



**Powys Replacement
Local Development Plan
(LDP)
2022-2037**

**Green
Infrastructure
Assessment**

August 2024



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1. Introduction

This background paper has been prepared to support the development of the Powys Replacement Local Development Plan (LDP) 2022-2037. The purpose of the paper is to review the context and available evidence and present a Green Infrastructure Assessment for Powys.

This green infrastructure assessment (GIA) is a supporting document for the Replacement LDP. Green infrastructure and its outputs will play an important role in achieving the outcomes of the Replacement LDP, from house building to active travel considerations and all spaces in between. It will also form a key part of the preferred strategy.

The following sections summarises the relevant national, regional and local policy context which needs to be considered and taken account of when formulating the Replacement LDP and makes recommendations to support green infrastructure in developments.

1.1. What is Green Infrastructure?

Planning Policy Wales (PPW) describes Green Infrastructure as:

“Green infrastructure is the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places.”¹

Green infrastructure functions on a variety of different scales and components²:

- At the landscape scale, green infrastructure can encumber entire ecosystems. These can include wetlands, peatlands and mountain ranges. Connected networks of mosaic networks as well as grasslands can also be included in this classification.
- At the local scale, features like parks, fields, ponds, cemeteries and public rights of ways can contribute to a local areas green infrastructure. They may be designed or managed to serve a specific purpose such as a sustainable drainage system.
- At the smallest scale, individual urban interventions can contribute to green infrastructure. Examples of these include street trees, hedgerows, roadside verges and green roofs and walls.

1.2. Why is Green Infrastructure Important?

Green infrastructure plays a vital role in management of natural resources. Green infrastructure maintains, protects and enhances biodiversity and the resilience of ecosystems. This is done by improving diversity and connections between ecosystems and by generally improving the extent and condition of ecosystems. These improvements allow ecosystems to better resist, recover and adapt to various pressures. Development of green infrastructure can be an important way for local authorities to deliver Section 6 duties³ (Section 2.7).

¹ [Planning Policy Wales - Edition 12](#) – pg 135

² [Planning Policy Wales - Edition 12](#) – pg 135

³ [Planning Policy Wales - Edition 12](#) – pg 135

1.3. The Benefits of Green Infrastructure

Green infrastructure can provide benefits across social, economic, cultural and the environmental sector often simultaneously. Benefits from green infrastructure include flood management, water purification, improved air quality, reduced noise pollution, local climate moderation, climate change mitigation and food production. In urban areas, benefits include improved health and wellbeing (often associated with open space), clean air and improved tranquillity. Green infrastructure can help create a sense of place and contribute to local distinctiveness which may, in turn, provide economic benefits and social and community opportunities⁴.

1.4. Green Infrastructure and Local Planning Authorities

The planning system must protect and enable the creation of green infrastructure assets. This will contribute to societies social and economic objectives. The planning system should consider how it can compliment new and existing green infrastructure management within urban areas as well as how it can contribute to wider land management and nature recovery in rural areas⁵.

The GIA will highlight the important role green infrastructure can play in achieving and meeting many national and local policies. Following will be an assessment of green infrastructure assets present in the Powys County Council (PCC) planning area as well as opportunity areas suitable for increasing resilience for ecosystems. The GIA will be supported by a variety of maps utilising a range of information and datasets which will identify important green and blue features found in Powys.

Finally, there will be a list of recommendations for the Replacement LDP.

⁴ [Planning Policy Wales - Edition 12](#) – pg 135

⁵ [Planning Policy Wales - Edition 12](#) – pg 135-136

2. National Context

2.1. Planning Policy Wales – Edition 12

PPW⁶ sets out the land use planning policies of the Welsh Government and is supported by a series of Technical Advice Notes (TANs), Welsh Government Circulars and policy clarification letters. PPW's primary objective is to:

“ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales⁷”.

PPW, alongside Future Wales – the National Plan 2040 (see section 2.2 below) sets out how the planning system at the national, regional and local level can help deliver Strategic and LDPs.

A key aspect of PPW is the concept of sustainable development. This is outlined as the process of improving the economic, social, environmental and cultural well-being of Wales by taking actions which simultaneously meet the needs faced at present, without compromising future generations ability to meet their own needs.

PPW highlights the national sustainable placemaking outcomes, of which there are five:

- *“Maximising Environmental Protection and Limiting Environmental Impact*
- *Facilitating Accessible and Healthy Environments*
- *Making Best Use of Resources*
- *Growing Our Economy in a Sustainable Manner*
- *Creating and Sustaining Communities⁸”*

Integrated green infrastructure, alongside outcomes like clean air, reductions in pollution, climate change resilience as well as biodiversity and ecosystem resilience, can come together to achieve the key planning principle – *“maximising environmental protection and limit environmental impact⁹”*.

Green infrastructure such as SUDS, street trees and verges if well integrated, can create a pleasant environment which can provide a myriad of other benefits. These include, pollutant filtering, urban cooling, water management and habitat creation.

The Distinctive and Natural Places theme is where the majority of green infrastructure guidance lies. This theme covers the environmental and cultural components of placemaking as well as complementing the Active and Social and the Productive and Enterprising themes. These three themes also come together to contribute towards the national sustainable placemaking outcomes.

When development is proposed, it must be taken forward in a fully integrated way ensuring it is woven into the surrounding place and context alongside nature. Common issues should be considered and accommodated early on during the plan-making process and green infrastructure benefits should be secured. Proposals should work with nature and demonstrate

⁶ [Planning Policy Wales - Edition 12](#)

⁷ [Planning Policy Wales - Edition 12](#) – pg 4

⁸ [Planning Policy Wales - Edition 12](#) – pg 19

⁹ [Planning Policy Wales - Edition 12](#) – pg 17

how design, siting, scale density and other key considerations have been informed by biodiversity and ecosystem resilience considerations.

Outcomes under Distinctive and Natural Places will be based on sustainable characteristics and creating places which:

- The role of landscapes, the historic environment, habitats and biodiversity, coastal characteristics and rural or urban environments play in Distinctive and Natural places are identified, understood, valued, protected, maintained and enhanced.
- Further fragmentation and isolation of habitats and species is avoided. Wildlife corridors and stepping stones between wider ecological networks are maintained and enhanced.
- Fully consider designated sites landscape and biodiversity or geodiversity importance. Protecting and enhancing special characteristics and features as a way of improving resilience of ecosystems.
- Have resulted in development proposals which are directly shaped by retaining and enhancing existing habitats and species.
- Take opportunities to improve resilience of ecosystems and address issues such as building on floodplains, diffuse pollution, soil compaction and sealing, ensuring the protection of peat resources and improving approaches to coastal flood defence in urban areas and coastal margins.
- Take opportunities to improve health and wellbeing by reducing average levels of airborne pollution, protect appropriate soundscapes, create areas of tranquillity, secure sustainable drainage systems, ensure water sensitive design, address soil carbon management and secure access to informal spaces for recreation. This will also help adapt to the challenges of climate change (flood risk and increased temperatures).
- Take opportunities to improve resilience of ecosystems through developing green infrastructure.
- Support developments which both positively contribute to an area and address environmental risk.

The development of green infrastructure is an important way for local authorities to deliver Section 6 duties.

2.2. Future Wales – The National Plan 2040

Future Wales¹⁰ is the national development framework for Wales, this will set out the overall direction for development up to 2040. This will address key national priorities through the planning system. The focus is largely on sustainable development with achieving decarbonisation, climate-resilience, developing strong ecosystems and improving the health and well-being of our communities being key factors.

