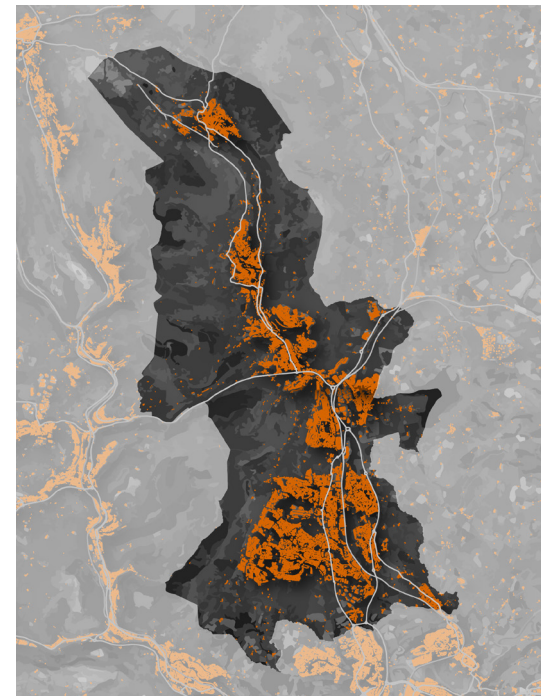
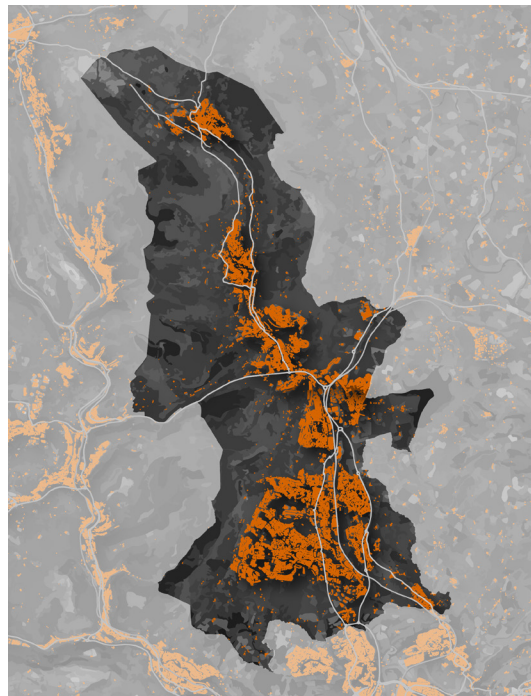
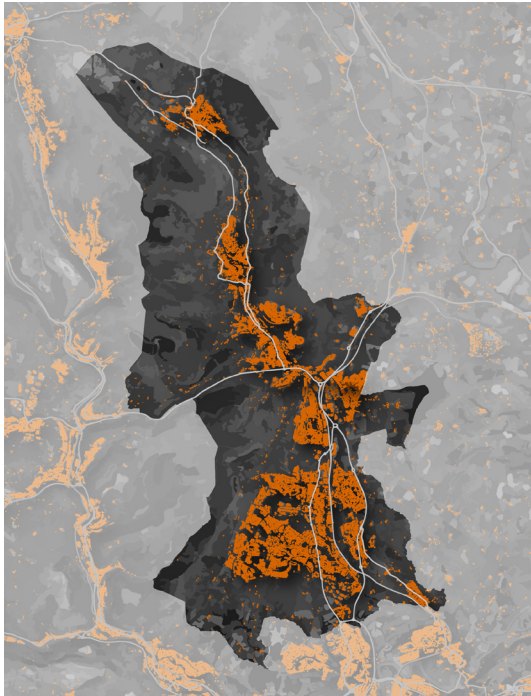


Green Infrastructure Strategy



CHRIS BLANDFORD ASSOCIATES
landscape | environment | heritage



Green Infrastructure Strategy

Approved

A handwritten signature in black ink that reads 'D. Watkins' in a cursive style.

Dominic Watkins

Position

Director

Date

5th December 2019

Revision

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TORFAEN GREEN INFRASTRUCTURE STRATEGY

A shared framework for developing a functional, connected network of natural areas

KEY MESSAGES

The Green Infrastructure Strategy is designed to assist in shaping and coordinating the delivery of green infrastructure in Torfaen, to provide social, environmental and economic well-being benefits now and in the future.

The Strategy demonstrates how green infrastructure can help adapt to climate change, reverse the decline in biodiversity and support healthy living and well-being, while also supporting sustainable growth and economic development.

Green infrastructure is the living network of natural and semi-natural green and blue spaces, and other landscape features, interspersed within and between urban and rural places.

Our Shared Vision for Green Infrastructure

Torfaen has a well-connected and multi-functional green infrastructure network of distinctive, biodiverse and resilient natural spaces, providing social, environmental and economic well-being benefits for people. Our natural resources and ecosystems are managed in sustainable ways to maintain, protect and enhance the network's integrity and connectivity. The interdependency of Torfaen's rich biodiversity, landscape and heritage is widely recognised.

Our urban green infrastructure includes a network of woodlands, street trees, parks, gardens, road verges, allotments, cemeteries, amenity greenspaces, and blue infrastructure such as rivers and canals, much of which is accessible to the public.

Green infrastructure in the countryside and uplands surrounding around our towns includes a network of mountain, moorland and heath, semi-natural grassland and woodland, forestry plantation and farmland habitats.

Overall, at the strategic level Torfaen's Green Infrastructure Network is extensive and generally well-connected, much of which is publically accessible. At the local level, particularly in and around Torfaen's towns, there are place-specific opportunities to strengthen the quality, connectivity and accessibility of the green infrastructure network.

Where maintained and managed in a healthy condition, our green and blue infrastructure can offer multiple benefits for helping alleviate social, economic and environmental challenges.

Green infrastructure provides essential "life-support services" for sustaining people's well-being - from clean air and water and regulation of flooding, to green spaces for escape, play and relaxation.

Adopting an integrated and joined up "green infrastructure approach" to managing natural resources can significantly reduce costs for public bodies, businesses and individuals, whilst providing quality of life benefits for residents, workers and visitors.

This Strategy provides a strategic framework or "big picture" for *developing a functional, connected network of natural areas that supports the current and future well-being needs of local populations in Torfaen* (objective 1 of the Well-being Plan). It outlines principles, priorities and opportunities for strengthening the resilience and connectivity of Torfaen's Green Infrastructure Network.

The Green Infrastructure Strategy is aimed at public bodies prescribed under the Well-being of Future Generations (Wales) Act, as well as private and third sector landowners, developers and the general public. All these stakeholders have a part to play in helping make Torfaen a happy, healthy and prosperous place to live through sustainable management of our shared natural resources.

1.0 SETTING THE SCENE

1.1 Background

1.1.1 Torfaen County Borough is located in South East Wales within the former county of Gwent (see **Figure 1.1**). The main towns within Torfaen are Cwmbrân, Pontypool and Blaenavon.

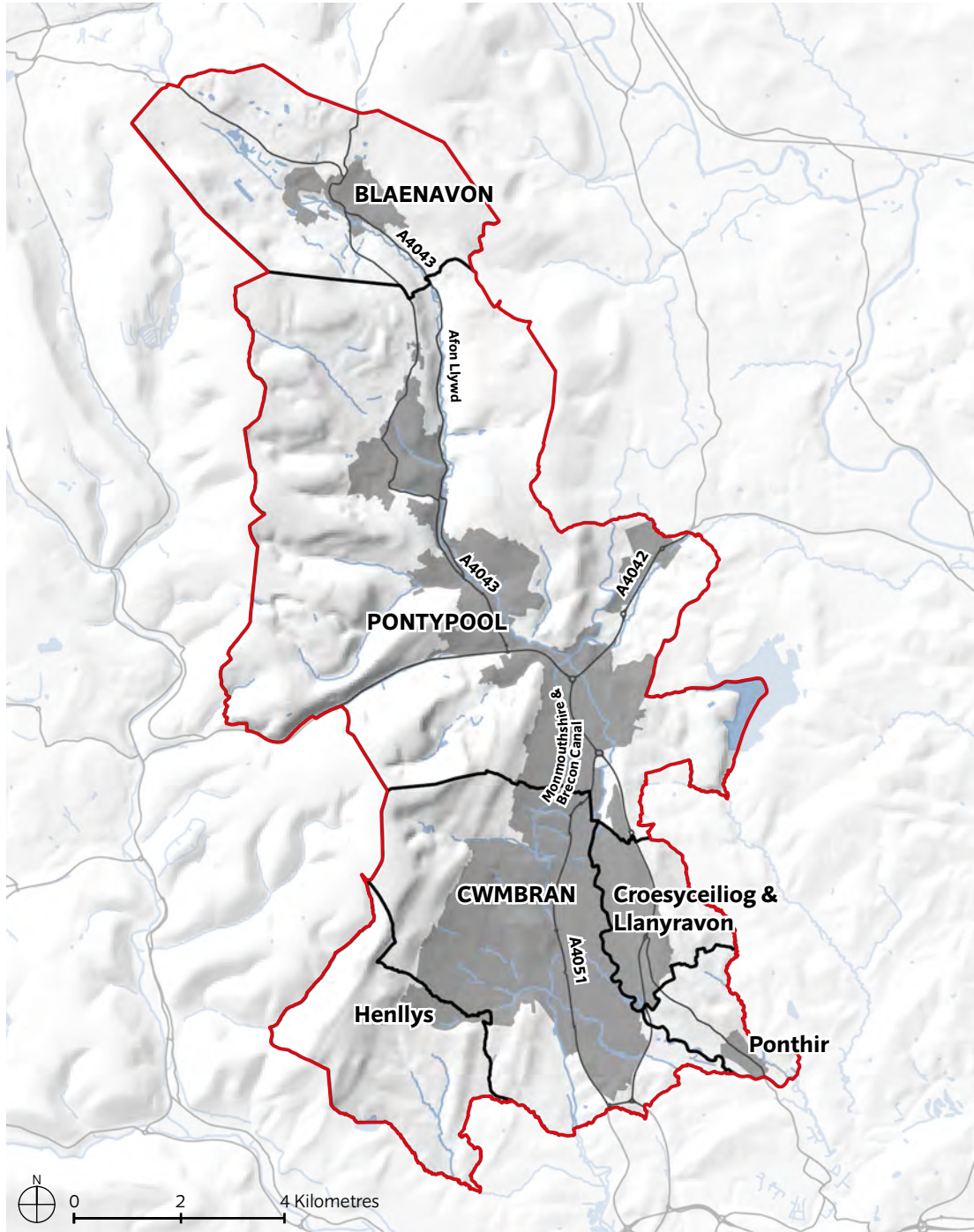
Need for the Strategy

1.1.2 The Torfaen Public Services Board (PSB) was established in April 2016 under the Well-being of Future Generations (Wales) Act 2015. The PSB brings together public bodies operating across the County Borough in a partnership to deliver public services in new ways that will improve the well-being of future generations in Torfaen.

1.1.3 The sustainable management of our natural resources is at the heart of the PSB's shared vision for improving well-being in Torfaen set out in the Well-being Plan 2018-2023.

1.1.4 Objective 1 of the Plan is to *'develop a functional, connected network of natural areas that support the current and future well-being needs of local populations'*.

1.1.5 As a starting point towards delivering this objective, the PSB identified the need to develop a Green Infrastructure Strategy for Torfaen. On behalf of the PSB, Torfaen County Borough Council commissioned Chris Blandford Associates (CBA) to prepare the Green Infrastructure Strategy in consultation with key partners.



KEY

- Torfaen County Borough
- Town/Community Councils

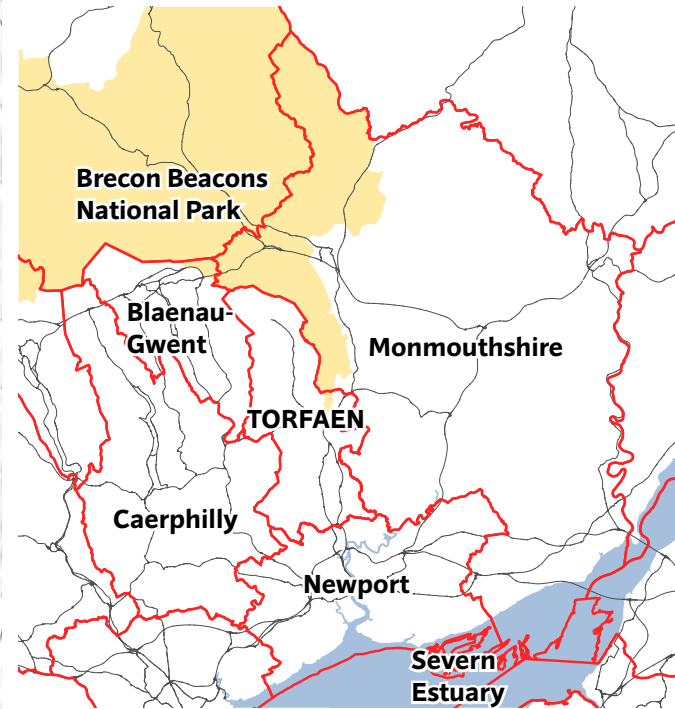


FIGURE 1.1
LOCATION & CONTEXT

Aims and Focus of the Strategy

- 1.1.6 The aim of this Green Infrastructure Strategy is to set out an agreed strategic framework for the sustainable management of our natural resources to support the current and future well-being needs of Torfaen's communities.
- 1.1.7 In line with Objective 1 of the Well-being Plan, the Green Infrastructure Strategy focuses on five priority areas:
1. Building climate change resilience.
 2. Supporting biodiversity and ecological resilience.
 3. Tackling landscape crime involving the irresponsible use of greenspaces.
 4. Identifying strategic opportunities to develop active travel networks and promote outdoor physical activity.
 5. Maximising opportunities for training, volunteering and apprenticeships related to natural resources management.

Benefits of the Strategy

- 1.1.8 Some of the key benefits of the Strategy for green infrastructure planning and management of natural resources in Torfaen include:
- Providing an agreed strategic framework or "big picture" for working towards Objective 1 of the Well-being Plan, whilst also contributing to many of the Plan's other objectives (see **Box 1.1**).
 - Encouraging a more integrated, innovative and joined up approach to maximising well-being benefits from sustainable management of natural areas by public, private and third sector landowners.
 - Establishing shared principles, priorities and opportunities for strengthening the resilience and connectivity of Torfaen's green infrastructure network.
 - Provision of evidence to support the preparation and implementation of local delivery plans.

Box 1.1 – Torfaen Well-being Plan Objectives

1. *Develop a functional, connected network of natural areas that support the current and future well-being needs of local populations.*
2. *Develop mitigation and adaptation responses to the impacts of climate change.*
3. *Provide children and young people with the best possible start in life.*
4. *Support healthy lifestyles and enable people to age well.*
5. *Tackle the intergenerational patterns of poverty and develop economic resilience.*
6. *Improve local skills through work-force planning, training, apprenticeships, and volunteering opportunities.*
7. *Create safe, confident communities and promote community cohesion.*

1.2 What is Green Infrastructure?

1.2.1 In the context of sustainable management of natural resources for well-being benefits, "Green Infrastructure" (GI) is as defined in **Box 1.2**.

– Green Infrastructure

Green infrastructure is the living network of natural and semi-natural green and blue spaces, and other landscape features, interspersed within and between urban and rural places.

Where appropriately managed, Green Infrastructure Assets and natural resources provide "life-support services" that sustain people's well-being.

1.2.2 Natural resources - our air, land, water, wildlife, plants and soil - provide our most basic needs, including food, energy and security and they keep us healthy. Where natural resources are under pressure from unsustainable uses and activities, this presents a risk to long-term social, economic and environmental well-being.

Box 1.3 - Ecosystem Services

- **Supporting services:** systems necessary for supporting all other ecosystem services – such as soil formation, nutrients cycling and plant growth.
- **Regulating services:** ecosystem services that regulate our environment – such as pollination, pest/disease control, carbon sequestration, water purification and flood attenuation.
- **Provisioning services:** ecosystem services that provide us with goods – such as drinking water, food, fuel, energy and construction materials.
- **Cultural services:** ecosystem services that provide us with aesthetic, spiritual, religious, recreational or scientific enrichment – such as access to green spaces and historic places for recreation and tourism.

1.2.3 Conversely, where our GI Assets and natural resources are sustainably managed they can provide a wide range of ecosystem services (as highlighted in **Box 1.3** and illustrated on **Figure 1.2**), which in turn can provide multiple social, economic and environmental benefits for people's well-being.

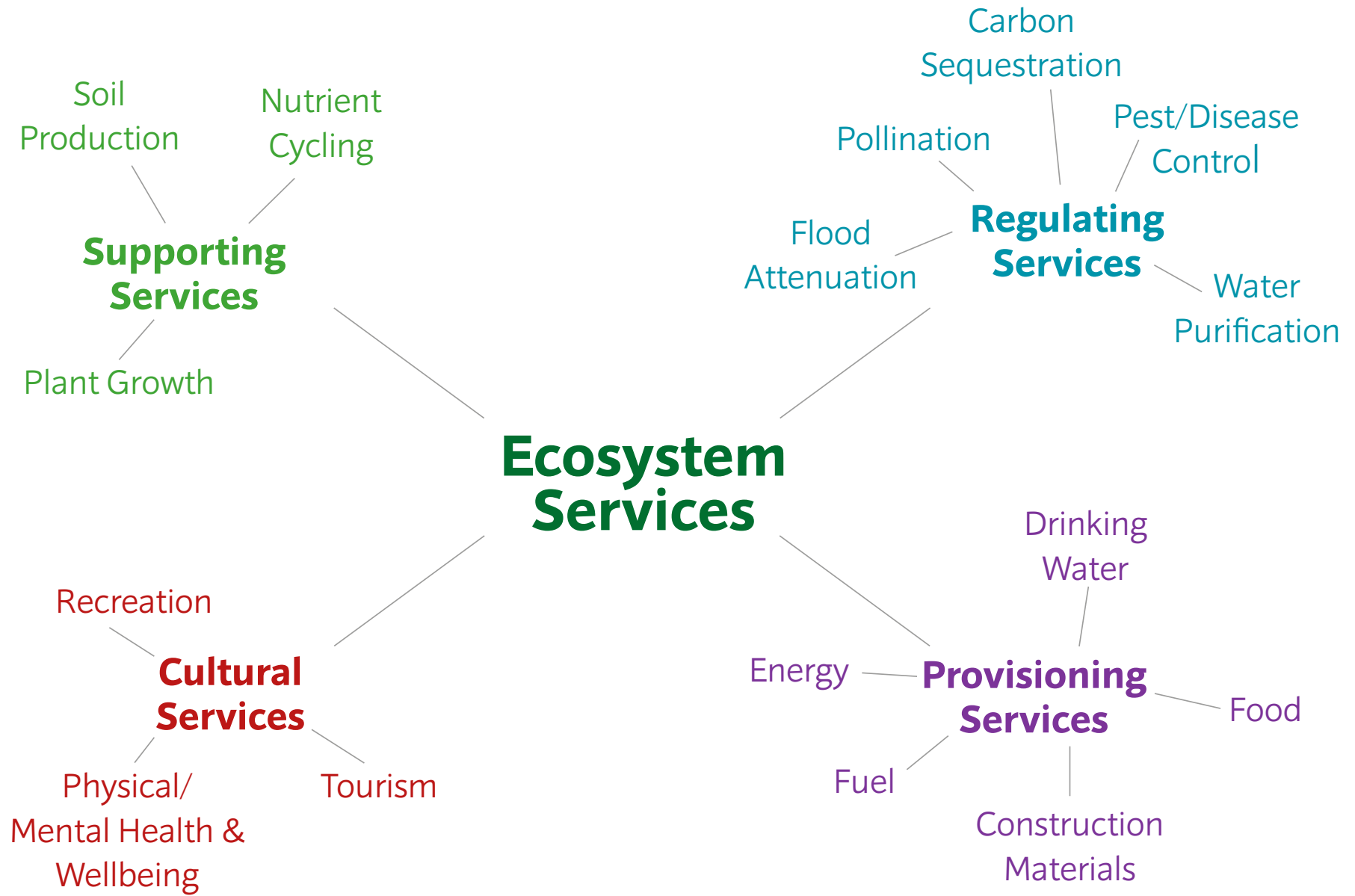


FIGURE 1.2
ECOSYSTEM SERVICES

1.2.4 Whilst individual GI Assets can serve one or more functions, connectivity between different GI Assets helps to maximise the ecosystem services and well-being benefits that they can generate. Well-connected GI Assets create GI networks that are adaptive and resilient to urbanisation and climate change.

1.2.5 Physical connections make the most impact. Linear landscape features such as river corridors and hedgerows provide ecological corridors for the dispersal of wildlife. Connecting green spaces and places via a network of sustainable walking and cycling routes along green corridors encourages healthy living and opportunities for people to experience nature.

1.2.6 Adopting an integrated and joined up “green infrastructure approach” to managing natural resources can significantly reduce costs for public bodies, businesses and individuals, whilst providing quality of life benefits for residents, workers and visitors.

1.2.7 As illustrated on **Figure 1.3**, GI networks can connect people with GI Assets at various scales. GI Assets range from ‘blue infrastructure’ (such as rivers, canals and lakes) to urban green infrastructure (such as parks, green roofs and street trees). They can be specific sites at the local level or broader landscape-scale features at the strategic level such as moorlands, grasslands and woodlands.

1.2.8 Where connected together by rights of way, cycleways and green and blue corridors, GI Assets around individual buildings, streets, neighbourhoods and the wider countryside in and around our towns combine to form multi-functional networks of natural spaces.



FIGURE 1.3
GREEN INFRASTRUCTURE SCALES & CONNECTIVITY

1.3 Policy Context

- 1.3.1 This Green Infrastructure Strategy provides a shared framework for strengthening understanding of the connections between the state of our natural environment, the services and goods it provides for human well-being and drivers of change. It connects a wide range of environmental, social and economic issues and helps us to more fully take into account the value of our natural environment as a whole.
- 1.3.2 The relevant legislation, Welsh Government policies and Natural Resources Wales advice that provides the national context for GI planning and delivery in Torfaen is illustrated on **Figure 1.4** and outlined in **Boxes 1.4 – 1.10**).

Box 1.4 – The Environment Act

Section 4 of the Environment (Wales) Act 2016 sets out principles for the sustainable management of natural resources in Wales, which is defined as:

'Using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of present generations of people without compromising the ability of future generations to meet their needs, and contributing to the achievement of the well-being goals in the Well-being of Future Generations Act.'

Section 6 places a duty on public bodies to prepare a Biodiversity and Ecosystem Resilience Forward Plan, demonstrating how they intend to deliver the plan in collaboration with other partners, taking into consideration the Nature Recovery Plan for Wales and the Well-being of Future Generations Act.

Section 7 requires Welsh Government, in consultation with Natural Resources Wales, to publish a list of the habitats of principal importance (priority habitats), and take all reasonable steps to maintain and enhance this list, including encouraging others to do the same.

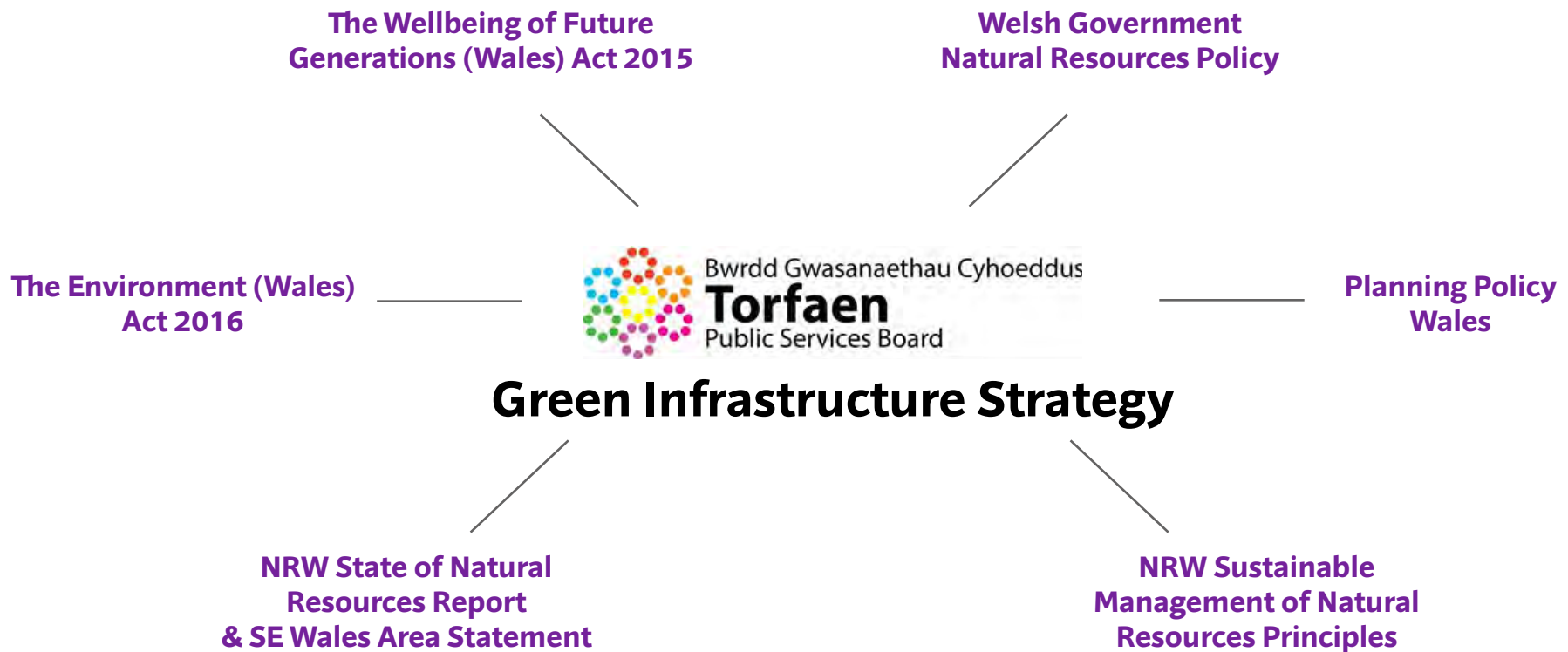


FIGURE 1.4
GREEN INFRASTRUCTURE POLICY CONTEXT

Box 1.5 – The Well-being of Future Generations Act

The Well-being of Future Generations (Wales) Act 2015 seeks to improve the social, economic, environmental and cultural well-being of Wales.

Public bodies must do what they do in a sustainable way and think more about the long term; work better with people and communities and each other; look to prevent problems; and take a more joined-up approach to delivering services and advice.

Public bodies need to make sure that, when making their decisions, they take into account the impact they could have on people living in Wales.

- 1.3.3 Together, these Acts create the legislative framework for managing our natural resources and improving social, economic, environmental and cultural well-being. They help us tackle the challenges we face and to take better advantage of the potential opportunities. The Environment Act focuses on building resilience into our ecosystems and recognising the benefits that they provide if we manage them in smarter ways.

Box 1.6 – Planning Policy Wales

Chapter 6 of Planning Policy Wales (Edition 10, 2018) sets out Welsh Government's planning policy on maintaining and/or incorporating GI as key components of distinctive and natural places to maximise health and well-being of communities and the environment.

PPW requires planning authorities to adopt a strategic and proactive approach to GI and biodiversity by producing up to date Green Infrastructure Assessments.

Green Infrastructure Assessments should be used to develop a robust approach to enhancing biodiversity, increasing ecological resilience and improving wellbeing outcomes; and identify key strategic opportunities where the restoration, maintenance, creation or connection of green features and functions would deliver the most significant benefits.

Box 1.7 – Welsh Government Natural Resources Policy

A statutory requirement of the Environment (Wales) Act, this document published in 2017 sets out Welsh Government's policy for the sustainable management of Wales' natural resources to maximise their contribution to the goals of the Well-being of Future Generations Act.

The Natural Resources Policy outlines three national priorities: delivering nature-based solutions; increasing renewable energy and resource efficiency; and taking a place-based approach.

Box 1.8 – Principles for Sustainable Management of Natural Resources (Natural Resources Wales)

- **Adaptive management** – manage adaptively by planning, monitoring, reviewing and where appropriate, changing action.
- **Scale** – consider the appropriate spatial scale for action.
- **Collaboration and engagement** – promote and engage in collaboration and cooperation.
- **Public Participation** – make appropriate arrangements for public participation in decision-making.
- **Evidence** – take account of all relevant evidence, and gather evidence in respect of uncertainties.
- **Multiple benefits** – take account of the benefits and intrinsic value of natural resources and ecosystems.
- **Long term** – take account of the short, medium and long term consequences of actions.
- **Preventative action** – take action to prevent significant damage to ecosystems.
- **Building resilience** – take account of the resilience of ecosystems, in particular (i) diversity between and within ecosystems; (ii) the connections between and within ecosystems; (iii) the scale of ecosystems; (iv) the condition of ecosystems (including their structure and functioning); (v) the adaptability of ecosystems.

Box 1.9 – State of Natural Resources Report (Natural Resources Wales)

This report by Natural Resources Wales sets out the state of Wales' natural resources. It assesses the extent to which natural resources in Wales are being sustainably managed, and recommends a proactive approach to building ecosystem resilience. The report links the resilience of Welsh natural resources to the well-being of the people of Wales.

The State of Natural Resources Report looks at how pressures on Wales' natural resources are resulting in risks, such as the challenges presented by climate change, and threats to biodiversity for long-term social, cultural, environmental and economic well-being, as set out in the Well-Being of Future Generations (Wales) Act 2015.

The report explores the key issues for resilience of Welsh natural resources, as well as opportunities for integrated solutions that provide multiple benefits. It also highlights where there are gaps in evidence.

Box 1.10 – Area Statements (Natural Resources Wales)

The Environment (Wales) Act 2016 made it a duty for Natural Resources Wales to produce Area Statements.

