]](#footnote-2)

In the River Wye catchment area, especially the SSSI & SAC, 14 of 51 water bodies received an ecological status of Bad or Poor in 2019, and only 4 received an ecological status of good. The reasons for the river not achieving good status by business sector are overwhelmingly from pollution from agriculture and rural land management.[[2]](#footnote-3) The river Wye provides drinking water for 2.5 million people across the catchment and in Birmingham, Cardiff, Newport and Gloucestershire.

**• How are water and sewage companies adapting to climate change?**

Welsh Water’s 2024 Water Resources Management Plan includes the key approach “To improve the resilience of our supply systems to pressures such as drought and climate change. We must deliver a plan that provides resilience to a 1 in 200-year drought event and will set out our plans for improving our resilience to a 1 in 500-year drought event.”[[3]](#footnote-4)

Excessively high summer water temperatures on the main river Wye are a major contributing factor to the significant algal growth that occurs on the main River Wye during the summer. Welsh Water work with the EA, NRW, NE and Wye & Usk Foundation to increase releases and river flows from the Elan Valley Reservoirs to try to keep river water temperatures & volumes at a safe level for fish, particularly salmonids.[[4]](#footnote-5) Sediment analysis is needed to build a more complete understanding of additional pressures.[[5]](#footnote-6)

**• What is being done to ensure the financial resilience of water companies?**

We think the approach of Welsh Water is a good long-term solution; as a not-for-profit business with no shareholders there is less risk of embedding perverse incentives that prioritise short-term gain over long term financial resilience.

**• How effective is Ofwat’s regulation of water companies and how are they working with the Environment Agency to assess compliance?**

Regarding the regulatory environment more generally: the continuing bad, poor or moderate status of the Axe and Lim and Wye water bodies demonstrates that, despite investment by the Environment Agency & water companies (and Natural England with Catchment Sensitive Farming advisors etc.) the current system is not effective.

There has been some degree of ‘stabilisation’ in the condition of the Lim and Axe so that may be the result of significant regulation efforts to date. The problems in the Lim and Axe may reflect the phosphate ‘legacy’, but also the fact that more effort is needed by water companies. Investment and effort is almost certainly not happening quickly enough to tackle the system failures.

Our view is that existing regulation has not been enforced over the last 5-10 years, and compliance mechanisms have not been strong enough. Most of the water quality problems in these protected areas are caused by agricultural pollution, and compliance and enforcement has not been emphasised by the government – instead, there has been a reliance on voluntary, incentive-led changes to pollution.

**• What is being done through the Sustainable Farming Incentive and other agricultural support mechanisms to help farmers to reduce pollution of waterways?**

There are several initiatives and projects pushing to reduce pollution via the Sustainable Farming Incentive and other agri-environment schemes. There is also the Farming in Protected Landscapes Scheme, which is part of Defra’s Agricultural Transition Plan, and which funds and support projects that support nature recovery, mitigates the impacts of climate change, and protects or improves the quality and character of the landscape or place.[[6]](#footnote-7) FiPL is currently due to finish in March 2025; however, we would argue that the approaches enabled through FiPL, including ‘softer’ peer-to-peer farmer networking projects, are and could have a large effect on a farming transition to more sustainable practices that will improve water quality and reduce water pollution, so we would urge that the scheme is continued.

In the Shropshire Hills National Landscape, the Farming in Protected Landscapes (FiPL) programme has enabled a number of farmers and landowners to undertake projects focused on water quality. The following information is taken from each of the project’s FiPL application, outlining the different aspects of each project and what they will have delivered. FiPL funding has proven to be an important agricultural support mechanism, enabling farmers to develop innovative ideas and to be able to receive funding to directly understand and reduce the impact their farming practices have on watercourses. Some examples follow.

