

Introduction

This document has been prepared to support an full planning application at **Detached Dwelling, Plot 8, Collier's Row, Heol Gerrig, Merthyr Tydfil**

. The development comprises a new residential development. The objectives are to maintain and develop a network of green corridors through the site and support biodiversity and ensure they link in with the wider ecosystem.

Green Infrastructure Definition and Terminology

Green Infrastructure has been defined by the Landscape Institute in their publication, Green Infrastructure: An integrated approach to land use (2013), as

“the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Individually, these elements are GI assets, and the roles that these assets play are GI functions. When appropriately planned, designed and managed, the assets and functions have the potential to deliver a wide range of benefits – from providing sustainable transport links to mitigating and adapting the effects of climate change.”

Natural Resource Wales (NRW) defines Green Infrastructure as

“a term that's sometimes used to describe a wide range of natural and semi-natural features, spaces, rivers and lakes including parks, fields, allotments, hedgerows, roadside verges and gardens, not to mention entire ecosystems such as wetlands, waterways and mountain ranges.”

The Landscape Institute position statement “Green infrastructure: connected and multifunctional landscapes” provides the following definitions for Green Infrastructure terminology:

“GI assets

GI assets include the natural elements which provide social, environmental or economic benefit. They can be specific sites or broader environmental features within and between rural and urban areas. A useful approach to outlining the different types of GI asset is to classify them according to the spatial scale at which each would typically be found.

Connectivity

Connectivity between different GI assets will help maximise the benefits that they generate. This connectivity can be visual or notional; however physical connections make the most impact. This connectivity can enhance public engagement with the natural environment, improve opportunities for biodiversity migration and assist in encouraging sustainable forms of travel.

GI functions

GI functions are the roles that assets can play if planned, designed and managed in a way that is sensitive to, and includes provision for, natural features and systems. Each asset can perform different functions, a concept known as multifunctionality.

Multifunctionality

Understanding multifunctionality is central to the GI approach to land use planning. Where land performs a range of functions it affords a far greater range of social, environmental and economic benefits than might otherwise be delivered.

Ecosystem services Underpinning the multiple functions that GI assets perform is the concept of ecosystem services. Health and wellbeing depends on the range of services provided by ecosystems and their constituent parts: water, soils, nutrients and organisms. These services include:

support: necessary for all other ecosystem services, e.g. soil formation and photosynthesis; —

provision: food, fibre, fuel;

regulation: air quality, climate control, erosion control; and

culture: non-material benefits for people, including aesthetic qualities and recreational experiences.

GI approach

GI approaches to land-use planning promote the widest range of functions which can be performed by the same asset, unlocking the greatest number of benefits. Such an approach enables us to demand more from the land in a sustainable way; by helping to identify when it can provide multiple benefits and to manage the many, often conflicting, pressures for housing, industry, transport, energy, agriculture, nature conservation, recreation and aesthetics. It also highlights where it is important to retain single or limited land use functions.”

National Planning Policy

Future Wales - The National Plan 2040 (Welsh Government 2021)

Policy 9 Resilient Ecological Networks and Green Infrastructure of the Future Wales - The National Plan 2040 states the following with regard to green infrastructure:

“To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

- identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and
- identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.

Planning Policy Wales sets out a range of policies to maintain and enhance biodiversity, promote the resilience of ecosystems, including the stepwise approach, and to maximise the provision of green infrastructure. The strategic focus of Future Wales on urban growth requires an increased emphasis on biodiversity enhancement (net benefit) in order to ensure that growth is sustainable.

As the population of Wales becomes increasingly urban, the opportunity to optimise well-being benefits from green infrastructure will be greatest in and around these areas. Innovative use of nature-based solutions and integrating green infrastructure in and around urban areas can help restore natural features and processes into cities and landscapes. Providing locally accessible, high quality green spaces and corridors helps to maintain and enhance the strategic functioning of our natural resources and ecological networks and address physical and mental well-being. Local green infrastructure assets such as public rights of way, common land, parks, village greens and allotments can all make a cumulative contribution towards wider national scale ecological connectivity. The real-life importance of urban green spaces was demonstrated when people were restricted to taking exercise in immediately local green spaces during the COVID-19 lockdown.”