Natural Resources Wales is currently working with partners in developing the Area Statement for South East Wales (covering Torfaen County Borough, Monmouthshire County, Newport City, Caerphilly County Borough and Blaenau-Gwent County Borough).

The Area Statement will set out the natural resources in South East Wales and the benefits (ecosystem services) they provide; address the key challenges and opportunities at a local level to better manage natural resources (including new ways of working together); and provide a common evidence base with information, data and evidence.

In this way, the Area Statement will help better understand the state and trends of natural resources in South East Wales, the pressures on them and the benefits they provide in order to provide information to better manage natural resources.

1.4 Developing the Strategy

- 1.4.1 This Green Infrastructure Strategy sets out a proactive approach to enhancing our natural resources, increasing ecological resilience and improving well-being outcomes for Torfaen.
- 1.4.2 The approach to developing the Green Infrastructure Strategy draws on best practice from elsewhere in South East Wales, including the Monmouthshire Green Infrastructure Strategy, in addition to best practice from elsewhere in the UK.
- 1.4.3 The Green Infrastructure Strategy was developed in three main steps as outlined below.

¹ In line with Chapter 6 of the Planning Policy Wales Edition 10, (Welsh Government, 2018)

Step 1 – Green Infrastructure Assessment

- 1.4.4 The Green Infrastructure Assessment¹ set out in **Section 2.0** paints a picture of **where we are now**. It brings together existing datasets within a Geographical Information System² to provide a map-based evidence resource of the existing GI Assets that contribute to Torfaen’s network of natural areas.
- 1.4.5 The Assessment also draws on evidence from a range of studies to explore the ecosystem services and well-being benefits that our GI Assets can provide; assess at a strategic level the accessibility and connectivity of our natural areas for people and wildlife; and highlight strategic opportunities for strengthening the functionality and resilience of Torfaen’s GI network through the restoration, maintenance, creation and/or connection of different types of GI Assets.

² Using QGIS in accordance with the recommendation of the Scoping Research into a GI/Natural Capital IT Assessment Tool commissioned from Capita by Torfaen CBC in 2018.

Step 2 – Green Infrastructure Vision and Objectives

- 1.4.6 Informed by the findings of the GI Assessment, our shared vision and objectives for the planning and delivery of GI are set out in **Section 3.0**. This provides a framework for shaping **where we want to be** in the future.
- 1.4.7 The vision is illustrated by a Strategic GI Network for Torfaen, which provides the overarching spatial framework for developing a functional, connected network of natural areas across Torfaen as an integral part of the wider Gwent Green Grid. Set within and supporting the Strategic GI Network, GI Networks for Blaenavon Town, Pontypool Town and Cwmbrân Town³ provide local spatial frameworks for informing the preparation of Place Plans by the Town and Community Councils.

Step 3 – Green Infrastructure Action Plan

- 1.4.8 A high level Action Plan set out in **Section 4.0** provides a framework for **how we will get there** in terms of working towards our shared vision for GI in Torfaen.
- 1.4.9 The Plan identifies priorities for action that will help the PSB partners and other stakeholders in adopting the new GI approach. These include exploring joint approaches to achieving the Green Infrastructure Strategy aims in the short-term; realising opportunities to scale-up delivery of improvements in the medium-term; and transforming how we can work together, and with private and third sector landowners and local communities, to secure the long-term sustainable management of natural resources and greenspaces for future generations in Torfaen.

³ incorporating Croesyceiliog & Llanyrafon, Ponthir and Henllys

Stakeholder & Public Consultation

- 1.4.10 Discussions and feedback from stakeholder consultations helped to shape the Green Infrastructure Strategy.
- 1.4.11 An initial stakeholder workshop was held with a number of the PSB partner organisations in July 2019 to explore opportunities for maintaining, protecting and enhancing GI Assets in Torfaen to deliver well-being benefits.
- 1.4.12 The interim findings of the emerging Green Infrastructure Strategy were presented to the following stakeholders during the Autumn of 2019:
- Torfaen Local Council Partnership (Town & Community Councils)
 - Torfaen Council Members (Streetscene Area Meeting)
 - Torfaen PSB Board
- 1.4.13 Following approval of the Draft Green Infrastructure Strategy by the PSB, it will be made available for a 6 week period of public consultation prior to its adoption.

2.0 WHERE WE ARE NOW

2.1 Key Challenges for our Natural Resources

2.1.1 Our uses of land and other human activities in Torfaen depend on healthy natural resources. The key challenges for improving GI and well-being in Torfaen are highlighted by the 2017 Well-being Assessment.

Environmental Challenges

2.1.2 As well as supporting our basic needs, including food, timber, fuel and recreational provision, there are also less visible services provided by our natural resources; these include water retention, supporting pollinating insects and carbon storage.

2.1.3 Where natural resources are under pressure this presents a risk to long-term well-being. Development (housing and infrastructure), agriculture, industry, leisure and recreation, and energy generation are all putting pressure on our natural resources.

2.1.4 Anti-social behaviour, vehicular air and noise pollution (see **Box 2.1**) lack of successional planting of trees and potential changes in species composition due to climate change and disease are also risks to our natural resources.

Box 2.1 – Vehicular Air & Noise Pollution Issues

Monitoring undertaken in Torfaen reveals that air quality continues to meet all national standards, with concentrations of all pollutants measured being within stipulated air quality limits. Despite this, monitoring shows that some areas of the Borough are experiencing an increase in vehicular air pollution, notably the area around Cwmbrân Drive associated with the South Sebastopol development.

Two sections of road in Torfaen have been identified as 'Noise Action Priority Planning Areas'. These are:

- A Local Authority owned road which stretches up Snatchwood Road from Pontnewynydd to Abersychan High Street.
- A national trunk road stretching up the A4042 Usk Road from the Wain Y Clare to the former British Nylon works.

Homes along these stretches have been modelled as experiencing particularly high levels of traffic noise.

2.1.5 Current consumption patterns show that we are consuming more than our fair share of the earth's resources. The ecological footprint for Torfaen in 2011 was 3.13 global hectares per person, this compares with 3.30 global hectares per person for Wales. If everyone in the world lived as we do in Torfaen then we would need 3.13 planets to support us all.

2.1.6 Improving understanding of the true value of our natural resources resulting in better protection and management means that we will be able to ensure the most basic needs of future generations are met. We will be better able to address challenges such as climate change and improving people's health and well-being, and take positive local action to help address the damage our decisions have upon our environment and the well-being of current and future generations.

Climate Change

- 2.1.7 Our climate is already changing and will continue to do so in the future. This will affect our communities, the services we deliver, our assets and infrastructure.
- 2.1.8 Projections suggest that (based on averages) Torfaen is likely to face hotter dryer summers, warmer wetter winters, lower groundwater levels, less snowfall and frost, and a greater frequency of extreme weather events. This may present flood risk management challenges in some localities.
- 2.1.9 To ensure the long-term well-being of our communities we need to start to prepare locally for the challenges of climate change. We also need to take positive action to help limit the damage our local decisions have on global environmental change.

Demographic Projections

- 2.1.10 Projections show that by 2039, the percentage of total population in Torfaen who are aged 65 and over will rise from 20.1% in 2016 to 28.3% and the number of Torfaen residents aged 85 and over is projected to be more than double in the next 23 years, from 2,372 in 2016 to 5,595 in 2039; an increase of 136%.
- 2.1.11 We know that these challenges mean that there will be increased demand for some services, with increasing numbers of older people needing care and primary health services.
- 2.1.12 We will need to account for future increases in the number of older people in our service planning. We also need to think about how they will access and negotiate the built and natural environment, and keeping people healthy and independent into old age.

2.1.13 Latest projections also show an expected 9.6% fall in the number of children and young people aged 0 to 25 over the next 23 years, from 28,010 to 25,330. This is similar to the projections for Wales.

Health Inequalities

2.1.14 The bigger picture for Torfaen, as in the rest of Wales, is that life expectancy and rate of premature mortality are improving. However, beneath that improving picture, there are stark inequalities in health and disease alongside more people living longer with a greater range and complexity of chronic mental (see **Box 2.2**) or physical health conditions (see **Box 2.3**). This will have a significant impact on people, communities and the sustainability of public services, particularly health and care services, for future generations.

Box 2.2 – Mental Health Issues

The average Mental Component Summary scores (WHS, 2014/15) for Torfaen is 48.7, being slightly lower than Wales (49.4) meaning Torfaen has slightly lower mental well-being on average than Wales as a whole.

Our Healthy Future Indicators (PHWO, 2015) show that nearly a third (31%) of Torfaen residents report having a common mental health issue.

Box 2.3 – Physical Health Issues

- According to the Welsh Health Survey (2014/15) over half of the Torfaen adult population report being treated for a mental or physical chronic illness, the majority of which is likely to be in our most deprived communities.
- GP disease registers show nearly 6,000 people resident in Torfaen are diagnosed with diabetes.
- Obesity rates are higher in Torfaen (27%) than Wales (23%) as a whole and rates have been rising steadily for the last decade.
- Two out of every three adults are overweight or obese (62%, WHS 2014/15), higher than Wales (59%).
- Over a quarter of reception year (4-5 years) children in Torfaen are already overweight or obese (28.6%) which is above the Wales average of 26.2%.
- Obesity rates are expected to rise further in future generations, creating a significant problem for health and well-being and the sustainability of public services in the future.

2.1.15 The data shows that our most deprived communities in terms of health are Trevethin 1 (ranked 22), Upper Cwmbrân 1 (ranked 39), Blaenavon 2 (ranked 78) and Pontnewydd 1 (ranked 97) out of 1909 LSOAs across Wales. All of which, can be correlated with overall levels of deprivation (see **Box 2.4**).

Box 2.4 – Deprivation Issues

There is wide variation in the level of deprivation experienced across Torfaen.

The three most deprived LSOAs in Torfaen are Trevethin 1 which is ranked 35, Upper Cwmbrân 1 which is ranked 78 and Pontnewydd 1 which is ranked 138, out of the total 1909 LSOAs in Wales.

2.1.16 Over a third of the population of Torfaen report being physically inactive, which is higher than the Welsh average. Again, physical inactivity is closely related to deprivation; people are twice as likely to be physically inactive in areas of high multiple deprivation compared to their less deprived neighbours.

Community Safety and Cohesion

2.1.17 Criminal damage and arson rates have reduced from 13.9 to 12.5, which are also higher than the Wales average which has reduced from 12.2 to 10.0. Anti-social behaviour has been declining at a similar rate in both Torfaen and Wales since 2011, however, Torfaen remains higher than Wales with a rate of 47.5 compared to Wales at 31.9 in 2015-16.

Economic Challenges

2.1.18 Torfaen has a higher proportion of residents who are employed in the public sector and manufacturing. We also know that the largest percentages of Torfaen residents work in Cwmbrân, followed by Pontypool, then Newport and, that average weekly pay is lower than the Wales average, and significantly lower than the UK average and, that men earn significantly more than women. Additionally, compared to the Wales average, people living in Torfaen have lower levels of qualifications and skills.

2.1.19 To plan for the future well-being of our communities we also need to consider other factors that could have an influence on the economy locally. This includes the Cardiff City Deal, Brexit and changes to national policy at a UK as well as Welsh Government level.

2.1.20 The impact of continued austerity measures mean there will be more cuts to the public sector, at a time when we are expecting demand for some services to increase. Future austerity measures also have the potential to impact greatest on those in our most deprived communities.

2.1.21 In order to transition towards a more sustainable community by 2035, the Pontypool Deep Place study advocates progressively developing the local food, energy, care and environmental sectors. We know that future generations are always going to have demand for these sectors as they are fundamental for everyday life. The study also highlighted the risks of over-looking existing economic activity and potentially missing opportunities to support its development. This is important because it will help ensure our communities and local economies are more resilient against external shocks, as well as in safeguarding our environment for future generations.

2.1.22 Future technological advances will also likely change what people will be doing for employment in the future, and will present important opportunities to support and strengthen our local economies across Torfaen. Technological advances are also likely to contribute to a more 'circular' and less socially and environmentally exploitative economic model for our communities.

2.1.23 Reduced oil availability and increased oil prices in the future have the potential to impact greatly on businesses (cost of materials, energy use and transport costs), on households (cost of goods, fuel poverty and cost of transport) and on our economic decision making now and in the future.

Housing Demand

- 2.1.24 The adopted Local Development Plan allocates for the provision of 4700 additional homes in Torfaen between 2006-2021. As at April 2016, 1888 dwellings had been delivered leaving a remaining requirement for 2865 dwellings up to 2021 (accounting for accrued demolitions). Based on current projections, Torfaen requires approximately 200 additional affordable units of housing per annum between 2015 and 2020 to meet housing need.
- 2.1.25 Additionally much of the housing stock in Torfaen could be improved in terms of energy efficiency, to create warmer homes that are cheaper to run and produce less carbon emissions.

Addressing the Challenges

2.1.26 Working with the other PSB's across Gwent, we have commissioned work to develop future scenarios to help build our understanding and inform our approaches to meeting these challenges.

2.1.27 As we work together to develop and adopt sustainable management approaches for our GI over the next 10 years or so, we will need to consider new ways of:

- Working better together to balance the land use pressures that impact on our natural resources.
- Increasing the resilience of our natural resources that we rely on from a changing climate.
- Better managing water in the landscape and reducing the impact of temperature rise, particularly in urban areas and around key infrastructure etc.
- Identifying and pursuing renewable energy generation opportunities.

- Accounting for the impacts of exiting the European Union on the environment (e.g. agricultural payments, access to labour, changes to environmental legislation, loss of grant aid etc).
- Addressing increasing levels of obesity and inactivity by promoting active travel and the benefits of outdoor recreation.
- Supporting an ageing population by making sure there is suitable access to greenspace.
- Identifying opportunities for local food production.

2.1.28 This will involve all public sector bodies with responsibilities for the management of land and GI Assets within Torfaen working together to maximise well-being benefits, in partnership with other stakeholders (such as wildlife organisations, the Torfaen Nature Partnership, private land owners, commoners and local residents).

2.2 Overview of our Green Infrastructure

2.2.1 Torfaen covers an area of approximately 12,546 ha. The main land uses within Torfaen are⁴:

- Mixed agriculture (50%)
- Built-up areas (20%)
- Post-industrial land (15%)
- Open moorland (10%)
- Woodland (5%)

2.2.2 Torfaen has 4,423 ha of farmland, which is approximately 35% of its total land area and below the Welsh average of approximately 80%⁵.

2.2.3 Torfaen has four Sites of Special Scientific Interest and seven Local Nature Reserves, as well as over 200 Sites of Importance for Nature Conservation. Much of the post-industrial landscape is of biodiversity value for wildlife.

2.2.4 The County Borough has heather moorlands, ancient woodlands and wildflower-rich meadows that support rare species of birds, flora, mammals and reptiles. The principal reasons for this rich biodiversity is because of the geology and the altitude, which has a range of almost 600 metres.

2.2.5 Torfaen has the largest urban tree canopy in Wales, and the towns are dominated by street trees and woodlands with an interconnecting network of open green spaces.

2.2.6 The Afon Lwyd River and the Monmouthshire and Brecon Canal provide important blue infrastructure assets as wildlife corridors, extending from Torfaen's boundary with Newport in the south through Cwmbrân and Pontypool to the Brecon Beacons National Park and Monmouthshire in the north.

⁴ Torfaen Replacement Local Development Plan (2018-2033) Draft Sustainability Appraisal Scoping Report Appendix 2 - Baseline Characteristics of Torfaen. April 2019

⁵ Draft Sustainability Appraisal Scoping Report Appendix 2 - The Baseline Characteristics of Torfaen (April 2019)

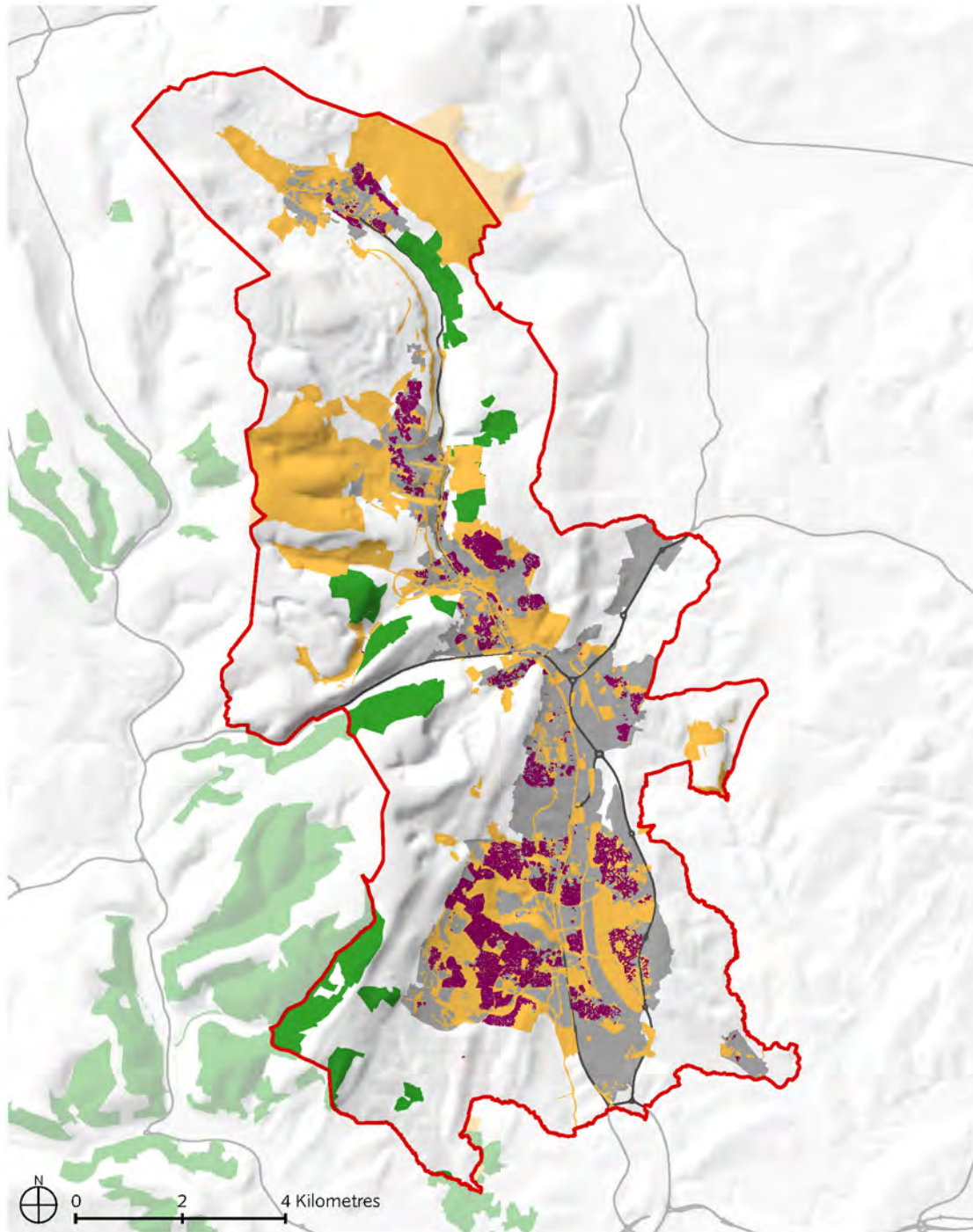
2.2.7 Torfaen also has an extensive public rights of way network comprising 329 kilometres of mostly public footpaths. Additionally, there are 3,567 hectares of open access land (306 hectares of which is woodland) largely within the uplands where people can walk without having to keep to paths. This means that 29% of Torfaen's area is open access land.

2.2.8 Overall, at the strategic level Torfaen's GI Network is extensive and generally well-connected, much of which is publically accessible. At the local level, particularly in and around Torfaen's towns, there are place-specific opportunities to strengthen the quality, connectivity and accessibility of the GI Network.

2.2.9 As shown on **Figure 2.1**, the majority of public land in Torfaen is owned and managed by Torfaen County Borough Council, Natural Resources Wales and the Bron Afon Housing Association. Other smaller areas of land within Torfaen are within the ownership of other public and not-for-profit organisations such as:

- Aneurin Bevan University Health Board
- Town and Community Councils
- Melin Homes (Local Social Housing Provider)
- Gwent Police Service
- South Wales Fire & Rescue Services
- Voluntary Associations (e.g. Gwent Wildlife Trust)

2.2.10 The remaining areas in Torfaen are largely under the control of private landowners, including farmers and utilities companies such as Welsh Water.



KEY

Major public landowners:




-  Torfaen County Borough Land
-  Natural Resources Wales Land
-  Bron Afon Housing Association Land

FIGURE 2.1
PUBLIC LAND OWNERSHIP

2.3 Our Green Infrastructure Assets

2.3.1 The different types of GI Assets that contribute to Torfaen's GI network are highlighted in **Box 2.5**.

Box 2.5 – Green Infrastructure Assets in Torfaen

- **Natural & Semi-Natural Greenspaces** (priority habitat networks including mountains, moors and heaths; semi-natural grassland; semi-natural woodland; freshwater; enclosed farmland and plantation forestry)
- **Urban Trees** (including urban woodlands and amenity street trees)
- **Urban Green Spaces** (including Allotments & Community Growing Spaces; Cemeteries & Churchyards; Public Parks & Gardens; Private Gardens; and Amenity Greenspaces)
- **Heritage Sites**

2.3.2 Where sustainably managed, these GI Assets can provide a range of ecosystem services and well-being benefits for Torfaen as highlighted in **Table 2.1**. For example:

- **Natural and semi-natural habitats** in the area are internationally important for wildlife and provide important ecosystems.
- **Goods harvested** from our natural environment include meat, milk, crops, timber, wood fuel, wild meat and fish, as well as building materials.
- **Access to high-quality green space** in and around our towns benefits local people's quality of life, health and wellbeing, communities and the economy.
- **Our outstanding landscapes and historic environment** are nationally and internationally important, helping to shape our natural environment and define our local identity.
- **Green spaces within our towns** can help regulate the urban environment by providing habitats for pollinating insects (including bees, wasps, butterflies, hoverflies and moths).

Table 2.1 – Ecosystem Services provided by our GI Assets

GI Assets		Ecosystem Services			
		Supporting Services	Regulating Services	Provisioning Services	Cultural Services
		Such as soil formation, nutrient cycling and plant growth.	Such as pollination, pest/disease control, carbon sequestration, water purification, flood attenuation.	Such as drinking water, food, fuel, energy and construction materials.	Such as access to green spaces and historic places for healthy activities, relaxation and tourism.
Natural & Semi-Natural Greenspaces	Mountains, moors and heaths	√	√	√√	√
	Semi-natural grassland	√	√	√√	√
	Semi-natural woodland	√	√	√√	√
	Freshwater	√	√	√√	√
	Enclosed farmland	√	√	√√	√
	Plantation forestry	√	√	√√	√
Urban Trees	Street trees	√	√√	√	√
	Urban woodlands	√	√√	√	√
Urban Green Spaces	Allotments & Community Growing Spaces	√	√	√	√√
	Cemeteries & Churchyards	√	√	√	√√
	Public Parks & Gardens	√	√	√	√√
	Private Gardens	√	√	√	√√
	Amenity Greenspaces	√	√	√	√√
Heritage Sites					√√

Natural & Semi-Natural Greenspaces

2.3.3 Torfaen's natural and semi-natural greenspaces encompass a broad range of habitat types such as moorland, woodland and recolonised previously developed/post-industrial land. These habitats support a range of wildlife species. Much of the natural and semi-natural greenspaces in Torfaen are designated for their biodiversity value as shown on **Figure 2.2**.

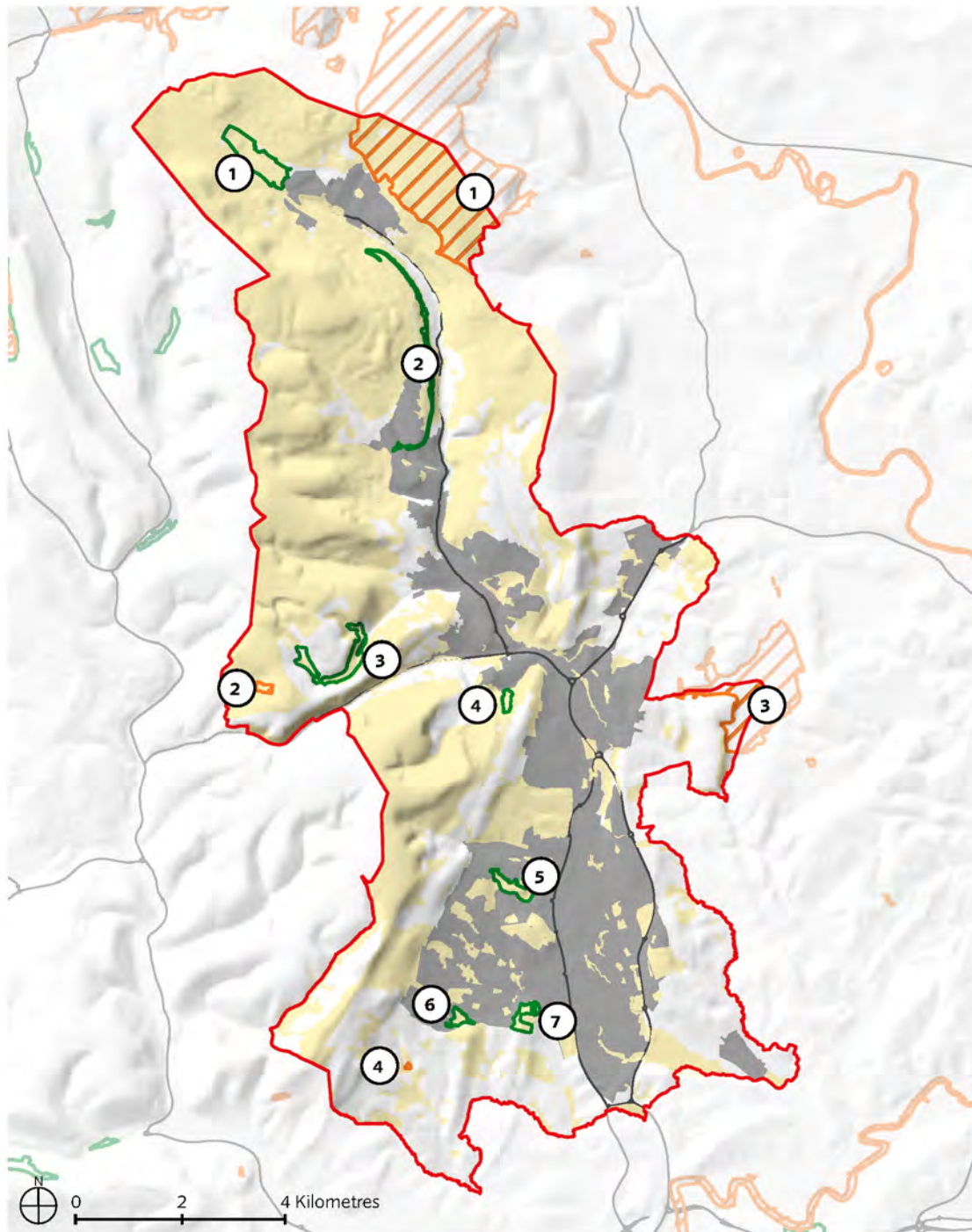
2.3.4 Torfaen has four Sites of Special Scientific Interest (SSSIs) designated by Natural Resources Wales: Blorenge; Ty'r Hen Forwyn; Llandegfedd Reservoir (see **Box 2.6**); and Henllys Bog.

Box 2.6 – Llandegfedd Reservoir SSSI

Llandegfedd Reservoir is the largest inland open water habitat in the County Borough of Torfaen and since its formation in 1963 has developed into one of three regionally important overwintering wildfowl refuges in Wales.

The SSSI is particularly important for the overall numbers and variety of wintering wildfowl, with large numbers of wigeon, pochard and mallard.

Other notable species include goosander, teal and goldeneye. The area around the reservoir includes grassland, important for feeding and roosting wildfowl, woodland and scrub.



KEY



Sites of Special Scientific Interest:

- 1) Bloreng
- 2) Ty'r Hen Forwyn
- 3) Llandegfedd Reservoir
- 4) Henllys Bog



Local Nature Reserves:

- 1) Garn Lakes
- 2) Cwmavon Corridor
- 3) Tir-Pentwys
- 4) Cwmynyscoy Quarry
- 5) Church Wood and Springvale Ponds
- 6) Henllys Open Space
- 7) Llwyn Celyn



Sites of Importance for Nature Conservation

FIGURE 2.2
BIODIVERSITY SITES

2.3.5 Torfaen County Borough Council has designated seven Local Nature Reserves: Garn Lakes (see **Box 2.7**); Cwmavon Corridor; Tir-Pentwys; Cwmyrnyscoy Quarry; Church Wood and Springvale Ponds; Henllys Open Space; and Llwyn Celyn. Local Nature Reserves are places with wildlife that are of special interest locally, which give people opportunities to study and learn about them or simply enjoy and have contact with nature. They are for conservation, quiet enjoyment and public appreciation of nature.

2.3.6 As shown on **Figure 2.2**, Torfaen County Borough Council has also designated extensive areas within the County Borough as local Sites of Importance for Nature Conservation (SINCs). There are currently 212 SINCs in Torfaen.

Box 2.7 – Garn Lakes Local Nature Reserve

The product of a former open-cast development, Garn Lakes is a large Local Nature Reserve situated on the outskirts of Blaenavon and at the heart of the World Heritage Site.

Consisting of two large lakes, grassland, woodland and hedgerows, Garn Lakes is popular for walking, fishing and birdwatching with circular walks, benches and interpretation panels.

It is an excellent site for orchids, butterflies, dragonflies and wintering wildfowl. Garn Lakes is well signposted from the B4248 with car parking available.

