



Powys Replacement Local Development Plan (LDP) (2022 – 2037)

Phosphate Position Statement

July 2024

This document forms part of Powys' Infrastructure Plan which has been prepared as part of the Replacement Local Development Plan (2022 – 2037)

Prepared by Powys County Council in partnership with Berrys.

BERRYS



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1) Introduction

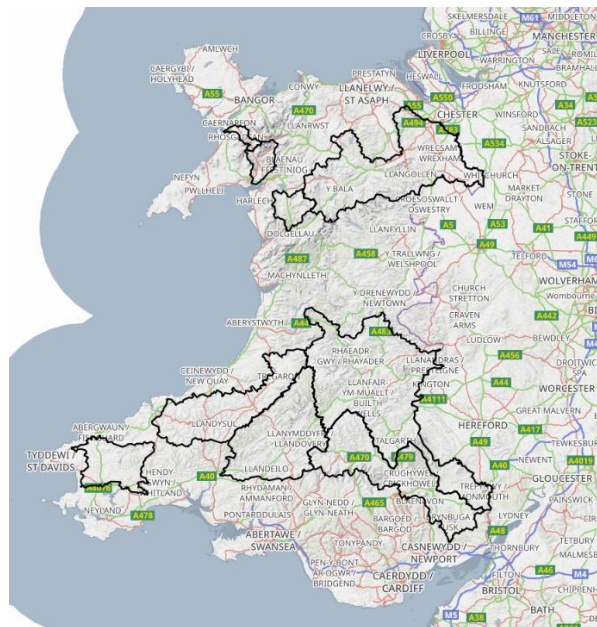
This document has been produced by Powys County Council, as the Local Planning Authority (LPA) for Powys to support the preparation of the Powys Replacement LDP. The Replacement LDP excludes the area of Powys within Bannau Brycheiniog National Park (BBNP). The purpose of the document is to provide a non-technical summary on the effect of the requirement for development to achieve nutrient neutrality with regards to phosphorus within Riverine Special Areas of Conservation (SAC) which have exceeded their critical levels for phosphorus.

This document is supplementary to the Powys' Replacement LDP Infrastructure Plan (supporting evidence) and will be updated independently of the Infrastructure Plan when deemed appropriate by the LPA in response to any changes to guidance.

This document has been produced with reference to the latest guidance produced by Natural Resources Wales (NRW)¹.

Figure 1 below shows an overview of SAC river catchment areas across Wales. The Powys planning area predominantly intercepts the river Wye and Usk SAC catchments.

Figure 1: Map of Welsh Special Area of Conservation (SAC) river catchments



Source: [DataMapWales](https://www.datamapwales.com/)

¹ [Advice to planning authorities for planning applications affecting nutrient sensitive river Special Areas of Conservation](https://www.naturalresources.wales/publications/Advice-to-planning-authorities-for-planning-applications-affecting-nutrient-sensitive-river-Special-Areas-of-Conservation)

Following a high-profile European Court case known as the “Dutch Nitrogen case”, it became clear that greater action was required to reduce nutrient levels within riverine SAC catchments. In 2016, the Joint Nature Conservation Committee (JNCC) updated and tightened the target levels for phosphorus levels in SAC rivers. A compliance assessment against these targets was undertaken by NRW² which found that 61% of the waterbodies that make up the nine river SAC catchments across Wales, failed to comply with the phosphorus target levels set by the JNCC.

NRW issued planning guidance in January 2021 to local planning authorities in relation to this. NRW’s guidance states that development proposals are only granted planning permission if they would result in a neutral impact or improvement in phosphorus levels in river SACs (i.e. nutrient neutrality or betterment).

