

# River Wye NMP Action Plan

## Update to NMP Board 19/01/2021

By Natural England, the Environment Agency and Natural Resources Wales

### Background

The River Wye Nutrient Management Plan (NMP) Action Plan needs to be updated and provide a greater degree of 'certainty' that water quality targets can be achieved. Representatives from Natural England, the Environment Agency and Natural Resources Wales from the Technical Advisory Group (TAG) have formed a working group to review the Action Plan, with consensus from the other TAG group members.

We have always expected the Action Plan to set out how water quality targets will be achieved, with room to accommodate planned development in Powys and Herefordshire.

Our review seeks to achieve to the following:

- To apply to the whole of the River Wye catchment, in England and in Wales.
- Establish consistency and shared Action Plan through a collaborative approach between Natural England, Environment Agency and Natural Resources Wales.
- Aim to incorporate a greater degree of 'certainty' into the solutions for achieving the necessary water quality targets, complying with the Dutch Nitrogen Judgement.
- Provide a 'one-stop shop' that captures all actions in the catchment and records progress against them.
- Quantify Phosphate reductions from practical actions and using these to give us an understanding of the 'gap' we have between Phosphate levels once these projects are in place, and the Phosphate targets as set out in the Conservations Objectives for the River Wye SAC.
- Capturing the actions around Nutrient Neutrality and recording activities that are already underway (led by Herefordshire Council).
- Offer a 'strategic solution', with individual plans and projects (such as a planning application), simply referring to the Action Plan in their Habitat Regulations Assessment (HRA).

### Timeframe

The Action Plan working group intends to bring a publishable draft version of the Action Plan to the Board for sign off in April. However, as it is intended that the Action Plan is iterative in nature, it is likely to take several iterations before the plan delivers enough certainty to be relied upon as strategic mitigation for plans and projects.

## Certainty

In order to be able to use the Action Plan as strategic mitigation, it needs to have enough 'certainty' to comply with the Dutch Nitrogen Judgement<sup>1</sup>. The Dutch Nitrogen Judgement means that for the parts of the river where water quality targets are already being exceeded, there needs to be 'certainty' that the target will be achieved.

'Certainty' means there is no reasonable scientific doubt remaining as to the absence of effects. Absolute certainty is not required. Certainty is made up of different elements, broadly: scientific certainty that a measure is capable of working or achieving the required reductions, and practical certainty that it is going to be in place at the relevant time (i.e. it is clear when the necessary actions will be taken, by whom, that there is adequate funding, or that the necessary rights over land exist).

We only need this additional certainty if we want plans and projects to be able to rely on the NMP and Action Plan as the 'strategic solution' in their HRA. If we do not want to use the Action Plan in this way, then it does not need to have this degree of certainty. Work to reduce nutrients to target levels would still need to proceed and be captured in the Action Plan, but we would not need to prove the actions with such rigor. In this scenario, nutrient neutrality becomes the best available option for plans and projects to proceed.

When it is completed the Action Plan will act as a strategic mitigation plan, meaning that it can be referred to when undertaking the Habitat Regulations Assessments of a plans or project, and used to underpin a conclusion of no adverse effect on integrity. However, it should be noted that this plan could be iterative in nature. It is likely to take several iterations before the plan delivers enough certainty to be relied upon as strategic mitigation for plans and projects. The plan can only be relied upon as a strategic solution when it has enough certainty.

The Action Plan is therefore expected to be a 'living' document. It will help to identify the work that is needed, drive the delivery of this work and keep track of implementation and progress. The TAG will use the Action Plan to structure its meetings.

## Plan Structure

The Action Plan is being restructured in order to provide a 'one-stop shop' that captures all actions in the catchment and records progress against them. It will begin by summarising the current water quality situation in the catchment, confirming the existing Phosphate levels and comparing this to the target allows the Phosphate gap to be quantified. The plan will also include relevant maps and figures.

The Action Plan will set out the actions planned or further needed to reduce Phosphate. Actions in the plan are being divided into sections on point sources, diffuse sources, catchment-scale actions, monitoring, engagement, governance and reporting, and Herefordshire only actions. Structuring the Action Plan in this way will make it easier to

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1) <sup>1</sup> The CJEU judgment on the joined [Coöperatie Mobilisation for the Environment cases](#) (often referred to as the Dutch Nitrogen cases) affects how the assessment of plans and projects under the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations') must be interpreted and applied by competent authorities (local planning authorities in relation to planning matters).

identify gaps and set actions in place to fill them. **See Annex 1 for extract of a working draft.**

## Quantifying Reductions

Some of the actions in the plan will be around gathering evidence, monitoring, and governance. However, many actions are expected to be practical actions – the physical things that need to be done to reduce the Phosphate. For example, installing additional Phosphate removal in Waste Water Treatment Works, or on farm actions falling under Catchment Sensitive Farming. The Phosphate reductions from these ‘practical actions’ needs to be quantified, to understand what reductions it can be certain will be achieved by them. This is an essential step in delivering a plan with enough certainty.

Quantified Phosphate reductions from practical actions will then be tallied up to give us an understanding of the ‘gap’ we have between Phosphate levels once these projects are in place, and the Phosphate targets as set out in the Conservations Objectives for the River Wye SAC. Further practical actions will need to be put in place to fill any remaining gap.

## Documenting Certainty

For the parts of the river where water quality targets are already being exceeded, there needs to be ‘certainty’ that the target will be achieved. Certainty is made up of different elements, broadly: scientific certainty that a measure is capable of working or achieving the required reductions, and practical certainty that it is going to be in place at the relevant time (i.e. it is clear when the necessary actions will be taken, by whom, that there is adequate funding, or that the necessary rights over land exist).

The Action Plan will also rank the certainty of each of the practical actions it identifies. On a stretch of the river that is exceeding its water quality targets, only actions that are sufficiently certain can be counted towards filling the Phosphate gap. It is possible that Phosphate reductions will need to ‘over-shoot’ the target in order to provide additional assurances around certainty and some flexibility around deliverability. However, this needs to be given greater consideration.

By identifying actions with enough certainty to be counted, quantifying the Phosphate reductions that they will deliver, totalling this up, and aiming for over-delivering, it should be possible to demonstrate with certainty that water quality targets can be achieved.

## Nutrient Neutrality

The Plan will include actions intended to allow development to proceed in the interim period, whilst we do not have a sufficiently certain Action Plan. One way in which a plan or project that contributes nutrients can proceed in area where the designated site is in unfavourable condition, is by achieving ‘nutrient neutrality’, i.e. demonstrating that the input being made is offset by other measures put in place. The actions already under way (led by Herefordshire Council) around Nutrient Neutrality will be captured in the Action Plan.

## The geographic scope of the Action Plan

The Action Plan will apply to the whole of the River Wye catchment, in England and in Wales.