2.3.7 Habitat networks (within and outside of the designated sites) that contribute to the resilience of ecosystems within Torfaen's GI Network have been identified and mapped by Natural Resources Wales. These include the following broad ecosystems:

- Mountains, moors and heaths habitat networks
- Semi-natural grassland habitat network
- Semi-natural woodland habitat network
- Freshwater habitat networks
- Modified ecosystems habitat networks (plantation forestry & enclosed farmland)

2.3.8 Together, these habitats form extensive tracts of natural and semi-natural greenspaces within the countryside and uplands surrounding Torfaen's towns.

2.3.9 Natural Resources Wales has defined and mapped three levels of habitat networks based on the habitat requirements and dispersal abilities of species supported by the respective habitat type. These are:

- **Core networks** – areas within which species that require extensive habitat and disperse poorly are able to move.
- **Focal networks** – areas within which species tolerant of smaller habitat patches and with greater dispersal ability are able to move.
- **Local networks** – areas within which species that can persist within small habitat patches and have very limited dispersal abilities can move.

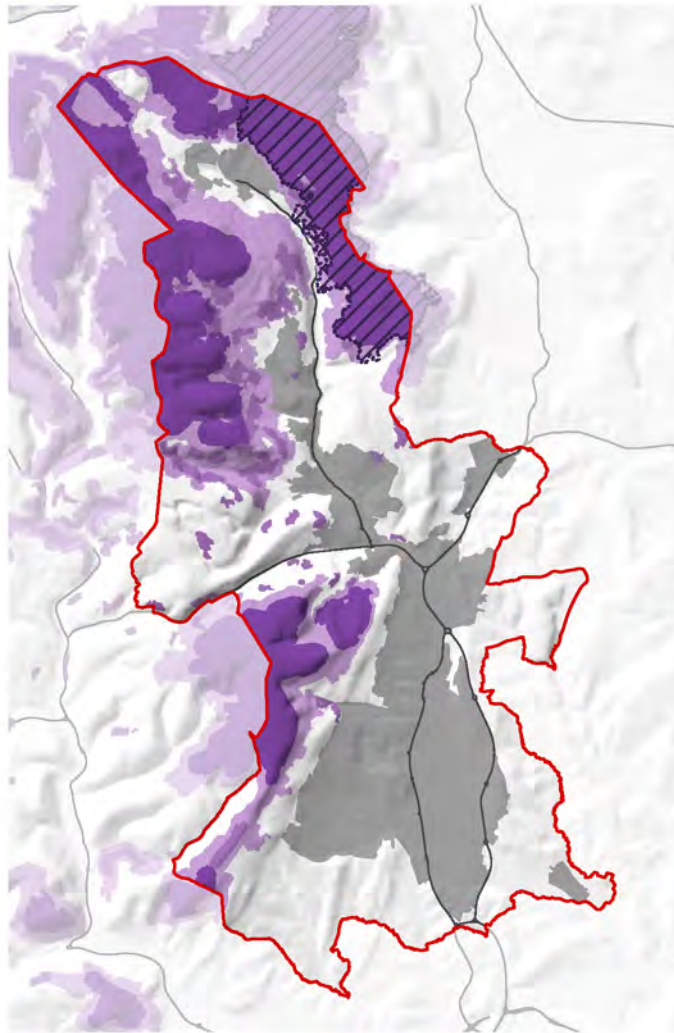
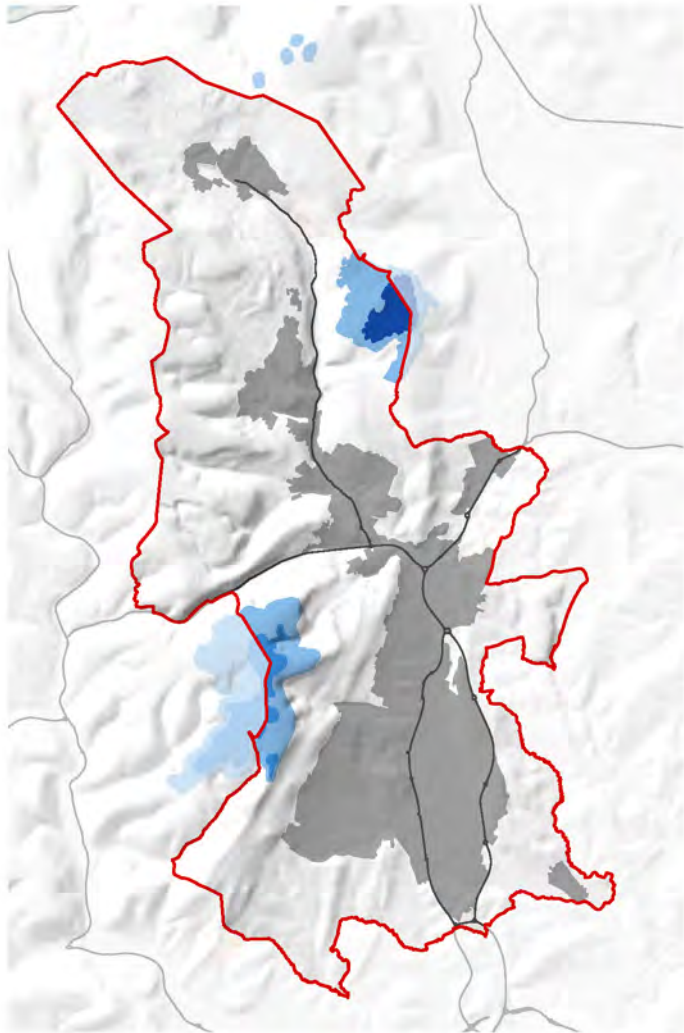
2.3.10 The **Mountains, Moors and Heaths** habitat networks shown on **Figure 2.3** comprise of two discrete areas of peat bog habitat and the more extensive tracts of heathland habitat found within Torfaen's uplands.

2.3.11 Peat bogs are fed solely by rainfall and typically develop a very acidic and nutrient-poor peat supporting a restricted but highly specialised range of species. A range of other semi-natural habitats occur widely on upland peat bogs as a result of modification. The presence of heathland and marshy grassland are likely to indicate the influence of factors such as past burning, drainage and over-grazing. More extreme modification in upland areas is represented by commercial plantation forestry and improved grassland in places.

2.3.12 The mountains, moors and heaths habitat networks contribute to the provision of ecosystem services in many ways. As well as playing an important role in the water cycle, they help provide a wide range of functions and regulating services such as water purification, carbon storage and carbon sequestration.

2.3.13 These upland habitats also have the potential to store water to help reduce flooding downstream and to maintain river base flows during periods of drought. Although characterised by their relatively species-poor habitats, mountains, moors and heaths are also known for supporting iconic species such as black grouse.

2.3.14 From a cultural perspective, upland landscapes have the capacity to inspire people and contribute greatly to Torfaen's distinctive identity and sense of place.



Bog Habitat Networks:

- Core networks
- Focal networks
- Local networks

Heathland Habitat Networks:

- Core Networks
- Focal Networks
- Local Networks
- Level 2 Networks

Habitat networks data includes three levels:

- **Core networks** (areas within which species that require extensive habitat and disperse poorly are able to move)
- **Focal networks** (areas within which species tolerant of smaller habitat patches and with greater dispersal ability are able to move)
- **Local networks** (areas within species that can persist within small habitat patches and have very limited dispersal abilities can move).

Level 2 networks are selected, priority networks, within which action may be targeted to enhance functional networks of the best habitat areas.

Source: Modelling of Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved (Accessed 08-2019, <http://lle.gov.wales/catalogue/item/HabitatNetworks/?lang=en>)

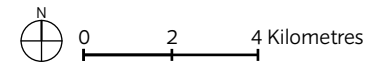


FIGURE 2.3
MOUNTAINS, MOORS AND HEATHS HABITAT NETWORKS

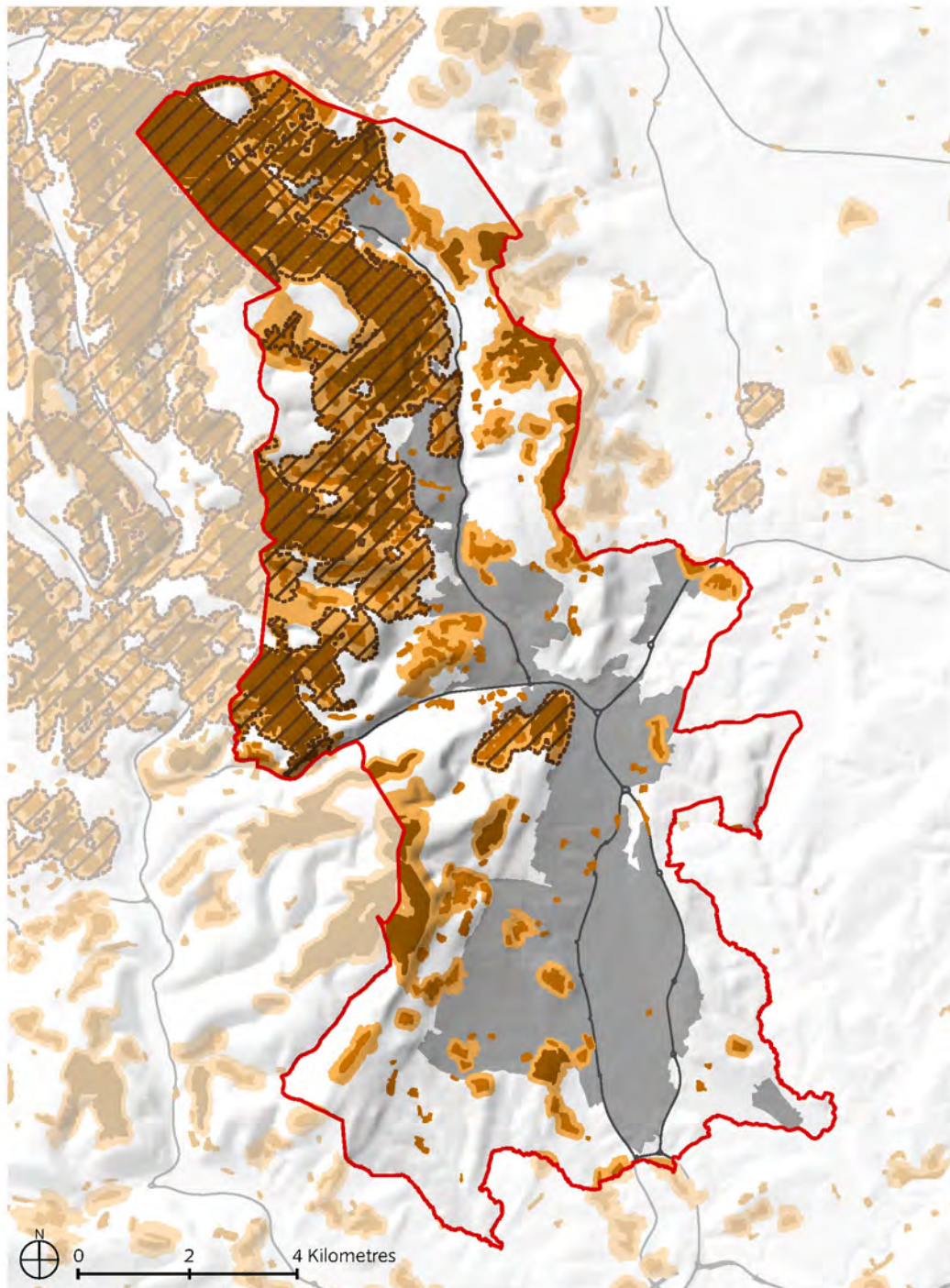
2.3.15 Extensive tracts of Torfaen's upland areas are designated as open access land under the Countryside and Rights of Way Act (CRoW). This provides opportunities for informal recreation activities such as walking and bird watching, and appreciation of natural and semi-natural greenspaces and historic sites. People often identify upland areas as the places they would like to visit more often for recreation.

2.3.16 The **Semi-natural Grassland** habitat network within Torfaen is shown on **Figure 2.4**. As is the case across most of South East Wales, semi-natural grassland connectivity is very poor within Torfaen as grassland habitats are particularly fragmented across the more agriculturally-modified lowland landscapes. Grassland connectivity is generally better in the upland fringes of the eastern coalfield valleys between Merthyr Tydfil and Pontypool, although grassland diversity here is not particularly high with lowland dry acid grassland being largely dominant.

2.3.17 Semi-natural grasslands mostly form part of upland farming systems, and are distinguished from improved grasslands within enclosed farmland mainly in lowland areas by their lack of recent cultivation, re-sowing or heavy fertilisation and lower-intensity management.





2.3.18 Grasslands provide climate regulation through sequestration and storage of carbon and other greenhouse gases; help with purification of pollutants and storage of water; and closely interact with wetland systems such as water meadows traditionally managed for storing seasonal floodwaters.

2.3.19 The **Semi-natural Woodland** habitat network within Torfaen is shown on **Figure 2.5** comprising native broadleaved woodland. There are a significant number of large ancient semi-natural woodlands along Cwm y Glyn to the west of Pontypool and to the east of Abersychan, with a number of smaller pockets in and around Cwmbrân.



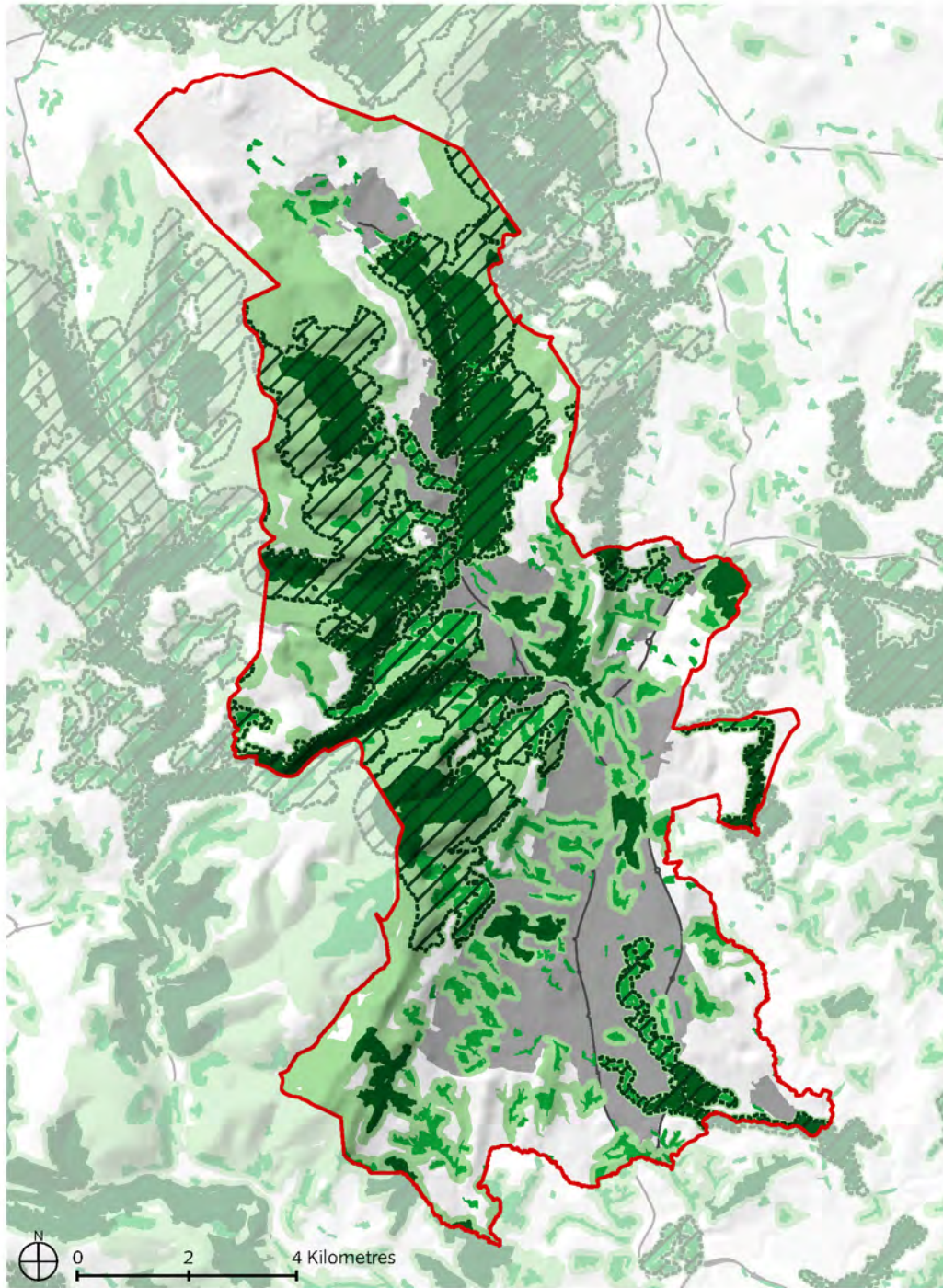
KEY

Grassland Habitat Networks:

-  Core networks (areas within which species that require extensive habitat and disperse poorly are able to move)
-  Focal networks (areas within which species tolerant of smaller habitat patches and with greater dispersal ability are able to move)
-  Local networks (areas within species that can persist within small habitat patches and have very limited dispersal abilities can move)
-  Level 2 Networks (selected, priority networks, within which action may be targeted to enhance functional networks of the best habitat areas)

Source: Modelling of Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved (Accessed 08-2019, <http://lle.gov.wales/catalogue/item/HabitatNetworks/?lang=en>)

FIGURE 2.4
SEMI-NATURAL GRASSLAND HABITAT NETWORK



KEY

Woodland Habitat Networks:

- Core networks (areas within which species that require extensive habitat and disperse poorly are able to move)
- Focal networks (areas within which species tolerant of smaller habitat patches and with greater dispersal ability are able to move)
- Local networks (areas within which species that can persist within small habitat patches and have very limited dispersal abilities can move)
- Level 2 Networks (selected, priority networks, within which action may be targeted to enhance functional networks of the best habitat areas)

Source: Modelling of Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved (Accessed 08-2019, <http://lle.gov.wales/catalogue/item/HabitatNetworks/?lang=en>)

FIGURE 2.5
SEMI-NATURAL WOODLAND HABITAT NETWORK

2.3.20 Woodlands contribute to the functioning of social and economic systems and well-being in many ways. They help to regulate climate stress at a local level, provide carbon sequestration and contribute to flood and low river flow risk management; safeguard soils, improve air quality and reduce noise pollution; and can also help regulate pests and diseases.

2.3.21 Woodlands play a major role in pollination, soil formation, nutrient cycling, water cycling and oxygen production, all of which are crucial in supporting our health and well-being. The effectiveness of these supporting and regulating services is dependent on the nature, extent, condition and resilience of woodland ecosystems. Woodlands can also provide fuel (biomass) and timber for building materials.

2.3.22 It is increasingly acknowledged one of the most important regulating services that woodlands provide is their capacity to sequester carbon. Predicated changes in climatic conditions have wide-ranging implications for woodlands in Torfaen and across Wales in terms of how they are managed, the suitability and distribution of different tree species and the benefits derived from them; and also in relation to Wales' carbon footprint and the role woodlands play in climate change mitigation and adaptation.

2.3.23 Some of these semi-natural woodlands can also provide public access for recreation, such as the some of the larger woodlands outside urban areas owned by Natural Resources Wales (including Blaenavon wood, Coed Parciau wood and Lasgarn wood) and community woodlands such as the Blaen Bran Community Woodland (see **Box 2.8**).

Box 2.8 – Blaen Bran Community Woodland

The 100 acre community woodland is a privately owned woodland above Upper Cwmbrân, which is run and maintained by the Blaen Bran Community Woodland Trust.

Blaen Bran Community Woodland is located backing onto Mynydd Maen common land, which allows it to be part of walking trails linking to Twmbarlum Mountain, Cwmcarn Forest Drive and across to Pontymoile.

The woodland is of natural and historical interest, and is situated on the side of the Mynydd Maen with extensive views over Cwmbrân extending to the Severn and Llandegfedd reservoir.

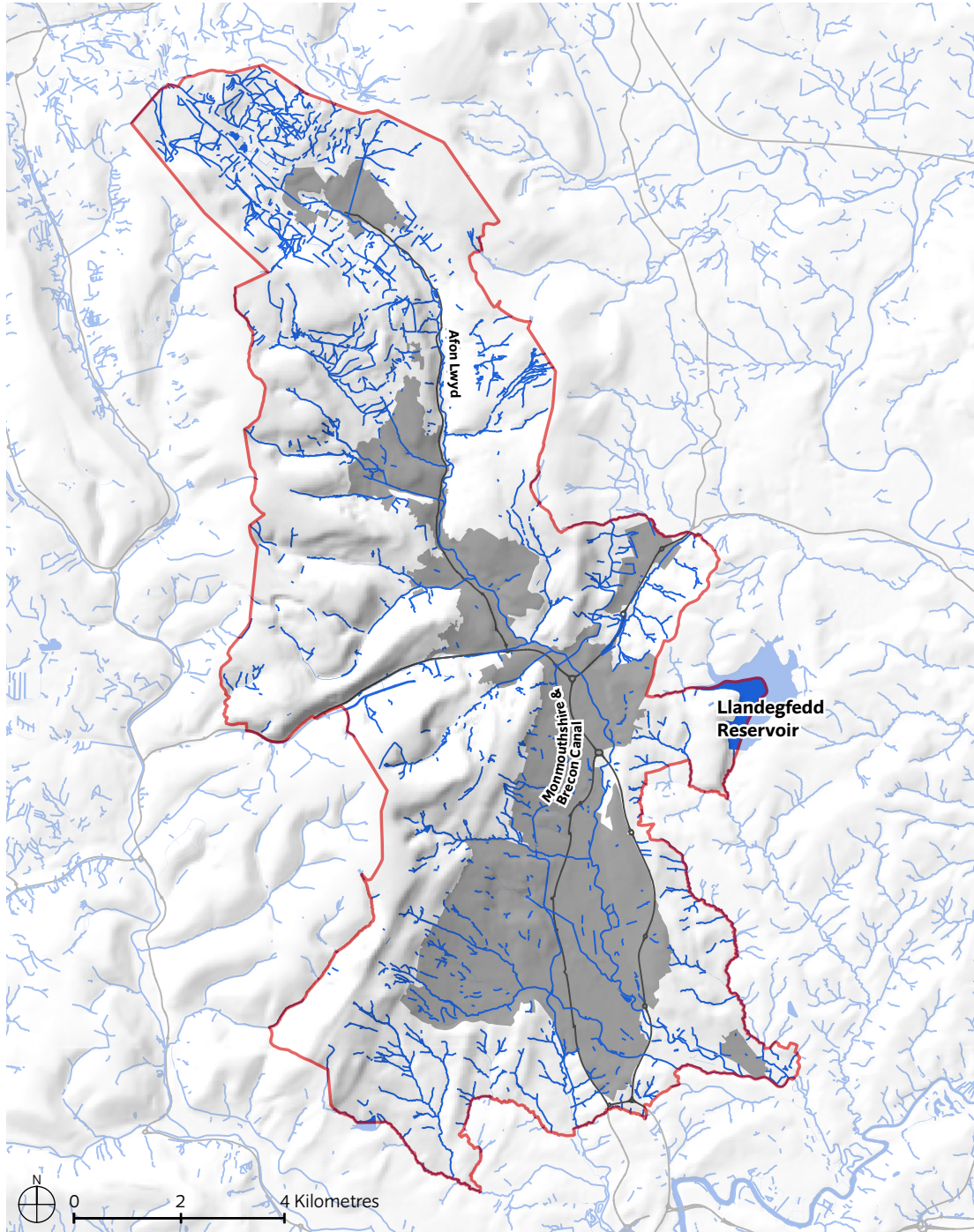
The community woodland provides a feeling of freedom, peace and quiet as a getaway from the town. The known history dates back to pre-Roman times and the area has been used for farming and coal mining.

2.3.24 The **Freshwater** habitat network within Torfaen is shown on **Figure 2.6**, which includes rivers such as the Afon Lwyd (see **Box 2.9**) and the Monmouthshire and Brecon Canal. Rivers, streams, lakes and wetlands are fundamentally important blue infrastructure assets. They provide drinking water and contribute to our enjoyment of life through the opportunities they provide for leisure (such as watersports at Llandegfedd Reservoir) and the appreciation of water in the landscape, and are also important for sustaining other ecosystems.

Box 2.9 – The Afon Lwyd

The Afon Lwyd (the “Grey River”) is a 13-mile long river corridor which flows from its source north of Blaenavon, through Abersychan, Pontnewynydd, Pontypool, Llanfrechfa and Cwmbrân before flowing into the River Usk at Caerleon, which subsequently flows into the Bristol Channel in Newport.

The Afon Lwyd is designated as a linear Site of Importance for Nature Conservation.



KEY



Watercourses and Waterbodies

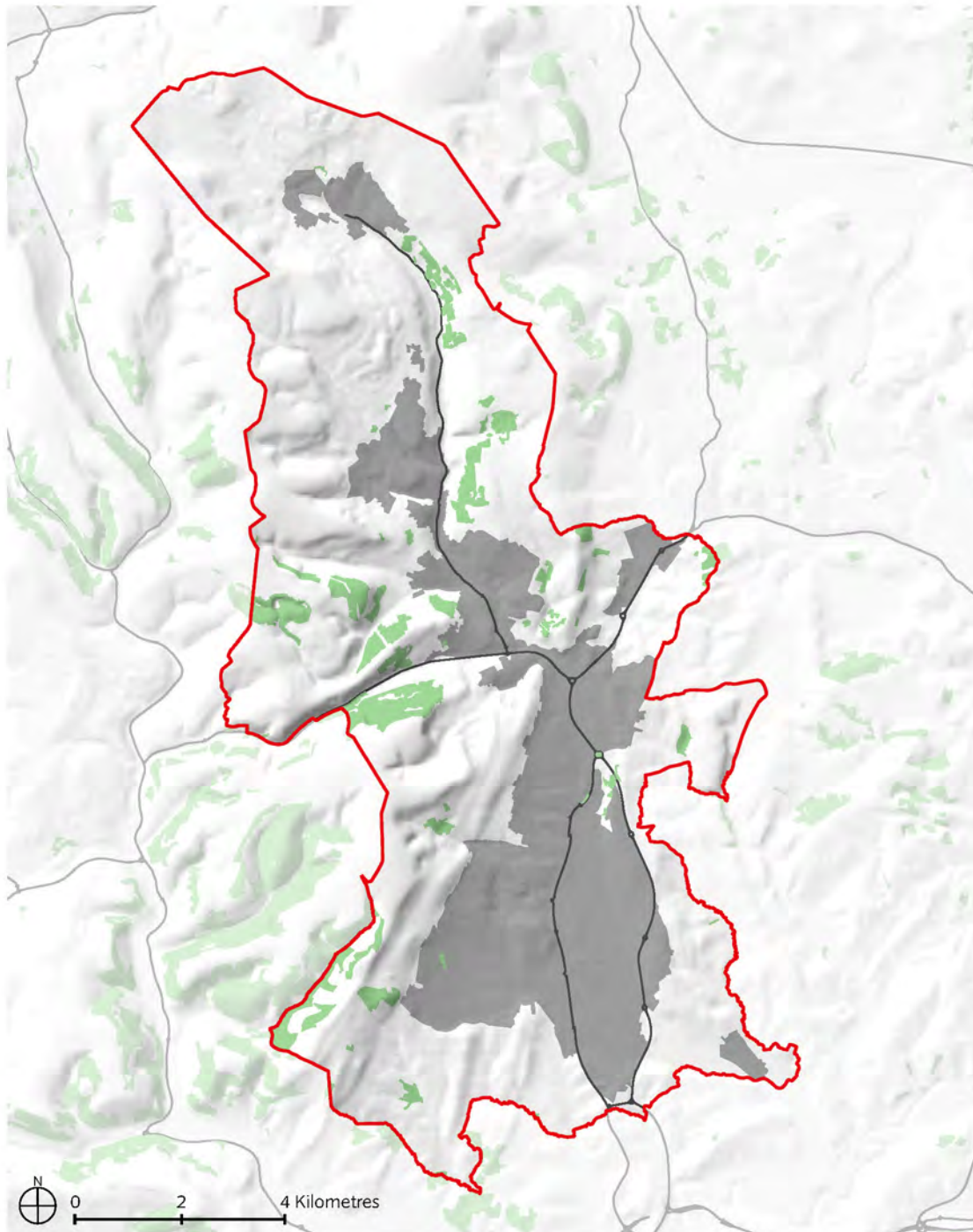
FIGURE 2.6
FRESHWATER HABITAT NETWORK

2.3.25 In particular, freshwater systems help to control runoff from the land to rivers, floodplain inundation, groundwater recharge, and water quality. These processes are vital for the regulation and supply of water, nutrients, energy flows, solutes, sediments and migratory organisms to ecosystems. Freshwater systems remove and dilute pollutants, store waters to help maintain flows and capture carbon. They are therefore critically important in supporting the functioning of social and economic systems and our ability to adapt to climate change.

2.3.26 Outside of urban areas⁶, modified ecosystems including plantation forestry and enclosed farmland habitat networks are also identified by Natural Resources Wales.

2.3.27 The distribution of the **Plantation Forestry** habitat network within Torfaen is shown on **Figure 2.7**, which comprises coniferous forests largely owned and managed by Natural Resources Wales. In addition to providing timber for construction materials and waste for biofuels, plantation forestry can also provide public access for active recreation such as walking and cycling.

⁶ Modified ecosystems within the main urban areas are considered under urban green spaces



KEY

■ Coniferous Plantation Forestry

FIGURE 2.7
PLANTATION FORESTRY HABITAT NETWORK

2.3.28 **Enclosed Farmland** in Torfaen is predominantly found in the areas of better quality agricultural land (Grades 1, 2 and 3a) within the lowlands around Ponthir and Cwmbrân (see **Figure 2.8**), which primarily supports arable and livestock farming. In contrast, the unenclosed farmland in Torfaen's uplands are dominated by moderate to lower quality agricultural land (grades 3b-5) largely supporting sheep farming.

2.3.29 Enclosed farmland is managed primarily for food production. Torfaen's agricultural sector produces meat, milk and other dairy products and some arable crops. Enclosed farmland can also provide biomass fuel.