Planning Policy Wales - Edition 11 (Welsh Government 2021)

Planning Policy Wales - Edition 11 states the following with regard to green infrastructure

“Integrating Green Infrastructure 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.”

Building Better Places, The Planning System Delivering Resilient and Brighter Futures Placemaking and the Covid-19 recovery (Welsh Government 2020) Within the above document under ‘Green infrastructure, health and well-being and ecological resilience’ it states the following regarding green infrastructure

“Resilient ecological networks, whilst vital for nature recovery, are also integral to our health and well-being and form part of our response to climate change. The crisis has highlighted the importance of access to green spaces and opportunities to connect with the natural and historic environment. It has highlighted that easy access and proximity to quality greenspace is severely lacking in some areas and to some sections of our communities and actions to reduce such inequalities should be prioritised as part of wider regeneration and improvement activities as a matter of social and environmental justice. At the same time it is notable how, with the advent of fewer unnecessary journeys and increased walking and cycling, biodiversity has the opportunity to thrive.

We must reverse biodiversity decline and enhance the resilience of ecosystems, as well as enable opportunities for social and economic activity based on valuing and enabling access to the natural and historic environment. The planning system has a key responsibility in securing green infrastructure, which plays a fundamental role in shaping places and our sense of well-being and is intrinsic to the quality of spaces in which we live, work and play”

Active Travel (Wales) Act (2015)

The Active Travel (Wales) Act (2015) set out that Welsh ministers must publish annual reports on the amount of active travel journeys made in Wales. There is also a requirement for Local Authorities to identify and plan for active travel routes and increase the provision for walking and cycling, and encourage users to rely less on cars. Local highway authorities are required to give greater consideration to the requirements of walkers and cyclists and provide greater infrastructure provision to them. The act also highlights the need to build connections between key sites such as workplaces, hospitals, schools and shopping areas with active travel routes.

The Well-being of Future Generations Act (2015)

The Well-being of Future Generations Act requires public bodies in Wales to consider the long- term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

The Planning Act (Wales) 2015 states that Local Planning Authorities must exercise their function in relation to the determination of planning applications “...as part of carrying out sustainable development in accordance with the Well-being of Future Generations (Wales) Act 2015 (annex 2), for the purpose of ensuring that the development and use of land contribute to improving the economic, social, environmental and cultural well-being of Wales.” (PA(W), Sec.2(2)).

Technical Advice Notes (TANs)

Technical Advice Notes should be read in conjunction with Planning Policy Wales (PPW). TANs should be taken into account by the local planning authorities in the preparation of Development Plans. They may be material to decisions on individual planning applications and will be taken into account

by inspectors and the Welsh Government in the determination of appeals and called-in planning applications. The following TANs are relevant to green infrastructure:

TAN 5: Nature Conservation and Planning (2009)

This Technical Advice Note provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities. The key principles of planning for nature conservation are set out followed by advice about the preparation and review of development plans, including the relevant statutory requirements.

TAN 12: Design (2016)

The revised Technical Advice Notes (TAN) aims to equip all those that are involved in the design of development with advice on how sustainability, through good design, may be facilitated through the planning system. It sets out the core design principles that any development proposal must follow to help create a sustainable environment and exhibit a high level of design quality. These are structured via five the following key objectives of good design:

- Access - Ensuring ease of access for all;
 - Character - Sustaining of enhancing local character; promoting legible development; promoting a successful relationship between public and private space; promoting quality, choice and variety; and promoting innovative design;
 - Community Safety - Ensuring attractive, safe public spaces and security through natural surveillance;
 - Environmental Sustainability - Achieving efficient use and protection of natural resources and enhancing biodiversity; and,
 - Movement - Promoting sustainable means of travel.
- Figure 1: Objectives of Good Design

TAN 16: Sport, Recreation and Open Space (2009)

This Technical Advice Note provides advice on the role of the planning system in making provision for sport and recreational facilities and informal open spaces, as well as protecting existing facilities and open spaces in urban and rural areas in Wales. The guidance includes advice on Open Space Strategies and Open Space Assessments, and outlines the need to consider green corridors and natural and semi-natural greenspaces when forming development proposals.