Future Wales has eight outcomes, all aid in achieving the overall ambitions found within Future Wales. The fifth outcome is “*A Wales where people live and work in towns and cities which are a focus and springboard for sustainable growth*”¹¹. Development plans will enable urban growth through a sustainable way, by investing in active transport, public transport, flood risk management and green infrastructure. This is to enable population and economic growth while reducing pollution and carbon consumption.

¹⁰ [Future Wales: The National Plan 2040](#)

¹¹ [Future Wales: The National Plan 2040](#) – pg55

Policy 2 (Shaping Urban Growth and Regeneration – Strategic Placemaking) under Future Wales’s spatial strategy highlights the importance of integrating green infrastructure into the urban environment. Green infrastructure supports ecosystem resilience, and nature-based solutions should play a role in strategic growth of the urban landscape. GIAs should ensure opportunities to fully integrate green infrastructure.

Policy 9 (Resilient Ecological Networks and Green Infrastructure) ensures the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure. Areas should be identified as “safeguarded” to highlight the important role these areas play in adaptation to climate change, habitat protection and/or creation, species protection and provide key ecosystem services. This also protects the sites from unduly compromised future development. Opportunities should also be identified where existing and potential green infrastructure could be maximised as part of placemaking. Nature-based solutions should form a key role in securing sustainable growth, ecological connectivity, social equality and well-being.

Future Wales recognises that strategic action will be necessary to safeguard ecological networks and secure biodiversity enhancements which result in a net benefit for nature. Effective action will be undertaken at both a regional and local level to reflect a variety of opportunities.

The expansion and connection of designated sites will increase the ability of species and ecosystems to adapt to the pressures of climate change. Protected sites shouldn’t act in isolation, instead functioning as nodes of largescale resilient and functional ecological networks and green infrastructure.

Strategic and Local Development Plans should take into account how the designated site will fit into the wider network of habitats and assess actions which will be taken to safeguard land which may be used to connect or enlarge protected sites.

Safeguarding, habitat creation and green infrastructure will all help to positively reverse biodiversity decline, address the climate emergency and provide social, cultural and economic benefits.

Opportunities for habitat protection, restoration and creation should be identified. Specific allocations may be identified as safeguard areas. These may take the form of buffer areas, stepping stones or green infrastructure in and around urban areas.

National scale ecological connectivity can be worked towards through local green infrastructure assets such as public rights of way, common land, parks, village greens and allotments.

Green infrastructure safeguarding may involve cooperation between local authorities where a site is across an administrative boundary.

2.3. The Nature Recovery Action Plan for Wales

The Nature Recovery Action Plan (NRAP)¹² was originally published in 2015, but has been refreshed for 2020-21. The plan addresses how the United Nations Environment Programme’s Convention on Biological Diversity’s Strategic Plan for Biodiversity and the associated Aichi Biodiversity Targets for 2011-20 will be implemented in Wales. It also acts as the National Biodiversity Strategy and Action Plan for Wales under Aichi target 17.

¹² [Nature Recovery Action Plan 2020-21](#)

In the refreshed plan, Part 2 covers the reviewing, re-organising of focus and prioritisation of the 2015 strategy to help counter the emerging ecological crisis. Examples of this include:

- Integration of the Natural Resources Policy.
- Better align the action plan with current context (latest evidence, priorities, Welsh Government objectives).
- Include a wider range of stakeholder actions on biodiversity and improve the structure of the delivery plan.
- Identify further action needed to address each of the themes and prioritise them.

The refresh identified a series of “game changers” which will be required to aid nature recovery. These include:

- Building resilient ecological networks for safeguarding species and habitats.
- Address both the root and symptoms of biodiversity loss.
- Understand nature’s role in our lives, livelihoods and well-being.
- Improve evidence and monitoring.
- Recognise and value biodiversity in accounting and decision making.
- Demonstrate the value placed on biodiversity through governance, and support for skills and capacity.

To address these “game changers”, NRAP objectives have been grouped together under five main themes. Included here is “maintaining and enhancing resilient ecological networks” where targeted place-based spatial actions will deliver benefits for biodiversity, species and habitats.

Biodiversity delivery gaps and urgent short-term actions were also identified during the refresh. Some key findings here include:

- The nature emergency and its alignment with the climate emergency, and how nature-based solutions are key to address these issues.
- The Sustainable Farming Scheme should help to address agri-environmental measures.
- To create mosaics across Wales and identify “core resilience areas”. Area statements can provide a baseline for this.
- As the heart of resilient ecological networks, protected site restoration is vital to reversing the decline in biodiversity.

2.4. 30 by 30

The Welsh Government have committed to protect 30% of the land and sea for nature by 2030. At present Welsh Government have not confirmed what will be included as part of the 30%.

The Wales Environmental Link (WEL) suggests areas contributing towards 30x30 should be “*protected in the long term and be well managed, and in good or recovering condition*”¹³ and “*that the target is applied as 30% of land and 30% of sea rather than the two being combined*”¹⁴.

For Powys, which has very little coastal area, will therefore have to focus on the land portion of the 30x30 target. WEL recommend the following land areas to be included for the 30x30 target¹⁵:

¹³ [30 by 30: Land and sea for nature’s recovery in Wales - Wales Environment Link](#) pg 1

¹⁴ [30 by 30: Land and sea for nature’s recovery in Wales - Wales Environment Link](#) pg 1

¹⁵ [30 by 30: Land and sea for nature’s recovery in Wales - Wales Environment Link](#) pg 3-6

1. Areas with strict statutory protection on land. (SSSI designation minimum).
2. Reformed landscape designations on land. (Areas of Outstanding Natural Beauty and National Parks).
3. Other sites or areas protected and managed for nature on land. (Local Wildlife Sites, National Nature Reserves, Regionally Important Geological Sites, for example).

2.5. Welsh National Marine Plan

The Welsh National Marine Plan¹⁶ lays out a long term vision for sustainable development of the sea. The plan looks to shape the sea to help support many overarching objectives; economic, social, cultural and environmental.

The vision for Welsh seas is as follows: “*Welsh seas are clean, healthy, safe, productive and biologically diverse*¹⁷”. This is further explained through a set of delivery plans.

- Through an ecosystem approach, sustainably manage natural resources. Seas are healthy and resilient while also being able to support a sustainable and thriving economy.
- Access and understanding of the marine environment will improve well-being and health.
- Through Blue Growth, create more jobs in coastal communities, helping them become more resilient and prosperous with a thriving culture.
- Through the use of low carbon technologies, the Welsh marine will make a strong contribution to energy security.

This plan supports the UK High Level Marine Objectives which are split into 6 themes: Overarching, achieving a sustainable marine economy, ensuring a strong and healthy and just society, living within environmental limits, promoting good governance and using sound science responsibly.

Whilst Powys has only a short section of coastline in the north-west of the County, green infrastructure assets such as rivers actively contribute to supporting the marine and estuarine environments around Wales.

2.6. Natural Resources Policy

The Natural Resources Policy¹⁸ is the result of the Environment (Wales) Act 2016. The focus of this policy is improving the way natural resources are managed. This is an important part of the delivery framework for the sustainable management of natural resources as seen in the Environment (Wales) Act 2016.

The focus of the Natural Resources Policy is to use policies to improve management of Wales’s natural resources and will also aid in achieving economic, environmental and well-being objectives.

The Natural Resources Policy help support a collection of international agreements as a result of the interconnections between biodiversity, climate change and sustainable development.

¹⁶ [Welsh National Marine Plan](#)

¹⁷ [Welsh National Marine Plan](#) – pg4

¹⁸ [Natural Resources Policy](#)

These agreements are the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity and the UN's 17 Sustainable Development Goals.