For parts of the catchment that are currently failing their water quality targets, the Action Plan will need to identify actions to bring nutrient levels down to the required level. It is also

worth noting that while parts of the Wye catchment are currently meeting their water quality targets, in some places there are known risks that targets could be exceeded in the future. For example, on the River Wye in Hereford, the totality of planned development in Herefordshire would cause water quality targets to be breached if adequate mitigation is not in place first. The Action Plan will also need to capture actions required to prevent this from happening.

## Annex 1 - Example extract of working draft

River Lugg actions						
Action	Detail	Lead organisation	Target end date	Notes on progress	Phosphate reduction	Certainty
					Load to be removed after sewage works fair share has been achieved = 1.129kg/d	
Integrated wetlands scheme						
Integrated wetlands to be delivered at <u>Dilwyn</u> and Canon <u>Pyon</u> WWTW	Scheme will release capacity for up to 600 homes	WUF		Planning application submitted, permission anticipated January 2021	Anticipated reduction 0.3kg/d	High
	Price of credits <u>set</u> and trading platform created	WUF				
	Wetland created	WUF	Fully functional May 2021			
					Phosphate gap = 0.8kg/d	
ICW's created below <u>Shobdon</u> and <u>Luston</u> & <u>Yarpole</u> STW's	Anticipated total headroom creation to accommodate up to 2000 homes	Herefordshire Council				High

# Planning Position Statement: SAC Designated Rivers & Phosphates

## Purpose of the Position Statement

This Statement sets out NRW's position on new developments which may lead to further deterioration in the condition of the Wye riverine Special Area of Conservation (SAC) due to the potential to increase phosphate levels within the SAC. This is required to respond to the compliance assessment undertaken which highlight the failures to achieve the standards required to meet the water quality condition for this designated river.

This position statement relates only to those developments that require screening and assessment through the Habitats Regulations Assessment (HRA) process, where the potential effects on the River Wye SAC are due to increased amounts or concentration of phosphate. Other types of issues arising from any development in the Wye catchment with the potential to affect any site previously designated pursuant to EU retained law, need to continue to be properly addressed through HRA processes .

It applies to all waterbodies within the Wye catchment north of Bigsweir Bridge, Monmouthshire.

## Background

The River Wye is a SAC and is protected under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

Natural Resources Wales has set new phosphate standards for the river Wye SAC following the revised [Common Standards Monitoring guidance](#) updated in 2016 by the Joint Nature Conservation Committee (JNCC). A compliance assessment, conducted by NRW, against these standards found widespread failures on the river Wye.

New development within any part of the catchment which will increase the amount or concentration of wastewater effluent or organic materials discharged directly or indirectly into the catchment's waterbodies has the potential to increase phosphate levels within those waterbodies.

Whilst a third of the waterbodies within the catchment satisfied the standards, the headroom within these waterbodies to accommodate increased levels of phosphates is limited. If phosphate levels are allowed to rise, the water bodies are at risk of failing the standard.

Additionally, for failing sections of the catchment there is no headroom and further increases in phosphate will further worsen the condition of the SAC.

## **Habitats Regulations Assessment**

Under the Habitats Regulations, where a plan or project is likely to have a significant effect on a European site, either alone or in combination with other plans or projects, and where it is not directly connected with or necessary to the management of the site previously (designated pursuant to EU retained law) the competent authority must carry out an appropriate assessment of the implication of the plan or project in view of the site's conservation objectives. In light of the conclusions of the compliance assessment, the competent authority may normally only approve the plan or project having ascertained that it will not adversely affect the integrity of a site (previously designated pursuant to EU retained law) if necessary taking into account any conditions or restriction which will mitigate any negative impacts of the plan or project.

Any proposed development within the Wye catchment that might increase the amount of phosphate within the catchment could lead to additional damaging effects to the SAC features and therefore such proposals should be screened through a HRA to determine whether they are likely to have a significant effect on the SAC condition. Once issued by NRW, this position statement in combination with the Compliance Assessment Report, applies to all development that is yet to be determined by the relevant planning authority

## **NRW's Role**

We are a statutory or specialist consultee within the planning system, both during the development plan making process, and during the planning application process. Our main role is to provide advice on how planning policies and development proposals should protect and enhance the environment and allow for our natural resources to be sustainably managed. Our advice is informed by the information submitted by the applicant, our expertise, and the Welsh Government's aspirations and policies for the environment as set out in national planning policy, and relevant legislation.

It is the role of planning authorities to determine planning applications and in so doing they will consider our advice alongside information submitted to them from the applicant, and other parties including other advisors and the public. The Local Planning Authority (LPA) is the competent authority under the Habitats Directive requirements for HRA and decides when an appropriate assessment is required. In its role as a Statutory Nature Conservation Body (SNCB) NRW must be consulted by the competent authority during an appropriate assessment. The competent authority must for the purposes of the appropriate assessment have regard to any representations made by the SNCB within such reasonable time as the authority may specify.