The guidance from NRW also impacts on the preparation of development plans. When preparing a Local Development Plan, or a determining a planning application, the LPA as the competent authority under the Habitat Regulations, 2017 (as amended), is required to determine whether the policies and proposals in the plan are likely to have a significant effect on the integrity of any National Site Network (also known as European designated nature conservation sites, of which SACs form a part of). As the competent authority, the LPA must also consider whether there will be any in-combination effect of any plans or projects. For any proposals which have the potential, alone or in-combination, to have an impact on a SAC, LPAs are required to undertake a Habitat Regulations Assessments (HRA) and to only approve plans or development if there is no likelihood of a significant effect on any National Site Network.

Powys County Council has been working collaboratively with NRW, Welsh Government, Dŵr Cymru Welsh Water (DCWW) and other Councils across Wales where development is similarly affected by river SAC catchments and nutrient issues, as well as a wide range of stakeholders. It is the aim of Powys County Council to work proactively to find and implement solutions which will improve the water quality of its river SACs, to ensure that phosphorus levels are brought within their target compliance levels. Powys County Council is also working to find solutions to allow new developments to come forward, provided it can be evidenced with certainty that any new development would be phosphorus neutral (nutrient neutral).

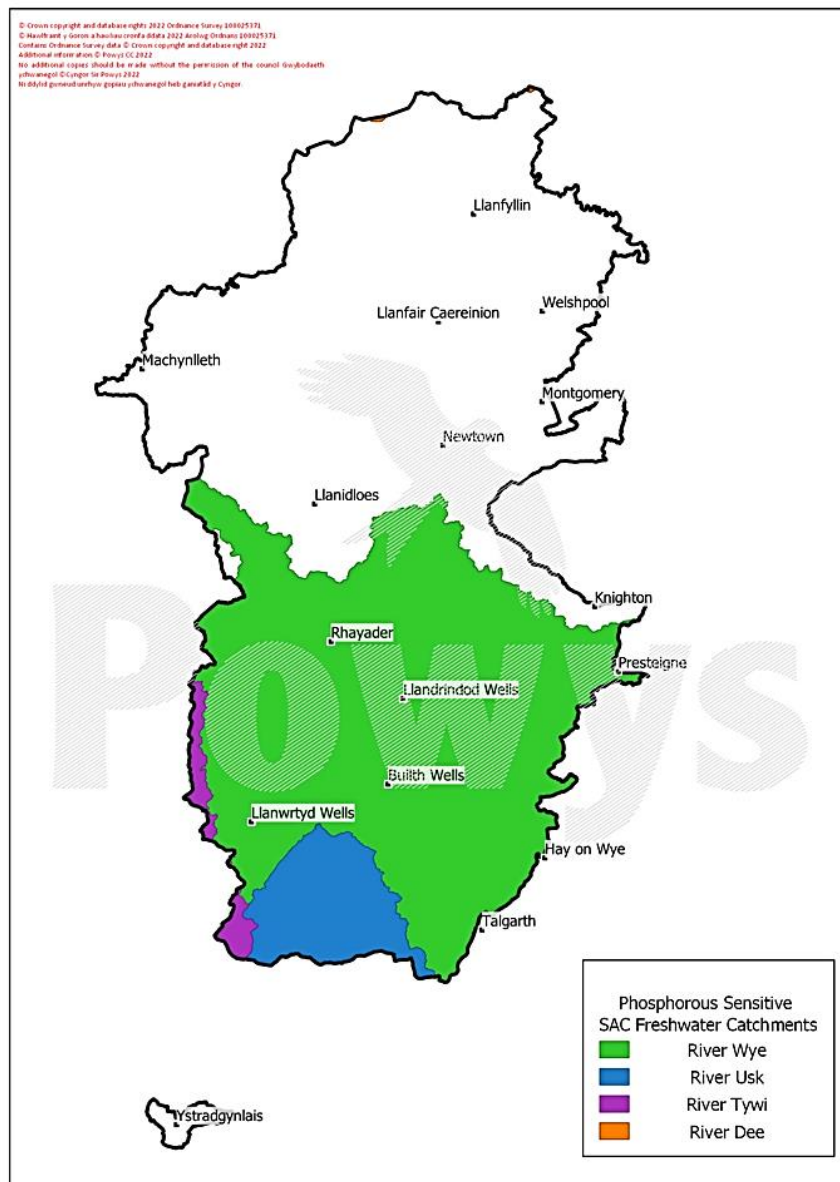
² [Compliance Assessment of Welsh River SACs Against Phosphorus Targets](#)