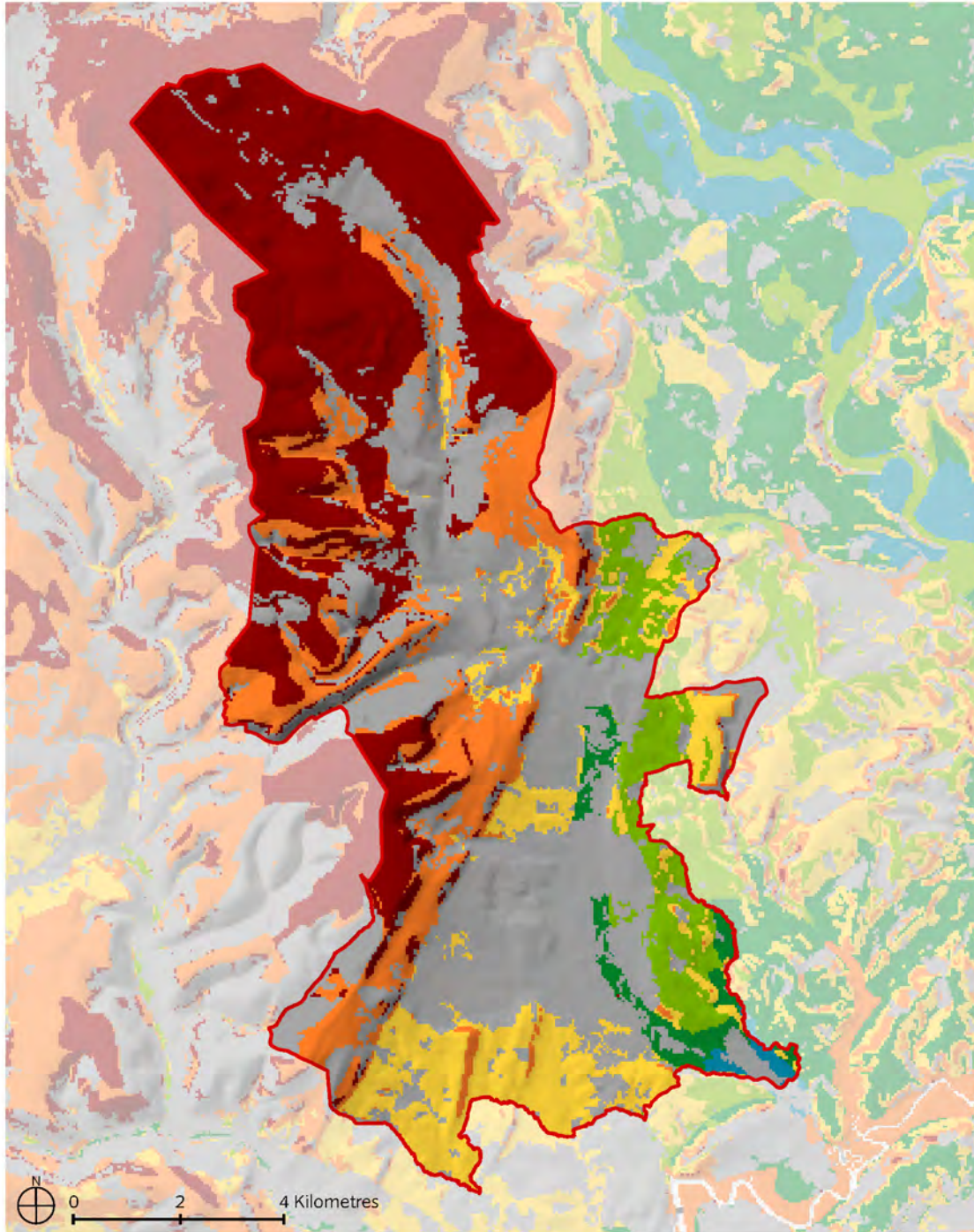
2.3.30 Enclosed farmland provides habitats for plants, animals and other organisms. How we use farmland can have a significant bearing on global resource use in terms of the import and export of foods, the use and alteration of energy and water, and emissions of greenhouse gases.

2.3.31 The positive management of enclosed farmland can help safeguard against soil loss, reduce water pollution and siltation, and address localised flooding.

2.3.32 Enclosed farmland also supports functioning of social and economic systems in a number of ways, being a focal point for relationships between rural and urban communities.

Opportunities for Improvement

2.3.33 The mountains, moors and heaths habitat network in Torfaen is particularly sensitive to a changing climate, including changes to the range of altitudes in which species are able to survive with some species migrating to higher altitudes. This could lead to changes in the biodiversity and landscape of the uplands with observations elsewhere in Wales suggesting that certain species (including western gorse and bracken) are already moving higher.



KEY

-  1: Excellent Quality
-  2: Very Good Quality
-  3a: Good Quality
-  3b: Moderate Quality
-  4: Poor Quality
-  5: Very Poor Quality
-  No Data/Urban Land

FIGURE 2.8
AGRICULTURAL LAND QUALITY

2.3.34 Increased soil moisture deficits and drying could also have severe adverse effects on key habitats such as peat bogs, which are both an important habitat and a major store of organic carbon.⁷ There will be a need to monitor and manage natural and semi-natural habitats likely to be affected by climate change going forward.

2.3.35 The main opportunity for securing improved connectivity of the mountains, moorlands and heath habitat network is to focus priority on the restoration potential for connecting blocks of modified peatland bogs and heathland by removal of plantation forestry within the 'Level 2 Networks' as was shown on **Figure 2.3**.

2.3.36 As was shown on **Figure 2.4**, the main opportunity for securing improved connectivity of the semi-natural grassland habitat network is to focus priority on the restoration potential for connecting blocks of modified grasslands within the 'Level 2 Networks' by removal of plantation forestry and grassland creation in enclosed farmland areas.

2.3.37 The main opportunity for securing improved connectivity of the semi-natural woodland habitat network is to focus priority on native woodland establishment, restoration of planted ancient woodland sites (PAWS) to native broadleaf woodlands and management of ancient semi natural woodland (ASNW) within the 'Level 2 Networks' as was shown on **Figure 2.5**.

⁷ A climate change risk assessment for Wales, January 2012 (Defra and Welsh Government)

2.3.38 With a changing climate comes the increasing likelihood of new diseases and the increased risk of existing diseases being spread to new areas. Natural Resources Wales has identified the need to ensure that its woodland ecosystems are healthy, resilient and sustainably managed, maximising the regulating and supporting services that they can provide. This includes a strategy of removing Larch infected with *Phytophthora ramorum* fungal disease and restocking where appropriate.

2.3.39 Some of the woodlands in Torfaen suffer as a result of unmanaged mountain bike use. There is a need to mitigate this through provision of managed mountain bike access in places, restriction of access in ecologically sensitive areas where necessary and through education.

2.3.40 Climate change is also likely to have impacts on woodlands, with beech woodlands at particular risk due to drought from projected reduced summer rainfall and increasing temperatures⁸. Torfaen has pockets of beech woodland such as in the Cwmavon Corridor LNR.

2.3.41 The risk of wildfire in grassland, peatland and heath landscapes is likely to increase with the hotter, drier conditions created by the changing climate. Fires and illegal off-road activity are causing damage to natural and semi-natural habitats in Torfaen's uplands, and Blaenavon's peatland is being degraded in places⁹. There is a need to more fully understand the combination of factors (landscape crime and climate change) which are the cause of wildfires in the uplands, and to develop strategies to tackle these factors through education.

⁸ A climate change risk assessment for Wales, January 2012 (Defra and Welsh Government)

⁹ Well-Being Plan for Torfaen 2018 - 2023

2.3.42 There are opportunities to improve the management of trees and overgrown hedgerows along the banks of the Monmouthshire and Brecon Canal. Improved management of these assets can also help reduce landscape crime (littering, anti-social behaviour etc). Other opportunities include improved provision of wildlife and heritage interpretation; improving towpath maintenance; improving way marking between the Canal and other nearby destinations; and encouraging recreational uses that help promote health and well-being.¹⁰

2.3.43 There is also a need to control the influx of invasive species such as Himalayan Balsam along water courses¹¹. For example, Weevil release is used as a biological solution for tackling the invasive *Azolla Filliculoides* (water fern) along the Monmouthshire and Brecon Canal in Cwmbrân.

2.3.44 There will be an increasing need for farmers to adapt to climate change by enhancing their productivity, reducing emissions of greenhouse gases and improving efficiency of water use. There may be increase in disease, and climate change may cause weeds to evolve more rapidly resulting in herbicide tolerance. Increased use of herbicides is likely to have implications for soil quality.¹²

2.3.45 Crop yields may be maintained or improved in future by higher temperatures and CO₂ concentrations, but this may be offset by lower summer rainfall. The impact of climate change on grass growth is of particular importance in view of the importance of livestock farming in Torfaen¹³. There may be opportunities for farmers to adapt to the changing climate by producing different crops or produce.

¹⁰ Monmouthshire & Brecon Canal: Conservation Area Appraisal & Management Proposals

¹¹ Green infrastructure action plan for pollinators in South-east Wales. TACP (2015)..

¹² Draft Sustainability Appraisal Scoping Report Appendix 2 - The Baseline Characteristics of Torfaen (April 2019)

¹³ A climate change risk assessment for Wales, January 2012 (Defra and Welsh Government)

2.3.46 In summary, the strategic opportunities for management of natural and semi-natural greenspaces to help strengthen the connectivity and resilience of Torfaen's GI Network are as highlighted in **Box 2.10**.

Box 2.10 – Key Strategic Opportunities for Management of Natural & Semi-Natural Greenspaces

- Seek opportunities to improve the condition/quality of Natural & Semi-Natural Greenspaces through appropriate management (e.g. control of invasive non-native species) in accordance with standards set by the Torfaen Open Space Assessment.
- Seek opportunities for the provision of new Accessible Natural & Semi-Natural Greenspaces of appropriate types, sizes and locations to address needs for public open space in accordance with standards set by the Torfaen Open Space Assessment.
- Seek opportunities for overcoming barriers to public use and enjoyment of Accessible Natural & Semi-Natural Greenspaces by tackling landscape crime.

Urban Trees

- 2.3.47 A study published by Natural Resources Wales in 2016 provides evidence about Torfaen's current urban tree resources in the towns of Blaenavon, Pontypool and Cwmbrân¹⁴. The main findings of the study are summarised below.
- 2.3.48 Torfaen is the most canopied county in Wales. Torfaen's urban tree cover was estimated to be 23.2% in 2013, down from 24.4% in 2009. In comparison, Wales' urban tree cover was 16.3% for 2013, down from 17.0% in 2009.
- 2.3.49 Tree cover in all three of Torfaen's urban areas exceeds the national average. Nationally, urban tree cover is low in coastal towns (e.g. Rhyl and Porthcawl – 6%) and high in the South Wales Valleys (e.g. 30% in Treharris). Cwmbrân's tree cover is 23.9%, Pontypool's is 23% and Blaenavon's is 19.8%.
- 2.3.50 Urban woodlands represent as much as 45% of Torfaen's urban canopy cover (35% in Wales). The rest of the tree canopy in urban areas is made up of individual and groups of 'amenity trees' growing along streets, gardens, car parks and other urban public and private open spaces.
- 2.3.51 Public open space hosts 57% of all urban tree cover in Torfaen, where such spaces account for 25% of urban land. This is 53% in our Welsh communities despite making up only 22% of urban land.

¹⁴ Town Tree Cover in Torfaen County Borough, Natural Resources Wales, 2016

2.3.52 Private residential gardens host 15% of all urban tree cover in Torfaen (20% for Wales), where such gardens make up 33% of Torfaen's urban areas (35% for Wales). This underlines the responsibility of homeowners, and the importance of tree preservation orders to the upkeep of the Welsh urban forest. It also highlights the responsibility of developers and planners as part of the development process to ensure housing areas are adequately canopied.

2.3.53 Transport routes (including verges and pavements) provide 8% of Torfaen's tree cover, where such routes make up 17% of Torfaen's urban land. This is 9% and 16% respectively in Wales. Motorised traffic causes urban air and surface water pollution, which trees can remove.

2.3.54 Overall, Torfaen lost 37 hectares of tree canopy cover between 2009 and 2013 across all three towns. Similarly 159 of Wales' 220 urban areas showed a decline in canopy. When comparing loss and gain of trees between 2006 and 2013, 7,000 large trees appear to have been lost overall across Wales. However, Torfaen appears to be one of the few counties where trees have been recruited from the medium category – as many as 985. Nationally however, there appears to be a steady erosion of Wales' Victorian and Edwardian tree legacy.

2.3.55 Tree cover in deprived areas tends to be lower and relatively less rich in amenity trees. Whilst variation exists across Wales, 63% of more affluent wards have tree canopy cover greater than 15% compared to 23% for less well-off wards. There is however great variation in tree cover within Wales' top 10 most deprived wards (2014), from 2% in Rhyl West 2 to 19% in Merthyr Vale 2, Aberfan.

2.3.56 Of the 18 wards in Torfaen's two Communities First cluster areas, 12 exceed the national canopy average with four in excess of 30% - St Cadocs and Penygarn has 46%. Only two, Abersychan 1 (8%) and Trevethin (5%), fall below 10%. Where high tree cover and high level of deprivation coexist, this seems to be associated with local urban woodland rather than amenity trees. Woods of this nature can sometimes be unmanaged and inaccessible.

2.3.57 'Green land' sites (soil, grass and shrub areas) were assessed for potential planting to increase urban tree cover in Cwmbrân as a pilot study. If all 'green land' sites identified were planted, with the right trees in the right places, the pilot study identified that tree cover in Cwmbrân could potentially be increased by 42% to 67%. Knowing where trees might be planted enables planners to set realistic canopy cover targets.

2.3.58 It is now widely accepted that trees and woodlands in and around towns and cities have a vital role to play in promoting sustainable communities. In the last few years a growing body of research has demonstrated that trees bring a wide range of benefits both to individual people and to society as a whole. As the most important single component of green infrastructure, trees can contribute to improved health and wellbeing, increased recreational opportunities, and an enriched and balanced environment that ultimately boosts a town's image and prosperity.

2.3.59 Trees on the edge of woodland and alongside roads have a significant potential for 'pollutant scrubbing' and helping to remove airborne pollutants from vehicle emissions for example, thereby helping in regulating air quality. Planting trees with a high propensity to remove pollutants from the air is preferential for incorporating into new and existing urban landscapes and streetscapes.¹⁵

¹⁵ Urban Air Quality Report (2012) Woodland Trust

Opportunities for Improvement

2.3.60 The Natural Resources Wales study makes a significant contribution in pinpointing where and how much tree cover Torfaen's towns possess. While Torfaen is currently the most canopied county in Wales, the Natural Resources Wales study also found significant discrepancies in tree canopy cover levels between and within the individual towns of Blaenavon, Pontypool and Cwmbrân. These findings provide evidence to inform actions for sustaining and growing tree canopy cover.

2.3.61 International best practice shows that the best way to ensure all urban communities achieve adequate canopy cover is to develop a strategic approach to managing urban trees by adopting local tree strategies and setting canopy cover targets.

2.3.62 For example, Portland in Oregon, with a similar climate to Wales, intends to increase its cover by 7% from its current level of 26%. Closer to home, Bristol City Council has set an aspirational goal of increasing canopy cover from 14% to 30%.

2.3.63 The study also identifies significant rates of tree loss in Torfaen. It is crucial that the effectiveness and use of existing tools and legislation for tree care and preservation is reviewed to ensure that the potential of grant programmes is maximised to support the sustainable management of Torfaen's urban treescapes.

2.3.64 In summary, the strategic opportunities for management of urban trees to help strengthen the connectivity and resilience of Torfaen's GI Network are as highlighted in **Box 2.11**.

Box 2.11 – Key Strategic Opportunities for Management of Urban Trees

- Seek opportunities to improve the condition/quality of Urban Trees through appropriate management of urban woodlands and amenity trees.
- Seek opportunities for planting new Urban Trees of appropriate species to address deficits within the towns of Blaenavon, Pontypool and Cwmbrân identified by the Natural Resources Wales Study¹⁶.
- Seek opportunities for overcoming barriers to public use and enjoyment of Accessible Urban Woodlands by tackling landscape crime.
- Develop a Tree Strategy to include targets for increasing urban tree and woodland cover in Torfaen.

¹⁶ Town Tree Cover in Torfaen County Borough, Natural Resources Wales, 2016

Urban Green Spaces

- 2.3.65 Towns are also important parts of ecosystems. They are characterised by their history, structure and function (including both natural and built components) and by the cycling and conversion of energy and materials within them. They have their own spatial organisation and distinctive patterns of change which influence species' behaviour, population dynamics and the formation of communities. The majority of Torfaen's population lives in the three towns.
- 2.3.66 Natural resources within urban areas, particularly Urban Green Spaces, can support communities by providing opportunities for interaction and engagement. This helps to build social cohesion along with improved mental well-being and increased physical activity, both of which are of particular benefit in more deprived areas where social cohesion is often at a lower level.
- 2.3.67 Local parks are the most commonly visited places for informal recreation and therefore recognised as important sources of cultural services. Cemeteries and churchyards opportunities for quiet reflection and spiritual enrichment that can contribute to people's mental health and well-being. They also play an important community role, providing a venue for religious ceremonies and practices. Parks and gardens can also provide economic and quality of life benefits by improving neighbourhoods, enhancing house prices and creating a sense of place. Amenity greenspaces can contribute to the character, structure and setting of settlements.
- 2.3.68 As well as providing a place for us to be active, our urban green spaces produce oxygen and cycling nutrients, help regulate climate, store carbon and have a role in water management (reducing flood-risk). They can also absorb air-borne pollutants and provide a pollination resource which is important for food production.

2.3.69 Allotments and community growing spaces provide opportunities for local food production. Allotment gardening provides an affordable source of fruit and vegetables, particularly for residents in Torfaen without access to a suitable private garden, and is also a rewarding pastime that improves the quality of many people's lives. Some of the benefits associated with allotment gardening are highlighted in **Box 2.12**.

12 – Key Benefits of Allotment Gardening

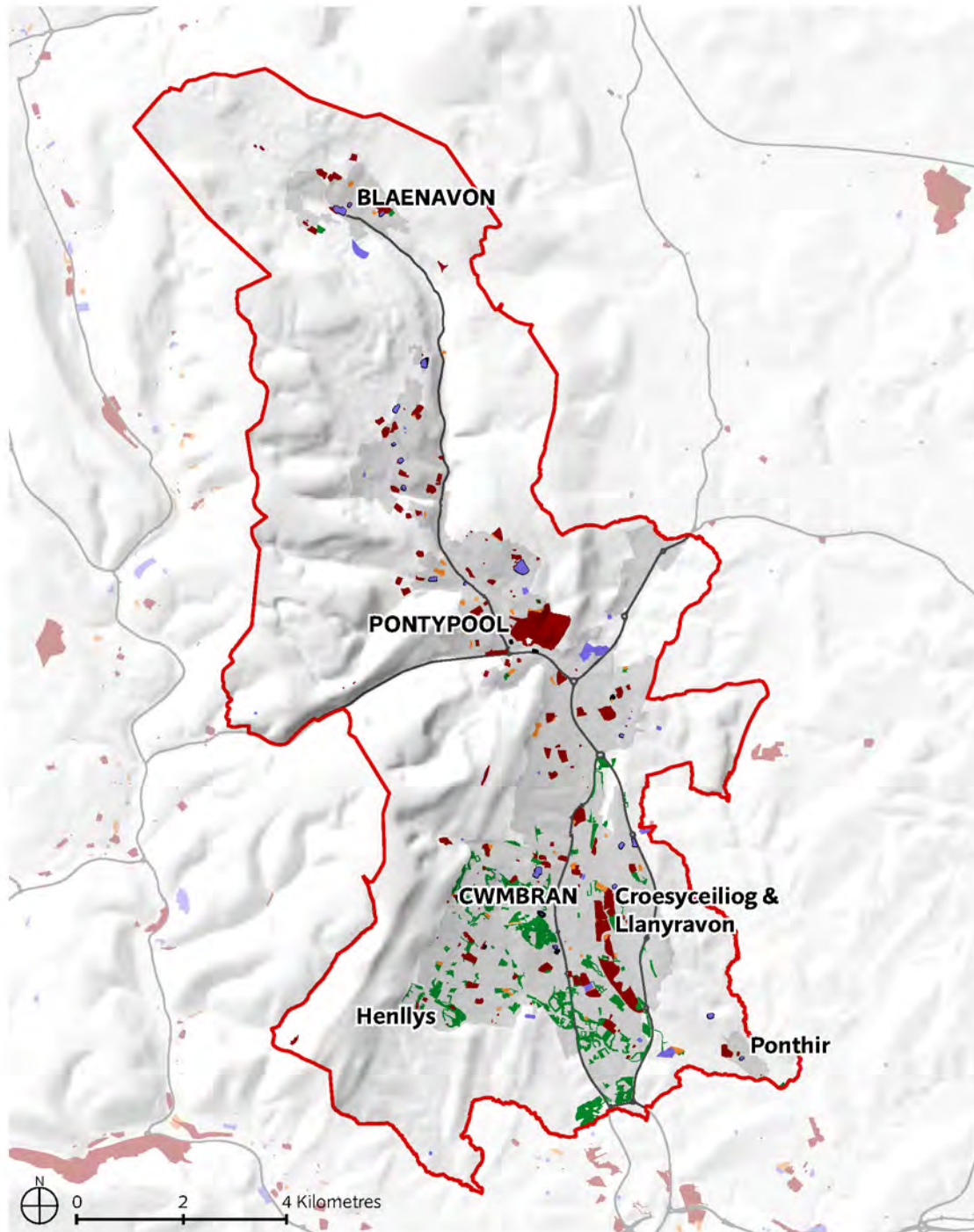
- A source of affordable good quality food that is an essential part of a healthy diet.
- A physical recreational activity providing health benefits.
- Being a part of an allotment community and the sharing of knowledge with differing age groups and abilities.

2.3.70 Urban green infrastructure is critical in helping to adapt to and mitigate the impacts of climate change and air pollution. For example, it can provide opportunities for air and water purification, carbon sequestration, noise alleviation and surface water regulation. Urban green spaces also provide wildlife habitats and contribute to wildlife corridors through built-up environments.

2.3.71 Urban Green Spaces in Torfaen are shown on **Figure 2.9**.

These include:

- Allotments & Community Growing Spaces
- Cemeteries & Churchyards
- Public Parks & Gardens (including playing fields & play spaces)
- Amenity Greenspaces



KEY

- Allotments & Community Growing Spaces
- Cemeteries & Churchyards
- Public Parks & Gardens (including playing fields and play spaces)
- Amenity Greenspaces

FIGURE 2.9
URBAN GREEN SPACES

2.3.72 **Allotments and community growing spaces** are urban green spaces set aside for the purposes of domestic gardening and small-scale horticulture, typically for fruit and vegetable production.

2.3.73 There are currently 41 allotments in Torfaen (see **Figure 2.9**), mainly within Cwmbrân and Pontypool. These are managed by the Cwmbrân South Allotments Association (21 allotment sites in the south of the County Borough) and the Eastern Valley Allotments Association (20 allotment sites in the north of the County Borough).

2.3.74 Other community growing spaces in Torfaen include a community orchard in Pontypool Park, the Greenmeadow Community Farm¹⁷ in Cwmbrân and the sustainable community allotment and food growing project at the Trevethin Life Station (see **Box 2.13**).

Box 2.13 – Trevethin Life Station Sustainable Community Allotment

The sustainable community allotment and food growing project is located on an area of land behind the Trevethin Life Station centre, which has been laid out with raised planting beds and allotment facilities.

The project aims to help encourage healthy eating and living by engaging the local community in a range of educational activities.

2.3.75 **Cemeteries and churchyards** are urban green spaces associated with parish churches (see **Figure 2.9**). Torfaen's main cemeteries are: Llwyncelyn Cemetery (Cwmbrân); Blaenavon Cemetery; Panteg Cemetery (Pontypool); and Cwmbrân Cemetery. Larger churchyards include for example Holy Trinity Church, Pontnewydd; St. Cadoc's Church, Trevethin; and at St. Peter's Church, Blaenavon.

¹⁷ <http://www.webster.uk.net/Businesses/Greenmeadow-Community-Farm/Home.aspx>

2.3.76 **Public parks and gardens** are urban green spaces predominantly associated with informal and formal recreation (including playing fields and play spaces). As illustrated on **Figure 2.9**, there are a large number of public parks, playing fields and play spaces widely distributed throughout Torfaen's towns. The largest parks within Torfaen are Pontypool Park (see **Box 2.14**), Cwmbrân Boating Lake and Panteg Park in Griffithstown.

Box 2.14 – Pontypool Park

Known locally as the People's Park, Pontypool Park covers 64 hectares and has several historical features including an Italian Gardens, Ice Houses and a Shell Grotto.

There is a link from the Park through adjacent farmland to the historic Folly Tower via a public footpath.

The Park includes a children's play area, rugby pitch (home to Pontypool RFC), tennis courts, pitch and putt, bowls and a dry ski slope.

2.3.77 **Private gardens** can also provide habitats for wildlife and are important elements of the urban green space network.

2.3.78 **Amenity greenspaces** are most commonly found in residential areas. It includes informal local recreation spaces and communal green space in and around housing, with a primary purpose of providing opportunities for informal activities close to home or work. Amenity greenspaces are also often used for landscaping purposes. Amenity greenspaces are also often found in villages, in the form of village greens. Amenity greenspaces can have an overlapping function with public parks and gardens and natural areas and also provide informal opportunities for children's play where there are no other facilities.

2.3.79 As illustrated on **Figure 2.9**, Cwmbrân contains extensive areas of amenity greenspace laid out as part of the New Town's masterplan in the 1950s.

Opportunities for Improvement

- 2.3.80 Working together to ensure all parts of our communities are able to benefit from access to urban green space and be involved in its management will contribute to a more cohesive and equal Torfaen. Working with partners to create safe, confident places will help to promote community cohesion. Addressing the barriers to people accessing and using urban green spaces for healthy activities, such as making sure the experience is good and people feel safe, will help contribute to a healthier, more equal and cohesive society.
- 2.3.81 There is increasing evidence relating to the links between the provision of high quality green space in urban areas and a reduction in crime. Given that amenity greenspaces are one of the most local types of urban green space, the provision and maintenance of high quality amenity greenspaces close to where people live is essential in order to discourage misuse and encourage a culture of respect.
- 2.3.82 Promoting the use of urban green spaces and corridors for more active travel not only is a cost effective way of gaining positive health outcomes, it also can contribute to reducing local carbon emissions and improve local air quality.
- 2.3.83 Urban green spaces can provide opportunities for culture and recreation. Maintaining and improving the quality of our natural areas will provide culturally distinctive and attractive areas for local people to come together to participate in sport and recreational activities and contribute to a more cohesive and equal Torfaen. The better the quality and the more diverse our greenspaces are, the more attractive Torfaen will be to visitors. Parks and other forms of accessible urban green space positively impact on physical and mental health, and these well-being benefits can be maximised by providing equitable access to these spaces.

2.3.84 With the exception of Pontypool Park, Cwmbrân Boating Lake and Panteg Park (all of which have Green Flag status), many of Torfaen’s public parks, playing fields and play areas are in need of improvement to maximise benefits to the local community and make them more desirable to visit.

2.3.85 Pollinators (including bees, wasps, butterflies, hoverflies and moths) provide essential regulating services for our natural environment. There is an opportunity to enhance the biodiversity value of grass verges along road corridors through Torfaen (see **Box 2.15**), amenity greenspace in residential areas (see **Box 2.16**) and other urban green spaces to support a wide range of pollinating insects through wild flower planting and implementing cutting management regimes that allow a diversity of plant species to flourish throughout the year.

Box 2.15 – Roadside Management for Pollinators

A key initiative of Torfaen County Borough Council is to change the management regime along our road corridors to improve their potential as a pollinator resource and increase their biodiversity value.

The aspiration is to widen this approach to the management of all green spaces in Torfaen managed by the Council.

Box 2.16 – Enhanced Amenity Greenspaces for Pollinators

Torfaen County Borough Council is creating areas of meadowland out of amenity greenspaces that were previously intensively mown areas of grass and provided little or no benefit to biodiversity.

These areas have been converted to meadowland to encourage pollinators, with sufficient amenity green space provided for people to walk their dogs or for children to be able to play. Converting these areas to meadowland involved the Council changing their cutting regime in these areas to once annually only to allow indigenous species to re-establish over time.

Other initiatives to promote wildflowers include:

- Identifying other areas suitable for wild flower seeding.
- Reviewing how grassland is managed across Torfaen, with areas not being used for sport or other activities cut less frequently to encourage the growth of flowering species.
- Encouraging developers to make provision for pollinating insects in proposals for new housing and industrial sites.

2.3.86 There are also opportunities for embedding and retrofitting GI into built development within urban areas such as biodiverse green spaces between buildings, green roofs, walls and facades, sustainable drainage schemes and other green design measures.

2.3.87 Opportunities for incorporating GI into the masterplanning and design of new developments by the PSB partners could be considered. For example, the new community hubs model¹⁸ proposed by the Aneurin Bevan University Health Board's estates strategy provides opportunities for linking these hubs with local accessible urban green spaces to provide health and well-being benefits for patients. The Council's 21st Century Schools programme also provides an opportunity to showcase best practice in the use of sustainable drainage schemes to reduce flood risk in new developments¹⁹.

¹⁸ Aneurin Bevan University Health Board Draft Health Board Estates Strategy 2018 - 2028

¹⁹ Torfaen County Borough Council Flood Risk Management Plan, 2015

2.3.88 Opportunities could also be taken to support local community groups in the ownership and management of urban green spaces.

2.3.89 In summary, the strategic opportunities for management of urban green spaces to help strengthen the connectivity and resilience of Torfaen's GI Network are as highlighted in **Box 2.17**.