## **Summary of Natural Resources Wales's current position**

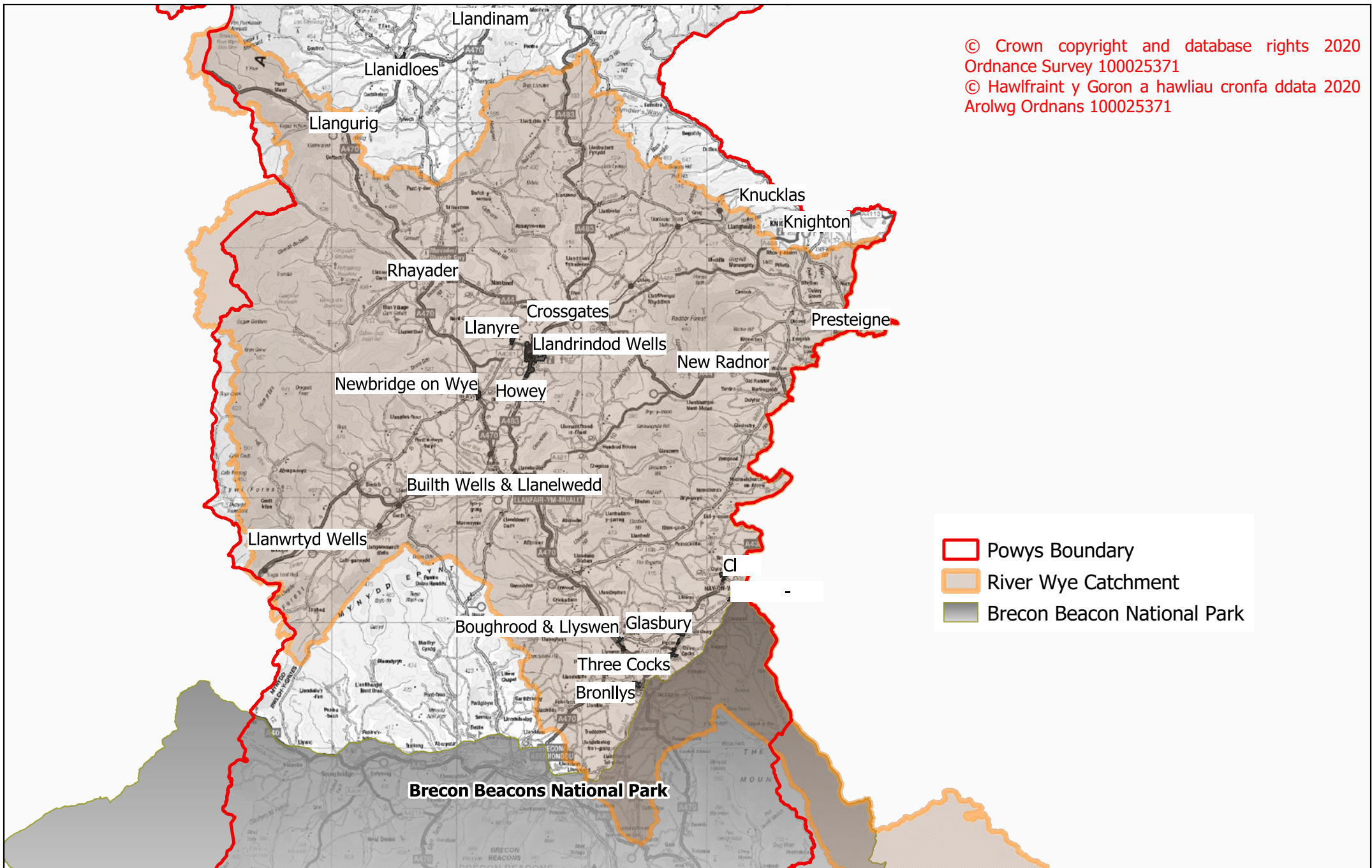
A large number of water bodies on the Wye are failing their phosphate targets. Even where they are passing, there is generally little headroom. For this reason we are unable to rule out the possibility that additional phosphate input on any part of the River Wye SAC will further damage the SAC. We therefore recommend that any proposed new development that might otherwise result in increasing the amount of phosphate within the SAC either by direct or indirect discharges must be able to demonstrate phosphate neutrality or betterment.




## **Next steps**

We will collaborate with partners to support the development of further advice to assist in assessing development proposals in relation to phosphates. We intend to mirror this approach for the other water quality indicators in the river and will set out clear timescales for this in the New Year.



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-  Powys Boundary
-  River Wye Catchment
-  Brecon Beacon National Park

Map showing River Wye Catchment for Powys

# Regulatory Position: SAC Designated Rivers & Phosphates

## Scope

This position is published alongside our assessment of Special Areas of Conservation (SAC) status for designated rivers. It sets out the legislative basis for NRW's regulatory role, and defines those activities within our regulatory remit, specifically focussing on: discharges to surface water and groundwater; installations; and spreading of organic materials to land.

## Our regulatory role

The Environmental Permitting (England and Wales) Regulations (EPR) 2016 as amended, provide the principal legal framework for NRW to regulate activities which have the potential to cause harm to human health or the environment. Our website provides guidance on which activities require an environmental permit, the application process and assessment, and what an operator needs to do to comply with their permit. Environmental permits are the basis for our regulatory role working with operators to manage both the potentially negative environmental impacts of their activities and to achieve the objectives of wider statutory environmental requirements. For example, all permit applications are screened for their potential impact on sensitive receptors such as Special Areas of Conservation (SAC).

## Discharges to surface water and groundwater

Discharges to surface water and groundwater require a permit, unless the discharge is of clean surface run-off. [If the water is clean surface run-off](#), for example, rainwater from a roof, road, pathway or clean hard-standing area, you do not need a permit, but need to make sure the discharge stays clean and uncontaminated.

Low risk or exempt activities do not require a permit. Existing domestic [septic tanks and package treatment plants](#) will in most instances only need an exemption registration. There is also a low risk position on temporary dewatering of excavations, covering the discharge of uncontaminated water (such as rainwater) from excavations at building sites and other excavations.

Discharges to sewer do not require a water discharge activity permit but may require the permission of the sewerage undertaker.

NRW screens permit applications and applies the Habitats Regulations Assessment (HRA) and Water Framework Directive (WFD) compliance assessment in accordance with the relevant statutory requirements. The [H1 risk assessment software tool](#) (developed by the Environment Agency and adopted by NRW) is one of a series of tools used to screen the

potential effect of discharges against the objectives and target standards for the receiving water body.

For designated SAC rivers, such as the Wye, [Common Standards Monitoring](#) (CSM) targets have been developed, which include standards for phosphorus (first published in 2016). In line with WFD requirements, NRW applies the most stringent objective for designated river water bodies (i.e. WFD or CSM) when assessing permit requirements. The most stringent objective has also been used in our work with the water industry to plan for future investments to wastewater infrastructure.

## Installations

An installation is made up of any stationary technical unit where one or more activities as defined schedule 1, Part 2 of EPR are carried out. These include energy, metal, mineral, chemical, waste, and intensive farming activities. NRW screens permit applications and applies the HRA in accordance with statutory requirements. Discharges to surface water and groundwater are assessed in line with the approach set out above. Installations must also meet industry standard Best Available Technique Associated Emission Limits (BAT-AELs).

NRW issues permits and enforces non-compliances of those permits for intensive farming sites over the set thresholds in EPR, these are currently: 40,000 places for poultry; 2,000 places for production pigs (over 30kg), or 750 places for sows. Other livestock such as cattle are not currently included within EPR.

Wastewater or effluent within an intensive farming unit is generally contained within a sealed source drainage system, for example drainage contained during cleaning within sealed dirty water tanks. Site run-off is managed by good operating techniques and management plans so that only uncontaminated surface water is allowed to discharge directly to ground or surface watercourses. All intensive farm permits contain condition 3.2.1 to prevent pollution from substances not controlled by emission limits being discharged. Only storage and spreading of manures/wastes within the site boundary (as defined on the permit) are regulated by NRW.

Under current regulations anaerobic digestion sites may need an environmental permit depending on what waste is being used, its quantities and where the activity is taking place. Subject to certain limitations agricultural materials such as slurry, manure, animal bedding and plant tissue do not need an environmental permit and can operate under an exemption.

## Spreading of organic materials to land

Under EPR the spreading of listed waste materials to land requires a permit. An operator must have a suitable permit and an approved deployment before carrying out any land spreading activities, the permit can either be a standard rule set or bespoke depending upon the activity.

NRW's standard rules permit *SR2010 No. 4 – Mobile plant for land spreading* allows an operator to operate mobile plant for land treatment activities on notified agricultural or non-

agricultural land, where the treatment results in agricultural benefit or ecological improvement.

NRW screens and assesses deployments to ensure both agricultural benefit and compliance with the Habitats Directive. The permit and deployment include conditions to ensure, if complied with, activities will not result in environmental impact.