2) Powys Context

There are nine riverine SACs in Wales, four of which have catchment areas within the Powys LPA area. These are the catchments of the Wye, Usk, Tywi and Dee, although neither of the Tywi or Dee catchments contain settlements in Powys. These SAC river ecosystems support some of Wales’ rarest and most important wildlife including Atlantic salmon, freshwater pearl mussel and white-clawed crayfish.

In total the riverine SAC catchments in Wales cover an area of land amounting to 8,161.19km². In the Powys LPA area, 2,047km² is affected by this issue which amounts to 47.1% of the Powys LDP area, as shown in figure 2

Figure 2: Map of the riverine SAC catchments within the Powys LPA area



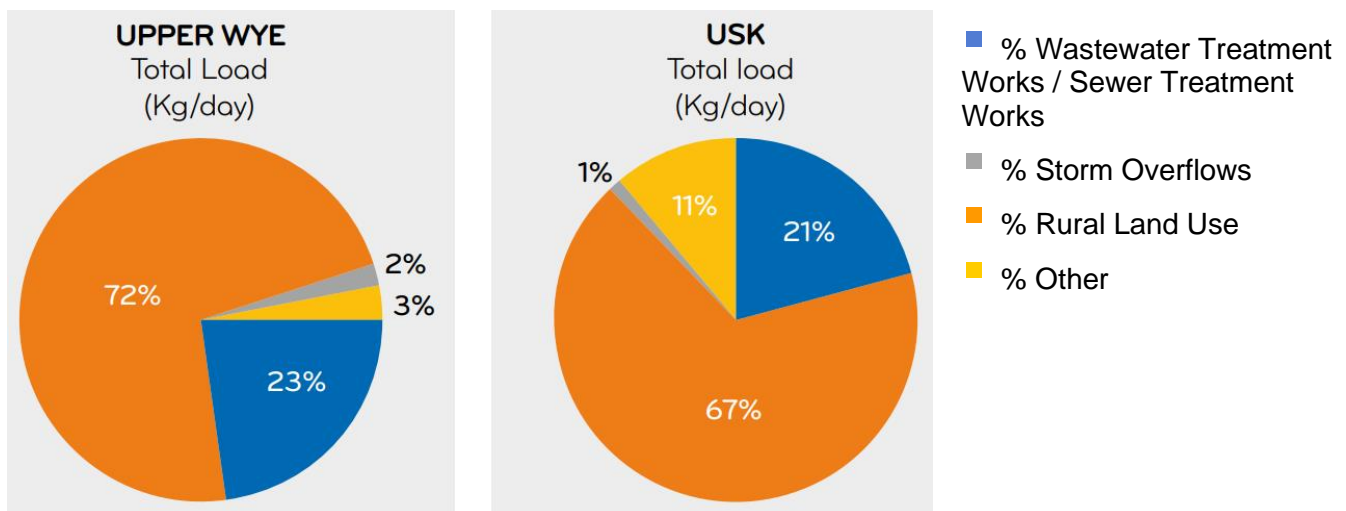
DCWW in conjunction with NRW has carried out source apportionment-GIS (SAGIS) modelling on both the Usk and Upper Wye river SAC catchments to determine the contribution of foul water discharges from wastewater treatment works (WwTWs).

DCWW found that its wastewater treatment works contributed 21% of the total phosphorus in the River Usk SAC catchment, with Combined Storm Overflows (CSOs) responsible for 1%.

For the Upper Wye SAC catchment, the modelling found that wastewater treatment works contributed 23% of the total phosphorus, with Combined Storm Overflows (CSOs) responsible for 2%.