A number of important points have been identified, as follows:

- Opportunities Wales's natural resources provide:
 - Supporting successful and sustainable communities.
 - Promoting green growth and innovation to create sustainable jobs.
 - Supporting a more resource efficient economy.
 - Maintaining healthy, active and connected communities.
- Key challenges:
 - Improving ecosystem resilience.
 - Climate change and the decline in biological diversity.
 - The UK's Withdrawal from the EU.
- National priorities:
 - Delivering nature-based solutions.
 - Increasing renewable energy and resource efficiency.
 - Taking a place-based approach
- Delivery through Welsh Government policies:
 - These include (but are not limited to), agriculture and food, trees and woodlands, water and flooding, local environmental quality and community wellbeing, landscape and historic environment as well as fisheries and marine.

Green infrastructure is especially important within implementation of increased nature-based solutions found in and around urban areas, some examples being sustainable drainage schemes, swales and reedbeds.

Other examples of green infrastructure such as open spaces and parks, play an important role in improving people's health and wellbeing. These spaces can also be used for educational purposes by teaching children the importance of the environment.

In urban spaces, green infrastructure can counteract climatic extremes via natural shelter and shading as well as providing an important space for biodiversity to adapt to climate change. Green infrastructure can provide spaces for recreation, resilience against flooding and heat whilst also improving air quality through absorption of pollutants.

2.6. The Biodiversity and Resilience of Ecosystems Duty

As part of the Environment (Wales) Act 2016, the Biodiversity and Resilience of Ecosystems Duty¹⁹ (section 6 duty) was introduced. This states that public authorities

"must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems²⁰".

To help public bodies comply with the section 6 duties, it is advised to embed biodiversity and ecosystem considerations into business planning, policies, plans, programmes and projects. Guidance is available for this process.

¹⁹ [The Section 6 Biodiversity and Resilience of Ecosystems Duty: reporting guidance](#)

²⁰ [The Section 6 Biodiversity and Resilience of Ecosystems Duty: reporting guidance](#) – pg 2

2.7. Environment (Wales) Act 2016

The Environment (Wales) Act 2016²¹ promotes sustainable management of natural resources.

This includes (relevance to Green and Blue Infrastructure):

- Targets for reducing greenhouse gas emissions.
- Make provision about several and regulated fisheries for shellfish.
- Make provision about fees for marine licences.
- Establish the Flood and Coastal Erosion Committee.
- Make minor changes to the law about land drainage and byelaws.

Under Section 6 of Environment (Wales) Act 2016, public authorities must seek to maintain and enhance biodiversity, which in turn will promote ecosystem resilience.

When implementing biodiversity improvements, there are several aspects of the ecosystem which should be considered. These include:

- *“Diversity between and within ecosystems;*
- *The connections between and within ecosystems;*
- *The scale of ecosystems;*
- *The condition of ecosystems (including their structure and functioning);*
- *The adaptability of ecosystems²²”*

Under Section 8 of Environment (Wales) Act 2016, Natural Resources Wales (NRW) must prepare and publish a State of Natural Resources (SoNaR) report. This report must set out the following:

- *“NRW’s assessment of the extent to which sustainable management of natural resources is being achieved;*
- *NRW’s assessment of biodiversity (including the living organisms and types of habitat included in any list published under section 7);*
- *What NRW considers to be the main trends and factors that are affecting, and are likely to affect, the state of natural resources;*
- *Any aspects of the state of natural resources about which NRW considers that it does not have sufficient information to make an assessment.²³”*

2.8. The Greenspace Toolkit NRW

The Greenspace Toolkit²⁴ is *“A Practical Guide to Assessing the Resource and Implementing Local Standards for Accessible Natural Greenspace Provision in Welsh towns and cities²⁵.”*

The Greenspace Toolkit is designed for Councils to assess if there is a satisfactory amount of the right green space in the right place. The toolkit is primarily used in urban areas and will compliment a GIA, especially when used in combination with an Open Space Assessment (See

²¹ [Environment \(Wales\) Act 2016](#)

²² [Environment \(Wales\) Act 2016](#) – Section 6

²³ [Environment \(Wales\) Act 2016](#) – Section 8

²⁴ [The Greenspace Toolkit \(PDF\)](#)

²⁵ [The Greenspace Toolkit \(PDF\)](#) – Front Page

sections 3.8 and 4.1.2 as well as Appendix A: Green Infrastructure Assessment Maps under 2.0 Powys Open Space Assessment).

The accessible natural greenspace standards are as follows:

- “Everyone should live within 300m of accessible natural greenspace
- There should be at least one accessible site of >20ha within 2km of home;
- There should be one accessible 100ha site within 5km;
- There should be one accessible 500ha site within 10km.²⁶”

The toolkit is based on a staged pathway approach called the ‘Implementation Process’. There are six steps in this process, made of four overarching phases²⁷ as shown in Table 1.

Table 1: Implementation Process

Phase	Step	Overview
Inception	Inception	Planning phase. The team, information, resources, scope and progress indicators are determined.
Assessment	Inventory of candidate sites	Data gathered, local greenspace identified, accessible natural greenspace resource identified.
	Inventory of natural sites	
	Inventory of Accessible Natural Greenspace	
Analysis	<ul style="list-style-type: none"> • Analysis Provision • Map Accessible Natural Greenspace Provision • Map areas of Deficiency 	Establish spatial patterns of accessible natural greenspace. Also identify areas currently lacking accessible natural greenspace.
Response	Response and Monitoring	Priorities for policy and management action are set out to address issues found during the analysis.

2.9. Technical Advice Notes

Technical Advice Notes (TANs) provide detailed planning advice. When preparing development plans, LPAs should take these into account.²⁸

It is acknowledged that there are several TANs that could be rooted in Green Infrastructure such as TAN 6 (planning for sustainable rural communities), TAN 10 (tree preservation orders) and TAN 15 (development and flood risk). However, the most relevant TANs are TAN 5 (Nature Conservation and Planning) and TAN 16 (Sport, Recreation and Open Space), which are discussed further below.

2.9.1. Technical Advice Note 5: Nature Conservation and Planning

TAN 5²⁹ provides advice on how to protect and enhance biodiversity and geological conservation via the land use planning system.

²⁶ [The Greenspace Toolkit \(PDF\)](#) – pg 6

²⁷ [The Greenspace Toolkit \(PDF\)](#) – pg 8

²⁸ [Technical Advice Notes](#)

²⁹ [Technical advice note \(TAN\) 5: nature conservation and planning](#)

When designing development and green infrastructure, there should be opportunities for the incorporation of wildlife and geological features. This should be promoted through development policies and supplementary planning guidance when necessary.

2.9.2. Technical Advice Note 16: Sport, Recreation and Open Space

TAN 16 provides guidance on the role planning has in providing sport and recreational facilities and informal open spaces³⁰.

The Greenspace Toolkit (Section 2.8) provides reference to TAN 16 and what 'Open Space' is classified as.

