



Caerphilly County Borough
2nd Replacement
Local Development Plan 2020-2035

EB20 Green Infrastructure Assessment

January 2025



INTRODUCTION

Caerphilly County Borough Council commenced work on its 2nd Replacement Local Development Plan 2020 – 2035 (2RLDP) in October 2020. The 2RLDP will set out the local planning policy framework and guide development within the county borough, covering the period 1st April 2020 to 31st March 2035.

The Council consulted on its first Pre-Deposit Plan for the 2RLDP in October and November 2022. Conformity Objections to the plan were received from Welsh Government in respect of the Strategic Site allocation at Parc Gwernau, Maesycwmmmer, the regional approach and context towards growth, and the information supplied regarding a Nature-based approach. As a result of these objections, changes to the Pre-Deposit Strategy have been made.

The Council has therefore taken a step back in the plan process and is undertaking a second public consultation on the Pre-Deposit Plan, which contains a Revised Preferred Strategy. This Green Infrastructure Assessment (GIA) has been published to demonstrate the Council's nature-based approach when preparing the Pre-Deposit Plan and address concerns previously raised by Welsh Government regarding Policy 9: Resilient Ecological Networks and Green Infrastructure within Future Wales, the National Plan.

Planning Policy Wales (PPW) requires all local authorities to undertake a GIA as part of the plans evidence base. This strategic version of the GIA has been prepared to inform the Pre-Deposit Plan, based on Guidance Note 42: Green Infrastructure Assessments which has been published by Natural Resources Wales (NRW). It includes a baseline review of green and blue infrastructure assets within the county borough at the strategic level, the key threats and challenges facing them, strategic opportunities to address them through nature-based solutions, the consideration of candidate sites, and a framework for monitoring and review.

Green Infrastructure

Planning Policy Wales (PPW), Edition 12 describes green infrastructure as:

“the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places” (para 6.2.1).

Although the term Green Infrastructure (GI) is most frequently used to describe this concept throughout national planning policy. It is also referred to by some professional practitioners as Green and Blue Infrastructure (GBI), which also highlights the important role of 'blue infrastructure assets' such as rivers, ponds and wetlands.

GI assets can exist and function at different scales, this can include entire landscapes such as grasslands, mountains, moors and heathlands, local areas such as parks, gardens and playing fields, and micro assets such as individual trees, hedgerows and roadside verges.

There are many benefits associated with GI, PPW outlines that a multifunctional green and blue infrastructure network will maintain and enhance biodiversity, boost ecosystem resilience, protect important landscapes, promote health and well-being, reduce flood risk, create accessible green spaces, improve air quality, revitalise tourism and the historical environment, and create jobs within a sustainable economy.

POLICY CONTEXT

This GIA is part of the evidence base for the 2RLDP, which sits within a wider policy hierarchy. Therefore, it is necessary to outline other key national and local policy frameworks and priorities which the 2RLDP must be in general conformity with.

Planning Act (Wales) 2015

This act sets out the statutory functions associated with development planning within Wales. It also sought to strengthen the 'plan led' approach to planning in Wales, requiring the preparation of a National Development Framework (NDF) to replace the Wales Spatial Plan (WSP). This would set out national priorities and infrastructure requirements. This later became known as Future Wales, the National Plan up to 2040 which was published in 2021.

The Well Being of Future Generations Act (2015)

This requires public bodies in Wales to strengthen overall well-being and improve the needs of the population without compromising the needs of future generations. In addition, it defines 'sustainable development' as the "*process of improving the economic, social, environmental and cultural well-being of Wales*".

The act sets out the following seven well-being goals:

- A Prosperous Wales.
- A Resilient Wales.
- A Healthier Wales.
- A More Equal Wales.
- A Wales of Cohesive Communities.
- A Wales of Vibrant Culture and Thriving Welsh Language.
- A Globally Responsive Wales.

The Environment (Wales) Act (2016)

The Environment Act sets out a collaborative approach towards the sustainable management of natural resources in Wales.

Section 6 places a duty on public bodies to maintain and enhance biodiversity and ecosystem resilience by considering the diversity between and within ecosystems, the connections between and within ecosystems, the scale of ecosystems, the condition of ecosystems, and the adaptability of ecosystems. This is commonly referred to as the DECCA framework. In addition, local authorities must also consider the list of priority species and habitats of principal importance published by Welsh Ministers under **Section 7** of this act, when considering all development proposals.

Welsh Government Emergency Declarations

In April 2019, the Welsh Government declared a **Climate Emergency in Wales**, drawing significant attention to the impacts of climate change and how they could threaten both the natural and built environment. Welsh Ministers highlighted that a collective approach towards tackling climate change was needed, and that these interventions must deliver a low carbon economy that promotes a fairer and healthier society. In addition, in June 2021, the Welsh Government also declared a **Nature Emergency in Wales** stating that "17% of the 3902

species studied in Wales were at risk of total extinction”, with a significant number also in severe decline.

National Planning Policy

Planning Policy Wales (PPW), Edition 12 (2024)

PPW is the national planning policy framework for Wales. It sets out that the planning system should deliver sustainable developments that improve the social, economic, environmental and cultural well-being of Wales. In addition, it outlines that the most appropriate method to implement sustainable development is through placemaking.

Placemaking is defined as *“a holistic approach to the planning and design of development and spaces, focused on positive outcomes. It draws upon an area’s potential to create high quality development and public spaces that promote people’s prosperity, health, happiness, and well-being in the widest sense” (para 2.9).*

PPW also provides some insight into the range of issues that local planning authorities should be considering when undertaking GIAs as part of their local development plan preparations.

- LPAs must produce up to date inventories and maps of existing green and blue infrastructure assets and networks, differentiate between the significance of ecological designations, ensure development avoids and minimises the impact on biodiversity and ecosystems, protect trees and hedgerows, and produce meaningful outputs that address and tackle key challenges and threats such as climate change, pollution and health and wellbeing.
- In addition, LPAs should consider a range of issues such as opportunities for habitat restoration, appropriate management of the landscape, consider the future of previously developed land and inactive sites, consider the role of common land, explore the role of historic parks and gardens, adopt local targets for tree canopy cover, consider the identification of wetland and riparian buffer zones, and consider air quality and appropriate soundscapes.
- Following the completion of the GIA, PPW outlines the importance of monitoring and review and suggests that assessments and data should be regularly reviewed and kept up to date.

Future Wales, the National Plan up to 2040

Future Wales is the national development framework for Wales up to 2040. It sets out the development strategy for meeting national priorities, as well as addressing key issues such as climate change, biodiversity decline, and ecosystem resilience.

This includes the following strategic policies for consideration when preparing a GIA:

- **Policy 1 – Where Wales will grow** describes Cardiff, Newport, and the Valleys as a National Growth Area, where housing, employment and new investment in infrastructure will be directed.