The modelling indicated that rural land uses contributed 67% and 72% of the total phosphorus for the rivers Usk and Wye respectively and the results of the SAGIS modelling are shown in Figure 3.

Figure 3: Sources of Phosphorus Discharges within the Upper Wye and Usk catchments



(Source: Dŵr Cymru Welsh Water³, May 2023, Page 9)

³ [Manifesto For Rivers - E May 23](#)

3) What Produces Phosphorus And Why Are They A Cause for Concern?

Phosphorus is naturally present in river environments but at very low levels. Human activities such as agriculture and the discharge of treated wastewater can elevate levels of phosphorus in river flows. Some new developments such as housing or agricultural enterprises can lead to increased amounts of phosphorus entering the river environment from the additional wastewater that they generate or from the poor management of manures and slurries.

High concentrations of phosphorus lead to the process of nutrient enrichment known as eutrophication which can alter the balance of plant species in rivers causing significant ecological damage. In high concentrations, phosphorus causes rapid increased plant growth, and algal blooms, which reduce the oxygen content in water. Reduced oxygen levels in watercourses makes it difficult for aquatic insects and fish to survive. Reduced species in the habitat results in a reduced food source for species in the immediate and wider ecosystem. The imbalance in the natural cycle caused by this can result in significant ecological harm.

4) What is Nutrient Neutrality?

Nutrient neutrality is an approach for managing new development and water discharge permit proposals to prevent them from causing a net increase in nutrients for the duration or lifetime of the permitted development or activity. Nutrient neutrality is applicable in Wales to developments with phosphorus discharges into river SACs⁴.

In river SAC catchments, it is possible that new developments can be permitted or allocated in an LDP where it can be demonstrated that it would not lead to further deterioration of water quality in the river SAC water bodies and that it would not undermine the ability of the river SAC to meet its conservation objectives.

This may be achieved if:

- developments are not a source of phosphorus; or
- developments are a source of phosphorus but there is no pathway for it to enter the river SAC river environment; or

⁴ [Natural Resources Wales / Principles of nutrient neutrality in relation to development or water discharge permit proposals](#)

- measures associated with a given development are put in place so that phosphorus neutrality can be achieved, and that development does not lead to a net increase in phosphorus entering the SAC river environment. Mitigation measures may also result in an overall reduction in phosphorous discharge from a site, which is referred to as betterment.

5) Calculating Nutrient Loads

With regard to planning applications, at present it is the responsibility of applicants to provide supporting evidence with scientific certainty that a development proposal is phosphorus neutral or can provide betterment. This evidence is scrutinised by the LPA in its role as the competent authority under the Habitat Regulations, 2017 (as amended) to determine the likely significant effect of a development proposal and whether planning permission may be granted.

In order to ensure that a uniform approach is taken across Wales, Welsh Government has developed a phosphorus Nutrient Neutrality Budget Calculator. This calculator will take into account catchment-level data and local features to be used within the planning process to aid decisions in river SAC catchments affected by nutrient neutrality. When released, the calculator will be available to access via the Council's website⁵.

Nutrient Neutrality Budget Calculators have been used successfully in other LPAs including Carmarthenshire, Herefordshire and Somerset. These calculators use environmental permit details from waste-water treatment works to establish what level of phosphorus removal is available from treatment works, Farmscoper data on the phosphorus discharge from different land uses, and nationally accepted figures for phosphorus discharge from private sewage treatment systems.

The output from Nutrient Neutrality Budget Calculators can be used to demonstrate phosphorus nutrient neutrality or betterment, to calculate the annual phosphorus load to be mitigated for on-site mitigation or where phosphorus credits are offered, to determine the amount required.

⁵ [Powys Website: River Special Areas of Conservation](#)

6) Phosphate Credits

There is currently no phosphate trading or credits scheme in place across Wales or within Powys which can be used to offset phosphate generated by a development proposal. Project specific mitigation is however possible.