Box 2.17 – Key Strategic Opportunities for Management of Urban Green Spaces

- Seek opportunities to improve the condition/quality of Urban Green Spaces through appropriate management in accordance with standards set by the Torfaen Open Space Assessment.
- Seek opportunities for the provision of new Accessible Urban Green Spaces of appropriate types, sizes and locations to address needs for public open space in accordance with standards set by the Torfaen Open Space Assessment.
- Seek opportunities for overcoming barriers to public use and enjoyment of Accessible Urban Green Spaces, where appropriate, by tackling landscape crime.
- Seek opportunities to increase the biodiversity value of urban green spaces and corridors for pollinators through wild flower planting and implementing cutting regimes to allow a diversity of species to flourish throughout the year.

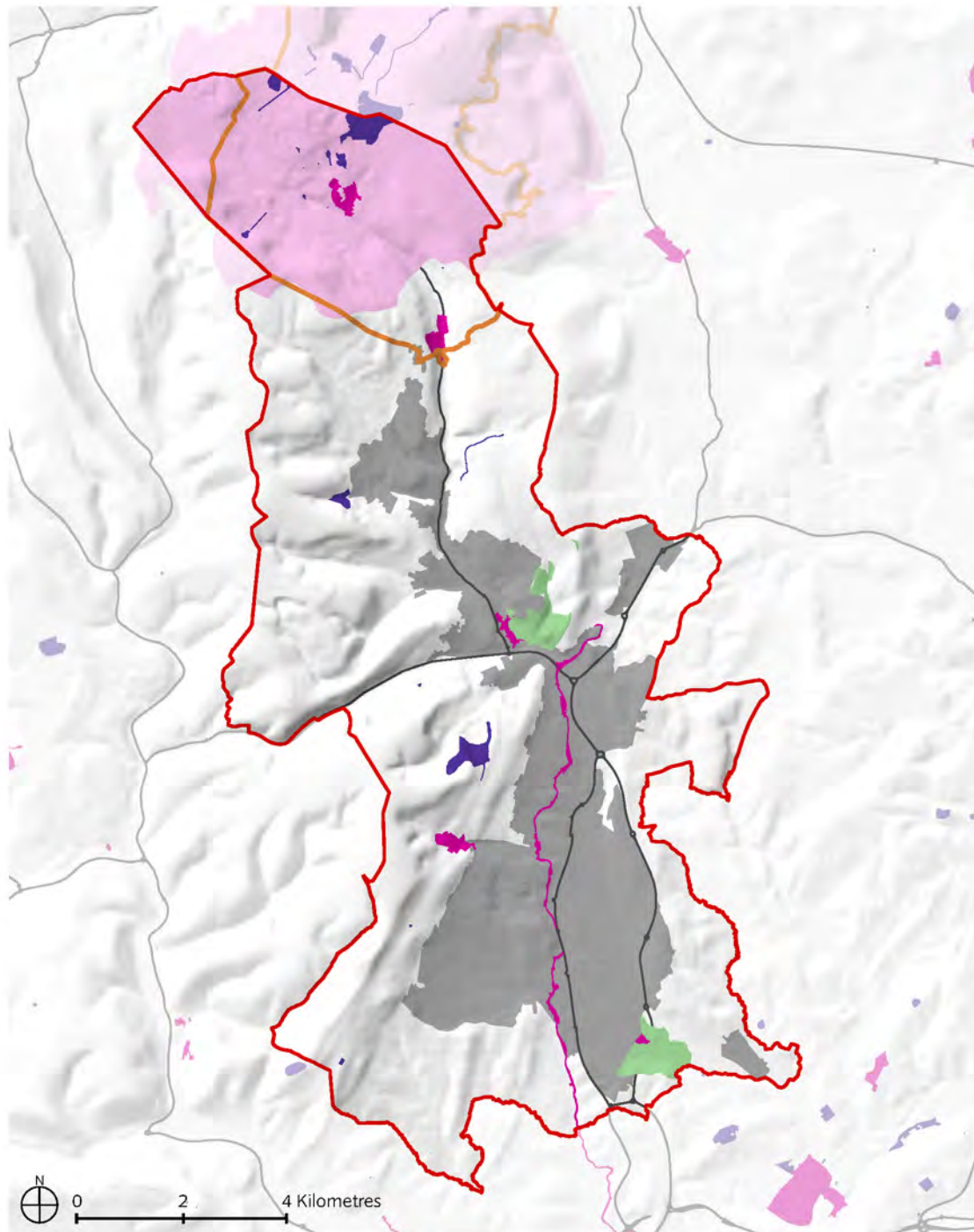
Heritage sites

- 2.3.90 Many of our heritage sites (see **Figure 2.10**) are associated with the industrial heritage of South Wales.
- 2.3.91 The internationally important Blaenavon Industrial Landscape World Heritage Site largely falls within the northern part of Torfaen covering some 33km². It is of outstanding universal value as a cultural landscape in which exceptional evidence of extensive coal mining and iron making during the early years of the Industrial Revolution survives. The workers' housing, chapels, churches, schools and the Workmen's Hall in Blaenavon town powerfully reflect the distinctive culture that developed in iron making and coal mining communities during the late eighteenth and early nineteenth centuries.
- 2.3.92 Pontypool Park and Llantarnam Abbey are Registered Historic Parks.

2.3.93 There are 6 Conservation Areas in Torfaen including:

- Monmouthshire and Brecon Canal
- Upper Cwmbrân
- Llantarnam
- Pontypool
- Cwmavon
- Blaenavon

2.3.94 There are also 26 Scheduled Monuments across Torfaen such as Blaenavon Ironworks, Cwmbyrgwm Colliery and the medieval sites of Abbey Tithe Barn and the Churchyard Cross in Llantarnam.



KEY






-  Blaenavon Industrial Landscape World Heritage Site
-  Landscape of Outstanding Historic Interest
-  Historic Parks and Gardens
-  Conservation Areas
-  Scheduled Monuments

FIGURE 2.10
HERITAGE SITES

2.3.95 Our outstanding historic environment is nationally and internationally important, helping to shape our natural environment and define our local identity.

2.3.96 In particular, the Blaenavon Industrial Landscape World Heritage Site is a key tourist attraction within Torfaen and the wider region, and acts as a gateway to the Brecon Beacons National Park. The World Heritage Site contributes to well-being by supporting tourism and informal recreation, as well as providing opportunities for intellectual access to the area's rich history.

2.3.97 The Monmouthshire and Brecon Canal also provides access and recreation opportunities that contribute to health and well-being benefits, in addition to habitats for wildlife.

Opportunities for Improvement

2.3.98 The key strategic opportunities for management of heritage sites to help strengthen the connectivity and resilience of Torfaen's GI Network are highlighted in **Box 2.18**.

18 – Key Strategic Opportunities for Management of Heritage Sites

- Seek opportunities to maintain and enhance the condition of Heritage Sites in accordance with appropriate conservation management plans and standards.
- Seek opportunities to improve the presentation of Heritage Sites including enhanced physical and intellectual access to encourage greater understanding and enjoyment.
- Seek opportunities for overcoming barriers to public use and enjoyment of Heritage Sites, where appropriate, by tackling landscape crime.

2.4 Green Infrastructure Accessibility & Connectivity

Green Infrastructure Network Accessibility

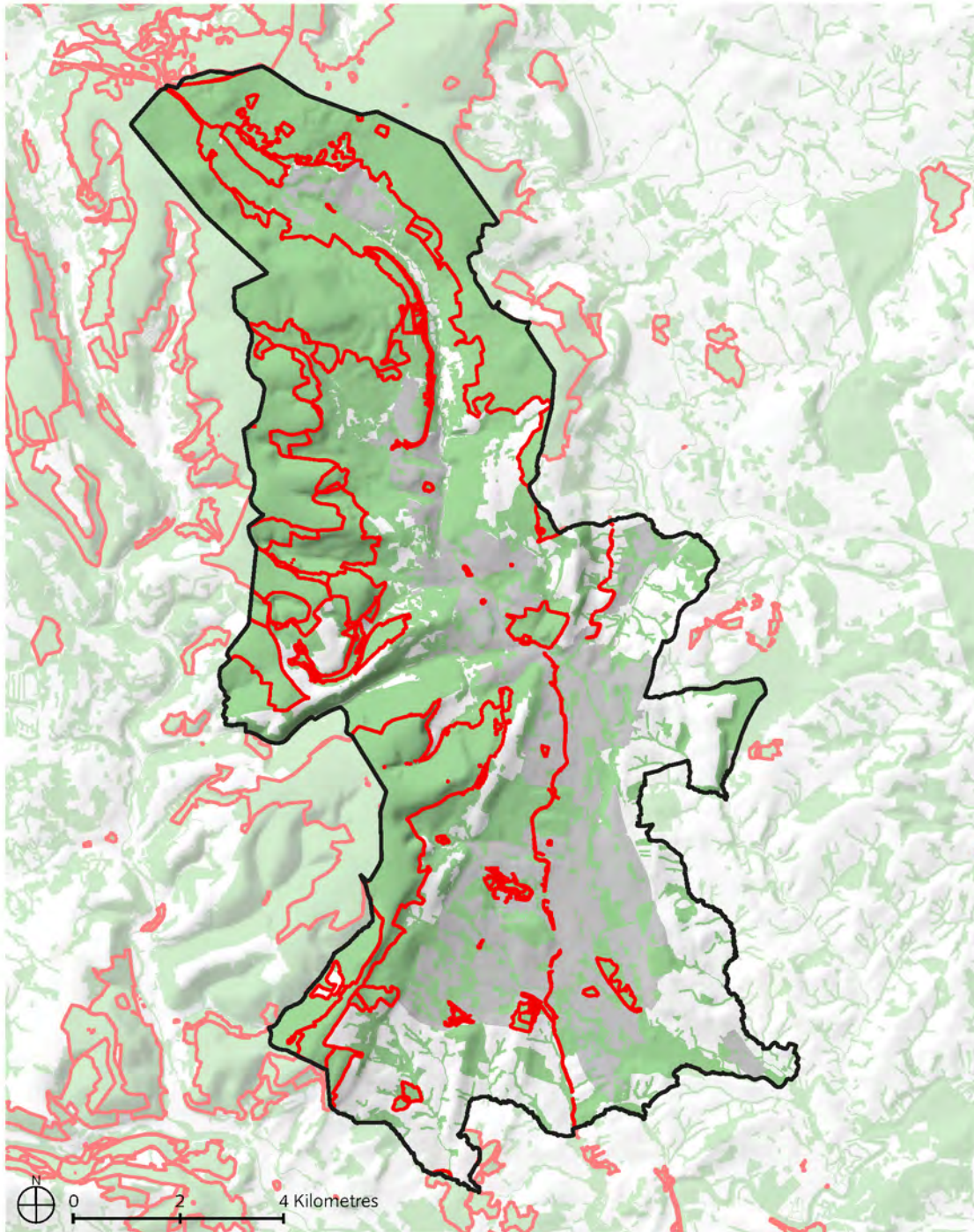
- 2.4.1 **Figure 2.11** identifies the current accessibility of Torfaen's GI network provided by Open Access Land, Common Land (see **Box 2.19**), Country Parks and Urban Open Space.
- 2.4.2 Examples of accessible GI sites include Garn Lakes Local Nature Reserve and Pontypool Park.

Box 2.19 – Access to Common Land in Torfaen

Much of the common land in Torfaen is semi-natural moorland habitat which has been managed by people for thousands of years. Grazing and annual management, including bracken control, cutting and controlled burning, are all important elements in keeping moorlands healthy.

Historically, most areas of common land in Wales have been open for public access with the consent of the landowner.

The Countryside & Rights of Way Act (CROW) 2000 established registered common land, mountain, moor, heath and down as 'open access land'. The right of access introduced by the CROW Act is for open-air recreation on foot. These areas are clearly marked on Ordnance Survey Explorer Maps. Horse riding and cycling remain confined to bridleways and byways.



KEY



-  Green Infrastructure Network
-  Accessible Green Infrastructure

FIGURE 2.11
GREEN INFRASTRUCTURE NETWORK ACCESSIBILITY

Green Infrastructure Network Connectivity

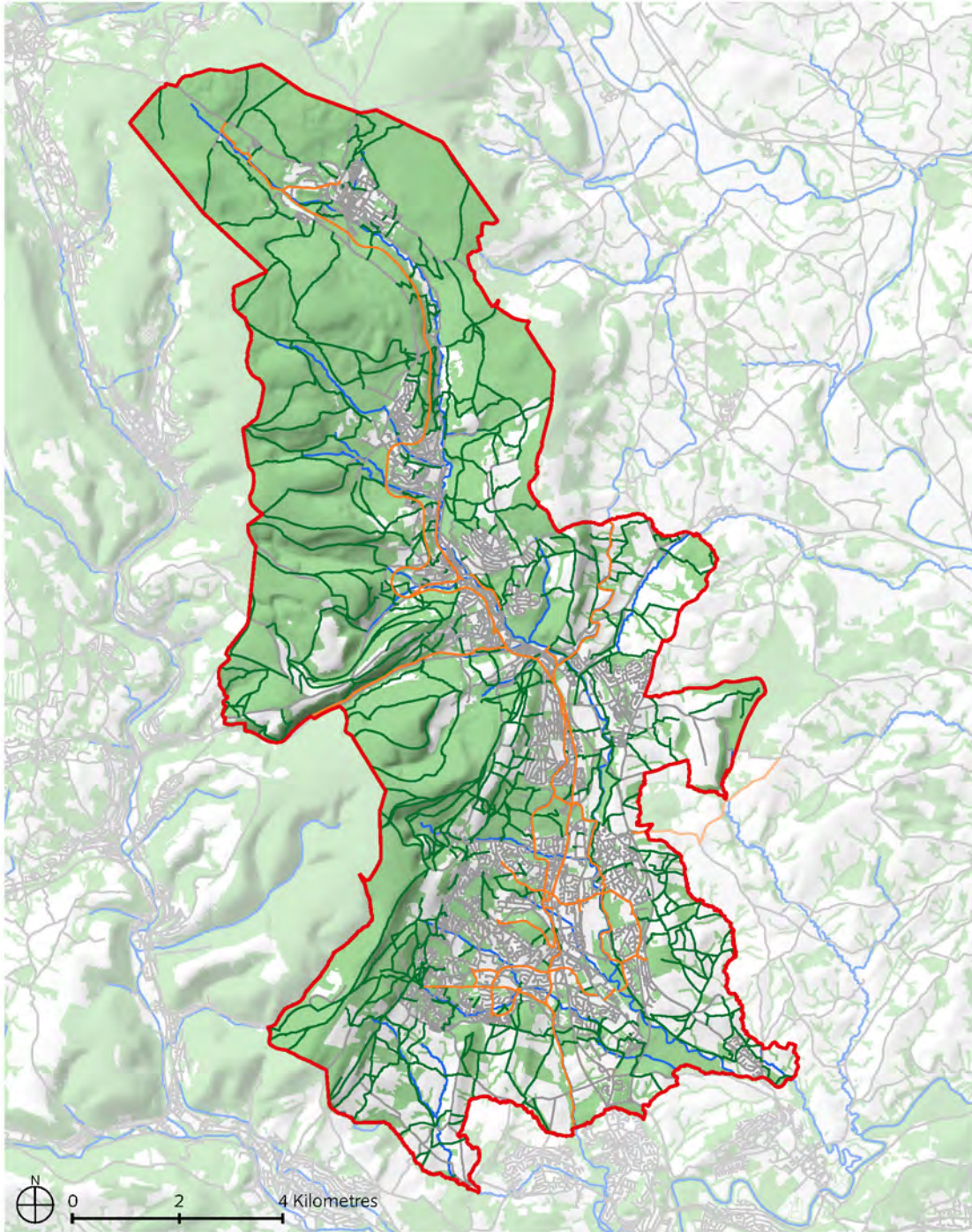
- 2.4.3 **Figure 2.12** indicates the current connectivity of Torfaen's GI network provided by Green and Blue Infrastructure Corridors - predominantly linear landscape features encompassing natural and semi-natural terrestrial and aquatic habitats such as road/railway line verges, hedgerows/tree belts and rivers, streams and canals.
- 2.4.4 Green Infrastructure Corridors in Torfaen include public rights of way (see **Box 2.20**) and promoted trails, the cycle network (see **Box 2.21**) and public transport routes.
- 2.4.5 Within Torfaen, Blue Infrastructure Corridors include the banks and riparian habitats of rivers such as the Afon Lwyd and waterways such as the Monmouthshire and Brecon Canal.

Box 2.20 – Torfaen's Rights of Way Network

369km (230 miles) of public rights of way provide access to Torfaen's countryside. These comprise:

- **Footpath** - a highway over which the public has a right of way on foot only.
- **Bridleway** - a highway over which the public has a right of way on foot, horseback and on a pedal cycle (including mountain-bikes).
- **Restricted Byway** - a highway over which the public is entitled to travel on foot, horseback and with non-mechanically propelled vehicles (such as pedal cycles and horse drawn vehicles).
- **Byway Open To All Traffic** - a highway over which the public is entitled to travel on foot, horseback or pedal cycle and by wheeled vehicle of all kinds, including horse-drawn and motorised vehicles. It is a route used by the public mainly for walking or for riding with occasional use by motorised vehicles.

While not rights of way, **permissive paths** and **green lanes** (unsurfaced tracks/paths bounded by hedges or walls often of some antiquity) also form part of Torfaen's countryside access network.




KEY

 Green Infrastructure Network

Green Infrastructure Corridors:

 Public Right of Way

 Cycleway

 Road

 Blue Infrastructure Corridors

FIGURE 2.12
GREEN INFRASTRUCTURE NETWORK CONNECTIVITY

Box 2.21 – Torfaen’s Cycle Network

Torfaen has an extensive network of easily accessible cycling routes which can be used for getting to and from work, reaching important facilities such as leisure centres or shops or just for pleasure.

Many of the routes are off road and pass through attractive landscapes with many interesting historical features. The number of routes has expanded rapidly over recent years and there is now an impressive network in the valley.

There are several ‘National Cycle Network’ (NCN) routes in the county borough including:

- NCN 492 - Cwmbrân to Blaenavon
- NCN 49 - Newport to Mamhilad
- NCN 466 - Pontypool to Crumlin

The Afon Lwyd Trail is the principal off road route through Torfaen and follows NCN 49 and NCN 492 from Cwmbrân to the Blaenavon World Heritage Site.

In addition, there are many other cycle routes that provide links to attractions in Torfaen.

2.4.6 Examples of Green & Blue Infrastructure Links include the Monmouthshire & Brecon Canal (see **Box 2.22**), the Afon Lwyd Trail (see **Box 2.23**) and the Iron Mountain Trail in the Blaenavon Industrial Landscape World Heritage Site.

Box 2.22 – Monmouthshire & Brecon Canal

Within Torfaen, the Monmouthshire & Brecon Canal runs through the centre of Cwmbrân and the southern part of Pontypool before heading off into the Brecon Beacons National Park via Monmouthshire.

Its original purpose was for transporting coal and iron, which were brought to the canal by a network of tramways and railroads, many of which were built and owned by the canal company.

The "Mon and Brec" was originally two independent canals – the Monmouthshire Canal from Newport to Pontymoile Basin (including the Crumlin Arm) and the Brecknock and Abergavenny Canal running from Pontymoile to Brecon.

Both canals were abandoned in 1962, but the Brecknock and Abergavenny route and a small section of the Monmouthshire route have been reopened since 1970.

Box 2.23 – The Afon Lwyd Trail

Travelling right through the heart of Torfaen, the Afon Lwyd Trail is a picturesque 16-mile traffic free route from Cwmbrân in the south, through Pontypool and up to the Blaenavon World Heritage Site in the north (following NCN 49 and 492).

Following first a canal and then a former railway, it offers an easy shared-use path for all users with a gradual incline rising from south to north.

The Afon Lwyd Trail passes through many valley communities and has good connections to bus and train stations at Pontypool and Cwmbrân, offering a healthy, pleasant and low cost way to commute to work or school.

A variety of green spaces, heritage sites and other attractions can be accessed from the Trail such as:

- Garn Lakes Local Nature Reserve
- Pontypool & Blaenavon Railway
- Big Pit: National Coal Museum
- Blaenavon Ironworks
- World Heritage Site
- Garndiffaith Viaduct
- Pontypool Museum and Pontypool Park
- Blaenavon, Pontypool and Cwmbrân Town Centres
- Monmouthshire & Brecon Canal

2.4.7 Green and blue corridors can function as ‘stepping stones’ for the dispersal of wildlife between otherwise fragmented and isolated habitats within both the agricultural landscape and urban area providing supporting services for a range of wildlife habitats, as well as supporting pollinators where managed appropriately. In addition to, green and blue corridors can incorporate walking and cycling links between settlements and the surrounding countryside, providing health and well-being benefits for local communities and visitors.

2.4.8 Blue corridors also provide a source of freshwater. The majority of Torfaen’s area is covered by the Afon Lwyd catchment, with parts of the south of the county borough in the catchment of Pantyreos Brook (source to Barrack Hill) and Dowlais Brook (source to confluence with Afon Lwyd), and areas close to the edge of the county borough sharing catchments with adjacent districts.

Opportunities for Improvement

2.4.9 The majority of the population rely on cars for day-to-day journeys, and there are low levels of walking and cycling in Torfaen²⁰. There are strategic opportunities to further enhance the provision of active travel routes along green corridors as an integral part of Torfaen's green infrastructure network, and to provide education to support their use. There are also some gaps in provision and maintenance (including the generation of Safe Routes to School²¹) which need to be addressed. Opportunities could also be taken to develop the volunteer network in Torfaen to assist with public rights of way maintenance.

2.4.10 The key strategic opportunities for improving the accessibility and connectivity of Torfaen's GI Network are highlighted in **Box 2.24**.

Box 2.24 – Key Strategic Opportunities for Improving the Accessibility and Connectivity of the GI Network

- Seek opportunities for the provision of new Accessible Green Infrastructure of appropriate types, sizes and locations to address needs for public open space in accordance with standards set by the Torfaen Open Space Assessment.
- Seek opportunities for overcoming barriers to public use and enjoyment of Accessible Green Infrastructure, where appropriate, by tackling landscape crime.
- Seek opportunities for the provision of new/enhanced Accessible Green Corridors between Accessible Natural & Semi-Natural Greenspaces to provide sustainable/active travel networks.
- Seek opportunities for strengthening the function of Green and Blue Corridors as ecological corridors through improved management (e.g. control of invasive non-native species) and creation of new linear landscape features to help address barriers for dispersal of wildlife due to habitat fragmentation.

²⁰ Torfaen County Borough Council, Local Development Plan (to 2021) Adopted December 2013, Written Statement

²¹ Torfaen County Borough Council Biodiversity and Ecosystem Resilience Plan 2019

3.0 WHERE WE WANT TO BE

3.1 Our Vision for Green Infrastructure

3.1.1 The Torfaen Well-being Assessment told us that 'place' is important to people and that our natural resources are an important asset. In particular the outdoor environment which includes the air, land, water, wildlife and plants that make up the landscape which surrounds us.

3.1.2 The natural environment has the capacity to deliver multiple well-being benefits to the citizens of Torfaen. These benefits include clean water, flood protection, space for leisure and recreation, food and fuel production, a sense of tranquillity, jobs and economic activity associated with a range of sectors including forestry, tourism, leisure and agriculture.

3.1.3 If current and future generations are going to realise the benefits that the natural environment can provide, then natural areas need to be healthy and in good condition. This means that we need to work together to develop approaches which protect and enhance the health of our natural resources as an important asset for Torfaen.

3.1.4 This is underlined by our shared vision for future generations in the Torfaen Well-being Plan, which includes references to the environment as highlighted in **Box 3.1**.

3.1.5 We will do this by enhancing diversity, adaptability, extent, condition and connectivity between natural areas whilst minimising the risks from external factors such as pollution, development, climate change, anti-social behaviour, lack of management and successional planting and non-native species.

Box 3.1 - Torfaen Well-being Plan Vision - Extracts

We want Torfaen to be...a place where the environment is protected and enhanced.

Natural resources will be protected and enhanced and resilient to a changing climate. Water and air quality will be good, soils will be healthy and ecological connectivity will be maximised. Our citizens' will understand and be able to realise the many benefits that our natural resources can provide.

Our communities and the key infrastructure they rely on will be resilient to the impacts of climate change. Opportunities associated with a changing climate will have been realised e.g. tourism, recreation and agriculture.

Torfaen will have resilience to rising energy and transport costs through improved efficiency, tackling fuel poverty, active travel and more local renewable energy generation.

- 3.1.6 Developing new approaches to managing the public sector estate and our collective assets will help us to maintain and enhance healthy functioning ecosystems, improve water and air quality, maintain healthy soils, increase ecological connectivity and contribute to flood management.
- 3.1.7 The way we manage our GI can help support longer-term social and economic resilience and Torfaen's capacity to adapt to climate change - e.g. managing water in the landscape and reducing the impact of temperature rise, particularly in urban areas and around key infrastructure.
- 3.1.8 Natural resources provide our most basic needs, including food, energy and shelter. Better management of our natural resources means that we will be better able to address challenges such as climate change, tackling poverty and inequality, and improving people's physical and mental health. Sustainable management of natural resources will also support biodiversity and ecological resilience.

3.1.9 Our shared vision for developing a functional, connected network of natural areas is outlined in **Box 3.2**.

Box 3.2 – Our Vision for Torfaen’s Green Infrastructure Network

Torfaen has a well-connected and multi-functional green infrastructure network of distinctive, biodiverse and resilient natural spaces, providing well-being benefits for people and nature.

Our natural resources and ecosystems are managed in sustainable ways to maintain, protect and enhance the network’s integrity and connectivity.

The interdependency of Torfaen’s rich biodiversity, landscape and heritage is widely recognised.

3.1.10 Working towards this vision will help contribute to many of the Well-being Plan’s objectives as highlighted in **Box 3.3**.

Box 3.3 – Contribution to our Well-being Plan’s objectives

- Developing a functional, connected network of natural areas will help build resilience to the impacts of **climate change** (Objective 2).
- Good quality greenspace with plenty of opportunities for active travel and physical activity supports **healthy children/young people** (Objective 3) and **healthy lifestyles** throughout people’s lives (Objective 4).
- Developing functional, connected natural areas offers opportunities to develop **economic resilience** through supporting employment linked to the environment (Objective 5) and for **improving local skills** through training, volunteering and apprenticeships (Objective 6).
- Tackling irresponsible use of green space can contribute towards **safe, confident & cohesive communities** (Objective 7).

3.2 Our Green Infrastructure Objectives

3.2.1 Our key objectives for developing a functional, connected network of natural areas that will support the current and future well-being needs of local populations in Torfaen are highlighted in **Box 3.4**.

Box 3.4 – Green Infrastructure Objectives

1. Build climate change resilience.
2. Support biodiversity and ecological resilience.
3. Tackle landscape crime and irresponsible use of greenspaces.
4. Develop active travel networks and promote outdoor physical activity.
5. Promote training, volunteering and apprenticeships opportunities.

Objective 1: Build climate change resilience

3.2.2 Developing a functional, connected network of natural areas will help build resilience to address the challenges of climate change (Torfaen Well-being Plan Objective 2). More sustainable management of our natural resources can help support longer-term social and economic resilience and Torfaen's capacity to adapt to climate change. As well as providing a place for us to be active, our green areas help regulate climate, store carbon and have a role in water management (reducing flood-risk). They can absorb air-borne pollutants harmful to health and provide a pollination resource for local food production.

3.2.3 Key priorities for building climate change resilience are:

- Working better together to balance the land use pressures that impact on our natural resources.
- Increasing the resilience of our natural resources (that we rely on) from a changing climate.

- Better managing water in the landscape and reducing the impact of temperature rise, particularly in urban areas and around key infrastructure etc.
- Identifying and pursuing renewable energy generation opportunities.
- Identifying opportunities for local food production to help reduce "food miles".

3.2.4 The PSB partners with leading roles in delivering this objective are highlighted in **Box 3.5**.

Box 3.5 – Key Players in Building Climate Change Resilience

- **Torfaen County Borough Council** (TCBC) can provide leadership for strategic planning and facilitating community engagement.
- **Natural Resources Wales** will work with partners to identify opportunities to improve the resilience of our natural areas in the county and the well-being benefits they provide.
- **South Wales Fire & Rescue** can help ensure our green spaces support flood and fire resilience.

Objective 2: Support biodiversity and ecological resilience

3.2.5 Developing a functional, connected network of natural areas will help increase biodiversity and ecological resilience to the impacts of a changing climate (Torfaen Well-being Plan Objective 2). More sustainable approaches to managing the public sector estate and our collective assets will help us to maintain and enhance healthy functioning ecosystems, strengthen biodiversity and increase ecological connectivity.

3.2.6 The PSB partners with leading roles in delivering this objective are highlighted in **Box 3.6**.

Box 3.6 – Key Players in Supporting Biodiversity and Ecological Resilience

- **Natural Resources Wales** has a leading role to play in delivering this objective by working with partners to identify opportunities where ecological resilience can be improved and key risks to natural resources. Natural Resources Wales can also help identify opportunities to improve the resilience of our natural areas in Torfaen and maximise the well-being benefits they provide.
- **Torfaen County Borough Council (TCBC)** can also provide leadership for strategic planning and facilitating community engagement with respect to biodiversity and ecosystem resilience.

Objective 3: Tackle landscape crime and irresponsible use of greenspaces

3.2.7 Tackling landscape crime, irresponsible use of greenspaces and anti-social behaviour (such as grass fires, fly tipping and illegal off-road bike use) can contribute towards safe, confident & cohesive communities (Torfaen Well-being Plan Objective 7). Working with regional partners to create safe, confident places will help to promote community cohesion. Addressing the barriers to people being more active, including those with protected characteristics, will contribute to a healthier, more equal and cohesive society (i.e. making sure the experience is good and people feel safe).