In TAN 16, open space is classified as follows³¹:

- Public parks and gardens
- Natural and semi-natural greenspaces
- Green Corridors
- Outdoor sports facilities
- Amenity greenspace
- Provision for children and young people
- Allotments, community gardens, and city (urban) farms
- Cemeteries and churchyards
- Accessible areas of countryside in the urban fringe
- Civic spaces
- Water

2.10. Sustainable Urban Drainage Schemes and Statutory Standards for Sustainable Drainage Systems – Designing, Constructing, Operating and Maintaining Surface Water Drainage Systems

“From January 7th 2019, all new developments of more than one house or where the construction area is of 100m² or more will require sustainable drainage to manage on-site surface water. Surface water drainage systems must be designed and built in accordance with mandatory standards for sustainable drainage published by Welsh Ministers.³²”

These requirements have come into effect as a result of The Flood and Water Management Act 2010 (Schedule 3). Sustainable urban drainage schemes (SuDS) mimic natural drainage systems. They manage surface runoff as close to the source as possible, controlling the flow and providing a variety of other benefits. These are listed in Table 2 below³³:

³⁰ [Technical advice note \(TAN\) 16: sport, recreation and open space](#)

³¹ [Technical advice note \(TAN\) 16: sport, recreation and open space - pg 31](#)

³² [Sustainable Drainage Approval Body - Powys County Council](#)

³³ [Statutory Standards for Sustainable Drainage Systems – Designing, Constructing, Operating and Maintaining Surface Water Drainage Systems](#)

Table 2: Benefits of Sustainable Urban Drainage Schemes

Standards	Objective
Surface water runoff destination	<i>“Ensure that runoff is treated as a resource and managed in a way that minimises negative impact of the development on flood risk, the morphology and water quality of receiving waters and the associated ecology.” pg 8</i>
Surface water runoff hydraulic control	<i>“Manage the surface water runoff from and on a site to protect people on the site from flooding from the drainage system for events up to a suitable return period, to mitigate any increased flood risk to people and property downstream of the site as a result of the development, and to protect the receiving water body from morphological damage.” pg 19</i>
Water quality	<i>“Minimise the potential pollution risk posed by the surface water runoff to the receiving water body.” pg 29</i>
Amenity	<i>“Enhance the provision of high quality, attractive public space which can help provide health and wellbeing benefits, they improve liveability for local communities and they contribute to improving the climate resilience of new developments.” pg 38</i>
Biodiversity	<i>“Create ecologically rich green and blue corridors in developments and enrich biodiversity value by linking networks of habitats and ecosystems together.” pg 41</i>
Design of drainage for construction, operation and maintenance	<i>“Designing robust surface water drainage systems so they can be easily and safely constructed, maintained and operated, taking account of the need to minimise negative impacts on the environment and natural resources.” pg 44</i>

All SuDS systems proposed alongside development will need to be approved by PCC acting as the SuDS Approval Body. Approval must be granted before construction can begin.

3. Local Context

3.1. NRW Mid Wales Area Statement

The NRW Mid Wales Area Statement³⁴ covers the area of Powys and Ceredigion County Councils. This includes the areas covered by both PCC and Bannau Brycheiniog National Park (BBNP). See figure 1³⁵ below for the full extent of area covered by the NRW Mid Wales Area Statement. The NRW Mid Wales Area Statement was initially published in March 2020 and was reviewed in 2022.



Figure 1: NRW Mid Wales boundary map

The area statement is made up of four key themes (with a climate emergency theme throughout):

- Improving biodiversity
- Sustainable land, water and air
- Reconnecting people and places
- Forestry resources

³⁴ [Mid Wales Area Statement \(Home Page\)](#)

³⁵ [Introduction to Mid Wales Area Statement – Figure 1 \(boundary map\)](#)

3.1.1. Improving Biodiversity

Biodiversity isn't only focused on species, the ecosystems they inhabit is also important. Ecosystems and their resilience provide a wide range of 'services'. These 'services' are vital for human health. They include:

- Clean air and water.
- Food.
- Timber.
- Recreation and green space.
- Flood alleviation.
- Carbon storage.

Fragmentation of designated sites undermines their resilience, hence their management plays an important role in supporting their long term health and the species they support. Buffer areas are an important tool in providing links for nature.

Invasive non-native species (INNS) have been declared the second largest threat to native species and habitats (First is climate change). It is estimated INNS management costs the Welsh economy £128m annually. Japanese knotweed and Himalayan balsam are a particular problem across the rivers Wye and Usk catchments. Rhododendron is also a concern across Mid Wales which effects protected sites and woodlands.

“The main areas of focus under the Improving Biodiversity theme are:

- *Identifying the main causes of the nature emergency including what needs to be done, by whom and where*
- *Improving the Favourable Conservation Status of designated sites*
- *Identifying opportunities for connectivity between those sites and other areas, at a landscape scale*
- *Making nature a priority through planning, policy and practical measures*
- *Seeking innovative measures and alternative options for tackling invasive non-native species, especially near water courses³⁶”*

3.1.2. Sustainable land, water and air

Mid Wales contains some of the richest landscape and nature. Agriculture is a large influencing factor for Mid Wales. It employs a lot of people, provides food, provides associated employment in other rural sectors, helps towards creating a thriving community and a sense of place.

The Mid Wales landscape is dominated with upland moorland and scattered forestry, though much of the landscape is deemed 'agriculturally less favoured' land. This land has historically been undervalued as an important part of providing 'ecosystem services' (biodiversity, water storage, carbon storage and recreation).

Ammonia and nitrates have significantly increased during recent farming diversity efforts. Ammonia is a harmful element which poses a risk to sensitive species and habitats. An example of which being rare pollution-sensitive lichens.

Water is an essential natural resource. Important to the environment, society and the economy. Population growth, increased national demand and climate change are all pressures impacting

³⁶ [NRW Mid Wales Area Statement - Improving Biodiversity](#)

water resources. Slurry and pollutant leaks can enter the river systems which poses a risk to the riverine habitat, killing aquatic life and polluting water supplies. Important water resources in Powys include the rivers Severn, Wye and Usk. The reservoirs Llyn Clywedog, Llyn Vyrnwy and the Elan Valley Reservoirs regulate water levels and supply water to other places.

Flooding events are being increasingly witnessed across Mid Wales. Coastal, river and surface water continue to impact communities, businesses and the environment. Natural Flood Risk Management (NFRM) is a key approach to provide environmentally sensitive flood risk approaches. These can include tree planting, in-stream obstruction, soil and land management and creation of new wetlands. The aim of NFRM is to 'slow the flow', this delays the flooding peak and is most effective when utilised across a large catchment.

"The main areas of focus under this theme are:

- *Support farm businesses through ways of working that minimise impacts on the environment*
- *Take measures to reduce pollution incidents through better management of potential sources of pollution (such as slurry & manure stores)*
- *Work with businesses, communities and policy makers to review current agricultural policies and schemes and explore new options for Payment for Ecosystem Services*
- *Manage our water resources to improve the quality and quantity of available water, without causing detriment to the natural environment*
- *Help to create adaptive and resilient communities in response to adverse weather events and climate change*
- *Support new ideas around developing Nature Based Solutions - for example, using Natural Flood Risk Management³⁷"*

3.1.3. Reconnecting people and places

Outdoor recreation is proven to make an important contribution to physical and mental health. Urban and rural green / blue space like parks and woodlands can make people feel better through how we choose to interact with it. Some examples include physical activity, reflection, adventure and learning.

Tourism plays a major role in the Mid Wales economy. Tourism and the rapidly growing 'activity tourism', relies on the natural environment. Tourism businesses in Mid Wales contribute 10% of the overall Welsh tourism economy. This highlights how important the natural environment is for the Mid Wales economy. Some outdoor opportunity found in Powys includes two National Trails (Offa's Dyke and Glyndwr's Way), and Cors y Llyn National Nature Reserve.