7) Development Connecting To The Mains Sewer Network

Existing settlements within the Powys LPA area which are served by WwTW with phosphorus reduction equipment are:

- Presteigne (Norton) – River Wye SAC Catchment.
- Builth Wells – River Wye SAC Catchment.
- Llandrindod Wells – River Wye SAC Catchment.

The following settlements have phosphorus reduction schemes planned for completion as part of Asset Management Plan (AMP) 7 (2020 – 2025):

- Rhayader – due for completion March 2025. River Wye SAC Catchment.
- Clyro – due for completion March 2025. River Wye SAC Catchment.
- (Note: Brecon due for completion in 2024, BBNP LPA area. River Usk SAC catchment)

NRW is in the process of completing a review of the environmental permits for all WwTWs within Wales' river SAC catchments that have a dry flow discharge rate of 20m³ / day. NRW aimed to complete the review by the end of July 2024 and each of these larger WwTWs will be subject to a permit with a defined total phosphorus level. NRW has a website where it provides the most up to date environmental permit review information (Phosphorus only)⁶.

The WwTW for Hay on Wye is located in England and serves settlements located in the LPA areas of Herefordshire, BBNP and Powys. As the WwTW is located in England, it is subject to Natural England's guidance on nutrient neutrality which differs to NRW's guidance.

⁶ [Phosphorus limits on environmental permits for waste water treatment work discharges \(NRW\)](#)

Natural England has not introduced nutrient neutrality restrictions that affect the Hay on Wye WwTW.

As a consequence of the review of Environmental Permits by NRW under the fair share principle, capacity has been identified at some WwTWs to enable further connections by development. For example, if the actual phosphorus discharge flow is 0.75mg/l from the WwTWs and the revised permit limit is 1mg/l, this would create a capacity of 0.25mg/l.

NRW has provided the following advice when it comes to new connections to WwTW with a reviewed environmental permit.

“Where a wastewater treatment works permit has been reviewed against the revised water quality targets and, in some cases, varied accordingly, new developments connecting to the associated public sewer should still be subject to an HRA by the Planning Authority. While the nutrient impacts of new connections should be considered on a case-by-case basis, it is likely that a conclusion of no likely significant effect could be drawn in the context of water quality impacts where the sewerage undertaker confirms the following apply:

- *There is capacity to treat additional wastewater from the proposed development within revised environmental permit limits (meaning both nutrient limits with immediate effective dates and for some permits, tighter nutrient limits with future effective dates), and*
- *The WwTW is currently operating in compliance with permit conditions or will be in advance of new connections being made, where permit conditions include those for flow, final effluent standards and flow passed forward (for works with storm tanks or direct storm overflow).⁷”*

Powys LPA has used “grampian conditions” where DCWW has proposed investments in its WwTW over the course of its AMP7 programme.

In the event that a proposal seeks to connect to a WwTWs which does not benefit from an Environmental Permit with a phosphorus limit, and it is uncertain when improvements to the WwTW will be carried out or completed, the LPA’s HRA cannot conclude no likely significant effect or no adverse effect on site integrity. In this circumstance the LPA cannot approve any proposals which may result in an increased level of phosphorous into the mains sewer network and therefore the river SAC catchment. This restriction applies to all forms of

⁷ [Advice to planning authorities for planning applications affecting nutrient sensitive river Special Areas of Conservation](#) - Version 4 published 28/06/2024

development and all parts of the planning application process, including but not limited to full planning applications, outline planning applications, reserved matters applications, and discharge of condition applications.

8) Planned Improvements To Water Treatment Works

Water companies as statutory sewerage undertakers are responsible for operating, maintaining, improving, and extending the system of public sewers, water mains and associated apparatus together with treatment works and pumping stations and have corresponding statutory duties to ensure effectual drainage.