1. **Monitoring water quality on land holdings in the following sub-catchments: Pontesford Brook, East Onny and Cound Brook, with workshops and training on how to improve water quality by changing land management practices (8 farmers).**

The project has involved the following aspects:

* Deployment of 21 sensors to monitor the turbidity, colour and temperature of water in streams and ponds on 8 land holdings across three waterbody sub-catchments: Pontesford Brook, East Onny, Cound Brook. The sensors have been developed by the company, [FreeUp](https://freeup.world/), and support will be available from the founder, Tom McNamara, throughout the project for sensor deployment, data interpretation, workshop facilitation, and resolving any technical issues with the sensors.
* To hold a workshop roughly every 3 months over the course of the project where the participants will come together to discuss the data captured by the sensors and identify projects they can deliver on their land to improve water quality. These workshops will be facilitated by the project lead (a local landowner), alongside Tom McNamara and staff from Harper Adams University (Dr Lucy Crockford - Senior Lecturer in Soil and Water Management, Alexander Miles - Aquaculture Unit and Dr Eric Siqueiros - AgriProject Co-ordinator).
* A final year BSc (Hons) Agriculture student at Harper Adams University will complete a research study on the project to identify the impact of agricultural activities on nutrient losses using proxy sensors supervised by Dr Lucy Crockford and facilitated by the leading landowner. As well as interpreting data from the sensors, manual samples will be collected from the watercourses near to the sensors to analyse for nitrate and phosphate, and Total Organic Carbon and Dissolved Organic Carbon. Some further analysis of data trends linked to agricultural activities may be completed but the primary aim is to discover if the sensors will provide farmers with an affordable method of determining the changes in nutrients in their water bodies.
* The participants have also had the option to complete a course in Holistic Land Management, halfway through the project to help with their decision making in changing land management practices and to develop their understanding of ecosystem processes (water cycle, mineral cycle, energy flow and community dynamics). The training will be delivered by the consultancy, 3LM: Land and Livestock Management for Life, with whom the lead local landowner completed their Holistic Management training, which was funded through the Farming in Protected Landscapes programme.
1. **Clun Valley Farmers -  Water & Soil Project (6 farmers)**

FiPL funding has enabled 6 landowners to each purchase a water photometer which can be used to monitor various parameters within the water courses on their holding to gain greater understanding of water quality.  This information, along with support from planned events, will guide any potential changes in the management of their holding to improve their farm business, sustainability and environmental performance. Six landowners are signed up to receive photometers and the initial training in their use of Hanna Instruments who are supplying the photometers. This will mean the purchase of six photometers, six protective cases and a bulk purchase of reagents (after which landowners will purchase their own).  Soil testing, advisory visit followed by a nutrient management plan will be offered to each participant by CSFO Denise Latham and five have signed up.

Delivery of two events (open to all local landowners) by the Catchment Sensitive Farming Officer and FiPL adviser to help those taking part in the testing and others to identify future practical actions that can be taken to address water quality and land management (plus to look to case studies that already showcase good practice – another local landowner has been approached to speak on their successful rotational grazing project at one of these events). Results of water and soil testing will be owned by the farmer to allow open discussions without landowners feeling penalised. Delivery of one face to face event and one webinar by Kingshay Consultancy on farmer led subjects (e.g. reducing use of wormers and the positive effect this has on soils).  Whilst the water monitoring is a valuable project in itself, this project will give the opportunity to farmers to work together within a cluster to share experiences and ideas which will enable them to move forward their farm businesses with greater knowledge and confidence.

1. **Upper Onny Farmers Group – Farm Water Audits (12 farmers)**

Farm Water Audits on 12 farms to identify: potential interventions for water quality; water resource mitigation works; watercourse protection and restoration opportunities.

The Upper Onny Farmers Group (UOFG) grew out of the Stepping Stones Project with an aim of creating and improving habitat connectivity on a landscape scale whilst maintaining viable livestock farms. In March 2023, the UOFG set out their 30-year vision. Water is a key theme of their vision, with an aim to improve water quality, retain more water, and slow the flow to alleviate flooding. The farm water audit is the first step to achieving this aim. The participating farmers intention is to act on the opportunities/recommendations identified in the audits and to seek funding from our supporting partners (Environment Agency, Severn Trent, Severn Rivers Trust, etc.) to enable us to implement the recommendations.  The watercourses mentioned in these examples largely fall within the River Teme catchment; there is a breadth of work and different approaches being taken by farmers to address water quality issues via FiPL.