- **Policy 2 – Shaping Urban Growth and Regeneration, Strategic Placemaking** outlines that sustainable urban growth should include the principles of strategic placemaking. Therefore, developments should have a mix of uses, a variety of housing types, a walkable scale, be permeable and accessible, promote a plot-based approach, increase population density, and integrate new and existing green and blue infrastructure.
- **Policy 9 – Resilient Ecological Networks and Green Infrastructure** requires Local Planning Authorities (LPAs) *“to identify areas to be safeguarded as well as opportunities for enhancements using nature-based solutions, which will ensure the resilience of ecosystems and protection of biodiversity” (p76)*. As part of this, the local authority must include these areas within its development plan and supplementary planning guidance to consider what actions can be taken to enlarge, connect and enhance each site as well as creating new areas, managing existing assets and enhancing the wider green infrastructure network.
- **Policy 15 – National Forest** sets out a key commitment of the Welsh government which seeks to develop a national woodland. *“This should be done through the identification of appropriate sites, which will connect and enhance the overall green infrastructure network. These woodlands should be a quality environment, which is sustainable productive and serves local communities” (p92)*.
- **Policy 34 – Green Belt** requires the Strategic Development Plan (SDP) for the South East of Wales to designate a Green Belt north of Cardiff and Newport. Green Belts are a permanent landscape designation that restricts urban sprawl and development within the countryside. The exact location of the green belt has not yet been identified. This will be determined by the SDP for the South East of Wales. The SDP is still under development and there is no set date for it to be published. However, it is expected that this will likely be during the 2RLDP plan period. Therefore, until the SDP is adopted, Future Wales, outlines that the local authority should restrict major development proposals within the general area proposed for the green belt.

Technical Advice Notes (TANs)

TANs are detailed guidance notes for planning proposals in Wales and supplement PPW and other circulars to make up the national planning policy framework. Welsh Government recommends that they be considered by local authorities when preparing development plans and other regeneration strategies.

Therefore, the following TANs should be considered when preparing a GIA:

- TAN 5: Nature Conservation and Planning (2009)
- TAN 6: Planning for Sustainable Rural Communities (2010)
- TAN 10: Tree Preservation Orders (1997)
- TAN 11: Noise (1997)
- TAN 12: Design (2016)
- TAN 13: Tourism (1997)

- TAN 15: Development and Flood Risk (2004) - *Please note that TAN 15 is currently under review by Welsh Government and is likely to be updated in due course*.
- TAN 16: Sport, Recreation and Open Space (2009)
- TAN 24: The Historic Environment (2017)

Natural Resource Policy (NRP – 2017)

The NRP sets out three national priorities for the sustainable management of natural resources in Wales. These include, delivering nature-based solutions, increasing renewable energy and resource efficiency, and taking a place-based approach. In addition, the NRP acknowledges the role of the planning system and development plans in safeguarding natural resources.

Section 11 of the Environment (Wales) Act 2016, outlines that to facilitate the implementation of the Natural Resources Policy, NRW were required to publish seven **Area Statements** that cover the entirety of Wales. Each statement would outline a collaborative approach towards the sustainable management of natural resources and set out the key challenges and opportunities for the future. **Guidance Note 42: Green Infrastructure Assessments** produced by NRW highlights these Area Statements as a starting point for local authorities when producing GIAs.

Following on from this, the **State of Natural Resources Report (SoNaRR)** published by NRW in 2020 assessed the current condition of natural resources in Wales and opportunities for action. The report has four long term aims, which includes safeguarded and enhanced natural resources, resilient ecosystems, healthy places for people, and a regenerative economy. The evidence and data collected as part of this study forms a crucial part of this GIA, by providing the most up to date information regarding broad ecosystems, the condition of designated sites and opportunities to address threats and challenges through nature-based solutions.

In addition, the NRP and SoNaRR Report are further supplemented by NRW's **Welsh Information for Nature Based Solutions (WINS)** data. NRW outlines that this information can provide significant insight as to how local authorities can identify opportunities for nature-based solutions within its administrative boundaries and should be used to inform development plans and strategies.

The Nature Recovery Action Plan for Wales (NRAP – 2021)

The NRAP was published to acknowledge the considerable impact that climate change and other threats were having upon the natural environment. In 2021, the Welsh Government declared a nature emergency recognising the growing evidence outlining the scale of biodiversity and ecosystem decline in Wales due to the effects of climate change, pollution, over exploitation and non-native invasive species.

The NRAP outlines five key themes for action:

- Maintaining and Enhancing Resilient Ecological Networks.
- Increasing Knowledge and Knowledge Transfer.
- Realising new Investment and funding.
- Upskilling and capacity for delivery.
- Mainstreaming, Governance and Reporting Progress.

Local Planning Policy

The Adopted Local Development Plan (LDP - 2010)

The Councils Local Development Plan (LDP) was adopted in November 2010. This set out the local planning policy framework to help guide development and shape the county borough. The plans initial period was set to last until 2021. However, the 1st Replacement Local Development Plan was subsequently withdrawn before examination. Therefore, the adopted LDP remains the fundamental policy document for determining planning applications within the local authority until a replacement plan is adopted.

Relevant policies for consideration include:

Strategic Policies

- SP6: Placemaking
- SP10: Conservation of the Natural Heritage
- SP11: Countryside Recreation
- SP18: Protection of the Strategic Leisure Network

Countywide Policies

- CW4: Natural Heritage Protection
- CW5: Protection of the Water Environment
- CW6: Trees, Woodland and Hedgerows
- CW7: Protection of Open Space

Area Specific Policies

- NH1: Special Landscape Areas (SLAs)
- NH2: Visually Important Local Landscapes (VILLs)
- NH3: Sites of Importance of Nature Conservation (SINCs)

Supplementary Planning Guidance (SPGs)

In addition to the adopted LDP, there are several SPG documents that provide further guidance to developers and applicants wishing to submit a planning proposal. These are also key documents for the delivery of green and blue infrastructure moving forward. They will be reviewed and updated accordingly following the adoption of a replacement development plan.

Relevant SPG documents include:

- LDP4: Trees and Development
- LDP6: Building Better Places to Live
- LDP8: Protection of Open Space
- Biodiversity Action Plan for CCBC

Other Policy Considerations

The Corporate Plan (2023 -2028)

CCBCs current corporate plan was approved by members at a council meeting in November 2023 and will be in place until 2028. The plan sets out what the council hopes to achieve on behalf of its communities over the next five years. It includes several well-being goals which seek to enable children to succeed in education, enable residents and communities to thrive, enable the economy to grow, and enable the environment to be greener.

Green Infrastructure Strategy

The Council appointed external consultants TACP in 2018 to prepare a Green Infrastructure Strategy for the county borough to replace its existing Countryside Strategy. The strategy was formerly adopted by the Council in 2020. The scope of the strategy was to review existing green infrastructure assets and their functions, to produce several action plans for the next twenty years ensuring green infrastructure thrived within the county borough. This is a key document for consideration during the development of the GIA, as it provides a starting baseline for mapping green and blue infrastructure assets and their functions.

METHODOLOGY

Whilst PPW outlines the requirement for LPAs to undertake a GIA as part of their development plans, it does not set out how exactly LPAs should undertake their assessments. However, WG have stated that each local authority should have a locally distinct assessment, highlighting the key issues and opportunities within each locality.

Guidance Note 42: Green Infrastructure Assessments which has been published by NRW, outlines the starting point for LPAs when undertaking their assessments. Whilst it is not a requirement to follow this guidance, it is considered as good practice to do so by professional practitioners across the region.