"The main areas of focus under this theme are:

- *We want to help support communities develop their evidence base, using Citizen Science. This also helps reach out to include under-represented groups across communities*
- *Look for new ways in which people can connect with their local environment to help improve their health and well-being*
- *Work with different organisations to develop opportunities for using the natural environment on our doorstep as a tool in preventative medicine*

³⁷ [NRW Mid Wales Area Statement - Sustainable land, water and air](#)

- *Develop the evidence base to further support the theories around health and well-being and links to the natural environment*
- *Promote sustainable tourism opportunities to help boost the local economy*
- *Promote, encourage and support sustainable recreation, reconnect local people and visitors with access to the natural environment³⁸*

3.1.4. Forestry resources

Woodland and trees provide a variety of social, economic and environmental benefits, these include:

Climate regulation	Income and jobs from timber production
Store carbon	Reduce flood risk
Safeguard soils	Improve air quality
Reduce noise pollution	Regulate pests and diseases
Pollination	Nutrient cycling
Soil formation	Water cycling
Oxygen production	Improve mental and physical well-being

Mid Wales contains a diverse mix of woodland and forestry resources. Some examples include large-scale upland conifer forests, small scattered native woodlands and shelterbelts, estate woodland, wood pasture and parkland habitats. Mid Wales provides 350,000 cubic metres of timber to Wales's wood processing industry, which equates to almost 40% of all certified timber from the Welsh Government Woodland Estate. This is the largest productive forestry area found in Wales. Forestry harvesting is a significant contributor to the rural economy. It must be ensured that Mid Wales forestry is able to grow annually and in a sustainable way.

Native woodlands have suffered habitat loss and fragmentation over the past 1,000 years. This is largely due to clearing land for agricultural production. Remote uplands, much of which was deep peatland, gave way for forestry planting. This inadvertently caused damage to peatland habitat.

Tree diseases like ash dieback and *Phytophthora* infections necessitates felling which has affected the broad leaf and coniferous forest landscape. This can be both positive (some conifer forests replaced with broadleaf) or negative (effect on species associated with ash woodland).

Native woodland in Mid Wales is characterised 60% by upland oak woodland and are recognised for their biodiversity and cultural value. Unfortunately, many woodlands lack appropriate management which results in poor overall condition and lacking structural diversity.

Pollution, specifically nitrogen deposition, also impacts woodland habitats. Delicate mosses, lichen and bryophytes are especially vulnerable to nitrogen deposition.

Climate change is predicted to bring with it an increased number of pests and diseases alongside a warmer and drier climate. This altered climate will impact existing species such as Sitka spruce, but provide an opportunity for high yield species such as Douglas fir.

“The main areas of focus within this theme are:

- *Managing forest resources sustainably, while also supporting the timber industry*

³⁸ [NRW Mid Wales Area Statement - Reconnecting people and places](#)

- *Increasing woodland cover with conifer, broadleaved and mixed woodland, following the 'right tree, right place' principle**
- *Supporting training and local employment opportunities in forestry and rural land management skills*
- *Valuing woodlands for their commercial, recreational climate and biodiversity value*
- *Adapting to the impacts of tree disease and climate change*
- *Working with policy makers to balance the need for re-stocking upland forests whilst avoiding damage to natural peatland habitats*
- *Seeking opportunities for carbon capture, offsetting and storage³⁹*

3.2. Powys Public Services Board Wellbeing Plan

A Wellbeing Plan is agreed by the Public Services Board (PSB) which will outline objectives and steps PCC will take to improve the wellbeing of its people.

The vision for the PSB is a Fair, Sustainable and Healthy Powys.

The PSB must be consistent with the sustainable development principles. These are as follows: Long term, prevention, integration, collaboration and involvement. These are also known as the 'five ways of working'.

There are three Powys PSB Well-being objectives which will help achieve the vision⁴⁰:

1. People live happy, healthy, and safe lives.
2. The county will consist of sustainable places and communities.
3. An increasingly effective Public Service.

To achieve these objectives there are three core actions⁴¹:

1. Responding to the climate emergency.
2. A whole system approach to healthy weight.
3. Shaping the future by improving our understanding of what matters to the people of Powys through evidence and insight.

To complete the objectives above, green space will be a key asset to utilise. The objectives also support the Well-being of Future Generations goals through increased use of green space.

3.3. Powys Nature Recovery Action Plan

"The Powys Nature Recovery Action Plan (PNRAP) has been developed in consultation with the Powys Nature Partnership, this is a group of organisations and individuals committed to reversing the declines in biodiversity across Powys. The PNRAP is intended to guide the work of the Partnership, to stimulate project ideas, to direct conservation efforts, and to provide a rationale for local action to achieve national objectives⁴²".

³⁹ [NRW Mid Wales Area Statement - Forestry resources](#)

⁴⁰ [The Powys Wellbeing Plan](#) pg 7

⁴¹ [The Powys Wellbeing Plan](#) pg 15

⁴² [PNRAP - Part 1. Our Strategy for Nature Recovery and General Action Plan](#) pg 2

The PNRAP excludes the BBNP area as they have their own Local Nature Partnership and NRAP.

There are a number of key pressures which are driving the loss in biodiversity in Wales which have been identified via evidence gathered in the State of Nature and State of our Natural Resources reports. These are listed in Table 3 below.

Table 3: Pressures identified in the Powys Nature Recovery Action Plan

Pressure	Examples of Impacts⁴³
Climate Change	<i>“Habitat degradation, a decline in native species, changes in migration and breeding patterns and increases in pests and invasive species”.</i>
Invasive Species	<i>“Spreading diseases, modifying ecosystems, reducing populations of native species through competition for resources, and by hybridising with native species”.</i>
Development	<i>“Cause disturbance and result in a loss of habitats, as well as fragmenting habitats and leading to changes to those habitats that remain”.</i>
Intensive agriculture	<i>“Silage production, increased use of chemicals and fertilisers, and intensified grazing” - “have impacted habitats and species”.</i>
Pollution	<i>“Diffuse air and water pollution continue to have a severe impact on biodiversity”.</i>
Woodland management	<i>“Across woodlands in general, lack of appropriate management is having adverse impacts on species such as the Hazel Dormouse. To add to this, a growing range of pests and diseases present a serious threat to woodlands.”</i>
Hydrological change	<i>“Many rivers have been straightened and dammed, whilst bogs and other wetland habitats have been drained to make way for forestry and agriculture. Freshwater and wetland species have been undergoing long term declines as a result”.</i>

The PNRAP aims to halt and reverse biodiversity decline across Powys. It builds off the six objectives from the NRAP for Wales and looks at them in a local context. These are listed below:

- *“Engage and support participation and understanding to embed biodiversity throughout decision making at all levels.*
- *Safeguard species and habitats of principal importance and improve their management. Including the requirement on Welsh Ministers to prepare and publish a list of the living organisms and types of habitat which are of principal importance for the purpose of maintaining and enhancing biodiversity in Wales.*
- *Increase the resilience of our natural environment by restoring degraded habitats and habitat creation.*
- *Tackle key pressures on species and habitats.*
- *Improve our evidence, understanding and monitoring.*
- *Put in place a framework of governance and support for delivery.⁴⁴”*

The PNRAP builds on the Powys Local Biodiversity Action Plan (PLBAP) which was originally published in 2002. The PNRAP does not replace the PLBAP as it remains a valuable source of

⁴³ [PNRAP - Part 1. Our Strategy for Nature Recovery and General Action Plan](#) pg 3-4

⁴⁴ [PNRAP - Part 1. Our Strategy for Nature Recovery and General Action Plan](#) pg 6

information on specific species and habitats included within the plan. A 2016 review indicated a total of 1,529 species were identified as being locally important in Powys.