There is also significant collaboration happening in the Wye Catchment[[7]](#footnote-8) The Wyescapes LR2 scheme also helps reduce pollution where applicants apply for it. Wider and more targeted advice and guidance is needed, with the support for farmers & land managers built on the good relations with established and trusted conveners & advisors, which can then lead to cluster groups and effective peer-to-peer knowledge exchange. Generally, there is much more that needs to be done to promote appropriate agri-environment options to make a transition to more sustainable farming practices. As part of FiPL, farmers and landowners need to apply for funds and support to achieve water quality improvements so improving understanding and landscape-scale impacts is critical. As key brokers at the landscapes scale, National Landscapes could play a key role here, given sufficient resources.

**• How can water companies and other industries be more transparent about their impact on water quality?**

Share their information better, as it’s very difficult to get detailed information, even via National Landscape partners, even using freedom of information requests.

**• How effective are current sewage discharge monitoring systems and how will ‘real-time’ data on water quality in receiving waterbodies be monitored, published and used?**

Current monitoring tools may not have the live information needed to respond appropriately quickly. It is understood that the ‘next generation’ of monitoring in the Wye will be ‘live’ but seasonal, as the equipment will need to be removed during seasons with high flow risks.

**• Is water quality at bathing sites being monitored and publicised effectively?**

In Dorset National Landscape there are a number of rivers that create lagoons where they discharge to the sea at designated bathing beaches.  These lagoons act as very effective settlement ponds and can have exceptionally high bacteriological counts.  However, they are not routinely tested for this, as the actual designated bathing water is only the marine element. So, there is the unusual situation of hundreds of people bathing in a freshwater lagoon at an ‘excellent’ bathing water beach, but at risk of becoming ill because it is contaminated water.  It falls outside the Environment Agency and Public Health jurisdiction, and we could get the freshwater element designated as a bathing water, but then you would have ‘excellent’ and ‘poor’ effectively at the same location.

• **How far will new Government plans contribute to restoring the health of rivers?**

The government’s new River Wye Action Plan[[8]](#footnote-9), has largely been welcomed but also met with disappointment as much of the identified resources have already been allocated or are for technological solutions that will not contribute to restoring the health of the river for some time (see Wye Nutrient Management Board papers).[[9]](#footnote-10)

There is £35 million available for poultry manure combustors, which far outstrips the amount available for nature recovery, and which doesn’t support the ‘polluter pays’ principle.

1. <https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3253/classifications> [↑](#footnote-ref-2)
2. <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3117/rnags> [↑](#footnote-ref-3)
3. <https://www.dwrcymru.com/en/our-services/water/water-resources/draft-water-resources-management-plan-2024> [↑](#footnote-ref-4)
4. <https://engageenvironmentagency.uk.engagementhq.com/water-regulation> [↑](#footnote-ref-5)
5. <https://wyecatchmentpartnership.org/wp-content/uploads/2024/01/Wye_Report_Q3_2021_22.pdf> [↑](#footnote-ref-6)
6. <https://www.gov.uk/guidance/funding-for-farmers-in-protected-landscapes> [↑](#footnote-ref-7)
7. See: <https://engageenvironmentagency.uk.engagementhq.com/working-together> and <https://wyecatchmentpartnership.org/> [↑](#footnote-ref-8)
8. <https://www.gov.uk/government/publications/river-wye-action-plan/river-wye-action-plan> [↑](#footnote-ref-9)
9. <https://councillors.herefordshire.gov.uk/ieListDocuments.aspx?MId=9468&x=1&> , particularly <https://councillors.herefordshire.gov.uk/documents/b26221/Supplement%20-%20Responses%20to%20the%20DEFRA%20plan%20Friday%2026-Apr-2024%2014.00%20Wye%20Catchment%20Nutrient%20Managemen.pdf?T=9> & recording of meeting <https://www.youtube.com/watch?v=FqlqSH6kUqg> [↑](#footnote-ref-10)