This guidance sets out that a GIA should contain five key stages which include:

- Establishing the existing baseline by mapping green and blue infrastructure assets
- Identifying key challenges and pressures
- Identifying opportunities to address them
- Consider the impact of new development sites
- Set out a framework for monitoring and review

Baseline Review

The Council adopted its Green Infrastructure Strategy in 2020. This document set out the organisations priorities for maintaining and enhancing green and blue infrastructure over the next twenty years. As part of this work, TACP consultants were commissioned to map the county borough to provide the local authority with a dataset for primary and secondary green infrastructure typologies. This information is the most recent and up-to date source of information for the LPA to map its existing green and blue infrastructure assets. However, work has begun on a new dataset in collaboration with external consultants that will provide an updated information source before the Deposit consultation expected to take place in January 2026.

Mapping green and blue infrastructure assets involved a combination of datasets, which included Ordnance Survey Master Map, Ordnance Survey Green Space, and Open Street Map. The resulting data has been mapped to highlight primary and secondary typologies of green and blue infrastructure as set out within Annex B of TAN 16: Sport, Recreation and Open Space. EB20.1 Green Infrastructure Assessment: Supporting Maps provides an overview of primary and secondary typologies within the county borough and each of the five masterplan areas.

In addition to this data, internal and external datasets held by the Council as well as external stakeholders including NRW, WG and CADW have been used to map existing site designations, protected and productive landscapes, accessible greenspaces, blue infrastructure, access routes, and the historic environment. These supporting maps can be viewed in EB20.1: Strategic Review of Existing Green Infrastructure Assets.

Identifying Key Challenges and Pressures

PPW outlines that Area Statements prepared by NRW should be considered as starting point for local authorities looking to highlight key issues impacting upon the natural environment within their locality. In addition to this, the SoNaRR Report published by NRW in 2020, highlights how each of these issues is impacting upon broad system habitats, which are key for ecosystem resilience and maintaining and enhancing biodiversity. The key drivers highlighted are climate change, pollution, land use change, and invasive not native species, pests and diseases. Each of these threats has been outlined, as well as the impacts upon the natural environment.

Opportunities for Enhancement

The Council has produced maps of the county borough that highlight opportunities to enhance land parcels to improve green and blue infrastructure. The Councils Green Infrastructure Strategy outlines a scoring framework for each land parcel within the county borough based on its multifunctional importance. Each land parcel has been scored from one to five based on its contribution to each function of green and blue infrastructure. These functions include biodiversity, landscape, water management, access, education, community regeneration and tourism. The resulting dataset scores each land parcel by one of five categories from very high potential to very low potential.

In addition, SoNaRR and Welsh Information for Nature-based Solutions (WINS) data published by NRW provides local authorities with additional information as to what opportunities exist within their areas for addressing key issues through nature-based initiatives. Therefore, these opportunities have also been set out within the strategic level assessment. Although specific areas at the local scale have not been precisely mapped at this stage, as this is a strategic assessment. The Council has commenced work on identifying local opportunities and areas to implement nature-based solutions for key challenges such as flooding, biodiversity enhancements, and agricultural land management. These areas will be mapped extensively and will inform the deposit version of the GIA.

Consideration of Candidate Sites

As part of the Pre-Deposit Plan consultation, the Council has opted to open a third call for candidate site submissions. This assessment sets out how previous site submissions have

considered the role of green and blue infrastructure from the outset of the plan process, including an overview of how each site submission has been assessed to this point.

Recommendations

This report includes recommendations for a strategic policy which is included within the Pre-Deposit Plan, as well as further work that has been identified as a result of undertaking this assessment. This work involves further strengthening the evidence base as well as key considerations for the candidate sites assessment process.

STRATEGIC REVIEW OF EXISTING GREEN AND BLUE INFRASTRUCTURE

Classifications of Green and Blue Infrastructure

Annex B of TAN 16: Sport, Recreation and Open Space sets out useful classifications of open spaces, which the Council has used as a basis for mapping its existing green and blue infrastructure assets. These can be separated into primary and secondary classifications of land, commonly referred to as typologies.

Definitions

Primary Typologies: are broad classifications of the landscape type, which is beneficial for high level strategic planning.

Secondary Typologies: provide a more detailed review of the landscape type, breaking down each primary typology into more specific land uses.

Example: Natural and Semi Natural Green Spaces are a primary typology, which include grasslands, woodlands and wetlands as secondary typologies.

Mapping Primary and Secondary Typologies

Primary and secondary typologies have been mapped for the county borough. These maps can be found within EB20.1: Green Infrastructure Assessments – Supporting Maps.

EB20.1 includes:

GI2.1 – Primary typologies within the Heads of the Valleys Masterplan Area.

GI2.2 - Primary typologies within the Ystrad Mynach Masterplan Area.

GI2.3 - Primary typologies within the Greater Blackwood Masterplan Area.

GI2.4 - Primary typologies within the Caerphilly Basin Masterplan Area.

GI2.5 - Primary typologies within the Lower Ebbw and Sirhowy Valleys Masterplan Area.

GI2.6 – Secondary typologies within the Heads of the Valleys Masterplan Area.

GI2.7 - Secondary typologies within the Ystrad Mynach Masterplan Area

GI2.8 – Secondary typologies within the Greater Blackwood Masterplan Area.

GI2.9 - Secondary typologies within the Caerphilly Basin Masterplan Area.

GI2.10 - Secondary typologies within the Lower Ebbw and Sirhowy Valleys Masterplan Area.

Breakdown of Existing Green and Blue Infrastructure by Typology

Table 1 – Breakdown of typologies within the county borough.

| Primary Typology | Secondary Typology |
|---|---|
| Natural and Semi Natural Greenspace (39%) | Woodland and Scrub (18%), Grassland (15%), Other (5%), Heath or Moor (1%), Wetlands (0.3%), Open and Running Water (0.3%), Bare Rock Habitats (0.1%), Nature Reserves (0.1%), Rural Commons (0.002%), Meadow (0.002%), Sanded Area / Beach (0.0004%). |
| Amenity Greenspace (9%) | Domestic Gardens (4%), Housing Green Spaces (4%), Informal Recreation Spaces (0.4%), Other Incidental Space (0.2%), Play Space (0.01%). |
| Urban Parks and Gardens (2%) | Public and Country Parks (2%) |
| Green Corridors (2%) | Road and Rail Corridors (1%), Rivers and Canal Banks (1%). |
| Other (37%) | Farms (34%), Other Spaces (2%), Institutional Spaces (1%), Golf Courses (1%), Allotments (0.2%), Public / Civic Spaces (0.1%), Cemeteries and Churchyards (0.1%), Camping / Caravan Parks (0.003%), Orchard (0.003%). |

Functions of Green and Blue Infrastructure

Green and blue infrastructure has a range of benefits. PPW outlines that a multifunctional GBI network can improve the economic, social, environmental and cultural well-being of the county borough. The term multifunctional relates to integrated networks of green and blue infrastructure assets that provide a range of benefits simultaneously. These are commonly referred to as functions of green and blue infrastructure and include:

- Biodiversity and habitat
- Landscape
- Health and well-being
- Water management (blue infrastructure)
- Access
- Built heritage

A strategic review of green and blue infrastructure assets within each of these key functions has been undertaken and outlined within the following section.

Biodiversity and Habitat

Biodiversity, short for “biological diversity,” refers to the variety of all living organisms on Earth, from microscopic organisms to large trees. It is essential for maintaining life support systems that sustain all life forms, including humans. Biodiversity is crucial for our well-being and prosperity, supporting a sustainable economy, promoting a healthier and happier society, and offering opportunities for learning, recreation, and tourism.