Creating ecological Networks are a key focus for the PNRAP. More joined up, bigger and better ecological networks are required to prevent isolating protected sites and fragmentation. Species need to be able to move amongst the landscape to search for food and water as well as shelter and allowing for genetic diversity.

A resilient ecological network is often made up of three habitat types. These are listed below:

- **Core habitats:** Areas of semi-natural habitats. They will have most of their processes and biodiversity functioning, though there may be some alteration by human activity. They can often be large enough to support healthy and resilient populations of species. Species have all the resources they need to survive.
- **Stepping stones:** Smaller areas of core habitat. They are unable to support a healthy, long-term population. Stepping stones act as corridors which allows for a species movement between other core habitats.
- **Supporting habitat:** Any other suitable habitat found in close proximity to core and stepping stone habitat. Conditions here tend to be harsher, hence specialist species cannot survive here, though less specialist species are able to survive.

A full list of the General Action Plan can be found on pages 12 – 14 of the PNRAP Part 1 - Our Strategy for Nature Recovery⁴⁵.

As part of the PNRAP there have been seven different Habitat Action Plans (HAP) produced (Part 2). Habitats have been combined into ecosystem groups which provides the opportunity for targeted ecosystem recovery and conservation.

Each HAP covers the following (where relevant):

- Habitat introduction which covers descriptions, ecosystem services and risks.
- Review of extent, connectivity, opportunities for restoration and locally important species.
- Habitat targets.
- Habitat actions.

Habitats included are Freshwater and Wetlands, Grassland, Linear, Scrub and Ffridd, Upland and Heathland, Urban and Brownfield and Woodland. Of these, wetland, grassland, heathland and woodland have been mapped and can be seen under 4.1.9 (Habitat Maps). Details can be found on the PNRAP website⁴⁶

There have also been two specific Species Action Plans produced. One for amphibians and reptiles and one for bats. These again consist of an introduction, opportunities, targets and actions (Part 3)⁴⁷.

An action report for ideas was also produced (Part 4)⁴⁸. This highlights some ideas different groups in society can carry out which will aid in nature recovery. Ideas listed here are grouped under communities, individuals, businesses and schools.

⁴⁵ [PNRAP - Part 1. Our Strategy for Nature Recovery and General Action Plan](#) pg 12-14

⁴⁶ [PNRAP - Part 2. Habitat Action Plans 2.0 – 2.7](#)

⁴⁷ [PNRAP - Part 3. Species Action Plans 3.0 – 3.2](#)

⁴⁸ [PNRAP - Part 4. Ideas for Action 4.0](#)

3.4. Powys Road Verge Biodiversity

Across Powys, there is around 5,500km of surfaced roads. The road verges found here can provide a valuable habitat for various species. Nearly half of all UK wildflower meadow species are located on road verges. Some of these species are rare and threatened. Some road verges support woodland, hedgerow and heathland habitat.

PCC has reduced the frequency of mowing road verges, creates a better environment for invertebrates, birds, small mammals, amphibians and reptiles. For the roads that PCC manages, the Highways Authority tries to strike a balance between the safety of highway users and biodiversity value. Cutting regimes differ in urban and rural areas:

- Urban Areas (speed limit): Three cuts, though cuts one and two are only cut with a single swathe except where visibility is required.
- Rural Areas (national limit): One cut being a single swathe except where visibility is required.

PCC have over 100 Road Verge Nature Reserves (RVNR) which are managed separately due to having been identified as having a particular value to biodiversity. In collaboration with Local Wildlife Trusts, these RVNR are managed to support nationally and/or locally important species⁴⁹.

3.5. Rights of Way Improvement Plan 2018 – 2028

As the local Highway Authority, PCC is required, under Section 60 of the Countryside and Rights of Way Act 2000, to publish a Rights of Way Improvement Plan (ROWIP)⁵⁰. A ROWIP sets out how public rights of way will be managed for the benefit of residents and landowners, as well as visitors. ROWIPs are a prime way to identify, prioritise and plan for improvements to local rights of ways.

Powys's ROWIP does not contain the area of BBNP.

The ROWIP can contribute to the Active Travel (Wales) Act 2013. Active travel planners can identify local public rights of ways as key ways to contribute safe and appropriate active travel routes.

The vision of the ROWIP *“is to have a well-utilised, well-managed, meaningful and accessible countryside across Powys, supported by high quality information”*⁵¹.

As part of the ROWIP process, four key themes were identified as being integral to delivering the ROWIPs vision:

- Theme A: Public Rights of Way and Open Air Recreation
- Theme B: Management and Enforcement of Public Rights of Way and Green Spaces
- Theme C: Definitive Map and Statement
- Theme D: Publicity and Promotion

Every year an annual work plan is produced. This outlines projects and areas of countryside access improvement work which is being carried out in a given year and can be found on the

⁴⁹ [Road Verge Biodiversity - Powys County Council](#)

⁵⁰ [Rights of Way: Improvement Plan](#)

⁵¹ [Rights of Way: Improvement Plan](#) – pg 14

Powys Rights of Way: Improvement Plan website⁵². For each project included, the partners, resources, milestones, relevant plans and strategies and remedial actions are listed.

3.6. Upper Wye Restoration Plan

The Upper Wye Restoration Plan is an ambitious new project launched by NRW. It aims to help restore the upper reaches of the River Wye (upstream from Hay-on-Wye) by protecting species and improve habitats. Some improvement efforts will include reducing sediment and pollutants entering the river.

This will be a large collaboration project between many landowners, organisations and communities.

Some interventions are:

“Restore river corridors, create in-river habitats, and install structures to reduce pollution and prevent soil erosion. Additional measures will slow the flow of overland water, reconnect floodplains, and remove barriers that obstruct fish and gravel movement. Invasive non-native species that cause bank erosion will also be tackled.”⁵³

3.7. Tree Preservation Orders

“A Tree Preservation Order (TPO) is an order made by a local planning authority which makes it an offence to cut down, top, lop, uproot, wilfully damage or wilfully destroy a tree without the planning authority's permission.”⁵⁴

Individual trees, groups of trees or entire woodlands can have a TPO. Trees in Powys with an TPO can be found on the PCC TPO website⁵⁵.

3.8. Powys Open Space Assessment (2018)

The Powys Open Space Assessment was carried out to inform the Adopted LDP (2011-2026). The assessment aims to provide an overview of all current open space provision found in key settlements across Powys (excluding BBNP area).

The definition of ‘Open Space’ was derived from TAN 16 (see section 2.10). The following were considered as part of the assessment:

- Public Parks and Gardens
- Natural and Semi-Natural green spaces
- Outdoor sports facilities
- Amenity greenspace
- Provision for children and young people
- Allotments, community gardens and city (urban) farms
- Cemeteries and churchyards

⁵² [Rights of Way: Improvement Plan](#) (Work Plan)

⁵³ [Upper Wye restoration: Ambitious new project launched to help restore beloved river](#) – 22nd Jul 2024

⁵⁴ [Tree Preservation Orders and Trees in Conservation Areas](#)

⁵⁵ [Tree Preservation Order - Search](#)

When assessing the open space found in Powys; size, accessibility, quantity and quality are considered to determine the percentage of population which live within the recommended distance of each open space type.

Open Space Assessment mapping for settlements across Powys have been published alongside the main assessment which detail the methodology and standards used⁵⁶.

The Powys Open Space Assessment has been included as part of the mapping exercise carried out for this GIA. Please see section 4.1.2 and Appendix A: Green Infrastructure Assessment Maps 2.0 for further information.

3.9. A Strategy for Climate Change – Net Positive Powys 2021 - 2030

PCC declared a climate emergency on 24th September 2020. By making this declaration PCC has shown a commitment and ambition to reduce its carbon emission to net zero by 2030. This is in line with the larger Welsh public sector target.