The storage and spreading of other organic materials to land such as farmyard manure, slurry, and biosolids (i.e. sewage sludge) does not require an EPR permit unless from a permitted unit and within the permit boundary. NRW's regulatory role over these activities is established by: the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010; The Sludge (Use in Agriculture) Regulations (1998). the Nitrate Pollution Prevention (Wales) Regulations 2013 as amended - where they apply within designated Nitrate Vulnerable Zones; the Cross-Compliance regime - for farmers claiming subsidies.

## Natural Resources Wales's interim advice for planning applications within the Wye catchment

### How do I know if a proposal might increase phosphate levels within the SAC?

Each development should be considered on a case by case basis. Developments should first be screened to determine whether they are likely to have a significant effect.

With no pathway for impacts, the development can be screened out as not likely to have a significant effect on the SAC in relation to phosphate inputs. Therefore, there is no need to progress further with the HRA, unless there are other potential impact pathways associated with the development which need to be considered.

The following types of development are unlikely to increase phosphate inputs:

- Any development that does not increase the volume or concentration of wastewater;
- Any development which improves existing water quality discharges by reducing the phosphate load of wastewater, or by decreasing the volume of wastewater produced (e.g. by improvements to existing wastewater treatment infrastructure);
- Any development connecting to a public wastewater treatment works where the permit has phosphate conditions in place and sewerage undertaker has confirmed that there is capacity to treat the additional wastewater and the additional phosphate from the proposed development;
- Private sewage treatment systems discharging domestic wastewater to ground which are located more than 50m from the SAC, and which have a daily discharge rate of less than 2 cubic metres (m<sup>3</sup>);
- Development which involves the treatment of wastewater which ensures the water is at least nutrient neutral when entering the watercourse;
- Development to an existing residential property (e.g. extensions) that does not increase occupancy or the volume of drainage.

### What does this mean for development proposals involving connection to public wastewater treatment works?

Any development connecting to a public wastewater treatment works that has the capacity to accommodate the additional wastewater and additional phosphate from the proposed development are unlikely to increase phosphate inputs into the SAC. There is a Presumption that all rainwater is kept separated from polluted water and disposed of separately in line with Planning Guidance on rainwater disposal.

For such development proposals, we would seek the following information in support of any planning application consultation:

- Confirmation of how any foul or surface water will be managed;
- Clear scale plan showing the location of nearest mains sewer and proposed connection point; and
- evidence that an application has been made to the sewerage undertaker for connection to a mains sewer, and a copy of their formal response that confirms that there is treatment capacity to treat the additional waste-water and any additional phosphate from the proposed development (alone and in-combination with other planned development), or confirmation that

the treatment capacity will be implemented within the current Asset Management Plan (AMP) period.

- That any development complies with The Flood and Water Management Act 2010 (Schedule 3), effective in Wales from 7 January 2019, requiring new developments to include Sustainable Drainage Systems (SuDS) features that comply with national standards.

### What does this mean for development proposals involving private sewage treatment systems ?

[Circular 008/2018](#) (Planning requirement in respect of the use of private sewerage in new development, incorporating septic tanks and small sewage treatment plants) states when drawing up sewerage proposals for any development, the first presumption must always be to provide a system of foul drainage discharging into a public sewer. Additional guidance on the use of private sewage treatment in an area with a public sewer is available [from the Natural Resources Wales website](#)

If, by taking into account the cost and/or practicability, it can be shown to the satisfaction of the planning authority and Natural Resources Wales a connection to a public sewer is not feasible, a package sewage treatment plant should be considered.

Only if it can be clearly demonstrated by the developer that connection to the sewer, or the use of a package treatment plant is not feasible should a system incorporating septic tank(s) be considered.

When proposing private sewage treatment systems we encourage applicants to make use of Natural Resources Wales's [environmental permitting pre-application advice service](#) to discuss any constraints which may apply.

We do not consider that schemes involving new or changes to existing private sewage treatment systems which:

- discharge to ground into a drainage field constructed to the relevant British Standards; and
- are located more than 50m from the SAC; and
- have a daily discharge rate of less than 2 cubic metres (m<sup>3</sup>)

are likely to have a significant effect on the SAC.

We advise that all other forms of development involving private sewage treatment systems should be subject to Habitat Regulations Assessment.

We would seek the following information in support of any planning application or appropriate assessment consultation for a scheme involving a private sewage treatment system:

- Confirmation of how foul and surface water will be managed;
- Clear scale plan showing location of proposed private sewage treatment system and discharge location;
- Where a private sewage treatment system is proposed within a sewered area evidence to justify why a connection to mains sewer is not feasible [in line with the requirements published on our website](#);
- For all other private sewage treatment systems evidence that [Circular 008/2018](#) (Planning requirement in respect of the use of private sewerage in new development, incorporating septic tanks and small sewage treatment plants) has been followed;
- Confirmation of the volume of wastewater to be discharged, and evidence that demonstrates if and how the level of treatment ensures the water is at least phosphate neutral;

- Where discharges to ground are proposed provide the results of infiltration testing with calculations to demonstrate that the drainage field size and design is appropriate for the volume of discharge proposed and follows the relevant British Standard; and
- Copies of any Natural Resources Wales environmental permit or registered exemption to discharge to ground or to a watercourse.

### **What does this mean for development proposals involving agricultural development?**

New development involving the storage, management and spreading of organic material within the catchment has the potential to contribute towards the level of phosphates entering the SAC, and should be subject to HRA.

### **Avoidance and Mitigation measures**

If mitigation measures which are not an integral part of the development as proposed are necessary in order to ensure that a development will be phosphate neutral or will lead to betterment, the development should be screened in as likely to have a significant effect on the SAC and be subject to an appropriate assessment. The efficacy and reliability of any mitigation measures should be established through the appropriate assessment.

We would expect that any measures relied upon to avoid or mitigate adverse effect on the integrity of the SAC are supported by evidence from the developer which demonstrates that they are guaranteed and maintained for the lifetime of the development, and are effective, reliable, and timely.

We would also seek confirmation by the local planning authority that they can be legally enforced to ensure they can be implemented as proposed.

For each measure, we would therefore expect details on:

- How the measure would avoid or reduce adverse effects on the SAC (considering the predicted duration of the effects);
- How the measure will be implemented, and by whom;
- How the measure will be maintained, the duration of any maintenance, and details of who will be responsible for its maintenance;
- the available evidence that demonstrates the effectiveness of the measure.

### **Natural Resources Wales's interim advice for the review of local development plans (LDPs)?**

All local development plans should first be screened to determine whether any policies are likely to have a significant effect on the SAC.

Policies can be screened out as not likely have a significant effect in relation to phosphate contributions if there are no pathways for impacts, unless there are other potential impact pathways associated with the policy which should be considered.