Caerphilly County Borough, located in the South Wales Valleys, has a unique landscape with diverse mix of biodiversity, ecosystems and habitats. The county borough is part of a larger nature network across South East Wales, which makes nature a cross-boundary issue, requiring a collaborative approach for its maintenance and enhancement.

Broad System Habitats

NRW describes the Office for National Statistics (ONS) classifications of ecosystem networks as the most appropriate reflection of existing habitats within Wales. These are:

- Woodlands
- Mountains, Moorland, and Heath
- Semi-natural Grassland
- Enclosed Farmland
- Coastal Margins
- Freshwater
- Urban / Non-Habitat
- Marine

Woodlands in Wales provide essential ecosystem services, including timber, biodiversity support, carbon storage, and improved air and water quality. They also help reduce flooding and drought risks and enhance physical and mental health. Welsh woodlands cover about 15% of the total land in Wales, this has increased from around 5% in the early 1900s. Despite this increase, Wales remains one of the least wooded countries in Europe, prompting efforts to create more woodlands.

Mountains, moorlands, and heathlands in Wales include upland habitats like dwarf shrub-heath, blanket bog, and native woodland. These ecosystems provide key benefits such as carbon storage, flood mitigation, and support for species. Mountains, moors and heath cover 19.3% of Welsh land, but lowland peatlands and heathlands are small and fragmented. Both upland and lowland areas face challenges from pollution and changes in traditional land management practices.

Semi-natural grasslands once dominated the Welsh lowlands but declined by over 90% in the late 20th century due to agricultural policies. Now, they cover about 9% of Wales, often in small, fragmented areas with low-intensity management. These grasslands, typically used for grazing livestock, provide higher ecosystem services than improved grasslands, especially for biodiversity, pollination, carbon storage, pollution control, and cultural heritage.

Enclosed farmland in Wales, which covers 54% of the country, is primarily used for livestock production. This ecosystem is intensively managed and includes areas of high biodiversity like hedgerows and traditional orchards. While agricultural productivity has been stable, it negatively impacts other ecosystem services through pollution and biodiversity loss.

Agriculture must reduce greenhouse gas emissions and improve nutrient use to address climate change and environmental challenges. Systemic changes in agricultural practices are needed to balance food production with environmental sustainability.

Wales has 2,700 km of coastline, with **coastal margins** including saltmarsh, sand dunes, sea cliffs, shingle, and saline lagoons, making up 3% of semi-natural habitats. These dynamic ecosystems, which transition between land and sea, have faced significant losses due to development and agriculture. They are highly diverse and support specialized species. The coastline is celebrated for its scenery, benefiting recreation, tourism, and the economy. Coastal margins also play a crucial role in flood protection. However, they are threatened by climate change, sea-level rise, and erosion.

Freshwater ecosystems, such as rivers, lakes, ponds, and floodplains, are crucial for biodiversity but are highly threatened globally. In Wales, only 44% of rivers meet good ecological status due to pressures like climate change, pollution, and invasive species. These ecosystems provide essential services, including water supply, renewable energy, and flood management. Sustainable management of these ecosystems is closely tied to the land within their catchments, and balancing their use with environmental sustainability is a significant challenge.

Urban areas have a significant impact on other ecosystems but also offer opportunities for innovation to reduce environmental impacts. By rethinking urban design, transport, and planning, urban areas can lead efforts to address climate and nature emergencies, improving quality of life and creating new jobs. Effective solutions require better policy integration and governance at all levels. Urban ecosystems, where most people live, are crucial for addressing environmental challenges and creating a sustainable, zero-carbon society with adequate green and blue infrastructure.

The Welsh inshore **marine** area extends up to twelve nautical miles from the coast, covering nearly 15,000 square kilometres or 41% of Wales. This marine ecosystem includes water quality, intertidal and subtidal habitats, and various species. It supports economic activities like aggregate extraction, ports, shipping, aquaculture, fishing, and marine renewable energy. The marine environment provides essential services such as carbon sequestration, natural flood defence, habitat restoration, and benefits for recreation, tourism, and well-being.

NRW has published its **Welsh Information for Nature-based Solutions (WINS)** data, which allows local authorities to identify these habitats within their areas. Analysis of this data indicates that Caerphilly County Borough contains six of the eight broad ecosystems as it is not located near the coast, therefore it does not contain any known coastal or marine habitats.

Table 2 provides a snapshot of the amount of land occupied by the six broad system habitats present within the county borough and their contribution to the regional nature network.

Table 2 – Broad system habitats within the county borough, and their contribution to the regional nature network.

| Habitat | Area (Ha) | Percentage of County Borough | Percentage of Habitat in the Region |
|----------------------------|-----------|------------------------------|-------------------------------------|
| Enclosed Farmland | 8647 | 31.2 % | 10.5 % |
| Semi Natural Grassland | 4951 | 17.9 % | 40.7 % |
| Woodland | 4887 | 17.6% | 21.9 % |
| Urban | 4783 | 17.2 % | 24.5 % |
| Mountains, Moors and Heath | 4111 | 14.8 % | 25.1 % |
| Freshwater | 309 | 1.1 % | 10.6 % |

Enclosed farmland is the most common habitat in Caerphilly County Borough covering 31.2% of all land, followed by semi-natural grasslands, woodlands and urban areas, each of which account for between 17% and 18% of all land within the county borough. However, the county borough contains 40.7% of the region's semi-natural grasslands, 25.1% of its mountains, moorland, and heathland, and 21.9% of its woodland. These areas are regionally important, highlighting the need to maintain and enhance them to reverse biodiversity decline and habitat fragmentation.

Peatlands

In addition to the eight broad habitats, peatlands are of importance for supporting a variety of species and habitats. They maintain biodiversity, help capture carbon and other greenhouse gases and regulate water. PPW outlines that these areas are extremely fragile as whilst they are few in number, they contain approximately a quarter of all soil carbon in Wales. There are fourteen small areas of Peatland within the county borough (five within the Heads of the Valley, five within the Caerphilly Basin, and four within Ystrad Mynach). All these areas are located outside of defined settlements, in areas of the open countryside.

Protected Areas of Biodiversity and Habitat - Supporting Map GI3.1

In addition to the eight broad system habitats and peatlands, there are many areas protected for their international, national and local importance for biodiversity and habitat. These are known as designated sites. Designated sites can be separated further, by whether they have statutory protection. Statutory sites are protected by law, whereas non-statutory sites are not protected by law.

Statutory sites include, Special Areas of Conservation (SACs), Special Protection Areas (SPAs), National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs) and RAMSAR sites. Non-statutory sites include Sites of Importance for Nature Conservation (SSSIs), Local Nature Reserves (LNRs) and Regionally Important Geodiversity Sites (RIGS). The following section will provide an inventory of the designated sites that are present within the county borough.

Special Areas of Conservation (SACs) - Supporting Map GI3.1

SACs were initially designated as sites of international importance for biodiversity and habitat by the European Unions (EU) Habitats Directive. They were considered part of the Natura

2000 nature network until the United Kingdom (UK) withdrew from the EU in 2019. Following this SACs were added to the National Sites Network (NSN) under the 2019 Habitat Regulations. Whilst the UK and Wales is no longer part of the EU, SACs are still considered as internationally important areas for biodiversity and habitat.