Vision: In 2030 PCC is carbon neutral and climate resilient.

The vision is supported by the ‘five ways of working’ as seen in the Powys Well-being Plan.

There are five key areas of change: Buildings, mobility and transport, procurement, land use and agriculture, council and governance.

Land use and agriculture is the key area for nature, climate change and biodiversity. The focus and benefits are listed in Table 4⁵⁷:

Table 4: Land Use and Agriculture Focus Areas and Potential Benefits

Area of focus	Benefits
<i>“Understand the environmental impact on our land and the opportunities available.</i>	<ul style="list-style-type: none"> • <i>“We can measure climate impacts from our land.</i> • <i>Protect land-based businesses, including agriculture, horticulture and forestry through climate resilience.</i> • <i>Improved community health and wellbeing.</i> • <i>Decreased flood risk.”</i>
<i>Support and encourage best practice including local sustainability and innovators.</i>	
<i>Give our local communities a voice to help express local preferences through place-based planning.</i>	
<i>Encourage community groups to develop green spaces and other similar initiatives”.</i>	

3.10. Powys Adopted Local Development Plan (2011 – 2026)

Although there is no direct mention of ‘green infrastructure’ in the Powys Adopted Local Development Plan (adopt as the Adopted LDP predated the requirement to consider “Green

⁵⁶ [Powys Open Space Assessment \(2018\)](#)

⁵⁷ [What is the Council doing on Climate Change?](#) – Climate Change Strategy (PDF) – pg 15

Infrastructure April 2018)⁵⁸, there are Development Management policies for a variety of topics which Green Infrastructure will positively impact. Some examples include:

- Policy DM2: The Natural Environment
- Policy DM3: Public Open Space
- Policy DM4: Landscape
- Policy DM5: Development and Flood Risk
- Policy DM14: Air Quality Management

4. Green Infrastructure Assessment for Powys LPA Area

The features mapped for this GIA have been explained primarily through PPW Edition 12 as the document provides guidance concerning what should be included within a GIA.

The following section refers to maps found in Appendix A: Green Infrastructure Assessment Maps. It is intended this section to be read alongside viewing Appendix A.

Appendix A also contains the map layer sources.

Descriptions follow the same order of appearance found in Appendix A.

4.1. Map Explanations

4.1.1. Statutory and Non-Statutory Sites (1.0)

SSSI sites must not be developed upon, only necessary management may go ahead (wholly exceptional circumstances may override this). SACs and SPAs are of European importance. Under the Conservation of Habitats and Species Regulations (2017), public bodies must consider these sites when enabling development. They are afforded the same protection levels as SSSIs. Appropriate Assessments must be carried out when one of these sites are likely impacted by a development. Ramsar sites are important wetland areas which have been designated under the Ramsar Convention on Wetlands of International importance. They are also afforded the same protection as SSSI though are not subject to the Habitats Regulations. Protection is also extended to proposed SPA and SAC sites. Opportunities to restore networks to a healthy condition should be taken. These sites should therefore be protected from negative development while also being restored and linked with other habitats where appropriate.

Sites of Importance for Nature Conservation, Local Wildlife Sites, Local Nature Reserves, and Regionally Importance Geodiversity Sites make a vital contribution to delivering an ecological network. Although they do not have statutory protection, they should receive protection in development plans. Non-statutory sites can form the core of vital habitat network and play an essential role in protecting, maintaining, connecting and restoring biodiversity as well as contributing to nature recovery. Any development likely to damage these sites should be referred to a local authority ecologist who will provide a written opinion.

Peatland habitats cover 3-4% of Wales, but stores 20-25% of all soil carbon. Peat soils are extremely fragile, a great risk is poised if this habitat is compromised. Considerable weight

⁵⁸ [Adopted LDP \(2011 - 2026\)](#)

should be afforded to peatland soils due to its importance to carbon uptake, biodiversity and flood management.

4.1.2. Powys Open Space Assessment (2.0)

Local authorities should look to retain and protect allotment sites as they have many social, environmental, economic and health benefits. They can have both a green infrastructure and community value.

Recreational green spaces provide a variety of benefits including for our health and well-being, a place for sports and exercise, places to relax in and contribute to green infrastructure. They are accessible greenspaces within the urban environment. Formal and informal greenspaces should be protected from development, especially in the urban environment. These spaces can play a key role in climate protection as they can help with flood management and urban heat islands.

There are many parks and gardens with historic significance found on the Wales Register. GIAs should be used to explore the role they play in historical and cultural assessments.

Cemeteries can form a part of local scale green infrastructure.

4.1.3. High Quality Agricultural Land (3.0)

Agricultural land graded 1, 2, 3a, are Wales's best and most versatile land. It should be conserved as a finite resource for the future. This land should be protected from development unless there is an overriding need.

4.1.4. Heritage Sites (4.0)

The historic environment illustrates how previous generations have shaped Wales. They are central to Wales's culture and character. Some historic assets have statutory protection or are in formal registers. Parks and gardens should be valued, protected, conserved and enhanced. GIAs should explore the role historic parks and gardens play in historical and cultural assessments. A new developments impact on a historic park or garden or its setting should be an important determining factor.

4.1.5. Blue Infrastructure (5.0)

Rivers and lakes are also a key part of Green Infrastructure (these are sometimes known as 'blue infrastructure'). Green infrastructure and nature-based solutions can be used to address pollution and help restore riverine habitats. Interventions can include riparian buffer zones and managed wetlands, these should be a key output of GIAs. Protection of riverine corridors will help to avoid and reverse fragmentation of habitats which in turn will improve connectivity between habitats.

4.1.6. Flood Risk (6.0)

Green infrastructure must address the climate emergency. For example, via natural flood management and sustainable drainage schemes. Poorly designed or located development can exacerbate problems like surface water flooding and diffuse pollution. Any development should reduce, not increase flood risk. Undeveloped and unobstructed floodplains should be protected from development.

4.1.7. Phosphates (7.0)

These maps highlight areas where diffuse pollution, primarily phosphorus, risks the biodiversity of SAC rivers. Increased levels of phosphorus can result in Eutrophication. This process causes algae bloom which can remove large amounts of dissolved oxygen from the river environment. Nature based solutions which address diffuse pollution should be encouraged in these areas. This can also be related to blue infrastructure (see 4.1.5).

A separate Phosphate Position Statement will be published.

4.1.8. Active Travel (8.0)

GIAs should consider opportunities to increase habitat connectivity, mitigate fragmentation and secure other green infrastructure benefits along transport networks. Completion of the cycle network and key network links should be aligned with securing green infrastructure.

4.1.9. Habitat Maps (NRW and PNRAP) (9.0)

Green infrastructure can comprise of entire ecosystems. Pollution and restoration of habitats can be addressed by green infrastructure and nature-based solutions. Habitat fragmentation must be avoided, instead connectivity should be sought. This, along with the general protection and proper management of habitats will improve ecosystem resilience. Development should not cause significant loss of habitat and its populations, instead must work alongside nature to provide a net benefit for biodiversity. The habitat maps have both NRW and PNRAP data displayed.

The NRW habitats data set used was originally developed for Countryside Council for Wales in collaboration with Forestry Commission and Forest Research. It is now developed and managed by NRW. This dataset is comprised of three different levels of habitat networks⁵⁹:

- Core: Areas where species, which require extensive habitat patches and disperse poorly, can move.
- Focal: Areas where species, which are able to tolerate smaller habitat patches and have a greater capacity for dispersal, can move.
- Local: Areas where species, can endure within small habitat patches and have a very limited dispersal ability, can move.