DCWW is the statutory sewerage undertaker responsible for the maintenance of sewerage infrastructure in the Rivers Wye and Usk SAC catchments of the Powys Replacement LDP area.

Improvements to this infrastructure are set out as part of the water company’s AMP. AMP7 sets out the improvement plans for the period 2020-2025. Further improvements will be included in for AMP8 for the period 2025-2030 when published. A summary of the AMP7 improvements relevant to the Powys LPA area is included within Figure 5.

Figure 5: Summary of AMP7 (2020-25) improvements to Wastewater Treatment Works operated by Dŵr Cymru Welsh Water

Wastewater Treatment Works	Is phosphorus reduction technology already installed at WwTW	Has a phosphorus permit been granted?	Are there any planned phosphorus reduction technology upgrades planned as part of AMP7 (2020-2025)?
Brecon (BBNP)	No	Yes – with tightened P-level by Dec 2025	Due for completion in 2024
Builth Wells	Yes	Yes – with tightened P-level by March 2025	Phosphorus reduction scheme completed
Clyro	No	Yes – due to be in place May 2025	Due for completion by March 2025
Llandrindod Wells	Yes	Yes – with tightened P-level by March 2025	Phosphorus reduction scheme completed

Presteigne (including Norton)	Yes	Yes	Phosphorus reduction scheme completed.
Rhayader	No	Yes – with tightened P-level by March 2025	Due for completion by March 2025.

9) Development Utilising Private Treatment Systems

Proposals utilising new private sewage treatment systems

With regard to Private Treatment Systems, the Welsh Government Circular 008/2018 advises:

“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. This should be done in consultation with the Sewerage Undertaker of the area.⁸”

“If, by taking into account the cost and/or practicability, it can be shown to the satisfaction of the planning authority a connection to a public sewer is not feasible, a package sewage treatment plant should be considered.⁹”

“Applications for planning permission should be supported by a full assessment of the proposed use of septic tanks, to confirm the adverse effects by reference to the factors in paragraph 2.6 below will not arise. This assessment should focus on the likely effects on the environment, amenity and public health and, in particular, it should include a thorough examination of the impact of disposal of the final effluent by soakage into the ground¹⁰”.

The adverse factors found in paragraph 2.6, which relates to phosphorus are stated below (full list can be found within the Circular 008/2018 – see footnotes).

“2.6 The assessment of private drainage proposals should include full and detailed consideration of the following factors:

D) Damage to controlled waters: Any evidence, including reference to information on site hydrology and geology and to the Environmental Permitting Regulations, which indicates the proposed arrangements may result in the entry of any poisonous, noxious or polluting matter or any solid waste matter into any controlled waters, including ground waters.

⁸ [Welsh Government Circular 008/2018](#) Pg 5

⁹ [Welsh Government Circular 008/2018](#) Pg 5

¹⁰ [Welsh Government Circular 008/2018](#) Pg 5

E) Damage to the environment and amenity: Any evidence the proposed arrangements are likely to lead to raw or partially treated sewage entering into receiving waters or onto land, to such an extent as to damage or undermine the environment and amenity value of the locality or any other area, particularly if it is of special significance such as a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) or public open space¹¹.”

As per NRW’s planning guidance, discharges to ground are unlikely to have a significant effect if all of the following are met:

- Discharges to ground are less than 2m³/day.
- Built to the relevant British Standard (BS 6297:2007+A1:2008).
- The drainage field is located more than 40m away from surface water, 50m from a SAC boundary and 50m from any other known discharges to ground.

Larger discharges to ground will need to be subject to an Appropriate Assessment along with other forms of development involving private sewage treatment systems not addressed above.

Proposals utilising existing private sewage treatment systems

The LPA follows the latest advice issued by NRW with regard to the use of existing private treatment systems for new development. Any proposals which do not comply with this advice can only be granted planning consent if it can be evidenced with scientific certainty that there will be no likely significant effect or no adverse effect on any SAC.