There is one SAC located within the county borough, which is the Aberbargoed Grasslands. This site is 39.81 Ha in size. The site is considered particularly important for its population of Marsh Fritillary Butterflies and Purple Moor Grass Meadows. The SoNaRR report (2020) published by NRW outlined that both indicative features were in an unfavourable condition following its last survey.

Sites of Special Scientific Interest (SSSIs) - Supporting Map GI3.1

SSSIs are areas designated for their national importance under the Wildlife and Countryside Act 1981. NRW are responsible for identifying these sites which can vary in habitat from flora and fauna, grasslands, parklands, woodlands, swamps to geologically important areas.

There are currently 13 SSSIs within the county borough, covering 240.25 Ha which is approximately 0.9% of all land. The SoNaRR report (2020) outlines that following the last survey of these sites which involved assessing 16 features from 11 of the 13 sites. It was concluded that 10 features were in an unfavourable condition, 1 was favourable and 5 were unknown. There is no information currently available for the condition of the remaining two sites at Cefn Y Brithdir and Memorial Park Meadows in Pontllanfraith.

National Nature Reserves (NNRs) - Supporting Map GI3.1

NNRs are designated by NRW under both the National Parks and Access to the Countryside Act 1949 and the Countryside and Wildlife Act 1981. They are legally protected sites which are conserved for the study of wildlife, habitats and geological features.

There is one NNR located within the County Borough, which is 42.28 Ha in size. The NNR is located at the Aberbargoed Grasslands and covers an area of land which includes the SAC. However, SACs are the highest designation within the designated sites hierarchy identified within PPW. Therefore, land covered by the NNR within the SAC, is considered as a SAC in the first instance. There is currently no data available as to the condition of the NNR. However, 39.81 Ha of the land within the 42.28 Ha designation was assessed by SoNaRR data as part of the SAC survey.

Sites of Importance for Nature Conservation (SINCs) - Supporting Map GI3.1

SINCs make a valuable contribution towards conserving biodiversity and ecosystem networks and are designated at the local level by local authorities. They are known as non-statutory designations because they don't have the same legal protection that statutory sites such as SACs, SSSIs and NNRs possess. However, whilst SINCs do not have the same legal protection, they make a valuable contribution towards ecosystem resilience and are therefore protected at the local level. There are currently 190 existing SINCs within the county borough, which were designated within the adopted LDP in 2010. They cover approximately 7427.05 Ha of land, which is 26.8% of all land within the county borough.

The last review of SINCs was carried out to inform the evidence base of the adopted LDP in 2007/08. As a result, whilst the local authority maintains each site on council owned land, little is known regarding the condition of sites on privately owned land. There is no requirement

under the current SINC guidelines for private land owners to maintain the condition of SINC on their land. This is an important issue as SINC do not preclude development from taking place. Therefore, it is important to establish the condition of all SINC within the county borough and establish up to date inventories of each site. Therefore, there is a need for a full review of all existing and potential SINC sites within the county borough.

Local Nature Reserves (LNRs) - Supporting Map GI3.1

LNRs are areas of land that are identified and managed by local authorities for their important natural features of special interest to the local area. There are four LNRs located within the county borough, these sites are located at Cwmllydrew Meadows, Memorial Park Meadows, Graig Goch and Flatwoods Meadow Natural Reserve. These areas cover 25.97 Ha in total which is approximately 0.1% of all land within the county borough. These four areas are under the ownership of the local authority and are managed accordingly to maintain their condition.

Cwmllydrew Meadows consists of a small alder woodland, two ponds, an ant meadow and two hay meadows. This area is considered of importance as it is one of the few remaining wet meadows within the county borough. Flatwood Meadows is made up of two meadows near the Sirhowy River which is home to wildflowers, butterflies, birds and amphibians. This area is of importance to the locality as it is one of the few remaining examples of species rich grasslands within the Sirhowy Valley. Graig Goch is an ancient oak and beech woodland located within the Sirhowy Valley. It is one of the few remaining woodlands from the pre-industrial period. It supports a range of species, as well as being an important landscape feature. Memorial Park Meadows contains four hay meadows and a large pond. It is also designated as a SSSI due to its important wet meadows, laid hedges and wildflowers.

Protected and Priority Species - Supporting Map GI3.2

Protected species include both animals and plants that are vulnerable, declining, or at risk of harm. They can be protected at various levels, from international to local, with the level of protection varying accordingly. The Environment (Wales) Act 2016 sets out that under Section 7 local authorities must consider the lists of priority species and habitats published by the WG.

These lists include 36 priority terrestrial, freshwater, and coastal habitats and 19 priority marine habitats. In addition, section 7 relates to 17 species of mammal, 51 species of birds, 10 species of fish, 8 species of reptiles, 188 species of invertebrates, 77 species of vascular plants, 67 species of lichens, 52 species of mosses and liverworts, 27 species of fungi, 5 species of stoneworts, and 55 marine species. Each of these is considered a priority species, which must be maintained and enhanced under the Councils duty to section 6 of the Environment (Wales) Act 2016. Section 7 habitats within Caerphilly County Borough include grasslands, ancient woodlands, rivers, ponds, lakes and hedgerows.

Landscape

The landscape is a vital and ever-present part of our heritage, offering a sense of place and local distinctiveness. It is constantly changing and reflects our past, influences our present, and provides essential resources like food, materials, and air. The landscape's structure is shaped by geology, geomorphology, and soil, helping us understand its development over time.

The established approach to assessing the characteristics of the landscape within Wales is through LANDMAP, which is a baseline assessment tool published by NRW. LANDMAP

contains five nationally consistent datasets which assesses the landscape by its geological, cultural, and historical qualities, its habitats, and its visual and sensory characteristics. The last assessment of the landscape within the county borough took place in 2008, during the preparation of the adopted LDP 2010. This assessment involved a full assessment of the county borough using the LANDMAP tool and resulted in several areas being protected within the plan as Special Landscape Areas (SLAs) due to their importance.

Special Landscape Areas (SLAs) - Supporting Map GI4.1

SLAs are a non-statutory designation for protecting areas of important landscape. In addition, this designation should be applied where normal planning policies cannot provide the necessary protection from development that may have a significant impact on the landscape. There are six existing SLAs within the county borough, which are the Upper Rhymney Valley (NH1.1), Gelligaer (NH1.2), Mynydd Eglwysilan (NH1.3), North Caerphilly (NH1.4), South Caerphilly (NH1.5) and Mynyddislwyn (NH1.6). These areas cover 13128.35 Ha of land which is approximately 47.3% of the county borough.

Visually Important Local Landscapes (VILLs) - Supporting Map GI4.1

In addition to SLAs, four VILLs were also designated within the county borough. These are areas considered to be of importance for their visual quality and backdrop. VILLs are not a specific planning designation nationwide. They were designated within the plan because although they did not meet the criteria to be designated as SLAs, they still were of distinct importance locally. Therefore, the VILL designation was applied for the county borough, which is a local designation which does not have any statutory protection. There are four VILLs within the county borough, located within the Northern Rhymney Valley (NH2.1), Manmoel (NH2.2), Abercarn (NH2.3) and Rudry (NH2.4). These areas cover 5663.1 Ha of land, which is approximately 20.4% of the county borough.