3.2.8 The PSB partners with leading roles in delivering this objective are highlighted in **Box 3.7**.

Box 3.7 – Key Players in Tackling Landscape Crime

- **South Wales Fire & Rescue** can help identify fly tippers with partner organisations such as Fly tipping Wales to ensure waste clean-up.
- **Gwent Police** can advise on the safety of our public green areas, and help tackle landscape crime.
- Working with Gwent Police, **Torfaen County Borough Council** can tackle illegal/anti-social activities (e.g. metal theft, off-road trespassing, vandalism, fly-tipping, dog fouling, joy riding, fires, poaching and wildlife crime).
- **Torfaen County Borough Council's Community Safety Team** working with Gwent Police will take appropriate action when members of the public report Off Road Biking.
- **Bron Afon Community Housing** and **Melin Homes** will work with partners, tenants and residents to support resilient and safe communities.

Objective 4: Develop active travel networks and promote outdoor physical activity

- 3.2.10 Good quality greenspace with plenty of opportunities for active travel and physical outdoor activity supports Torfaen Well-being Plan Objective 3 (provide children and young people with the best possible start in life) and Objective 4 (support healthy lifestyles and enable people to age well). Supporting more active travel will also contribute to reducing local carbon emissions and improve local air quality (Well-being Plan Objective 2).
- 3.2.11 Green spaces can provide opportunities for culture and recreation. Maintaining and improving the quality of our natural areas will provide culturally distinctive and attractive areas for local people to come together to participate in sport and recreational activities and contribute to a more cohesive and equal Torfaen. The better the quality and the more diverse our greenspaces are, the more attractive Torfaen will be to visitors.

- 3.2.12 Parks and other forms of public open space can positively impact on well-being. Physical and mental health can be supported by providing equitable access to green space.
- 3.2.13 Promoting active travel and the benefits of outdoor recreation can help in addressing increasing levels of obesity and inactivity, and in supporting an ageing population by ensuring suitable access to greenspace.
- 3.2.14 The PSB partners with leading roles in delivering this objective are highlighted in **Box 3.8**.

Box 3.8 – Key Players in Promoting Outdoor Activity

- **Torfaen County Borough Council** can provide leadership for strategic active travel planning and facilitating community engagement.
- **Aneurin Bevan University Health Board** can provide the evidence base for improving physical activity and the use of green space to improve health.

Objective 5: Promote training, volunteering and apprenticeship opportunities

3.2.15 Developing functional, connected natural areas offers opportunities for improving local skills through work-force planning, training, apprenticeships and volunteering (Torfaen Well-being Plan Objective 6), which can also offer opportunities to tackle poverty and develop economic resilience through supporting employment linked to the environment (Objective 5). Working together to ensure all parts of our communities are able to benefit from access to greenspace and be involved in its management will contribute to a more cohesive and equal Torfaen.

3.2.16 The PSB partners with leading roles in delivering this objective are highlighted in **Box 3.9**.

Box 3.9 – Key Players in Promoting Training, Volunteering and Apprenticeship Opportunities

- **Natural Resources Wales** and **Gwent Wildlife Trust** can help support training and apprenticeship opportunities for managing wildlife sites.
- **Torfaen Voluntary Alliance** can help support volunteering to improve and maintain green space for wider benefit (healthy lifestyles, skills development etc.).
- **Town and Community Councils** will facilitate community engagement through the place planning process at the local level.

3.3 Green Infrastructure Planning Principles

- 3.3.1 As highlighted by Planning Policy Wales (see **Box 3.10**), the land use planning process affords considerable potential to help integrate GI and development by balancing priorities for environmental protection, health and well-being outcomes and economic development needs. Greatest benefits for strengthening Torfaen's GI Network can be secured where GI provision is embedded into site design from the start of the masterplanning process.
- 3.3.2 The GI planning principles set out below are intended to help inform pre-application discussions and consultations, evaluation of planning applications and implementation of development schemes in respect of securing appropriate GI provision that can contribute towards delivery of all of the Torfaen Well-being Plan's objectives.

Box 3.10 – Integrating GI and Development

'Green infrastructure plays a fundamental role in shaping places and our sense of well-being, and are intrinsic to the quality of the spaces we live, work and play in. The planning system should protect and enhance green infrastructure assets and networks because of these multi-functional roles. The protection and enhancement of biodiversity must be carefully considered as part of green infrastructure provision alongside the need to meet society's wider social and economic objectives and the needs of local communities. The multiple benefits that resilient ecosystems and green infrastructure offer to society, including the economic and social contribution they make to local areas, should be taken into account when balancing and improving these needs.'

The quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design. With careful planning and design, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, helping to overcome the potential for conflicting objectives, and contributing towards health and well-being outcomes. There are multiple ways of incorporating green infrastructure, dependent on the needs and opportunities a site presents. Landscaping, green roofs, grass verges, sustainable urban drainage and gardens are examples of individual measures that can have wider cumulative benefits, particularly in relation to biodiversity and the resilience of ecosystems as well as in securing the other desired environmental qualities of places.'

- The planning authority should seek to maintain and enhance GI Assets and build a resilient GI Network by ensuring that any adverse effects on the integrity of Torfaen's GI Network are firstly avoided, then minimised, mitigated, and as a last resort compensated for.
- The planning authority should ensure that features of GI value are retained on site, and enhanced or created wherever possible, by adopting best practice site design and GI principles that draw on the issues and opportunities highlighted by this GI Strategy.
- Development proposals should seek to avoid any significant loss or damage of GI Assets that would harm the integrity and functionality of Torfaen's GI Network.
- Where significant loss or damage of GI Assets on site is unavoidable, and any reasonable alternative sites that would result in less harm, no harm or gain have been fully considered, development proposals should seek to provide a net benefit or gain for the GI Network through the provision of suitable off-site compensation measures to create new GI Assets, or provision of improved management arrangements to enhance the condition/quality of existing GI Assets, to off-set the unavoidable loss/damage and thereby help maintain the integrity of Torfaen's GI Network.
- Suitable locations for securing offsite compensation should seek to reflect the priorities and opportunities highlighted by this GI Strategy and other local GI delivery plans.
- Planning decisions should seek to incorporate measures to secure the creation, restoration and enhancement of green and blue corridors and linkages, and the long-term management and maintenance of GI Assets, through developer contributions where appropriate.
- Development proposals should provide adequate access to natural/semi-natural green space for residents/workers to interact with nature and encourage healthier lifestyles by meeting standards for open space provision recommended by the Council's Open Space Study.
- Development should incorporate measures for adapting to climate change through innovative GI landscape, architectural and engineering design solutions – such as sustainable drainage systems, green roofs and green walls for example.

3.4 Strengthening our Green Infrastructure Network

3.4.1 Our vision for a well-connected, multi-functional green infrastructure network of distinctive, biodiverse and resilient natural spaces is reflected in the GI Network shown on **Figures 3.1, 3.2, 3.3** and **3.4**.

3.4.2 These help focus attention or priority on land that needs to be safeguarded, managed or secured in positive ways to create a multi-functional network of green spaces, links and other GI Assets for which investment can deliver the greatest range of benefits. It is not a rigid approach. The GI Network is intended to be flexible and responsive to opportunities and constraints - such as land ownership, community aspirations, access to funding, land drainage requirements, development opportunities, conservation considerations, etc.

3.4.3 The GI Network applies across the whole of Torfaen, and it can operate at any scale. It provides the context for the delivery of GI interventions that would improve management of existing GI Assets, as well as creation and restoration of new GI Assets in areas where there are identified needs.

3.4.4 It is important to ensure that the integrity of the overall GI Network is not compromised by inappropriate development or land management. This means that there needs to be flexibility in how the GI Network is protected and managed. In cases where there is an unavoidable harm to existing GI assets in order to meet social and economic needs, this should be offset by mitigation and compensation measures to enhance the functionality of other GI Assets elsewhere within the GI Network. However, some habitats, such as ancient woodlands, are irreplaceable and need protection.

3.4.5 Where development is planned within or in close proximity to a GI Asset, it should become an integral feature to the layout, design and 'identity' of the development to ensure that the connectivity of the GI network for both public benefit and biodiversity is retained and enhanced.

3.4.6 The GI Network encapsulates a range of GI Assets within varied landscape settings. With investment and appropriate management over time, the GI Network will offer more diverse uses, experiences and functions to deliver increased economic, environmental and social well-being benefits within Torfaen as highlighted in **Box 3.11**.

Box 3.11 – Key Benefits of GI for Torfaen

- Contributing to health and well-being by promoting opportunities to access green spaces for exercise.
- Linking housing, schools and bus/train stations to the access network and connecting with accessible green spaces.
- Providing an improved image, experience and sense of place through investment in open space improvements.
- Opportunities to provide environmental education through parks, nature reserves and farm-based activities.
- Helping address climate change through sustainable management of waste, water and air pollution, growing energy crops and creation of woodland as carbon sinks.
- Supporting local food production, processing of local produce and provision of farm shops.
- Increasing awareness of, and celebrating, the contribution of heritage sites to local distinctiveness and sense of place.
- Providing opportunities for community involvement through volunteering and gaining new skills through GI project delivery, particularly within areas of high social deprivation.
- Strengthening management of wildlife habitats for sites experiencing recreational pressures.

3.4.7 The GI Network encompasses a range of GI Assets, functions, locations, sizes and levels of accessibility and use, and operates at every spatial scale and in all geographic areas, both rural and urban.

3.4.8 Taking into account the strategic opportunities for GI identified in **Section 2.0**, our strategic priorities for strengthening the resilience of the Strategic GI Network to deliver greatest well-being benefits for Torfaen are highlighted in **Box 3.12**.

Box 3.12 – Strategic Priorities for GI Investment

- Support economic well-being in the uplands (e.g. commoning, livestock grazing, tourism-led diversification)
- Promote wildlife conservation (e.g. heathlands, grasslands, woodlands, freshwater, birds and invertebrates)
- Enhance regulating ecosystem services (e.g. water resources management, renewable energy, pollination)
- Promote community engagement in use of natural spaces (e.g. tackling landscape crime, volunteering, recreation)
- Support heritage conservation (in particular the Blaenavon Industrial Landscape World Heritage Site)
- Deliver strategic access improvements to address missing links in the Rights of Way network
- Develop a ranger training programme to ensure sustainable management of countryside access
- Support tree management and planting in areas of high pollution (e.g. urban areas/A472 Crumlin-Pontypool)
- Develop a sustainable approach to maintenance and management of public parks and gardens
- Implement alternative pollinator grassland management regimes for parks, amenity greenspaces and along road verges to promote resilient ecological networks

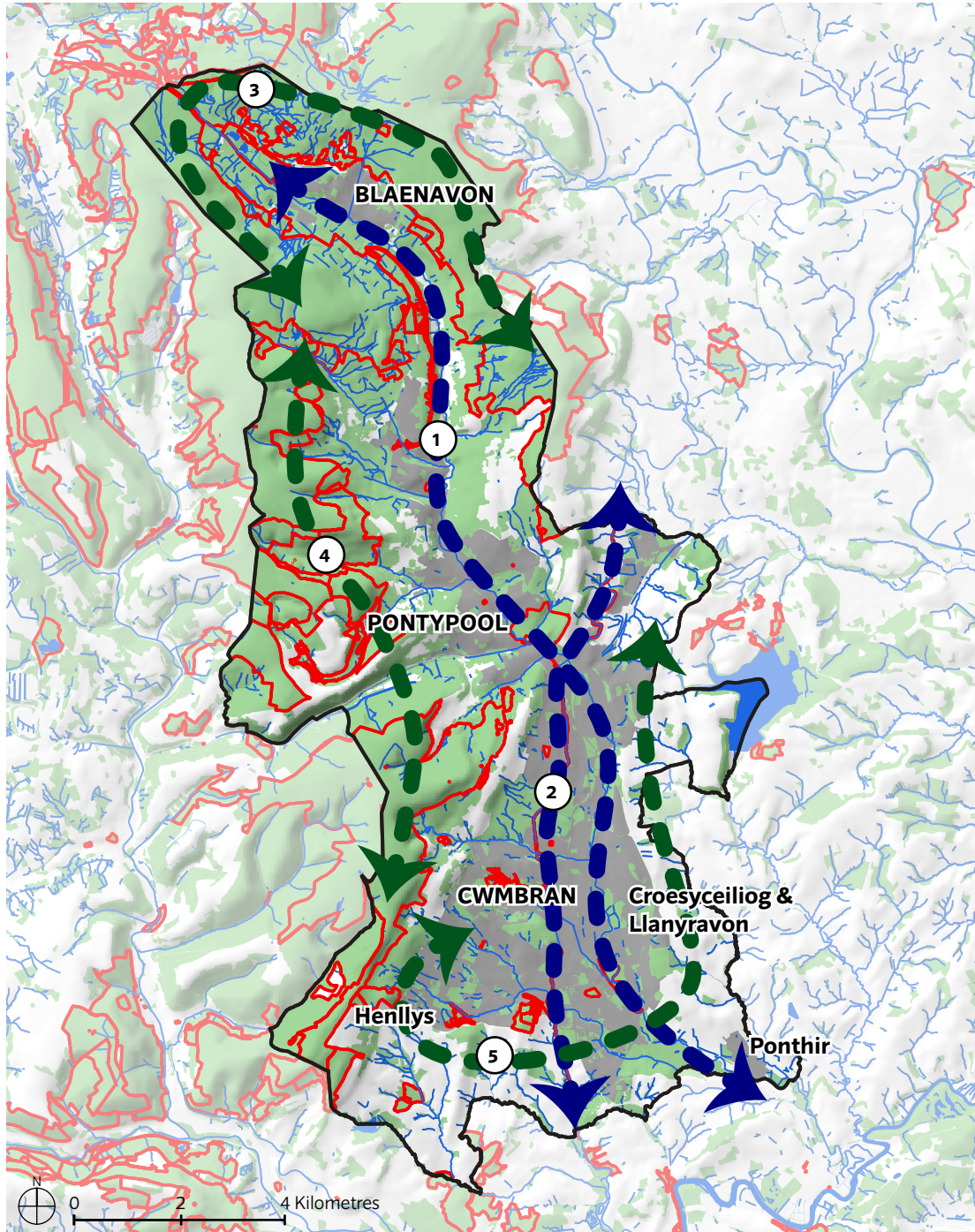
3.4.9 Focusing investment on management of Torfaen's existing GI Assets to improve their condition and quality is a clear priority - in particular, management of natural and semi-natural greenspaces, urban trees and urban green spaces. Effective protection of existing GI Assets where under pressure from land use changes, inappropriate management and/or climate change is also of importance. Addressing deficits in GI provision to meet the existing and future needs of communities in Torfaen who are likely to experience growth-related pressures is also a priority.

3.4.10 The GI Networks provide a high level framework within which we will work in partnership with stakeholders to develop a functional, connected network of sustainably managed natural areas in and around our towns.

The Strategic GI Network for Torfaen

3.4.11 The overarching Strategic GI Network for the whole of Torfaen illustrated on **Figure 3.1**. This network of strategic green and blue infrastructure paints the 'big picture' for GI in Torfaen. It embraces strategic green and blue spaces, corridors and linkages, both with and without public access, connecting GI Assets within the County Borough and in neighbouring areas as an integral part of the wider Gwent Green Grid. The Strategic GI Network provides the context for important linkages with GI in and around Torfaen's towns.

3.4.12 The principal components of the Strategic GI Network are outlined below. These should be read in conjunction with the key strategic opportunities for strengthening the connectivity and resilience of Torfaen's GI Network highlighted in **Section 2.0**.



KEY

- Strategic Green Infrastructure Network
- Accessible Green Infrastructure
- Strategic Blue Infrastructure Network

- Strategic Green & Blue Corridors:
- ① Afon Lwyd Valley
 - ② Monmouthshire & Brecon Canal
 - ③ Northern Uplands
 - ④ Western Uplands
 - ⑤ Eastern and Southern Lowlands

Note: the Green Infrastructure Network map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.1
TORFAEN STRATEGIC GREEN INFRASTRUCTURE NETWORK

3.4.13 Within the Strategic Green and Blue Infrastructure Networks, priority areas with key opportunities for strategic GI enhancement, linkage and creation have been highlighted. These are landscape-scale **Strategic Green and Blue Corridors** providing the backbone of Torfaen's GI Network and key strategic linkages with GI Networks in the wider Gwent Green Grid. Comprising a mosaic of land uses, natural features and habitats, built heritage, archaeological resources and villages, they are intended to be fully multi-functional corridors with the potential to deliver a wide range of economic, environmental and social well-being benefits.

3.4.14 The Strategic Green and Blue Corridors connect core natural and semi-natural greenspace habitat networks, providing opportunities for restoring and re-creating habitats outside of core areas, and provide stepping stones for the dispersal of wildlife between habitats.

1. Afon Lwyd Valley Corridor

3.4.15 This blue corridor includes the Afon Lwyd river, bankside land and wider floodplain, and its wooded tributary valleys. It provides a major strategic GI corridor connecting habitats and communities in Blaenavon, Pontypool and Cwmbrân within Torfaen, and in Newport.

3.4.16 The Afon Lwyd Valley Corridor comprises key GI assets such as freshwater, woodland and grassland habitats, and the Cwmavon Corridor and Tir-Pentwys Local Nature Reserves.

3.4.17 Opportunities include buffering and extending existing habitats and linkages, strategic access route improvements and the provision of accessible natural greenspace to address identified deficiencies.

2. Monmouthshire & Brecon Canal Corridor

- 3.4.18 This blue corridor includes the channel, towpath and verges of the Monmouthshire & Brecon Canal.
- 3.4.19 The Monmouthshire & Brecon Canal Corridor provides a major strategic GI link connecting communities in Cwmbrân and Pontypool to GI in adjoining areas within Monmouthshire and the Brecon Beacons National Park. The Canal is a Conservation Area and provides accessible green space.
- 3.4.20 Opportunities include biodiversity enhancements, heritage restoration and strategic access route improvements.

3. Northern Uplands Corridor

- 3.4.21 This green corridor within Torfaen's northern uplands comprises a network of natural and semi-natural greenspaces including peatland bog, heathland, grassland and freshwater habitats, and provides a major strategic connection to GI in adjoining upland areas within Monmouthshire and the Brecon Beacons National Park.
- 3.4.22 The Northern Uplands Corridor comprises key GI Assets such the Blorenghe Site of Special Scientific Interest (part) and Garn Lakes Local Nature Reserve (both Torfaen CBC land), the Blaenavon Industrial Landscape World Heritage Site (part) and a number of Scheduled Monuments.
- 3.4.23 Opportunities include landscape-scale biodiversity enhancements, heritage site management and strategic access route improvements to strengthen links between the extensive areas of open access land in the northern uplands and Blaenavon Town.

4. Western Uplands Corridor

- 3.4.24 This green corridor within Torfaen's eastern uplands comprises a network of natural and semi-natural greenspaces including peatland bog, heathland, grassland and woodland habitats (Torfaen CBC and Natural Resources Wales are key landowners), and provides a major strategic connection to GI in adjoining upland areas within Blaenau-Gwent and Caerphilly.
- 3.4.25 The Western Uplands Corridor comprises key GI Assets such as the Ty'r Hen Forwyn Site of Special Scientific Interest and Sites of Importance for Nature Conservation.
- 3.4.26 Opportunities include landscape-scale biodiversity enhancements (including buffering and extending existing habitats and linkages) and strategic access route improvements to strengthen links between the extensive areas of open access land in the western uplands and communities in Pontypool and Cwmbrân.

5. Eastern & Southern Lowlands Corridor

- 3.4.27 This green corridor comprises an extensive swathe of enclosed farmland within Torfaen's eastern and southern lowlands, with pockets of semi-natural grassland, woodland and freshwater habitats.
- 3.4.28 The Eastern & Southern Lowlands Corridor comprises key GI Assets such as the Landegfedd Reservoir (part) and Henllys Bog Sites of Special Scientific Interest, numerous Sites of Importance for Nature Conservation and Llantarnam Abbey Historic Park.
- 3.4.29 Opportunities include targeted biodiversity enhancements of farmland landscape features (such as hedgerows, woodlands and grasslands) and strategic access route improvements to strengthen links with communities in Pontypool, Croesyceiliog, Llanyrafon, Ponthir, Cwmbrân and Henllys.

3.4.30 Within and connecting the Strategic Green and Blue Corridors, a network of **Strategic Green Access Links** provide multi-user, predominantly off-road, strategic access routes (or “greenways”) for pedestrians and cyclists, linking and integrating residential and business areas to key services, leisure destinations and urban green spaces across Torfaen’s towns.

3.4.31 The Strategic Green Access Links connect communities in Blaenavon, Pontypool and Cwmbrân to destinations within the Blaenavon Industrial Landscape World Heritage Site and the Brecon Beacons National Park beyond via National Cycle Routes along the Afon Lwyd and Monmouthshire and Brecon Canal. New access connections along some sections of these Links may need to be established and existing access upgraded where appropriate to accommodate cycle use.

3.4.32 The network of Strategic Green Access Links link with public transport services to provide an integrated sustainable movement network for Torfaen that will help reduce reliance on car-use and help reduce carbon emissions.

3.4.33 While the Strategic Green Access Links have the primary function of providing access and recreational route linkages, with appropriate management they also provide ecological corridors for the dispersal of wildlife.

3.4.34 The specific configuration of route alignments for the Strategic Green Access Links should respond to their intended uses and local circumstances.

3.4.35 Set within the Strategic Green and Blue Infrastructure Network, **Urban Green Grids** comprising multifunctional local networks of green and blue infrastructure threading through the built environment, weaving together urban green spaces in areas where people live and work with public transport networks and the wider countryside.

3.4.36 With investment and appropriate management, the Urban Green Grids can deliver a range of well-being benefits for urban communities such as those highlighted in **Box 3.13**.

Box 3.13 – Urban Green Grids GI Benefits

- Reinforcing local identity and enhancing physical character by shaping existing and future urban development.
- Maintaining visual amenity and increasing the attractiveness of a locality to create a sense of pride.
- Raising property values and aiding urban regeneration and neighbourhood renewal.
- Boosting the economic potential of tourism, leisure and cultural activities.
- Providing open spaces for cultural, social and community facilities such as fairs, festivals and concerts.
- Protecting historical, cultural and archaeological heritage.
- Contribution to health and well-being by reducing stress and providing spaces for formal and informal recreation.
- Providing outdoor educational facilities for schools and academic institutions.
- Improving physical and social inclusion particularly for young, disabled and older people.
- Offering walking/cycling networks and safe routes to school.
- Improving air quality and moderating extremes of temperatures.
- Protecting and enhancing biodiversity and ecological habitats.
- Incorporating environmental infrastructure to improve water quality and flood control.

3.4.37 The Urban Green Grids provide urban communities with natural areas for recreation and access to nature, a sense of place, education opportunities and help to contribute to sustainable travel by providing safe active travel routes for walking and cycling, and also contribute to improved health and well-being through exercise and access to urban green spaces.

3.4.38 Street trees, urban woodlands and amenity greenspace help counter the 'heat island effect' of urban areas by providing shade to regulate the micro-climate, and domestic gardens and green roofs/walls provide linkages for wildlife through the built-up areas. These GI Assets also help in managing surface water runoff in urban areas and mitigate flooding and conveyance of pollutants to watercourses.

3.4.39 The Urban Green Grids for Blaenavon, Pontypool and Cwmbrân (incorporating Croesyceiliog/Llanyrafon, Ponthir and Henllys) outlined below are an integral element of Torfaen's Strategic GI Network.

3.4.40 The Urban Green Grids provide spatial frameworks for informing local priorities and opportunities for the improved management and provision of urban GI assets, such as street trees, urban woodlands and urban green spaces. It is intended that the strategic priorities and opportunities for GI highlighted below are further developed at a local level through Place Plans prepared by the relevant Town and Community Councils with the support of Torfaen County Borough Council.

Blaenavon Urban Green Grid

3.4.42 As illustrated on **Figure 3.2a**, a network of Local Green Links connects the Blaenavon Urban Green Grid to accessible green infrastructure sites and green/blue infrastructure corridors in the countryside around the town within the Northern Uplands. The Urban Green Grid includes local footpath and cycle links connecting buildings, streets and neighbourhoods with accessible GI sites and urban green spaces (see **Figure 3.2b**) throughout the built-up area.

3.4.43 The protection and enhancement of biodiversity sites, townscape character and historic environment assets is a strategic priority. Where compatible with heritage considerations, embedding and/or retrofitting of GI features into the built environment (such as green roofs and walls on buildings and sustainable drainage systems) is encouraged as part of the Blaenavon Urban Green Grid.



3.4.44 Strategic priorities and opportunities for strengthening the resilience of Blaenavon's Urban Green Grid are highlighted in **Boxes 3.14** and **3.15**.

Box 3.14 – Strategic GI Priorities for Blaenavon

- Support economic well-being in the uplands (e.g. commoning, livestock grazing, tourism-led diversification)
- Promote wildlife conservation (e.g. heathlands, grasslands, woodlands, freshwater, birds and invertebrates)
- Enhance regulating ecosystem services (e.g. water resources management, renewable energy, pollination)
- Promote community engagement in use of natural spaces (e.g. tackling landscape crime, volunteering, recreation)
- Support heritage conservation (in particular the Blaenavon Industrial Landscape World Heritage Site)
- Deliver strategic access improvements to address missing links in the Rights of Way network




KEY

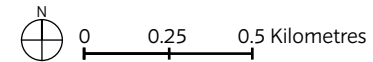
-  Local Green Infrastructure Network
-  Local Blue Infrastructure Network

-  **Accessible Green Infrastructure Sites:**
1. Blorenges (SSSI)
2. Garn Lakes (LNR)

-  **Key Green Infrastructure Corridors:**
1. Cwmavon Corridor LNR

-  **Key Blue Infrastructure Corridors:**
1. Afon Lwyd

-  Woodland and Trees
-  Main Roads
-  Public Right of Way
-  Cycleway



Note: the Urban Green Grid map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.2a
BLAENAVON URBAN GREEN GRID

Box 3.15 – Blaenavon Urban Green Grid GI Improvement Opportunities

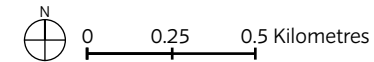
No	GI Improvement Opportunity (see Figure 3.2b)	Contribution to GI Strategy Objectives				
		Climate Change Resilience	Biodiversity Resilience	Tackling Landscape Crime	Promoting Physical Activity	Promoting Training/Volunteering
1	Promote wildlife conservation along the Afon Lwyd through improved management of riparian habitats.	✓	✓✓			✓
2	Support 'Friends of' community groups for Blaenavon Park, Garn Lakes and other local accessible green spaces.	✓	✓	✓✓	✓	✓✓
3	Promote wildlife/heritage conservation, and enhance visitor experience, by management of vegetation in St Peter's Cemetery	✓	✓✓	✓		✓
4	Create a new off-road access link/green corridor between Blaenavon town centre and Big Pit with suitable waymarking.	✓	✓		✓✓	
5	Create a new off-road access link/green corridor between Blaenavon town centre and NCR 492, 46 and 49.	✓	✓		✓✓	
6	Promote community engagement in delivery of relevant aspects of the South East Wales Resilient Uplands Project.	✓	✓	✓✓	✓✓	✓✓



KEY

- Natural and Semi Natural Greenspaces
- Watercourses and Waterbodies
- Woodlands
- Urban Green Spaces:**
- Allotments
- Cemeteries and Churchyards
- Public Parks & Gardens (including play spaces)
- Sports Pitches
- Amenity Greenspaces

- Main Roads
- Public Right of Way
- Cycleway
- 1 GI Opportunities



Note: the Urban Green Grid map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.2b
BLAENAVON URBAN GREEN GRID - OPPORTUNITIES

Pontypool Urban Green Grid

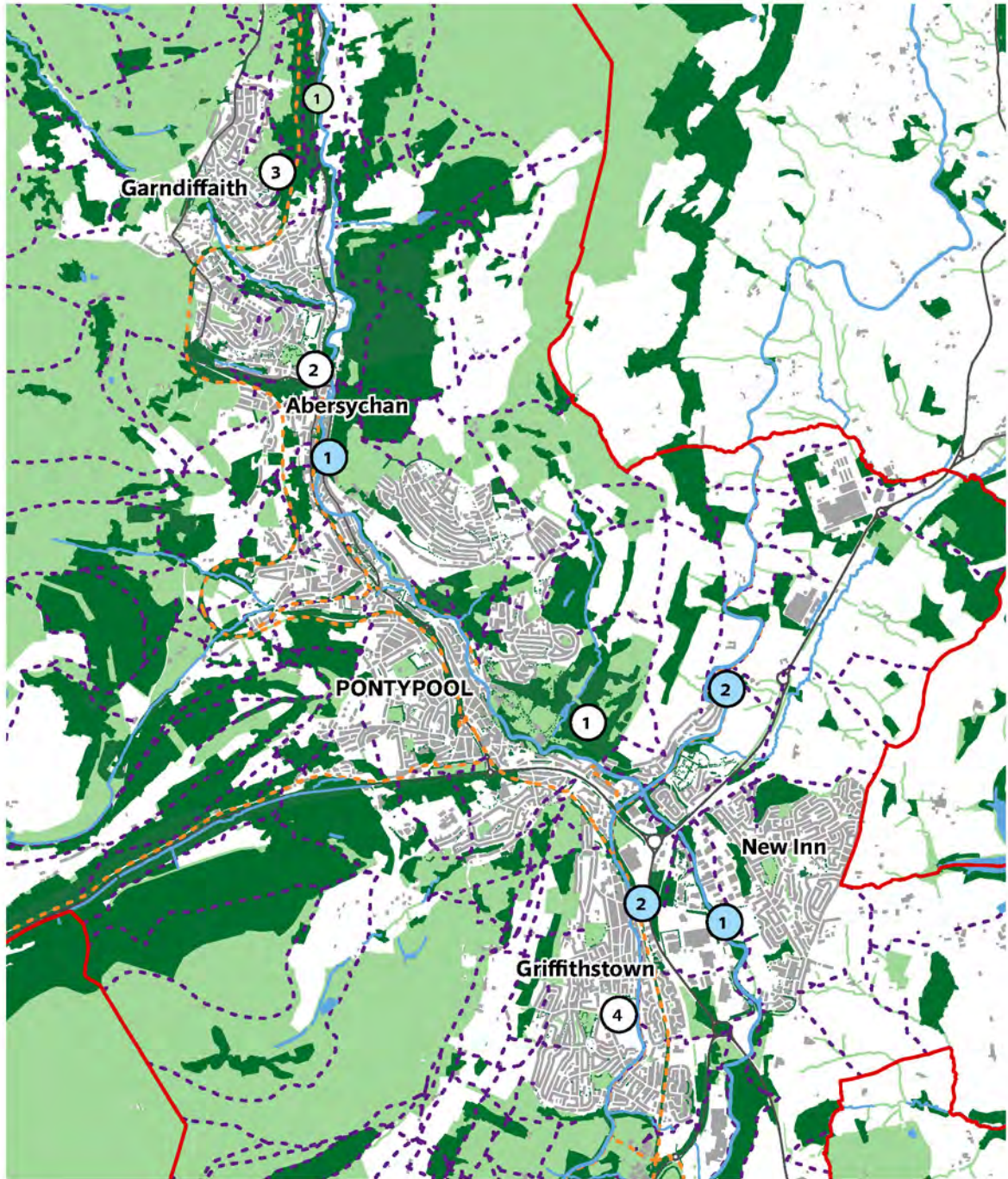
3.4.45 As illustrated on **Figure 3.3a**, a network of Local Green Links connects the Pontypool Urban Green Grid to accessible green infrastructure sites and green/blue infrastructure corridors in the countryside around the town within the Northern and Western Uplands. The Urban Green Grid includes local footpath and cycle links connecting buildings, streets and neighbourhoods with accessible GI sites and urban green spaces (see **Figure 3.3b**) throughout the built-up area, including the Afon Lwyd and Mon & Brec Canal.