Allocations for development which are proposed to be connected to a mains waste water treatment works with capacity to accommodate the additional waste-water and any additional phosphate from the proposed development (alone and in-combination with other planned development), or where there exists, confirmation that the necessary treatment capacity will be implemented within the current Asset Management Plan (AMP) period and therefore will be in place before any impact occurs, may also be screened out.

Allocations for development that are proposed to be connected to mains waste water treatment works where there is no capacity in place, or planned within the current AMP period, to treat the additional phosphate should be subject to an appropriate assessment, and Plan policies should ensure that development will have to achieve at least phosphate neutrality.

We also advise that any LDP policies relating to schemes for private sewage treatment systems should ensure at least nutrient neutrality where they:

- Discharge directly to surface waters; or
- Discharge more than 2 cubic metres (m<sup>3</sup>) per day to ground

Notwithstanding this, if the local planning authority considers appropriate, it may wish to consider whether there are alternative solutions that would avoid an adverse effect on the integrity of the site or whether there are imperative reasons of overriding public interest.

### Permitted Development Rights

Several classes of development, including agricultural development, benefit from permitted development rights under Article 3 of the *Town and Country Planning (General Permitted Development) Order 1995* (the GPDO) subject to conditions and limitations specified in the Order.

The Habitats Regulations impose controls on permissions granted by the GPDO to prevent any development which is likely significantly to affect a European site or European offshore marine site, either alone or in combination with other plans or projects, and is not directly connected with or necessary to the management of the site, from benefiting from permitted development rights, unless the local planning authority has determined, after consulting Natural Resources Wales, that it would not adversely affect the integrity of the site.

This does not automatically withdraw permitted development rights for such developments, but instead requires them to be subject to a prior approval.

We consider that any development proposal within the catchment which benefits from permitted development rights under the GPDO and involves increasing the amount or concentration of wastewater discharge within the catchment should be subject to prior approval.

The procedures for seeking approval are described in Annex 5 of [Technical Advice Note 5: Nature Conservation and Planning](#) (2009).

### Schemes proposed in England

Different nutrient targets apply in England and therefore project proponents for schemes located in England should consult the relevant planning authority for advice on the information that should be provided in support of planning applications.



Extract from

Hatton-Ellis TW, Jones TG. 2020. Compliance Assessment of Welsh River SACs against Phosphorus Targets. NRW Evidence Report No: 489, 96pp, Natural Resources Wales, Bangor.

## River Wye

The Wye is the largest Welsh SAC river, with a catchment covering much of southern Powys and part of the Brecon Beacons National Park before crossing the border into England near Hay-on-Wye. It is divided into 43 water bodies in Wales, with two water bodies straddling the border. There are an additional four water bodies entirely in England.

Targets for the river were incorporated into the SAC management plan in 2017 (NRW 2017c), and range from 10  $\mu\text{g l}^{-1}$  in headwater areas increasing progressively downstream to 50  $\mu\text{g l}^{-1}$  in the more nutrient-enriched English sections (Figure 1; Table 1).

The management plan update erroneously omitted the 'Wye - conf Afon Tarenig to conf Afon Bidno' water body target. This water body has been assessed here using the Near Natural target for its type. Additionally, an assessment has been carried out for Welsh parts of the cross-border water body 'Wye - Scithwen Bk to Bredwardine Br' as approximately 22km of this lies within Wales. The near natural target has been applied here in line with Common Standards Monitoring Guidance. Targets for these two water bodies should be viewed as draft, and the Wye Core Management Plan updated accordingly.

Much of the Upper Wye catchment is rural and until recently has been predominantly farmed for sheep and beef cattle. More recently there has been a rapid expansion of chicken farms, which has been the source of considerable public concern.

Comparison of phosphorus concentrations in the Wye against targets indicate widespread failures, some of them large in magnitude (Table 1; Figure 3). Fourteen water bodies passed their targets, 27 failed and three were unknown (Table 1). Water bodies achieving their orthophosphate targets were in the Upper Wye above Rhayader, about half of the Ithon, and two water bodies in the Irfon. All of the middle Wye tributaries, the remaining Irfon and Ithon and the Llynfi failed their targets (Figure 3). The largest failures were the Wye near Newbridge, the Cammarch, Clettwr Brook, Mithil Brook, lower Irfon, Garth Dulas and the three water bodies in the Llynfi catchment.