Productive Landscapes

Trees, Hedgerows and Woodlands - Supporting Map GI4.2

There are vast areas of the county borough covered by trees and woodlands. Approximately 4887 Ha of land is made up of woodlands, which contain a mix of ancient semi natural woodland and other mixes. Although there is no current data of the exact number of trees and hedgerows within the county borough, they make vital contribution towards our everyday lives. Due to their importance some areas are protected by tree preservation orders, there are 544 groups of trees and 1001 single trees currently under this form of protection.

Agricultural Land - Supporting Map GI4.3

There is 8647 ha of farmland within the county borough, which is approximately 31.2% of all land within the county borough. However, not all agricultural land is of equal importance for growing crops and sources of food. WGs Predictive Agricultural Land Classification (ALC) data provides information on where the best and most versatile agricultural land is located, which allows LPAs to consider this when making development decisions. The ALC model includes six different grades of land quality, not including urban and unclassified areas. A detailed breakdown of ALC land within the county borough is outlined within table 3.

Table 3 – Agricultural land quality within the county borough.

| Agricultural Land Classification (ALC) | Area (Ha) | Percentage of County Borough |
|---|------------------|-------------------------------------|
| Grade 1 – Excellent | 15.05 | 0.05 % |
| Grade 2 – Good | 357.94 | 1.29 % |
| Grade 3a – Good to Moderate | 435.87 | 1.57 % |
| Grade 3b – Moderate | 3138.12 | 11.31 % |
| Grade 4 – Poor | 9680.92 | 34.9 % |
| Grade 5 – Very Poor | 4173.47 | 15.1 % |

The county borough has very little grade 1 land, there is a small area located on the southern boundary with Cardiff. There is more grade 2 land, mostly located in the south of the county borough near the boundary with Cardiff, and around Bedwas, Machen, Wattsville, and Risca. Grade 3 land is more widespread in the south. However, less than 3% of the land is between grades 1 and 3a of the ALC model, indicating that existing areas should be protected from development where possible.

Health and Wellbeing

Accessible Greenspaces - Supporting Map GI5.1

Accessible natural greenspaces significantly enhance the environment and quality of life in urban areas. They are valued by the community, offer vital refuges for wildlife, and benefit public health and well-being. Greenspaces include natural and semi-natural open areas like parks, gardens, and recreational spaces that surround and form part of our communities. These spaces offer multiple benefits, including opportunities for physical activity, mental well-being, and social interaction.

There are six country parks located within the county borough. These are Bargoed Woodland Park, Parc Cwm Darran, Parc Penallta, Pen y Fan Pond, Riverside Park, and the Sirhowy Valley Country Park. These account for 812.7 Ha of land, approximately 2.92% of all land within the county borough. In addition, there are six urban parks within the county borough. These are Bargoed Park, Morgan Jones Park, Nelson Wern Park, Sir Harold Finch Park, Waunfawr Park and Ystrad Mynach Park. Each of these locations provides the local population with an accessible greenspace for health and wellbeing, sports and recreation.

NRW's Accessible Greenspace Standards within their Greenspace Toolkit outlines that everyone should live within 300 metres of an accessible greenspace area. Spatial analysis of county borough highlights that 97.1% of all land within the county borough is within 300m of an area of accessible greenspace. There is a total of 4951.65 Ha of accessible greenspace within defined settlements, with most accessible areas located outside of defined settlement boundaries. A detailed assessment of accessible greenspace is currently under development to assess the county borough in more detail than the strategic level and will inform the leisure, recreation and open space evidence paper, as well as the deposit version of the GIA.

Sports and Recreation

In addition to accessible areas of greenspace, there are many facilities for sports and recreation spread throughout the county borough. These facilities include 116 sports pitches,

21 tennis courts, 20 bowling greens, 8 cricket grounds, 105 fixed equipment playgrounds, 27 multi used games areas, 21 youth shelters, 18 skate parks, 10 kickwalls, 1 water play splash park and 1 assault course.

Blue Infrastructure - Supporting Maps GI6.1 & GI6.2

The county borough has a unique valleys landscape with three main freshwater rivers servicing local communities, these are the rivers Rhymney, Ebbw and Sirhowy. As a result of this some areas of the county borough are susceptible to flooding. The Flood Map for Planning (FMfP) highlights that 298.65 Ha of land is within Flood Zone 2, and a further 869.41 Ha of land is within Flood Zone 3. This is approximately 4.2% of the county borough. 145 Ha (12.4%) of these areas are within a Defended Zone.

In addition to rivers, there are four locations where there is access to freshwater, these are located at Penyfan Pond, Parc Cwm Darran Lake, Butetown Reservoir and the Pondfeeder located on Gelligaer and Merthyr Common.

There are a vast number of areas within the county borough that are susceptible to surface water flooding due to the steep topography of the valleys landscape. There are three areas of critical importance for drainage. These are the Rhymney River Upper Reach, The Nant Tywn Harris Catchment, and the Porset Brook Catchment. These areas account for 714.51 Ha of land within the county borough and are considered of vital importance for natural drainage.

These areas all make a vital contribution to the management of water, its quality and are home to many ecosystems and habitats. Therefore, they should be protected where necessary from inappropriate forms of built development, and enhanced where possible.

Countryside Access - Supporting Maps GI7.2 & GI7.3

The open countryside is of vital importance for human interactions with the natural environment. Over 80% of the county borough is located outside of defined settlements, providing significant opportunities for interactions with biodiversity, the landscape, accessible greenspaces and the historic environment. These areas are all connected by a vast network of Public Rights of Way (PRoW).

There is a combined network total of 495.8 miles of PRoW located within the county borough. This consists of 378.7 miles of footpaths, 59.6 miles of restricted bridleways, 50.9 miles of bridleways, and 6.8 miles of byways open to all traffic. Further information can be found within supporting map GI7.2.

In addition, there is a network of cycle routes that connect various parts of the county borough with principal and local settlements. A full overview of cycle routes is contained within supporting map GI7.3.

Historic Environment

Historical assets are a vital part of green and blue infrastructure as they provide opportunities for recreation and tourism, as well as improving cultural well-being which is a pillar of sustainable development. There are a number of historical assets located throughout the county borough, including listed buildings, scheduled ancient monuments, conservations areas, historic parks and gardens, and a historic landscape.

There are a total of 378 listed buildings, 51 scheduled ancient monuments, 16 conservation areas, 5 historic parks and gardens and 1 historic landscape spread across the county borough. Only 2 of the 378 listed buildings are considered grade 1, which are Caerphilly Castle and Llancaiach Fawr. Historic parks and gardens are located at the Maes Manor (11 Ha), Van Mansion (1.5 Ha), Ruperra Castle (254 Ha), Cefn Mably (210 Ha), and the Memorial Garden, Senghenydd (0.2 Ha). All of which are considered as grade 2 listings. There is one historical landscape within the county borough, which is the Gelligaer Common (693.6 Ha).

These historical assets are an important part of our heritage and should be protected from inappropriate forms of built development within the plan.

THREATS AND CHALLENGES

Guidance Note 42 published by NRW outlines that the South East Wales Area Statement should be used as a starting point for local authorities when identifying the key issues facing green and blue infrastructure.

Each of the seven Area Statements identifies key challenges in different localities and suggests actions to address them, aiming to manage natural resources sustainably for future generations. These statements are regularly updated with new evidence and ideas, involving more people and creating opportunities. Collectively, they respond to the WGs Natural Resources Policy, which outlines challenges and opportunities for the sustainable management of natural resources in Wales.