3.4.46 The protection and enhancement of biodiversity sites, townscape character and historic environment assets is a strategic priority. Where compatible with heritage considerations, embedding and/or retrofitting of GI features into the built environment (such as green roofs and walls on buildings and sustainable drainage systems) is encouraged as part of the Pontypool Urban Green Grid.



3.4.47 Strategic priorities and opportunities for strengthening the resilience of Pontypool's Urban Green Grid are highlighted in **Boxes 3.16** and **3.17**.

Box 3.16 – Strategic GI Priorities for Pontypool

- Promote wildlife conservation (e.g. heathlands, grasslands, woodlands, freshwater, birds and invertebrates)
- Enhance regulating ecosystem services (e.g. water resources management, renewable energy)
- Promote community engagement in use of natural spaces (e.g. tackling landscape crime, volunteering, recreation)
- Support heritage conservation
- Deliver strategic access improvements to address missing links in the Rights of Way network
- Support tree management and planting in areas of high pollution
- Develop a sustainable approach to maintenance and management of public parks and gardens
- Implement alternative pollinator grassland management regimes for parks, amenity greenspaces and along road verges to promote resilient ecological networks








KEY

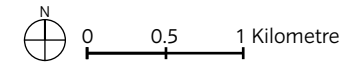
-  Local Green Infrastructure Network
-  Local Blue Infrastructure Network

-  **Accessible Green Infrastructure Sites:**
 1. Pontypool Park
 2. Abersychan Park
 3. Garndiffaith Recreation Ground
 4. Panteg Park

-  **Key Green Infrastructure Corridors:**
 1. Cwmavon Corridor LNR

-  **Key Blue Infrastructure Corridors:**
 1. Afon Lwyd
 2. Monmouthshire and Brecon Canal

-  Woodland and Trees
-  Main Roads
-  Public Right of Way
-  Cycleway

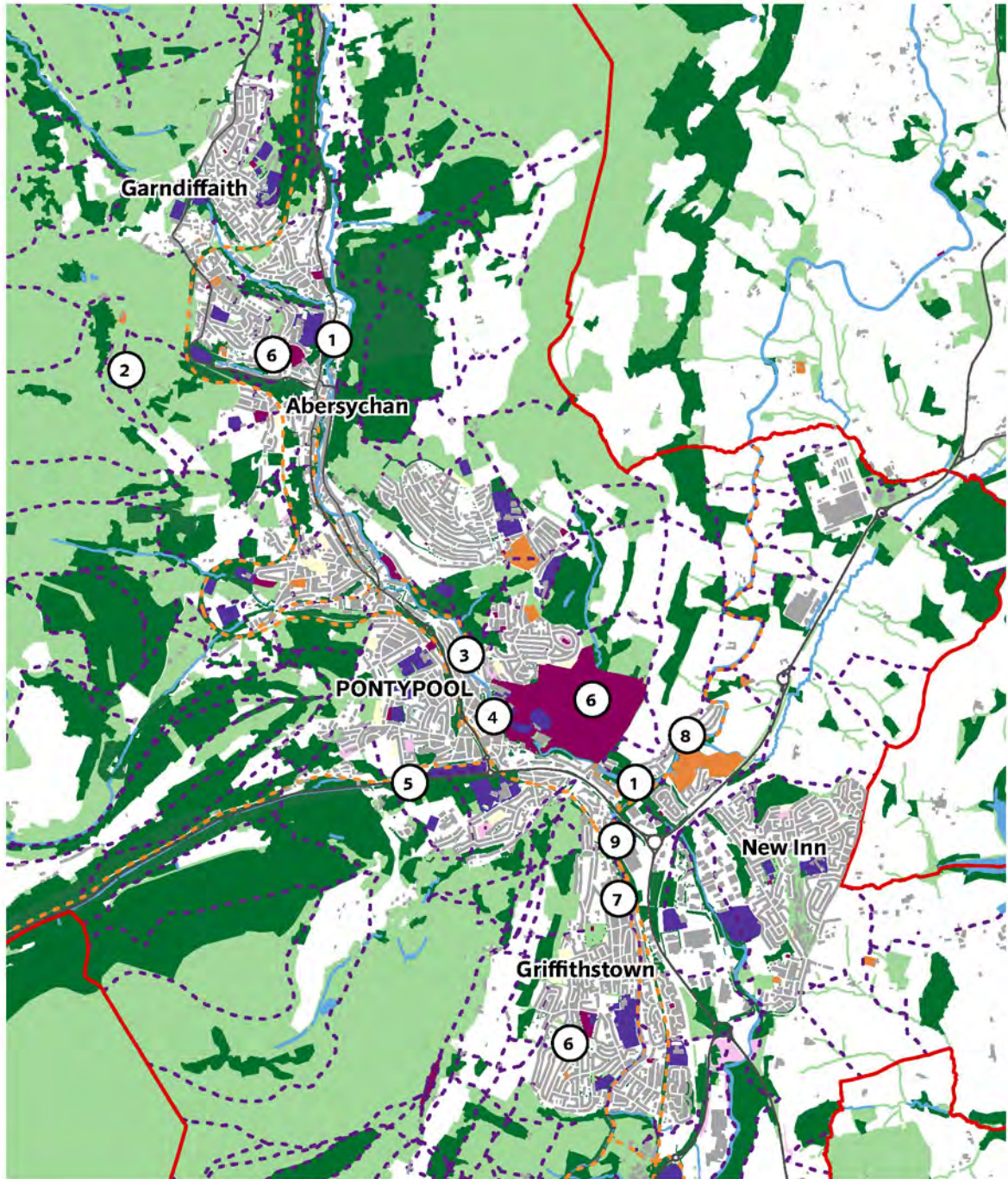


Note: the Urban Green Grid map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.3a
PONTYPOOL URBAN GREEN GRID

Box 3.17 – Pontypool Urban Green Grid GI Improvement Opportunities

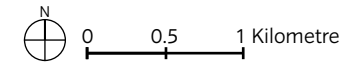
No	GI Improvement Opportunity (see Figure 3.3b)	Contribution to GI Strategy Objectives				
		Climate Change Resilience	Biodiversity Resilience	Tackling Landscape Crime	Promoting Physical Activity	Promoting Training/Volunteering
1	Promote wildlife conservation along the Afon Lwyd through improved management of riparian habitats.	✓	✓✓			✓
2	Promote community engagement in management/use of green space as part of 'The British' site masterplan.	✓	✓	✓✓	✓✓	✓✓
3	Create a new riverside walkway on the town side of the Afon Lwyd through the Pontypool Conservation Area.	✓		✓	✓✓	
4	Plant new street trees in strategic locations to enhance the special character and appearance of the Pontypool Conservation Area.	✓✓	✓✓			
5	Promote tree/grassland management and planting along A472 Crumlin-Pontypool road to reduce pollution/benefit pollinators.	✓✓	✓✓			
6	Support 'Friends of' community groups for Pontypool Park, Panteg Park and local accessible green spaces in Abersychan.	✓	✓	✓✓	✓	✓✓
7	Promote improved maintenance of the Mon & Brec Canal towpath, upgraded waymarking and replacement interpretation.	✓		✓	✓✓	✓
8	Support maintenance/removal of invasive tree, scrub and hedge growth along the Mon & Brec Canal.	✓	✓✓		✓	✓
9	Tackle vandalism and fly tipping at hotspots along the Mon & Brec Canal.			✓✓	✓	✓



KEY

- Natural and Semi Natural Greenspaces
- Watercourses and Waterbodies
- Woodlands
- Urban Green Spaces:**
- Allotments
- Cemeteries and Churchyards
- Public Parks & Gardens (including play spaces)
- Sports Pitches
- Amenity Greenspaces

- Main Roads
- Public Right of Way
- Cycleway
- 1 GI Opportunities



Note: the Urban Green Grid map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.3b
PONTYPOOL URBAN GREEN GRID - OPPORTUNITIES

Cwmbrân Urban Green Grid

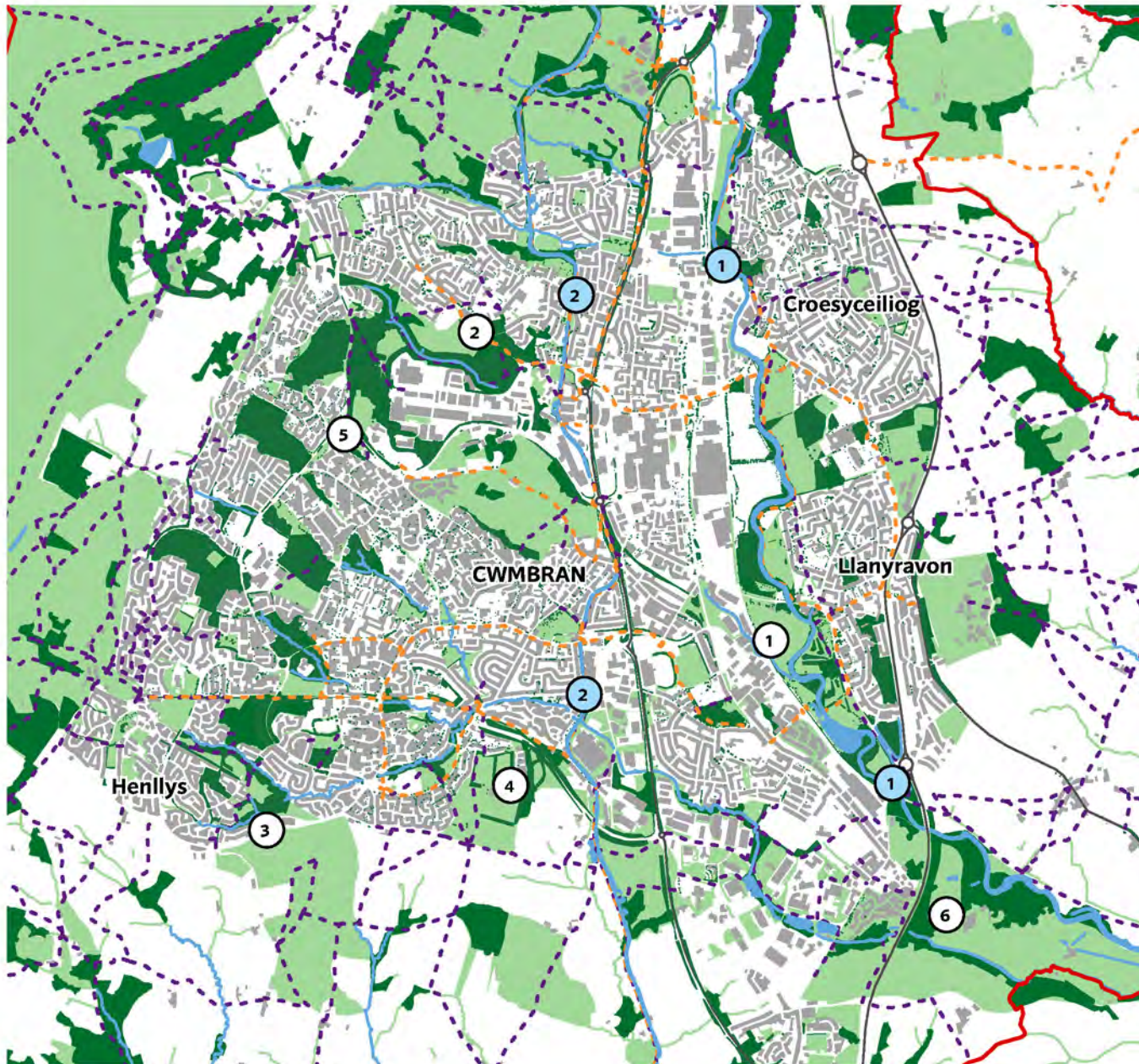
3.4.48 As illustrated on **Figure 3.4a**, a network of Local Green Links connects the Cwmbrân Urban Green Grid to accessible green infrastructure sites and green/blue infrastructure corridors in the countryside around the settlements within the Western Uplands and the Eastern & Southern Lowlands. The Urban Green Grid includes local footpath and cycle links connecting buildings, streets and neighbourhoods with accessible GI sites and urban green spaces (see **Figure 3.4b**) throughout the built-up areas, including the Afon Lwyd and Mon & Brec Canal.

3.4.49 The protection and enhancement of biodiversity sites, townscape character and historic environment assets is a strategic priority. Where compatible with heritage considerations, embedding and/or retrofitting of GI features into the built environment (such as green roofs and walls on buildings and sustainable drainage systems) is encouraged as part of the Cwmbrân Urban Green Grid.

3.4.50 Strategic priorities and opportunities for strengthening the resilience of Cwmbrân's Urban Green Grid are highlighted in **Boxes 3.18** and **3.19**.

Box 3.18 – Strategic GI Priorities for Cwmbrân

- Promote wildlife conservation (e.g. heathlands, grasslands, woodlands, freshwater, birds and invertebrates)
- Enhance regulating ecosystem services (e.g. water resources management, renewable energy, pollination)
- Promote community engagement in use of natural spaces (e.g. tackling landscape crime, volunteering, recreation)
- Deliver strategic access improvements to address missing links in the Rights of Way network
- Support tree management and planting in areas of high pollution within residential areas
- Develop a sustainable approach to maintenance and management of public parks and gardens
- Implement alternative pollinator grassland management regimes for parks, amenity greenspaces and along road verges to promote resilient ecological networks



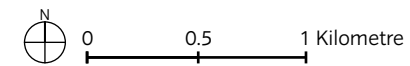
KEY

- Local Green Infrastructure Network
- Local Blue Infrastructure Network

- 1 **Accessible Green Infrastructure Sites:**
 1. Cwmbran Boating Lake Park
 2. Churchwood and Springvale Ponds LNR
 3. Henllys Open Space LNR
 4. Llwyncelyn LNR
 5. Greenmeadow Community Farm
 6. Llantarnam Abbey

- 1 **Key Blue Infrastructure Corridors**
 1. Afon Lwyd
 2. Monmouthshire and Brecon Canal

- Woodland and Trees
- Main Roads
- Public Right of Way
- Cycleway



Note: the Urban Green Grid map is illustrative only. It is intended to represent a high level spatial framework for the strategic planning and management of Green and Blue Infrastructure Assets at the local level. The map is based on current available data.

FIGURE 3.4a
CWMBRÂN URBAN GREEN GRID

Box 3.19 – Cwmbrân Urban Green Grid GI Improvement Opportunities

No	GI Improvement Opportunity (see Figure 3.4b)	Contribution to GI Strategy Objectives				
		Climate Change Resilience	Biodiversity Resilience	Tackling Landscape Crime	Promoting Physical Activity	Promoting Training/Volunteering
1	Promote wildlife conservation along the Afon Lwyd through improved management of riparian habitats.	√	√√			√
2	Promote community engagement in management/use of green space as part of Llanfrechfa Grange Hospital site masterplan.	√	√	√√	√√	√√
3	Promote improved maintenance of the Mon & Brec Canal towpath, upgraded waymarking and replacement interpretation.	√		√	√√	√
4	Support maintenance/removal of invasive tree, scrub and hedge growth along the Mon & Brec Canal.	√	√√		√	√
5	Tackle vandalism and fly tipping at hotspots along the Mon & Brec Canal.			√√	√	√
6	Support 'Friends of' community groups for Cwmbran Park, Cwmbran Boating Lake and Henllys LNR.	√	√	√√	√	√√
7	Promote enhanced provision of allotments/community growing spaces in Ponthir.	√	√		√√	√√
8	Promote tree/grassland management and planting within residential areas to reduce pollution and benefit pollinators.	√√	√√			√



FIGURE 3.4b
 CWMBRÂN URBAN GREEN GRID - OPPORTUNITIES

4.0 HOW WE WILL GET THERE

4.1 Turning Aspirations into Actions

4.1.1 This Green Infrastructure Strategy outlines a bold vision for developing a functional, connected network of natural areas that will help support the current and future well-being needs of local populations in Torfaen.

4.1.2 To achieve our biggest ambitions, our natural areas need to be managed collectively as one of Torfaen's most important assets. This Green Infrastructure Strategy provides the strategic or "big picture" framework for coordinating GI delivery action by partnerships working at both regional and local levels.

4.1.3 Working together through a shared commitment to implementation of this Green Infrastructure Strategy, we can, with strong leadership, turn our aspirational vision into positive actions that can deliver the outcomes highlighted in **Box 4.1**.

Box 4.1 – GI Strategy Outcomes

- **New perceptions** – visible improvement in the quality, accessibility and connectivity of Torfaen's natural areas.
- **Empowered communities** – greater participation in green space ownership/management, and adoption of more sustainable and healthier lifestyles.
- **A more resilient Torfaen** – contributing regionally to climate change adaptation and biodiversity conservation.

4.1.4 Through this Green Infrastructure Strategy, we will:

- Work collaboratively in partnership with land managers, owners and service providers, and with Community Councils, towards the shared vision for GI.
- Commit to following the common set of principles, priorities and opportunities for strengthening the resilience and connectivity of Torfaen's GI network.
- Combine resources in a planned approach to GI projects and investment.
- Identify opportunities to manage our natural assets more sustainably for the long-term.

4.1.5 Although having individual operational objectives, the PSB partners all share a common aim – to manage natural resources to improve the well-being of Torfaen's communities. The adopted Strategy supports this aim by helping all partners work towards aligning their future ways of working with the new GI approach.

4.2 Green Infrastructure Delivery Framework

GI Delivery Partnerships

4.2.1 There are great benefits to be gained from adopting a collaborative and multi-disciplinary approach to GI planning and delivery. The existing regional and local level partnerships through which the Green Infrastructure Strategy's objectives for the management of natural resources in Torfaen will primarily be delivered are highlighted on **Figure 4.1**.

4.2.2 At the regional level, the GI approach to natural resources management is being championed by the **Gwent Green Grid Partnership** (see **Figure 4.2**). The Partnership provides a mechanism for coordinating action in line with Natural Resources Wales' sustainable management of natural resources principles and the regional priorities highlighted by the emerging South East Wales Area Statement.

4.2.3 The Gwent Green Grid Partnership brings together existing partnerships/projects to achieve greater strategic and local impact by providing a framework for connecting other initiatives and strategies; pooling funding; sharing resources and learning around ecosystem resilience, healthy living and climate adaptation; making landscape-scale biodiversity enhancements; and involving partners on a wider footprint.

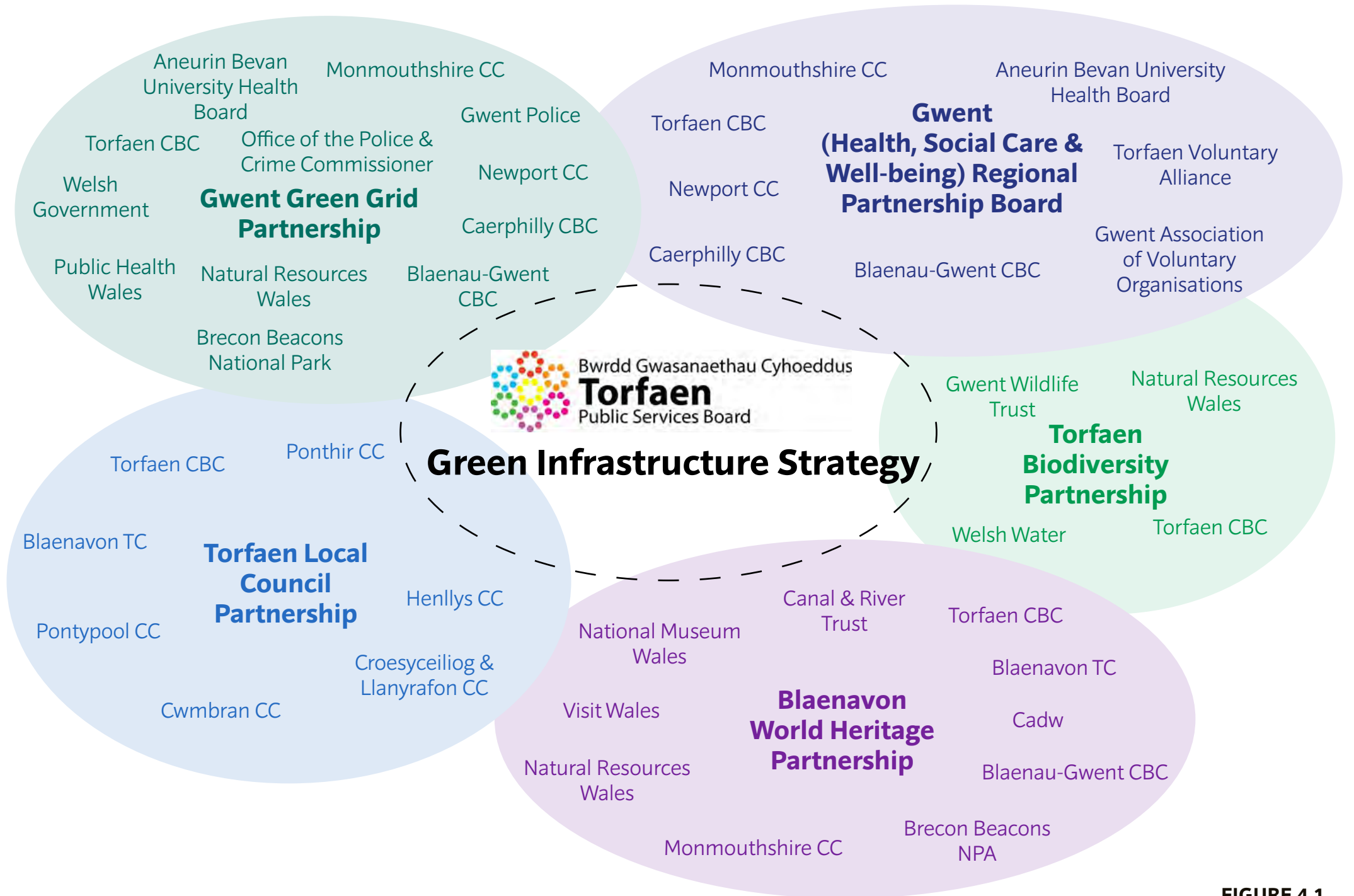
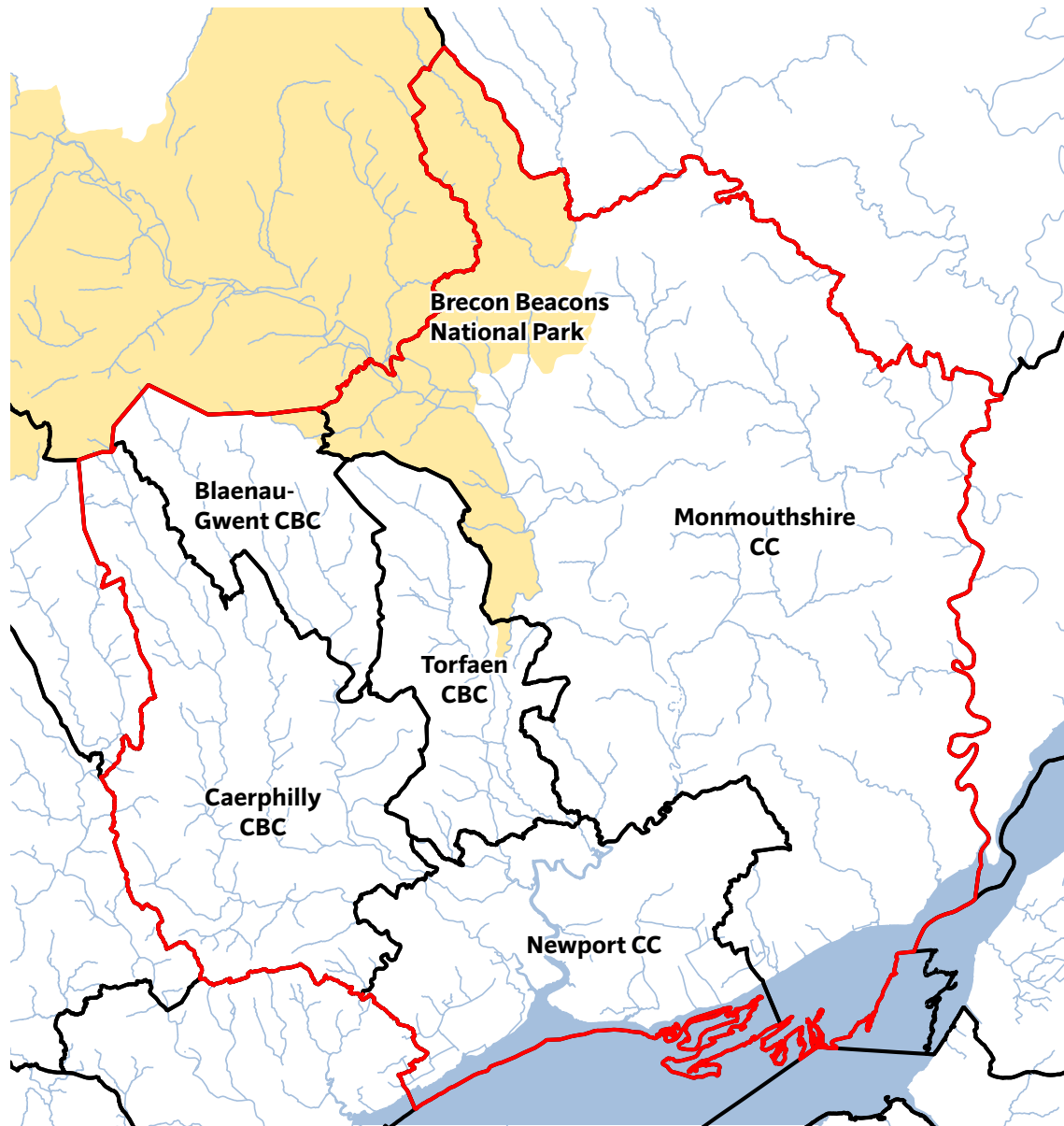


FIGURE 4.1
GREEN INFRASTRUCTURE DELIVERY PARTNERSHIPS



KEY



Gwent Green Grid Partnership



0 5 10 Kilometres

FIGURE 4.2
GWENT GREEN GRID

4.2.4 The Gwent Green Grid Partnership has secured funding from the Welsh Government's Enabling Natural Resources and Well-being Grant²² towards a three year project to develop the Gwent Green Grid Partnership Project. It aims to develop a more consistent approach to GI management across Gwent that enables strategic planning including influencing Local Development Plans, ecosystem service assessment and planning, eco-connectivity and mechanisms that create healthier citizens, stimulates business opportunities and increases community cohesion, skills development and volunteering. The following work programmes are included in the Gwent Green Grid Partnership Project:

- Gwent Green Grid Policy and Partnerships
- Gwent Strategic Access Plan
- Gwent i-Tree Eco Study
- Gwent Green Infrastructure Improvements
- Pollinator Friendly Gwent

4.2.5 The **Gwent Regional Partnership Board** brings together a range of partners working to promote health, social care and well-being across South East Wales. The Board provides an opportunity to promote the benefits of GI for healthy living in Torfaen highlighted by this Green Infrastructure Strategy.

4.2.6 At the local level, there are opportunities for the GI Strategy to shape the approach to management of natural resources in Place Plans prepared by the **Torfaen Local Council Partnership**, and to inform and support the **Blaenavon World Heritage Partnership** in managing the Blaenavon Industrial Landscape World Heritage Site. Additionally, the GI Strategy can help support the **Torfaen Biodiversity Partnership** with implementation of the Torfaen Local Biodiversity Action Plan.

²²The ENRaW Grant supports collaborative projects that address: (i) developing, regenerating and broadening access to sustainable GI; (ii) improving the quality of the urban and rural built environment; and (iii) developing resilient ecological networks, areas and nature based solutions.

GI Delivery Plans

- 4.2.7 The Strategy's objectives will be primarily delivered through implementation of the regional and local level delivery plans highlighted on **Figure 4.3**, which respond to the requirements of legislation and national policy for natural resources management and well-being.
- 4.2.8 Regional level, cross-boundary, plans for delivery of GI in Torfaen are outlined in **Boxes 4.2** and **4.3**.