Assessment of Existing Green Infrastructure

The Green Infrastructure SPG states that:

“For all developments, the existing green infrastructure resource in and around the site, based on the list of features in section 1.2 of the Green Infrastructure Plan, must be described and assessed. A thorough contextual analysis of the role of existing green infrastructure in and around the site (e.g. hydrology, habitats, public rights of way and parks) should be provided, appropriate to the scale of the proposed development. This should include a large scale map identifying the role of existing green infrastructure in the connecting wider city and neighbourhood context.

Evidence used to describe this resource can include novel approaches such as mapping of ecosystems and ecosystem services, and GIS network and opportunity analysis, as these and other resources become available.”

An Ecological Assessment was carried out for the outline planning application Written by: George Clutterbuck, Ecologist. The Ecological Assessment identified several existing Green Infrastructure features on the site that are mentioned in the report:

- Heathland and shrub – Mixed scrub
 - o Hedgerows
 - o Urban – Amenity grassland
 - o Urban – Introduced shrub
 - o Urban – developed land; sealed surface

The Ecological Assessment provides the following summary of the site:

- o The key features on site were assessed to be the hedgerows and mixed scrub which held value for NERC mammals, foraging bats, nesting birds, reptiles and amphibians.
- o Mitigation measures include the protection hedgehogs, bats, birds, reptiles and amphibians during habitat removal.
- o No protected species licenses are required for the site
- o Compensation measures include the planting up of the retained hedgerows and species-specific provisions within proposed dwellings.

Assessment of the Proposed Green Infrastructure Strategy

The Green Infrastructure SPG states:

“The likely impact of the proposals upon green infrastructure features must be assessed. This should include a holistic assessment of all of the elements of green infrastructure, including the synergies and trade-offs between them. The assessment should also consider the impact not only upon the green infrastructure within the development site, but also upon the surrounding green infrastructure context. Subsequently the needs for development must be reconciled with the need to maintain and enhance green infrastructure. This assessment of impact should be undertaken by a landscape architect, ecologist or similarly qualified professional.” and

A Green Infrastructure Strategy has been produced showing:

- The residential and commercial development areas;
- A breakdown of all existing and proposed green infrastructure elements;
- Associated access and transport links;
- Drainage / SuDS features / multi-functional components
- Greenways & enhancement of existing and proposed GI frameworks
- Open space and play provision

All the existing areas of Green Infrastructure along the boundaries are to be retained and additional areas of greenspace and tree planting are proposed. Overall, there will be a considerable ecological enhancement/ biodiversity net gain as a result of areas of new high-quality greenspace and the enhancement of existing greenspace.

We also note from the LEMP that the following should be applied:

1. 3.1 This LEMP has been prepared at the request of the Local Planning Authority and provides the plan by which the developer will be able to implement the provision of the ecological recommendations made in the PEA and whole-site LMP during the pre-construction and construction phases of the scheme whilst minimizing disturbance to existing ecological receptors. This LEMP is applicable to Plot 8 only.
2. 3.2 The scope of landscaping is limited by the close juxtaposition of the housing plots and the fact that the future maintenance of the gardens will ultimately be the responsibility of the plot owners. Features that will need regular attention within the whole site have therefore been limited to simple hedgerows and a small woodland area that will only require an acceptable level of domestic maintenance. None of these features impinge upon Plot 8 and none of these habitat features will be provided as part of the development of the plot.
3. 3.3 The principal landscape features within the whole development site are shown on the Landscape Master Plan at figure 2. These include the provision of
 - hedgelines at least 1.5m wide around the southern, western and northern site boundaries including a small area of woodland at the south-western corner

- a central hedgeline 1m to 1.5m wide that divides the site into two parts on an approximate north-northwest – south-southeast alignment which will contribute habitat connectivity between scrub habitats outside the site including the gardens and scrub to the north and the existing woodland to the south.

Of these features, only a short section of the central dividing hedgeline is located within Plot

8. Where these features are provided during the construction phase, they will be protected from potential damage from nearby site works by the erection of temporary high-visibility fencing which will be maintained for the whole duration of construction operations.

New, 2m high, solid, close-boarded, wooden fencing will be constructed along the boundaries of the plot as indicated on the Plot 8 detailed planning application *Existing and Proposed Site Layout and Sections* plan (dwg. No. 20/21/02) Close-boarded boundary fencing will provide shelter i) within the plot, ii) to the plantings of the adjacent section of the central hedgerow and also iii) to fauna using the hedgerow corridor.

Bat and bird boxes have been added to the elevations.