The latest SoNaRR report in 2020 outlined that there were five main drivers pressuring the natural environment in Wales, they include climate change, pollution, land use change, over exploitation, and invasive species.

The following tables provide an insight into the pressures associated with the drivers outlined above, the areas effected and how they are impacted. The information within each table is derived from SoNaRR and WINS data published by NRW.

Table 4 - Pressures of climate change within the county borough

| Pressures | Assets Impacted | Potential Impacts |
|-----------------------------|--|---|
| Changing Weather Patterns | Enclosed Farmland, Freshwater, Mountains, Moorlands and Heath, Semi Natural Grasslands, Urban, and Woodlands | Inconsistent weather for growing crops and managing livestock, loss of habitat, increased risk of wildfires, loss of species, increased risk of flooding, reduced water quality, soil degradation, increased risk of pests and disease, changes in carbon sequestration, changes in land suitability. |
| Increased Water Temperature | Freshwater | Changes in species population, increased risk of invasive species. |

Table 5 -Pressures of pollution within the county borough

| Pressures | Assets Impacted | Potential Impacts |
|------------------|--|---|
| Air Pollution | Enclosed Farmland, Freshwater, Mountains, Moors and Heath, Semi Natural Grasslands, Urban, and Woodland. | Acidification of rivers, ponds and lakes, impacts on ecosystem services, increased levels of greenhouse gases, increased levels of nitrogen, reduction in species |

| | | |
|-----------------|---|---|
| | | richness in both animal and plant species, increased carbon intake, soil acidification, harmful to human health and well-being. |
| Water Pollution | Enclosed Farmland, Freshwater, Mountains, Moors and Heath, and Urban. | Excessive nutrient content in rivers, lakes and ponds, less species diversity, eutrophication due to fertiliser use, poor soil condition, overexploitation. |
| Land Pollution | Enclosed Farmland, and Urban | Less diverse species, eutrophication due to fertiliser use, poor soil condition, decreased water quality, land contamination, lower value of land, decreased tourism, decline in health and well-being. |
| Noise Pollution | Urban. | Poor quality of life, decline in health levels. |

Table 6 - Pressures of land use change within the county borough

| Pressures | Assets Impacted | Potential Impacts |
|--------------------------------------|---|--|
| Agricultural Intensification | Enclosed Farmland, Freshwater, Mountains, Moors and Heath, Semi Natural Grassland, Urban, and Woodland. | Loss of habitat, deforestation, species decline, increased habitat fragmentation, increased flood risk, pollution, lack of buffer zones for priority species, soil compaction, fertiliser application, depletion of pollinators. |
| Built Development and Infrastructure | Enclosed Farmland, Freshwater, Semi Natural Grassland, Urban, and Woodland. | Loss of high-grade agricultural land, increased risk of flooding, loss of habitat, increased carbon footprint, consumes more natural resources, increases in landfill and waste, overexploitation. |
| Competing Land Use | Enclosed Farmland, Semi natural Grassland, and Woodlands. | Creation leads to possible loss of other habitats, loss of green areas for built development. |

| | | |
|---|---|--|
| Insufficient Management | Mountains, Moors and Heath, Semi Natural Grassland, and Woodland. | Decline in species and habitat, overgrazing, lower livestock production, lower food growth productivity, designated sites not managed effectively, poor connectivity, quality of sites deteriorates. |
| Unmanaged Access, Sport and Recreational Activity | Mountains, Moors and Heath, and Semi Natural Grassland. | Pollution (noise and air), physical damage, |
| Historic Inappropriate Afforestation | Mountains, Moors and Heath. | Loss of habitat and species. |
| Physical Modifications | Freshwater. | Reduced ecosystem resilience, impacts species movement and migration, loss of habitat, loss of connectivity, |

Table 7 - Pressures of invasive species within the county borough.

| Pressures | Assets Impacted | Potential Impacts |
|------------------------------------|---|--|
| Invasive Non-Native Species (INNS) | Freshwater, Mountains, Moors and Heath, Semi Natural Grasslands, and Urban. | Outcompete native species, loss of some species, structural impacts on river and canal banks, increased threat of flooding, threat to ecosystem delivery and connectivity, uncontrolled growth, impacts on built structures and environmental systems. |
| Pests and Diseases | Enclosed Farmland, and Woodlands. | Tree loss, loss of species, decline in tree health, deforestation. |

OPPORTUNITIES FOR ACTION

National legislation and planning policy outlines that threats and challenges must be addressed through nature-based solutions in Wales, to maintain and enhance biodiversity, boost ecosystem resilience, protect against habitat fragmentation, protect landscapes and accessible greenspaces, improve the quality of the blue environment, and safeguard our built heritage.

Therefore, it is important to identify areas of the county borough where there is a need for green and blue infrastructure enhancements, and where nature-based solutions can be implemented.

EB20.1 Green Infrastructure Assessment: Supporting Maps GI8 – GI8.5 highlight areas of the county borough where there is potential to enhance the land for green and blue infrastructure improvements.

Each land parcel has been scored based on its contribution to each function of green and blue infrastructure. These functions include biodiversity, landscape, water management, access, education, community regeneration and tourism. The resulting dataset scores each land parcel by one of five categories, ranging from very high potential to very low potential.

Scoring

Red – Very low potential

Orange – Low potential

Yellow – Medium potential

Light Green – High potential

Dark Green – Very high potential

A full breakdown of the county borough and each masterplan area can be found in the supporting document EB20.1: Green Infrastructure Assessment: Supporting Maps.

Supporting Maps

EB20.1: GI8 - Strategic overview of green infrastructure opportunities for enhancement.

EB20.1: GI8.1 - Strategic review of opportunities for enhancement within the Heads of the Valleys Masterplan Area.

EB20.1: GI8.2 - Strategic review of opportunities for enhancement within the Ystrad Mynach Masterplan Area.

EB20.1: GI8.3 - Strategic review of opportunities for enhancement within the Greater Blackwood Masterplan Area.

EB20.1: GI8.4 - Strategic review of opportunities for enhancement within the Caerphilly Basin Masterplan Area.

EB20.1: GI8.5 - Strategic review of opportunities for enhancement within the Lower Ebbw and Sirhowy Valleys Masterplan Area.

These maps will form the basis of the next stage in the process, which will identify local opportunities for improvements and enhancements through nature-based solutions

SoNaRR and WINS data published by NRW provides potential additional opportunities for further consideration.

SoNaRR Opportunities

The SoNaRR Report 2020 identifies the following opportunities for improving and enhancing biodiversity and habitat within Wales:

Enclosed Farmland: Dietary change, education and awareness, habitat creation, habitat protection, habitat restoration, integrated plans and strategies, nature-based solutions, pollution management, soil protection, sustainable agriculture and forestry.

Freshwater: Community engagement, education and awareness, habitat creation, habitat protection, habitat restoration, improve species diversity, integrated plans and strategies, nature-based solutions, payment for ecosystem services, renewable energy, research and technology, sustainable agriculture and forestry, and water efficiency.

Mountains, Moors and Heath: Community engagement, education and awareness, habitat protection, habitat restoration, integrated plans and strategies, nature-based solutions, payment for ecosystem services, pollution management, research and technology, and sustainable agriculture and forestry.

Semi Natural Grasslands: Habitat protection, habitat restoration, integrated plans and strategies, payment for ecosystem services, and soil protection.