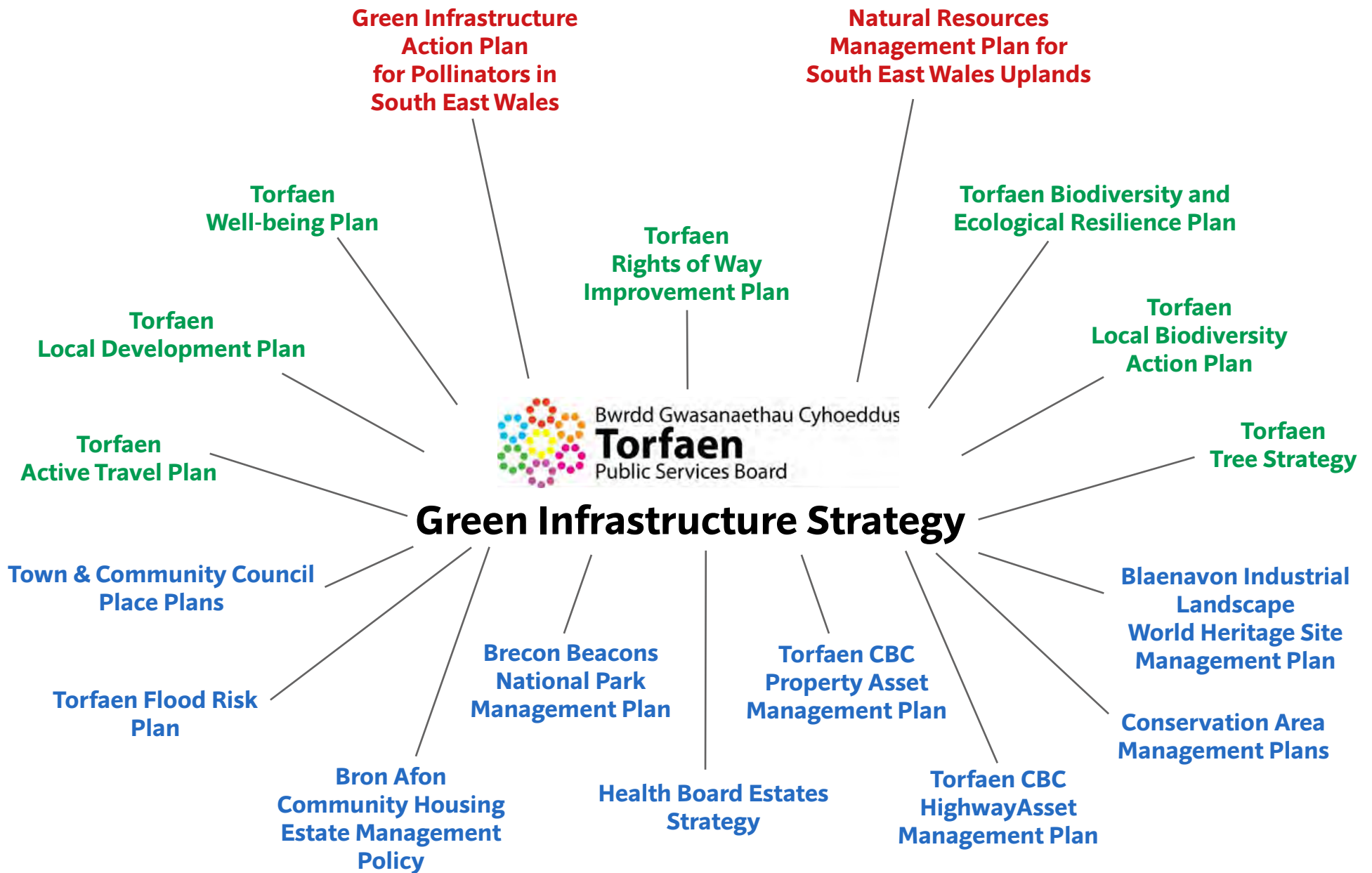


FIGURE 4.3
GREEN INFRASTRUCTURE DELIVERY PLANS

Box 4.2 – Green Infrastructure Action Plan for Pollinators in South East Wales

Published in 2015, the Action Plan seeks to raise awareness of the importance of pollinators for health and wellbeing across the four local authority areas of Torfaen, Monmouthshire, Blaenau Gwent and Caerphilly in South East Wales.

It seeks to address the decline of pollinators by providing a series of green infrastructure action plans and a management actions toolkit for improving habitats for pollinating species on publicly owned areas of green infrastructure. As major land owners, local authorities and other public bodies can lead by example by improving the management of green infrastructure such as parks, roadsides, school grounds, playing fields, woodlands and urban trees for the benefit of pollinators.

Supported by a series of guidebooks, the Action Plan provides a tool for guiding decision-making by site managers on selecting appropriate management actions and for prioritising resource allocation:

- Managing Green Spaces for Pollinators – an introduction for managers
- Managing Highway Verges for Pollinators – an introduction for highway managers
- Managing Residential Areas for Pollinators – an introduction for estates managers
- Managing School Grounds for Pollinators – an introduction for head teachers

Box 4.3 – Natural Resources Management Plan for South East Wales Uplands

Published in 2015, the Natural Resources Management Plan is based on an ecosystems approach to the management of the uplands commons of South East Wales (encompassing parts of Torfaen, Blaenau Gwent, Caerphilly, Merthyr Tydfil, Monmouthshire and the Brecon Beacons National Park).

The Plan identifies and informs the delivery of a portfolio of projects intended to restore important areas of upland habitat to favourable condition; enhance biodiversity; improve opportunities for sustainable grazing; identify innovative additional commercial uses including land-based products; support tourism development; and assist with climate change resilience by storing water and capturing carbon.

Key opportunities for enhancing the sustainable management of natural resources in the uplands identified by the Plan are:

- Heathland management and restoration
- Retention of water in the uplands
- Encouraging cattle grazing
- Encouraging the continuation of commoning
- Addressing landscape crime*
- Use for renewable energy
- Encouraging recreation and tourism
- Community engagement

*the Plan includes a Landscape Crime Toolkit

4.2.9 In addition to the Torfaen Well-being Plan 2018-2023 (see **Section 1.1** for information), other local level plans for delivery of GI in Torfaen are outlined in **Boxes 4.4 – 4.9**.

Box 4.4 – Torfaen Biodiversity & Ecosystem Resilience Plan

Published in 2019, the Plan sets out how the Council will comply with its duty under Section 6 of the Environment (Wales) Act 2016 to maintain and enhance biodiversity and promote the resilience of ecosystems. The Plan includes a range of actions including for example:

- Developing a tree strategy
- Enhancing blue/green infrastructure corridors
- Being an exemplar of land/water management
- Improving rights of way information, signs & maintenance
- Creating wildflower zones in green spaces for pollinators
- Promoting best practice for planning decisions
- Developing a design & construction toolkit
- Developing and monitoring waste reduction targets
- Improving energy efficiency of buildings/vehicles

To ensure it becomes an integral part of decisions and actions, the Council will incorporate the Biodiversity & Ecosystem Resilience Plan into its Corporate Plan.

Box 4.5 – Torfaen Local Biodiversity Action Plan

Published in 2003, the Torfaen Local Biodiversity Action Plan details measures to be taken to ensure the county borough retains and enhances its rich and varied biodiversity.

Facilitated by the Torfaen Biodiversity Partnership, the Plan includes separate action plans for over 20 key habitats and a wide range of species in need of urgent conservation action.

These range from iconic species such as lapwing, red grouse and otter to more the obscure dyers greenweed, pink meadow cap and the long winged conehead.

The Torfaen Biodiversity Partnership is in the process of producing a new action plan to ensure it remains fit for purpose with regards to sustainable development, ecosystem services and natural resource management objectives.

A number of pre-consultation workshops were held across the county borough in 2013 and an updated draft Biodiversity Action Plan has been consulted on.

Box 4.6 – Torfaen Tree Strategy

The Council is currently preparing a Tree Strategy for the management of trees, woodlands and hedgerows in Torfaen.

Traditionally the management of trees has been viewed as a cost to the Council and the community it serves through issues such as subsidence and health and safety claims.

While benefits of trees have for many years been appreciated, a fresh strategic approach to tree management is required to help embrace and maximise the free ecosystem services trees provide for our communities, places and heritage, and to place it within the goals and objectives of the Well-being of Future Generations (Wales) Act 2015.

The new Tree Strategy will also help the Council meet its statutory biodiversity obligations under Section 6 of the Environment (Wales) Act 2016, and to comply with Planning Policy Wales by setting out how urban tree planning policies contained within the Core Strategy will be delivered.

Box 4.7 – Torfaen Rights of Way Improvement Plan

The current Rights of Way Improvement Plan for Torfaen was published in 2008 as required by Section 60 of the Countryside & Rights of Way Act (2000).

The Plan assesses the extent to which the local rights of way network in Torfaen meets the present and likely future needs of the public; identifies the opportunities provided by local rights of way for exercise and other forms of open air recreation and enjoyment of the area; and considers the accessibility of local rights of way to blind or partially sighted persons and others with mobility problems.

The public Rights of Way network is managed by the Council's Access Team with assistance from volunteers, community groups and the Ramblers Association to keep routes open and maintain fences, stiles and gates.

Box 4.8 – Torfaen Active Travel Plan

The Active Travel (Wales) Act 2013 places a legal requirement on local authorities in Wales to map, plan, improve and promote routes deemed suitable for active travel.

Active travel means walking and cycling for everyday short-distance journeys, such as journeys to school, work, or for access to shops or services. Active travel does not include journeys purely made for recreation or social reasons.

To meet the requirements of the Act, Torfaen CBC has published an Existing Routes Map that shows routes which meet the standards set out in Welsh Government Design Guidance. The Existing Routes Map will help people who wish to plan their walking and cycling journeys.

Torfaen CBC is also required by the Act to produce an Integrated Network Map setting out a 15 year programme of improvements to active travel routes. The maps show proposed future networks of key walking routes and key cycling routes and facilities.

Box 4.9 – Torfaen Local Development Plan

In accordance with the Planning and Compulsory Purchase Act (2004), Torfaen County Borough Council adopted its first Local Development Plan (LDP) in December 2013.

The adopted LDP guides the development and use of land in the County Borough until 2021.

The LDP recognises the important role that green infrastructure plays in promoting sustainable development (Policy S2); mitigating and adapting to climate change (Policy S3); conservation of the natural and historic environment (Policy S7); contributing to the amenity and design of new development (Policy BW1); supporting strategic action area policies (e.g. Policy SAA5 for the British at Talywain, near Pontypool); safeguarding former transport routes (Policy T2); and improvements to walking and cycling routes (Policy T3).

The Council is currently preparing a full revision of the Plan, and anticipates adopting a replacement LDP in 2021 for the period up to 2033.

4.2.10 Place or asset specific plans for delivery of GI in Torfaen are outlined in **Boxes 4.10 – 4.18**.

Box 4.10 – Town & Community Place Plans

Place Plans²³ provide an opportunity for communities to engage in the plan-making process at a local level, with LPAs supporting place-making initiatives in local communities. They are non-statutory plans that add fine grain detail to a LDP.

Place Plans can be produced by Town and/or Community Councils, or the LPA in conjunction with local communities. Place Plans should be in conformity with the statutory development plan and adopted by the LPA as SPG to the plan.

The content of a Place Plan will depend on what is included in the LDP, the nature of the area, the issues it is seeking to address and community aspirations. This could be expressed through a strategy that addresses issues such as the management of local green spaces.

Planning Aid Wales has published guidance which provides a key reference point on the use and preparation of Place Plans²⁴. The Mold Town Plan 2017-2020²⁵ provides a useful good practice model for a Place Plan.

Box 4.11 – Torfaen Flood Risk Management Plan

Published in 2015, the Torfaen Flood Risk Management Plan (FRMP) sets out how Torfaen County Borough Council will manage flooding so that the communities most at risk and the environment benefit the most. The FRMP takes forward the objectives of the Council's Flood Risk Management Strategy.

This FRMP sets out objectives for the management of flood risk that focus on reducing the adverse consequences of flooding for human health, the environment, cultural heritage and economic activity.

It highlights areas most at risk from surface water flooding and ordinary watercourses in Torfaen, and sets out measures the Council will take over the next 6 years to mitigate these risks and make local communities more resilient.

This includes measures for incorporating source point controls and green infrastructure into the design of sustainable drainage schemes for new development through the development management process (in line with LDP Policy S3, Planning Policy Wales and Technical Advice Notes 12 and 15).

²³ Development Plans Manual, Edition 3, Consultation Draft, June 2019, Welsh Government

²⁴ www.placeplans.org.uk/

²⁵ www.moldtowncouncil.org.uk/

Box 4.12 – Bron Afon Community Housing Estate Management Policy

Bron Afon Community Housing is responsible for a large and diverse portfolio of land and other assets. The Housing Estate Management Policy²⁶ explains how Bron Afon will undertake environmental improvement works to enhance the appearance of green spaces around tenants/residents' homes.

It also describes how communities can take custodianship of land for uses compatible with Bron Afon's Green Futures Principles:

- **Climate change and biodiversity:** we will seek to create and maximize spaces that will deliver biodiversity across our land portfolio, to encourage wildlife and sustainable planting.
- **Growing local food:** all communities should have the opportunity to be involved in growing food. We should try to ensure that tenants and residents who live in flats and homes without gardens can access places for growing food.
- **Leisure and health:** where possible we will try to encourage the use of our land and spaces for community events and activities.

Box 4.13 – Health Board Estates Strategy

The draft Strategy²⁷ sets out how the Aneurin Bevan University Health Board's estate will be developed to support service delivery that is needed to meet the needs of patients.

Developed in the context of the Health Board's Clinical Futures Strategy, among other things it aims to deliver a refreshed clinical model for improved health and social care across South East Wales by focusing on well-being and prevention services.

A key principle of the Strategy is that the future estate should be sustainable in accordance with the Well Being of Future Generations (Wales) Act 2015.

The draft Strategy provides an opportunity to adopt the green infrastructure approach to managing green spaces in the Health Board's estate, and strengthening links to local walking and cycling networks, to provide well-being benefits for the physical and mental health of both patients, staff and visitors.

²⁶ Bron Afon Estate Management Policy, 2015, Bron Afon Community Housing Board

²⁷ Health Board Estates Strategy 2018-2028, Draft, Aneurin Bevan University Health Board

Box 4.14 – Torfaen CBC Property Asset Management Plan

The Plan sets out the approach to management of property (buildings and land) owned by Torfaen County Borough Council. This includes delivery of Streetscene maintenance and cleansing operations for green spaces and other land owned by the Council within the following areas:

- Area 1 Wards (Blaenavon, Abersychan, Snatchwood, Pontnewynydd)
- Area 2 Wards (Trevethin, Wainfelin, Pontypool, St Cadocs & Penygarn, New Inn, Panteg, Cwmyrnyscoy, Brynwern)
- Area 3 Wards (Upper Cwmbran, Greenmeadow, Coed Eva, Fairwater, Pontnewydd)
- Area 4 & 5 Wards (Two Locks, St. Dials, Llantarnam, Llanyrafon East & Ponthir, Llanyrafon West, Croesyceiliog North, Croesyceiliog South)

Box 4.15 – Torfaen CBC Highway Asset Management Plan 2019-2025

The Plan sets out the Council's policy for the creation, acquisition, operation, maintenance, rehabilitation and disposal of all assets that are included within the publically adopted highway network in the County Borough.

It also provides the Council's strategy for the management, operation, preservation and enhancement of highway assets (including grassed verges, trees/shrubs and hedges) to meet current and future needs.

Box 4.16 – Blaenavon Industrial Landscape World Heritage Site Management Plan 2018-2023

The southern part of the Blaenavon Industrial Landscape World Heritage Site lies within the County Borough of Torfaen and includes the town of Blaenavon.

The updated Management Plan identifies an overall vision, key principles and thematic objectives for the management of the World Heritage Site. These are supported by a suite of thematic policies for the protection, conservation, presentation and transmission of the Site's Outstanding Universal Value.

Specific actions for projects and activities to be explored and delivered by all partners over the plan period are identified, together with likely phasing and possible sources of funding.

A key aim of the Plan is to safeguard and manage the Blaenavon Industrial Landscape to protect and conserve its Outstanding Universal Value, and improve the future economic, social, environmental and cultural well-being and sustainability of the area. In pursuing this aim, a key principle of the Plan is to maintain and enhance the Site's natural resources and ecosystem services for the benefit of future generations by contributing to Biodiversity and Ecosystem Resilience in line with the duty on public bodies under Section 6 of the Environment (Wales) Act 2016.

Box 4.17 – Brecon Beacons National Park Management Plan 2015-2020

In accordance with Section 66(1) of the Environment Act 1995, the Brecon Beacons National Park Authority published an updated Management Plan for the National Park in 2015.

The Management Plan sets the framework for various strategies and action plans to be taken forward, guided by the Management Plan vision, aims and objectives to ensure a consistent approach to protecting and enhancing the special qualities of the National Park.

The Brecon Beacons National Park abuts the north-eastern boundary of Torfaen, and a small part of the Park extends into the County Borough east of Pontypool.

Box 4.18 – Conservation Area Management Plans

The Council has designated six Conservation Areas in Torfaen of special architectural or historic interest - Blaenavon Town Centre, Pontypool Town Centre, Llantarnam, Upper Cwmbran, Cwmavon and the Monmouthshire & Brecon Canal.

Management Plans have been prepared for the Blaenavon Town Centre, Cwmavon, Pontypool Town Centre and Monmouthshire & Brecon Canal Conservation Areas. These Plans include proposals for protecting and enhancing GI Assets, such as street trees and open spaces, which contribute to the special character and appearance of the Conservation Areas.

4.3 Priorities for Action

4.3.1 The priorities for actions set out below aim to support the PSB partners in adopting the new GI approach in a phased way over 10 years or so:

- Exploring joint approaches to achieving the Green Infrastructure Strategy's aims in the short-term (**next 5 years**).
- Realising opportunities to scale-up delivery of improvements in the medium-term (**5-10 years**).
- Transforming how they work together, and with private and third sector landowners and local communities, to secure the long-term sustainable management of natural resources and greenspaces for future generations in Torfaen (**over 10 years and beyond**).

4.3.2 Our action plan themes include:

- 1. Strengthening the GI evidence base and guidance
- 2. Integrating the GI approach into policy
- 3. Exemplifying the GI approach in the uplands
- 4. Working with private and third sector landowners
- 5. Supporting GI community ownership/management
- 6. Raising awareness and involvement in GI delivery
- 7. Strengthening resilience of the Urban Green Grids

1. Strengthening the GI Evidence Base and Guidance

4.3.3 In the short-term over the first 5 years, we will strengthen the GI evidence base to support the sharing of up-to-date data, information and best practice guidance between PSB partners. Priorities for action include:

- When the **SE Wales Area Statement** being prepared by Natural Resources Wales becomes available, we should make sure this evidence feeds into future updates of the GI Assessment (Action 1a).
- More information is needed on the quality of our ecological resource. An updated **Phase 1 Habitat Survey** is needed to provide a baseline audit on the extent and condition of natural and semi-natural green spaces in Torfaen in order to monitor ecological condition and changes (Action 1b).

- We need to do more to review, map and communicate the value of **Sites of Importance for Nature Conservation** in Torfaen. These features are key linear and stepping stone habitats that support landscape-scale ecological connectivity (Action 1c).
- Up-to-date information is needed about our urban open spaces. An updated **Open Space Study** for Torfaen's towns will provide robust evidence about the quality/condition of our open spaces, identify deficits in provision and set standards for future provision to meet current and future needs. This is currently in progress by Torfaen County Borough Council who are consulting local people, town and community councils, schools and sports clubs on current and future outdoor recreation needs - such as spaces for play, sport and recreation, allotments, amenity areas and natural green space (Action 1d).
- Within the "top down approach" to setting strategic priorities for management of our GI Network outlined in this GI Strategy, we should develop a GI Assessment Toolkit to provide a consistent "bottom up approach" and methodology for assessing and prioritising land use, management and investment decisions for specific sites within Torfaen's Strategic GI Network (including the Urban Green Grids). The Toolkit would provide guidance to help inform the setting of GI priorities for reviewing LDP candidate development sites; site planning for Strategic Development Sites allocated in the LDP; development management pre-application consultation and decision-making; deciding on management prescriptions/regimes for specific GI Assets; and making decisions for disposal of surplus land owned by the Council (Action 1e).

- Building on the new information available around Torfaen's urban tree resources, a **Tree Strategy** is needed to help inform the conservation of woodlands and street trees in the future. Urban street trees can make a significant contribution to climate change mitigation (Action 1f).
- Aneurin Bevan University Health Board will work with the Gwent Regional Partnership Board to provide an **enhanced evidence base for health and well-being benefits of GI** from use of green spaces and corridors for outdoor physical activity (Action 1g).

2. Integrating the GI Approach into Policy

- 4.3.4 Ensuring our natural assets are well managed and in good condition by enhancing diversity, adaptability, extent, condition and connectivity between natural sites - whilst minimising the risks from external factors such as pollution, development, climate change, anti-social behaviour - means will mean that future generations will be able to benefit from their well-being benefits.
- 4.3.5 The new GI approach offers considerable opportunities for maximising the well-being benefits of sustainably managed greenspaces and natural resources, challenging the Public Services Board's partners (see **Figure 4.1**) to think differently about how they deliver public services in the future.

4.3.6 In the medium-term over 5-10 years, all the PSB partners will aim to **align with the GI Strategy** by reviewing their relevant internal corporate plans and policies, operational management plans and maintenance procedures, and re-purpose resources, for managing GI assets within their ownership to align with the shared vision, objectives and priorities set out in this Green Infrastructure Strategy (Action 2a).

3. Exemplifying the GI Approach in the Uplands

4.3.7 In the medium-term over 5-10 years, we will exemplify the new GI approach to the management of natural resources in the uplands of Torfaen through implementation of the Natural Resources Management Plan for South East Wales Uplands and the Blaenavon Industrial Landscape World Heritage Site Management Plan. This will focus on the following priorities for action:

- Supporting economic land management for conserving the commons
- Promoting ecological land management and wildlife conservation
- Enhancing ecosystem services
- Encouraging community engagement in the sustainable use and management of the commons

4.3.8 We will do this through our involvement with regional partners in the **delivery of the South East Wales Resilient Uplands Project** as outlined in **Box 4.18** (Action 3a).

Box 4.18 – South East Wales Resilient Uplands Project

The Project has several strands including:

- Pilot projects for peatland restoration involving commoners and volunteers to capture carbon, mitigate flooding, and restore biodiversity.
- Preparation of management plans for the commons surrounding The British, including measures to reduce anti-social behaviour/landscape crime (installation of gates, boulders and bunds) and scrub management to reduce fire risk and facilitate conservation grazing.
- Heather management pilot projects on Bloreng Common, Mynydd Maen (with Caerphilly), Mynydd Llanhilleth, the Coity and Mynydd James (with Blaenau Gwent) to focus on restoration of areas damaged by illegal off-roading.
- Controlled heather burning training for commoners, volunteers, landowners and land managers provided by the fire service and local authority to help prevent wild fires, including vegetation management to create firebreaks and improve access.
- Establishing a landscape crime partnership group for combatting fly-tipping and illegal off-roading, including developing landscape crime management plans and a communication plan to guide practical action.

4. Working with Private and Third Sector Landowners

- 4.3.9 In the long-term over 10 years and beyond, we will work with private and third sector landowners to **encourage wider adoption of the GI management approach** (Action 4a).

5. Supporting Community Ownership/Management

- 4.3.10 In the long-term over 10 years and beyond, we will also explore how we can anticipate and enable community action, and deliver locally relevant solutions, by supporting community ownership and management of greenspaces and other GI Assets. Together with encouraging private landowners and land managers to adopt sustainable approaches to the management of natural resources, increased community ownership and management of greenspace will help support the maintenance and enhancement of Torfaen's Urban Green Grids.

4.3.11 Options for **transferring ownership of GI Assets** from public bodies to community partnerships will be explored through the Place Plans to be prepared by the Town and Community Councils across the County Borough (Action 5a).

4.3.12 We will also explore how we can encourage community involvement in helping to maintain and manage the borough's GI assets through conservation volunteering with groups such as the Torfaen Countryside Volunteers, the Blaenavon World Heritage Site Environmental Volunteers and the Friends of Henllys Local Nature Reserve Group for example. There are also many opportunities for volunteering on the Monmouthshire and Brecon Canal to gain training in canal restoration and heritage skills to help sustain the Canal in the future. These provide opportunities for people to get involved in improving their local environment and experience the health benefits that active volunteering can bring.

4.3.13 We will put in place **support to coordinate volunteering activity** across Torfaen related to the natural environment. This will help enhance opportunities for confidence building, training and skills development in conservation and land management, improved employment prospects and physical activity, and also help in creating more cohesive communities (Action 5b).

6. Raising Awareness and Involvement in GI delivery

4.3.14 We will **explore opportunities for raising awareness** of issues related to unsustainable management of natural resources, how these impact on ecosystem services and the benefits of adopting an integrated approach to GI management (Action 6a).

7. Strengthening resilience of the Urban Green Grids

4.3.15 Torfaen County Borough Council will work with the Torfaen Local Council Partnership in strengthening the resilience of the GI Network's Urban Green Grids. The Council will support the relevant Town and Community Councils in the preparation of Place Plans to further **develop and deliver local GI opportunities** at a local level within the framework of the strategic GI improvement priorities and opportunities highlighted in this GI Strategy for Blaenavon (Action 7a), Pontypool (Action 7b) and Cwmbrân (Action 7c).

Action Plan

4.3.16 The action plan outlined on **Table 4.1** highlights the lead and supporting partners for taking forward and delivering the above actions.

4.3.17 Abbreviations:

- BACH - Bron Afon Community Housing
- BTC - Blaenavon Town Council
- BWHP - Blaenavon World Heritage Partnership
- C&LCC - Croesyceiliog & Llanyrafon Community Council
- CCC - Cwmbrân Community Council
- GGGP – Gwent Green Grid Partnership
- GRPB - Gwent Regional Partnership Board
- GWT - Gwent Wildlife Trust
- HCC - Henllys Community Council
- MH - Melin Homes
- NRW - Natural Resources Wales
- PCC - Ponthir Community Council
- PTC - Pontypool Town Council
- TBP - Torfaen Biodiversity Partnership
- TCBC - Torfaen County Borough Council
- TLCP - Torfaen Local Council Partnership
- TVA - Torfaen Voluntary Alliance

Table 4.1 – Action Plan

Ref	Action	Spatial Scope	Timescale/ Phasing	Lead Partner(s)	Supporting Partners
Theme 1	Strengthening the GI evidence base and guidance				
1a	Feed SE Wales Area Statement into GI Assessment	Torfaen-wide	Short-term	TCBC	NRW/GGGP
1b	Update Phase 1 Habitat Survey	Torfaen-wide	Short-term	TCBC	NRW
1c	Review Sites of Importance for Nature Conservation	Torfaen-wide	Short-term	TCBC	TBP
1d	Update Open Space Study	Main Towns	Short-term	TCBC	TLCP
1e	Develop a GI Assessment Toolkit	Torfaen-wide	Short-term	TCBC	NRW
1f	Develop a Tree Strategy	Torfaen-wide	Short-term	TCBC	TBP
1g	Enhance evidence base for health and well-being benefits of GI	Torfaen-wide	Short-term	GRPB	-
Theme 2	Integrating the GI approach into policy				
2a	Align plans/policies/procedures/resources with the GI Strategy	Torfaen-wide	Medium-term	All PSB Partners	-
Theme 3	Exemplifying the GI approach in the uplands				
3a	Delivery of the South East Wales Resilient Uplands Project	Uplands	Medium-term	NRW	GWT, TCBC, BWHP
Theme 4	Working with private and third sector landowners				
4a	Encourage wider adoption of the GI management approach	Torfaen-wide	Long-term	All PSB Partners	-

Ref	Action	Spatial Scope	Timescale/ Phasing	Lead Partner(s)	Supporting Partners
Theme 5	Supporting GI community ownership/management				
5a	Explore options for transferring ownership through Place Plans	Torfaen-wide	Long-term	TCBC	TVA, TLCP, BACH, MH
5a	Put in place support to coordinate volunteering activity	Torfaen-wide	Long-term	TVA	TCBC, TLCP
Theme 6	Raising awareness and involvement in GI delivery				
6a	Explore opportunities for raising awareness/involvement	Torfaen-wide	On-going	All PSB Partners	-
Theme 7	Strengthening resilience of the Urban Green Grids				
7a	Develop and deliver local GI opportunities for Blaenavon	Blaenavon Town	Medium-term	TCBC, TLCP	BTC, BWHP
7b	Develop and deliver local GI opportunities for Pontypool	Pontypool Town	Medium-term	TCBC, TLCP	PTC
7c	Develop and deliver local GI opportunities for Cwmbrân	Cwmbrân Town	Medium-term	TCBC, TLCP	CCC, C&LCC, PCC, HCC

4.4 Monitoring Delivery

4.4.1 In line with Planning Policy Wales²⁸, the Green Infrastructure Strategy will be regularly reviewed to ensure that information on habitats, species and other green features and resources is kept up-to-date, so that development management decisions are informed by appropriate information about the potential effects of development on biodiversity and GI functions.

4.4.2 Torfaen CBC in its role as the local planning authority will use the best available data to monitor a set of key species and habitats to indicate whether there has been a net gain or loss of biodiversity, and use the trends identified to determine future priorities for planning and decision making.

4.4.3 The Council will incorporate these indicators into both their Annual Monitoring Reports and, where appropriate, into the appropriate plan and report in accordance with the Section 6 Duty under the Environment (Wales) Act 2016.

4.4.4 The monitoring of success and delivery of habitat and species mitigation requirements secured through conditions and obligations will also feed into this process.

²⁸ See paragraph 6.2.12 in Chapter 6 of Planning Policy Wales Edition 10, (Welsh Government, 2018)



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