Version 4 of SAC planning guidance issued by NRW in June 2024 states:

“Development proposals resulting in additional wastewater being discharged to an existing private treatment system are not likely to have a significant effect if:

- *the existing discharge is to ground and*
- *the drainage field is located more than 40m from any surface water feature such as a river, stream, ditch or drain and located more than 50m from a SAC boundary and*
- *the design of the existing private sewage system (including the drainage field) has the capacity to effectively treat and discharge the additional wastewater and*

¹¹ [Welsh Government Circular 008/2018](#) Pg 6

- *increases in effluent discharge to ground can be made where the discharge remains eligible for an existing exemption under the Environmental Permitting Regulations or can operate in compliance with conditions of an extant environmental permit.*

Where increases in wastewater to an existing private sewage treatment system are being proposed in association with a development, Planning Authorities are advised to obtain a detailed design of the private drainage system (including an assessment of ground conditions in the drainage field) to demonstrate that it can accommodate increased flow and continue to operate effectively.¹²

10) Conclusion and Recommendations for the Powys Replacement LDP (2022-2037)

- 1) The Replacement LDP must be prepared in line with NRW's planning guidance. This is stated below.

“All LDPs should be screened to determine whether any policies are likely to have a significant effect on a river SAC.

Policies can be screened out as not likely to have a significant effect in relation to increased nutrient loading if:

- *the associated developments or activities are not a source of nutrients or there are no pathways for additional nutrients to enter the river environment or*
- *Allocations requiring connection to a public sewer can meet the screening criteria set out in the section *What does this mean for development proposals involving connection to public wastewater treatment works?**

Any LDP policies relating to schemes for private sewage treatment systems should ensure no adverse effects on the integrity of any river SACs where:

- *discharges are direct to surface waters; or*
- *discharges are to ground and do not meet the screening criteria set out in this advice.*

Allocations for developments with proposed connection to a mains wastewater treatment works that do not meet the screening criteria and have the potential to increase nutrient

¹² [Advice to planning authorities for planning applications affecting nutrient sensitive river Special Areas of Conservation](#) – Version 4 published 28/06/2024

loading, should be subject to an Appropriate Assessment in accordance with advice set out earlier in this document.¹³

- 2) Within river SAC catchments, the Powys Replacement LDP should plan future development in accordance with the following hierarchy (from highest to lowest priority):
- Settlements with a WwTW with phosphorus reduction equipment in place or planned (as part of an AMP), with capacity demonstrated.
 - Settlements with a WwTW with a reviewed permit which can demonstrate capacity for phosphorus.
 - Rural areas and smaller settlements not reviewed as part of NRW’s environmental permit review process, only where proposals can demonstrate nutrient neutrality (including mitigation where appropriate).

All of the above should be in accordance with relevant NRW advice and the Welsh Government Circular 008/2018.

- 3) The Replacement LDP will be subject to a HRA as described in the quote from the Development Plans Manual below.

“The plan making authority (LPA as the identified ‘competent authority’ for a LDP/LDPL, the SPP for a SDP) must undertake a Habitats Regulation Assessment (HRA) of their development plan to determine whether the policies and proposals in the plan are likely to have significant effects on the integrity of any European designated site¹⁴”

“If an Appropriate Assessment (AA) is required, this should be done alongside the plan making process to inform the choice of alternatives and mitigation measure. It should be made available during the deposit consultation and must be updated at any subsequent stages if changes are proposed as part of FCs or the examination process (MACs) to confirm its continuing relevance and accuracy. It is important the competent authority maintains a thorough audit trail throughout all of the stages to ensure transparency of decision making.¹⁵”

¹³ [Advice to planning authorities for planning applications affecting nutrient sensitive river Special Areas of Conservation](#) – Version 4 published 28/06/2024

¹⁴ [Development Plans Manual - Edition 3](#) – Pg 82

¹⁵ [Development Plans Manual - Edition 3](#) – Pg 83