Environmental Systems Ltd carried out ecological network analysis mapping for the PNRAP. Grassland, woodland, wetland and heathland have all been mapped alongside opportunity mapping which would help increase habitat resilience (see 4.1.10).

⁵⁹ [Habitat Networks - Data Map Wales](#)

The PNRAP data covers a similar set of habitats that the NRW dataset does. Much like the NRW dataset, the PNRAP dataset identifies different levels of habitat networks⁶⁰:

- Core habitat: Patches of semi-natural habitat. These are large enough to maintain stable species populations and genetic diversity.
- Supporting habitat: Surround the core habitat. Provides conditions which species associated with the core habitat, can move through.
- Stepping stones: Patches of habitat which are the same type as the core habitat. These are too small to maintain significant specialist species populations. Some species are able to use this habitat to move from one core habitat to another.

The combined network map highlights areas contributing to more than one ecological network.

Methodology and more information for the Habitat Maps can be found in Appendix B: Powys Nature Recovery Action Plan Mapping Methodology, and on the PNRAP website under the HAP.⁶¹

The Ystradgynlais area is likely to have connectivity analysis issues. See Appendix B for more information.

4.1.10. Opportunities – PNRAP (10.0)

The NWRAP opportunities maps highlight areas which provide opportunities for new environmental habitats. These can be in the form of habitat expansion, restoration or the creation of 'stepping stone' and corridor habitats.

The opportunity maps offer examples of where each of the habitat level can be improved and/or expanded. If carried out, these sites will be more resilient and perform their role to a higher standard⁶².

The combined opportunities map highlight areas with capacity to improve more than one ecological network.

Methodology and more information for the Opportunities Maps can be found in Appendix B and on the PNRAP website under the HAP.⁶³

The Ystradgynlais area is likely have connectivity analysis issues. See Appendix B for more information.

⁶⁰ [Powys Nature Recovery Action Plan - Resilient Ecological Networks](#) (under Network Maps - How to interpret the map)

⁶¹ [Powys Nature Recovery Action Plan](#)

⁶² [Powys Nature Recovery Action Plan - Resilient Ecological Networks](#) (under Opportunity Maps - How to interpret the map)

⁶³ [Powys Nature Recovery Action Plan](#)

5. Recommendations

This GIA has brought together a wide variety of information relating to the use of green space, its importance to the population of Powys and the species which inhabit it. Arising from the analysis and mapping exercise (Appendix A), this GIA has the following recommendations:

- Use the habitat and opportunity mapping carried out for the PNRAP to explore ways of increasing ecosystem resilience and extent.
- Ensure approaches to green infrastructure are kept as local to the development sites as possible. Offsite mitigation may be used habitat connecting or extension. This may be achieved through larger developments.
- Ensure the right green infrastructure is used in the right place.
- Consider if the evidence obtained through this report can assist in 30x30.
- Consult local town councils for planned and/or ongoing green infrastructure projects.
- Following on from above, map towns in-depth to get detailed information of urban green infrastructure.
- Identify the condition of green assets.
- Species present in habitats should play a key role in why a site is protected and influence what enhancements a habitat may need.

5.1. Draft Strategic Policies for Replacement Local Development Plan

To support nature recovery and enhance Green Infrastructure, it is recommended that a suite of Strategic policies are included in the Preferred Strategy of the Powys Replacement Local Development Plan.

Firstly, the need for a dedicated Green Infrastructure Strategic Policy is recognised:

Strategic Policy – Green Infrastructure

Development proposals must integrate, protect and maintain existing and safeguarded green infrastructure assets and embrace opportunities to enhance the extent, quality, connectivity and multifunctionality of the green infrastructure network. Where the loss or damage of existing green infrastructure is unavoidable, appropriate mitigation and compensation will be required.

All developments must maximise:

- **The amount of green infrastructure on the site.**
- **The interconnectedness of green infrastructure assets within and around the site and to the wider green infrastructure network.**
- **Opportunities to achieve multi-functionality and nature-based solutions by bringing green infrastructure functions together, although the safeguarding and**

enhancement of biodiversity and the connectivity of priority habitats and species should be the overriding consideration.

All development proposals should demonstrate from the outset how green infrastructure has been considered and integrated by being accompanied by a Green Infrastructure Statement. This should be proportionate to the scale and nature of the development proposed, describing how green infrastructure has been incorporated into the proposals. Potential conflicts between different elements of green infrastructure should be reconciled as part of the Green Infrastructure Statement. Where relevant the Statement must set out how the layout and design of the scheme will contribute to, or be compatible with, any published local or regional Green Infrastructure Strategy.

Secondly, to support the declaration of the Nature Emergency, a Strategic Policy on Nature Recovery is proposed:

Strategic Policy – Nature Recovery

To maintain and enhance biodiversity, development proposals will be required to demonstrate how they protect, positively manage and enhance biodiversity and geodiversity interests including the restoration of ecosystems and improving the resilience of biodiversity through the enhanced connectivity of habitats within, and beyond the site.

To achieve this, all developments must:

- **Demonstrate that there has been an overall net benefit for biodiversity proportionate to the nature and scale of the development.**
- **Ensure that UK / European protected species and habitats are protected in accordance with statutory requirements.**
- **Protect the integrity of statutory and non-statutory designated sites ensuring that they are properly protected and managed.**
- **Be directed away from areas of high ecological value including areas identified as Biodiversity Hotspots in Future Wales.**
- **Incorporate green infrastructure at the early stages of design, that protects and enhances existing site features and improves the connectivity of the ecological network.**
- **Incorporate nature-based solutions within development to support biodiversity and build ecosystem resilience within the site and the wider area.**

Development on or adversely affecting other (non-designated) sites or wildlife corridors with biodiversity value will only be permitted where it can be demonstrated that the need for the development outweighs any harm caused by the development and that appropriate net biodiversity benefit measures can be provided.

Finally, a Strategic Policy should consider the wider Natural Environment of Powys

Strategic Policy – Natural Environment

Development proposals must protect and enhance the natural environment and will not be permitted where they will have an unacceptable adverse impact upon:

- Land designated at international, national and local level for environmental protection.
- The character and quality of the Powys landscape.
- The plan area's biodiversity and habitats.
- The quality of the area's natural resources including water, air and soil, including peat.

The character and quality of the area's countryside and rural resources including trees, woodlands and hedgerows.

This Strategic Policy should be supported by Table 5.

Table 5. Natural Environment Designations in the Replacement LDP Plan Area

Designation	Type / Source	Number in or Intersecting the Plan Area
Special Area of Conservation	Statutory	13
Special Protection Area	Statutory	3
Ramsar sites	Statutory	1
Site of Special Scientific Interest	Statutory	225
National Nature Reserve	Statutory	9
UNESCO Biosphere Reserve	Non-Statutory	1 – Dyfi Biosphere
UNESCO Geoparks	Non-Statutory	0 (Forest Fawr Geopark is in the BBNP)
Sites of Importance for Nature Conservation & Local Wildlife Sites	Non-Statutory	122 (2 SINC, 119 LWS, 1 other)
Local Nature Reserve	Non-Statutory	1
Regionally Important Geodiversity Sites (RIGS)	Non-Statutory	105
Potential National Natural Resources Areas (Future Wales)	Development Plan	Cambrian Mountains Black Mountains Brecon Beacons
Resilient Ecological Networks (RENs) / Nature Network Maps (NRW)	Area Statements / Green Infrastructure Assessments	Emerging policy / ongoing work as part of Deposit Plan / In progress