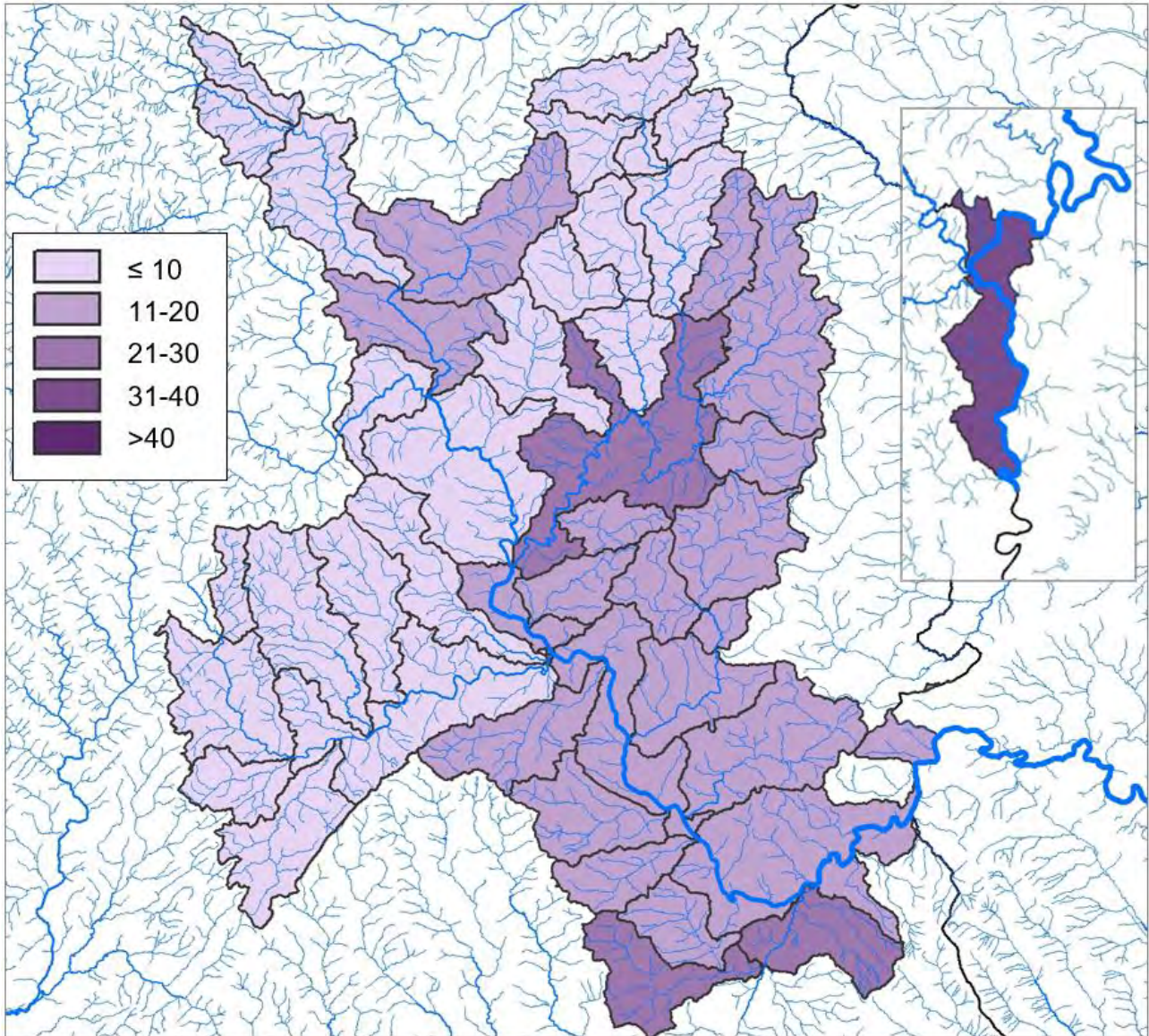


Figure 1. Map of phosphorus targets for the River Wye SAC. All concentrations are annual means and growing season means in  $\mu\text{g l}^{-1}$ . Inset shows the Wye – Walford Brook to Bigsweir water body in the lower Wye. Cross-border water bodies have been cropped to the Welsh border.

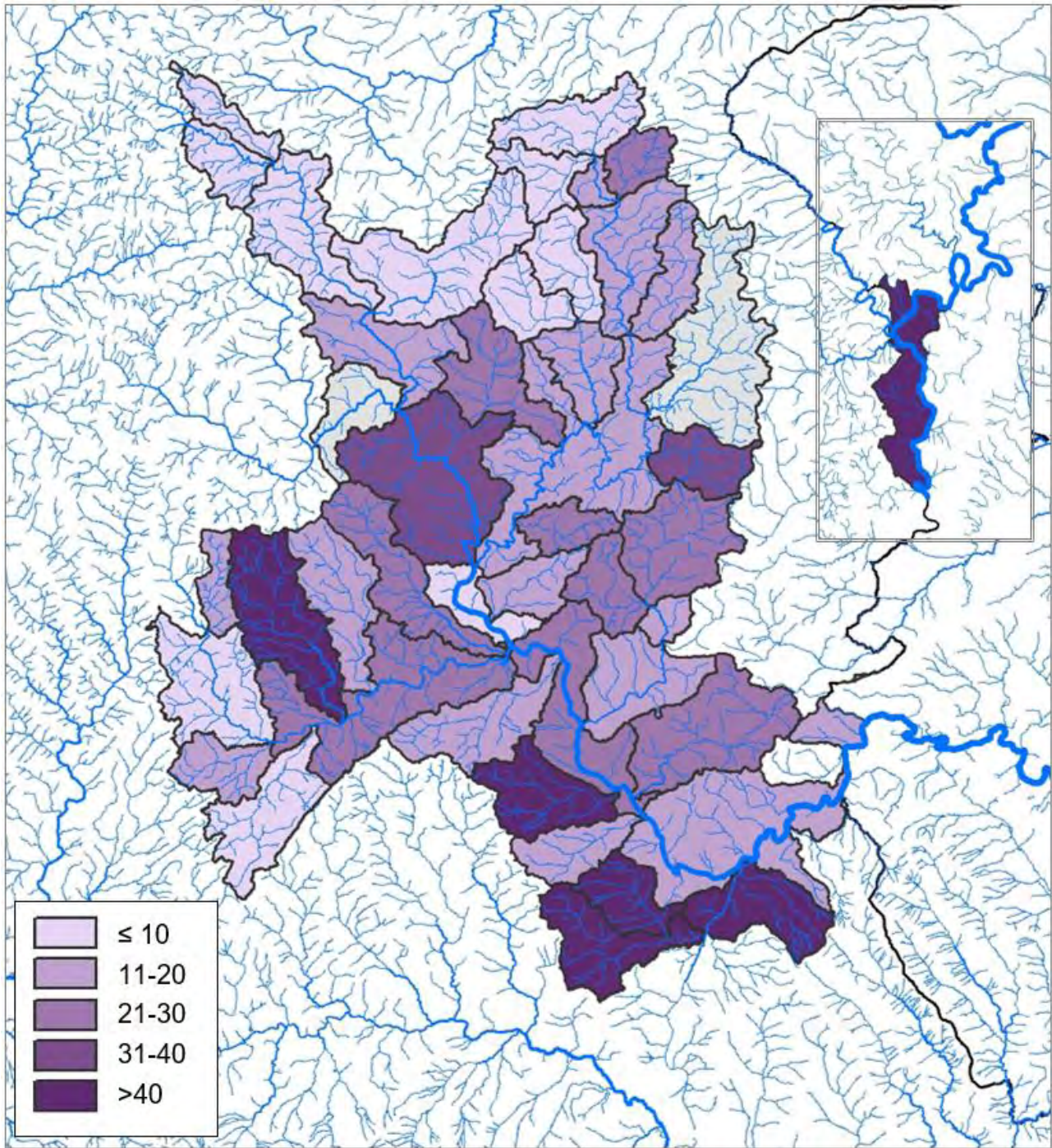


Figure 2. Map of annual mean phosphorus concentrations ( $\mu\text{g l}^{-1}$ ) in the Upper Wye. Inset shows the Wye – Walford Brook to Bigsweir water body in the lower Wye. Cross-border water bodies have been cropped to the Welsh border. Greyed out water bodies could not be assessed due to lack of data.