Urban: Access to nature, education and awareness, energy efficiency, habitat creation, habitat protection, nature-based solutions, renewable energy, research and technology, sustainable construction, sustainable transport, and water efficiency.

Woodlands: Community engagement, education and awareness, habitat adaption, habitat creation, habitat protection, habitat restoration, improve species diversity, integrated plans and strategies, payment for ecosystem services, renewable energy, research and technology, sustainable construction.

WINS Opportunities

WINS data published by NRW has estimated the amount of land which could accommodate nature-based initiatives to address key challenges within the county borough, these are included within table 8.

Table 8 – WINS data estimated opportunities for nature-based solutions within the county borough.

| Opportunities for Nature Based Initiatives | Potential Land (Ha) |
|--|----------------------------|
| Catchment Woodland | 606 Ha |
| Catchment Woodland (drained land) | 6342 Ha |
| Catchment Woodland (sensitive area on drained land) | 1502 Ha |
| Catchment Woodland (sensitive area) | 753 Ha |
| Channel Belts | 1610 Ha |
| Floodplain Woodland (area at greater risk of flooding) | 162 Ha |
| Habitat Restoration | 843 Ha |
| Hedgerow Planting | 878 Ha |
| Hedgerow Planting (at greater risk of flooding) | 1276 Ha |
| Hedgerow Planting (with sensitivities at greater risk of flooding) | 22 Ha |
| Hedgerow Planting (with sensitivities) | 13 Ha |
| Retention of Winter Stubbles | 683 Ha |
| Retention of Winter Stubbles (at greater risk of flooding) | 575 Ha |
| Riparian Planting | 413 Ha |
| Widening Existing Hedgerows | 443 Ha |
| Widening existing Hedgerows (at greater risk of flooding) | 368 Ha |

Each land parcel identified through this strategic assessment with a medium, high or very high potential for enhancement will be assessed to identify whether they could accommodate a nature-based initiative that will improve green and blue infrastructure and address key environmental challenges within the county borough. The results of this local scale assessment will inform the Deposit plan.

POTENTIAL DEVELOPMENT SITES

Consideration of Candidate Sites

The Pre-Deposit Plan public consultation will provide an opportunity for landowners to submit sites for potential development as part of the Councils third call for candidate sites. This is in addition to the two previous calls for sites in September 2021 and October / November 2022.

Green and blue infrastructure is a key consideration during the candidate sites process. All sites submitted are subject to a detailed assessment, which involves the input of other Council service areas based on their relevant expertise. The Councils Countryside Ecologists, Environmental Health, Landscape, Arboricultural, Rights of Way, and Placemaking officers are all key consultees as part of the process.

All sites submitted that are within a statutory site for biodiversity are immediately ruled out at stage one of the process. Sites which reach the second stage of the process are part of a detailed assessment by all service areas for their impact on green and blue infrastructure assets, as well as identifying potential opportunities for green and blue infrastructure enhancements as part of strategic placemaking, for any sites which are considered suitable for further consideration at this stage.

All green and blue infrastructure assets identified within this strategic assessment are fundamental considerations of the candidate sites process.

Consideration of Development Applications

Until a replacement LDP is adopted, it is recommended that all development applications for planning consent be considered in line with the adopted LDP for the county borough. However, following updates to PPW, with the release of Edition 12 in 2024. All planning proposals must be accompanied by a Green Infrastructure Statement that sets out how green and blue infrastructure assets will be impacted by the development, as well as how they can be integrated into its design. Planning Officers must consider each application by applying the step-wise approach and DECCA framework for resilient ecological networks (RENs), to meet the Councils duty to maintain and enhance biodiversity under Section 6 of the Environment (Wales) Act 2016.

MONITORING AND REVIEW

This strategic version of the GIA has been prepared to inform the Pre-Deposit Plan. However, there is a substantial amount of work on-going to further strengthen the evidence base and assess green and blue infrastructure in a much more detailed method. Work has already begun on a new green and blue infrastructure dataset which will provide an updated base dataset, in addition consultants have been procured to review existing biodiversity and landscape designations. This assessment will be constantly reviewed and updated until the consultation on the Deposit Plan, which is expected in January 2026. The final version of the GIA which will inform this stage of the plan and will include more detailed strategic, countywide and area specific green and blue infrastructure policies, as well as a robust monitoring framework. PPW requires that GIAs be updated regularly, in addition to the annual monitoring framework that is required as part of the adopted plan process. The Deposit version of the GIA will set out a robust monitoring and review framework in more detail.

RECOMENDATIONS

The following section will outline the initial recommendations of this strategic green infrastructure assessment, which includes further strengthening the evidence base of the plan and a strategic policy for inclusion within the revised preferred strategy which is included within the Pre-Deposit Plan.

Strengthening the Evidence Base

1. Review of Landscape Designations

Following consideration of the existing SLA and VILL designations, it was highlighted that the last LANDMAP assessment took place to inform the adopted LDP in 2010. There have been many developments constructed near the edge of settlements throughout the county borough since then, therefore these designations will be re-assessed, and their boundaries redrawn where there has been built development. The results of this review will inform the Deposit version of the GIA and will contribute towards an updated policy framework in relation to areas of the landscape that require protection from inappropriate development.

2. Review of Sites of Importance for Nature Conservation

Whilst there are currently 190 SINC areas within the county borough, this assessment has highlighted the lack of information the council currently holds regarding the condition of designations that are not within council ownership. The last SINC review was completed to inform the adopted LDP, therefore there is a need for a full review of all SINC areas. A full review of SINC sites within the county borough has been commenced by external consultants on behalf of the Councils Countryside Team. The specifications of this assessment include all existing SINC areas, other areas that may meet SINC status, as well as river and major road corridors. The results of this will further strengthen the evidence base and be published within the Deposit version of the GIA.

3. Updates to Existing and New Datasets

The plan process takes place over a period of several years, therefore the evidence base requires updating at various points of the process. To ensure that this assessment considers the most recent and up to date data, it will be updated and reviewed regularly. In addition, new datasets may be published by key stakeholders such as WG and NRW that will inform the GIA further. Therefore, further research and any new data will be considered when updating the GIA for the Deposit stage of the plan process.

4. Local Scale Green and Blue Infrastructure Assessment

Building upon this strategic assessment of green and blue infrastructure, a comprehensive and detailed summary of each local area of the county borough is required for the deposit version of the GIA. This assessment will identify local opportunities to implement nature-based solutions on areas of land identified through this assessment with potential for enhancement.

Strategic Policy for Inclusion within the Pre-Deposit Plan

Policy PS8: Green and Blue Infrastructure

All development proposals must maintain, and enhance green and blue infrastructure assets by promoting the following key functions:

- 1. Biodiversity and Ecosystem Resilience**
- 2. Landscape & Quality of Place**
- 3. Greenspace Provision**
- 4. Connectivity**
- 5. Water Management and embedding SuDS principles into development proposals from the outset.**

All development proposals must integrate green and blue infrastructure within the design from the outset. The recommended policy will ensure that green and blue infrastructure is considered as a fundamental requirement during the consideration of all sites and is implemented as a key placemaking principle in line with both national and local policy.

Following on from this, further policies will be identified within the Deposit Plan which will outline more specific details in relation to the maintenance and enhancement of green and blue infrastructure assets.