

Land at Ffordd Amazon, Swansea
Marubeni Europower

Green Infrastructure Statement

20th February 2025

Overview

As part of the development process, the existing Green Infrastructure (GI) asset has been assessed through landscape desktop survey, and the context of the site, in its wider GI network, and within the policy framework updated in PPW Chapter 6. The following statement reports on the iterative GI process and how it has influenced the design approach based on national and local policy, focusing on the appropriate and proportionate GI benefits that development of this site can contribute to, with regard to, and taking all reasonable steps to enhance the most value GI assets.

Chapter 6 of PPW states at Para 6.4.4 that *'all reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems and these should be balanced with the wider economic and social needs of business and local communities'*.

Introduction

Definition of Green Infrastructure.

The term *'Green Infrastructure'* first came to prominence in the early 2000's most notably in the Landscape Institute Position Statement *'Green Infrastructure An integrated approach to landuse'* (2009). This document defined Green Infrastructure as;

'The network of natural and semi-natural features, green spaces, rivers, and lakes that intersperse and connect villages, towns, and cities. It is a natural, service-providing infrastructure that is often more cost effective, more resilient, and more capable of meeting social, environmental, and economic objectives than 'grey' infrastructure.'

GI Functions are described as 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 ecosystems services. They may have obvious primary functions, but each asset can perform different functions simultaneously – 'multifunctionality.'

Green/Blue Infrastructure (GI) is the term adopted in this document to incorporate the now more fully developed drainage requirements for developments under SABs, (Sustainable Drainage Approval Body) in Wales, along with other GI elements including all the features of the natural environment between and within towns and cities, including greenspace, vegetation, and water. Provision of GI offers a multitude of ecosystem services (i.e. the benefits that people derive from nature) and forms part of a sustainable approach to the management of natural resources. New infrastructure should seek to strengthen and reinforce existing assets within a site, and it should be planned and designed to be beneficially multi-functional.

Principal Targets of GI.

The principal multifunctional targeted benefits of GI are to:

1. Protect and enhance biodiversity and the resilience of ecosystems and their connectivity;
2. Consider Opportunities for habitat protection, restoration, creation and management in the provision of GI;
3. Contribute to improved mental health with more direct contact with nature, the seasons and natural processes;
4. Identify opportunities where existing and potential green infrastructure could be improved and enhanced as part of placemaking;
5. Provide opportunities for improved physical health and wellbeing through recreational access, community permeability and connectivity;
6. Enhance place-making, identity and sense of community ownership;
7. Improve townscape and landscape quality and visual amenity;
8. Integrate play and recreation in GI networks;
9. Improve micro-climate (summer cooling/winter shelter);
10. Mitigate and adapt to the impacts of climate changes improving of;
 - Oxygen production.
 - Carbon sequestration (locking carbon in vegetation and soils).
 - Water sequestration (vegetation evapotranspiration and formal attenuations).
 - Improve air and water quality.
 - Reduce flood risk.
 - Provide alternative transportation opportunities (cycling/walking/public transport links).

Policy & Guidance

Planning Policy Wales 2024 (12th Edition)

6.2 Green Infrastructure

'Green infrastructure plays a fundamental role in shaping places and our sense of well-being, and is intrinsic to the quality of the spaces we live, work, and play in. The planning system must maximise its contribution to the protection and provision of green infrastructure assets and networks as part of meeting society's wider social and economic objectives and the needs of local communities. Taking a proactive and spatial approach, which links to wider activity being taken by local authorities to protect and provide green infrastructure, will help provide clarity around the contribution which the planning system can make. This means considering how it complements existing and future maintenance and management regimes within urban areas and contributes towards wider land management activities in rural areas to aid nature recovery, and its underpinning natural resources.'

'Green infrastructure is capable of providing several functions at the same time and as a result offers multiple benefits, for social, economic, and cultural as well as environmental resilience. The components of green infrastructure, by improving the resilience of ecosystems, can result in positive benefits to well-being including flood management, water purification, improved air quality, reduced noise pollution and local climate moderation, climate change mitigation and food production. These benefits are important in urban environments where they can facilitate health and well-being related benefits of open space, clean air and improved tranquillity, for example, as well as creating a sense of place and improved social cohesion. In addition, green infrastructure has a role in protecting local distinctiveness, providing economic benefits and social and community opportunities.'