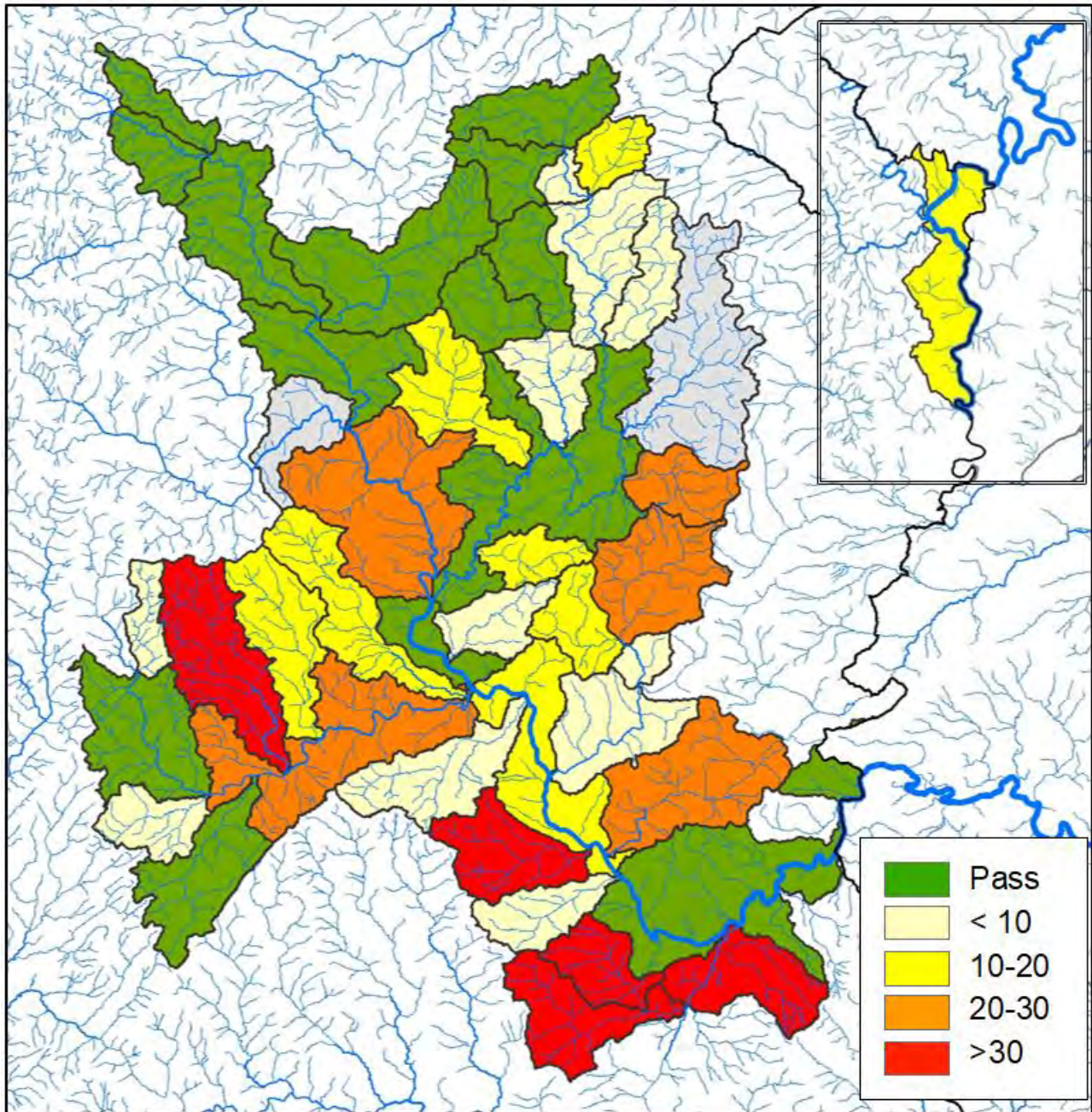


Figure 3. Map of phosphorus compliance for Welsh sections of the Wye SAC. Water bodies shaded green pass their target. Other colours fail the target with different colours representing the magnitude of failures in  $\mu\text{g l}^{-1}$ , expressed as the larger of annual means and growing season means. Inset shows the Wye – Walford Brook to Bigsweir water body in the lower Wye. Cross-border water bodies have been cropped to the Welsh border. Greyed out water bodies could not be assessed due to lack of data.



Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	N Samples	Annual Mean ( $\mu\text{g l}^{-1}$ )	Growing Season Mean ( $\mu\text{g l}^{-1}$ )	Assessment	Status
GB109055042320	Wye - conf Afon Tarenig to conf Afon Bidno	50361	10*	29	2	2	Pass	-
GB109055042320	Wye - conf Afon Bidno to conf Afon Marteg	50004	10	33	2	2	Pass	-
GB109055042340	Afon Bidno - source to conf R Wye	50003	10	29	1	1	Pass	-
GB109055042280	Wye - conf Afon Marteg to conf Afon Elan	50177	20	34	11	14	Pass	-
GB109055042310	Afon Marteg - source to conf R Wye	50005	13	33	7	6	Pass	-
GB109055042260	Afon Elan - Caban-coch Rsvr to conf R Wye	50008	10	-	-	-	Not Assessed	-
GB109055042250	Wye - conf Afon Elan to conf R Ithon	50010	10	29	37	38	Fail	Confirmed
GB109055042180	Ithon - source to conf Llaethdy Bk	51354	10	29	8	8	Pass	-
GB109055042160	Llaethdy Bk - source to conf R Ithon	51352	10	16	7	6	Pass	-
GB109055042170	Gwenlas Bk - source to conf R Ithon	51353	10	23	24	22	Fail	Confirmed

Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	N Samples	Annual Mean ( $\mu\text{g l}^{-1}$ )	Growing Season Mean ( $\mu\text{g l}^{-1}$ )	Assessment	Status
GB109055042150	Ithon - conf Llaethdy Bk to conf Gwenlas Bk	50086	10	29	13	13	Fail	Confirmed
GB109055042130	Camddwr Bk - source to conf R Ithon	50820	13	17	20	17	Fail	Confirmed
GB109055042140	Ithon - conf Gwenlas Bk to conf Camddwr Bk	50086	10	29	13	13	Fail	Confirmed
GB109055042110	Aran - source to conf R Ithon	50084	15	-	-	-	Not Assessed	-
GB109055041960	Mithil Bk - source to conf R Ithon	50825	15	18	40	37	Fail	Confirmed
GB109055041900	Howey Bk - source to conf R Ithon	50089	15	16	25	23	Fail	Confirmed
GB109055042080	Nantmel Dulas - source to conf R Ithon	50821	10	17	21	17	Fail	Confirmed
GB109055042270	Ithon - conf Camddwr Bk to conf R Wye	50085, 50090	25	31	17	16	Pass	-
GB109055042090	Clywedog Bk - source to conf Bachell Bk	50823	10	17	9	8	Pass	-
GB109055042120	Bachell Bk - source to conf Clywedog Bk	50824	10	8	4	-	Pass	-

Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	N Samples	Annual Mean ( $\mu\text{g l}^{-1}$ )	Growing Season Mean ( $\mu\text{g l}^{-1}$ )	Assessment	Status
GB109055042070	Clywedog Bk - conf Bachell Bk to conf R Ithon	50087	10	26	15	16	Fail	Confirmed
GB109055037150	Wye - conf R Ithon to conf R Irfon	50813	15	29	8	8	Pass	-
GB109055041870	Afon Gwesyn - source to conf R Irfon	57103	10	15	12	10	Fail	Probable
GB109055036760	Irfon - conf Afon Gwesyn to conf Cledan	57712	10	27	8	7	Pass	-
GB109055036680	Cledan - source to conf R Irfon	50818	10	21	18	11	Fail	Confirmed
GB109055036690	Tirabad Dulas - source to conf R Irfon	50077	10	19	8	8	Pass	-
GB109055041880	Afon Cammarch - source to conf R Irfon	50078	10	27	46	13	Fail	Confirmed
GB109055041890	Garth Dulas - source to conf R Irfon	50079	10	28	15	22	Fail	Probable
GB109055042190	Chwefru - source to conf R Irfon	50081	10	29	22	26	Fail	Confirmed
GB109055037090	Irfon - conf Cledan to conf R Wye	50080	10	27	24	38	Fail	Confirmed



Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	N Samples	Annual Mean ( $\mu\text{g l}^{-1}$ )	Growing Season Mean ( $\mu\text{g l}^{-1}$ )	Assessment	Status
GB109055037160	Builth Dulas Bk - source to conf R Wye	50501	15	16	16	19	Fail	Confirmed
GB109055037050	Duhonw - source to conf R Wye	50012	15	29	15 <sup>x</sup>	15 <sup>x</sup>	Fail	Probable
GB109055042200	Edw - source to conf Colwyn Bk	51355	15	28	30	39	Fail	Confirmed
GB109055042370	Camnant Brook - source to confluence R Edw	50510	15	24	24	32	Fail	Confirmed
GB109055037130	Edw - conf Camnant Bk to conf Clas Bk	50815	15				Not Assessed	-
GB109055037080	Edw - conf Clas Bk to conf R Wye	51305	15	28	20	23	Fail	Confirmed
GB109055037030	Clettwr Bk - source to conf R Wye	50015	15	21	41	50	Fail	Confirmed
GB109055037060	Bach Howey Bk - source to conf R Wye	50016	15	22	29	36	Fail	Confirmed
GB109055036990	Scithwen Bk - source to conf R Wye	50017	15	21	19	21	Fail	Confirmed
GB109055037115	Wye - conf R Irfon to Scithwen Bk	50440	16	29	23	29	Fail	Confirmed

Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	N Samples	Annual Mean ( $\mu\text{g l}^{-1}$ )	Growing Season Mean ( $\mu\text{g l}^{-1}$ )	Assessment	Status
GB109055036970	Triffrwd - source to Dulas	50811	15	14	70	40	Fail	Confirmed
GB109055036920	Dulas Bk - source to conf Afon Llynfi	50094	25	9	74	-	Fail	Confirmed
GB109055036950	Afon Llynfi - conf Dulas Bk to conf R Wye	50098	25	26	77	90	Fail	Confirmed
GB109055037116	Wye - Scithwen Bk to Bredwardine Br (Wales)	50018 <sup>1</sup>	30	34	<21 <sup>2</sup>	<23	Pass	-
GB109055037111	Wye - conf Walford Bk to Bigsweir Br	50032	39	34	52	55	Fail	Confirmed

Table 1. Compliance for the River Wye SAC.

Waterbody ID	Waterbody Name	Sample Point	Target ( $\mu\text{g l}^{-1}$ )	Median ( $\mu\text{g l}^{-1}$ )	Annual Mean ( $\mu\text{g l}^{-1}$ )	Outlier ( $\mu\text{g l}^{-1}$ )	Mean Excluding Outlier ( $\mu\text{g l}^{-1}$ )	BOD / N / NH <sub>3</sub> confirm outlier	Failure Type
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<sup>1</sup> This is a cross-border unit.

<sup>2</sup> Most of the data for this sample point was collected using the 'Low' method. The mean concentration for 2019, when sampling switched to 'Very Low' was 9  $\mu\text{g l}^{-1}$ .

GB109055042250	Wye - conf Afon Elan to conf R Ithon	50010	10	29	37	-	-	-	Consistent
GB109055042170	Gwenlas Bk - source to conf R Ithon	51353	10	23	24	57	-	-	Consistent
GB109055042150	Ithon - conf Llaethdy Bk to conf Gwenlas Bk	50086	10	10	13	58	-	-	Consistent
GB109055042130	Camddwr Bk - source to conf R Ithon	50820	13	12	20	95	15	-	Episodic
GB109055042140	Ithon - conf Gwenlas Bk to conf Camddwr Bk	50086	10	10	13	58	-	-	Consistent
GB109055041960	Mithil Bk - source to conf R Ithon	50825	15	22	40	188	-	-	Consistent
GB109055041900	Howey Bk - source to conf R Ithon	50089	15	24	25	77	-	-	Consistent
GB109055042080	Nantmel Dulas - source to conf R Ithon	50821	10	10	21	112	-	-	Consistent
GB109055042070	Clywedog Bk - conf Bachell Bk to conf R Ithon	50087	10	7	15	100	12	-	Episodic
GB109055041870	Afon Gwesyn - source to conf R Irfon	57103	10	6	12	61	9	>Q3 (N)	Episodic
GB109055036680	Cledan - source to conf R Irfon	50818	10	12	18	152	-	-	Consistent
GB109055041880	Afon Cammarch - source to conf R Irfon	50078	10	8	46	747	19	-	Episodic
GB109055041890	Garth Dulas - source to conf R Irfon	50079	10	5	15	239	6	>Q3 (BOD, NH <sub>3</sub> )	Episodic

GB109055042190	Chwefru - source to conf R Irfon	50081	10	17	22	-	-	-	Consistent
GB109055037090	Irfon - conf Cledan to conf R Wye	50080	10	7	24	355	12	-	Episodic
GB109055037160	Builth Dulas Bk - source to conf R Wye	50501	15	15	16	35	15	-	Episodic
GB109055037050	Duhonw - source to conf R Wye	50012	15	14	15	70	13	>Q3 (All)	Episodic
GB109055042200	Edw - source to conf Colwyn Bk	51355	15	15	30	369	17	-	Episodic
GB109055042370	Camnant Brook - source to confluence R Edw	50510	15	16	24	183	-	-	Consistent
GB109055037080	Edw - conf Clas Bk to conf R Wye	51305	15	14	20	145	15	Outlier (BOD, NH3); Q3 (N)	Episodic
GB109055037030	Clettwr Bk - source to conf R Wye	50015	15	24	41	172	-	-	Consistent
GB109055037060	Bach Howey Bk - source to conf R Wye	50016	15	21	29	99	-	-	Consistent
GB109055036990	Scithwen Bk - source to conf R Wye	50017	15	17	19	46	-	-	Consistent
GB109055037115	Wye - conf R Irfon to Scithwen Bk	50440	16	10	23	223	15	Outlier (BOD, NH3); Q3 (N)	Episodic
GB109055036970	Triffrwd - source to Dulas	50811	15	36	70	115	-	-	Consistent
GB109055036920	Dulas Bk - source to conf Afon Llynfi	50094	25	46	74	241	-	-	Consistent

GB109055036950	Afon Llynfi - conf Dulas Bk to conf R Wye	50098	25	64	77	193	-	-	Consistent
GB109055037111	Wye - conf Walford Bk to Bigsweir Br	50032	39	45	52	-	-	-	Consistent

Table 2. Sensitivity Testing for Failing Water Bodies on the River Wye SAC.