'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, informed by an appropriate level of assessment, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, help to overcome the potential for conflicting objectives, and contribute to health and well-being outcomes.'

Future Wales: The National Plan 2040

Policy 9 – Resilient Ecological Networks and 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 authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment."

"As part of a green infrastructure assessment, broad opportunities for habitat protection, restoration or creation and the provision of green infrastructure may be specified as part of identifying areas to be safeguarded or may take the form of more specific allocations. This may be achieved, for example, through the provision of buffer areas around protected sites or stepping stones connecting habitats or through the identification of green infrastructure in and around urban areas."

Policy Principal Aims/Wider Targets of GI.

The principal multifunctional targeted benefits of GI are to:

11. Protect and enhance biodiversity and the resilience of ecosystems and their connectivity;
12. Consider Opportunities for habitat protection, restoration or creation in the provision of GI;
13. Contribute to improved mental health with more direct contact with nature, the seasons and natural processes;
14. Identify opportunities where existing and potential green infrastructure could be improved and enhanced as part of placemaking;
15. Provide opportunities for improved physical health and wellbeing through recreational access, community permeability and connectivity;
16. Enhance place-making, identity and sense of community ownership;
17. Improve townscape and landscape quality and visual amenity;
18. Integrate play and recreation in GI networks;
19. Improve micro-climate (summer cooling/winter shelter);
20. Mitigate and adapt to the impacts of climate changes improving of;
 - Oxygen production.
 - Carbon sequestration (locking carbon in vegetation and soils).
 - Water sequestration (vegetation evapotranspiration and formal attenuations).

- Improve air and water quality.
- Reduce flood risk.
- Provide alternative transportation opportunities (cycling/walking/public transport links).

Neath Port Talbot County Borough Council: SPG: Biodiversity & Geodiversity May 2018

Paragraph 5.1.8 of the SPG notes the following regarding GI: *“An indicative list of information that a developer will be expected to provide as part of a planning application submission is set out below. By seeking pre-application advice, the requirements below will be able to be tailored to ensure that the information is relevant and reasonable for the site and the development proposal. Information Requirements Details of the site’s existing biodiversity and its value(11), including the presence or absence of protected species; priority species or habitats as listed in the LBAP or S7 Environment (Wales) Act or meeting SINC criteria; presence of designated sites on or close to the site; presence of habitats or features that support the biodiversity resource (e.g. by forming linkages including wildlife corridors or stepping stones); presence of important features such as trees, woodland, hedgerows / field boundaries, watercourses or ponds; ecological processes upon which the habitat and species recorded rely upon. Detailed surveys may be required.*

- *Details of the site's existing geodiversity and its value, including the presence of a Regionally Important Geological Site on or close to the site.*
- *Consideration of linkages with habitats outside of the site (including wildlife corridors and stepping stones).*
- *Consideration of the services that habitats and features provide and how such services can be retained and wherever possible enhanced (e.g. trees aiding in reducing surface water run-off or air pollution). This should include consideration of the green infrastructure assets on site and how they contribute towards the functioning of the on-site and wider environment.*
- *Assessment of direct and indirect impacts of the development on the biodiversity / geodiversity found and any proposed protection, enhancement, mitigation or compensation measures.*
- *Quantitative assessment of biodiversity net loss or gain per S7/LBAP/SINC habitat and/or species*

Development GI Process

As part of the development process, the existing Green Infrastructure (GI) asset has been assessed through Landscape desktop survey, and the context of the site, in its wider GI network, considered. These assessments are illustrated in the ecology and landscape plans and reports supporting the development s planning application.

The stepwise approach (PPW para 6.4.15) has been followed as a guiding principle. A summary of the stepwise approach;

1. **Avoid**
To avoid damage to biodiversity and ecosystem functioning.
2. **Minimise**
Alternative sites that would result in less harm, no harm or gain are to be fully considered to minimise the any harmful environment effects.
3. **Mitigate**
‘...ensure that features and elements of biodiversity or green infrastructure value are retained on site, and enhanced or created wherever possible.’
4. **Compensate (onsite)**
Onsite measures of a sufficient magnitude to fully compensate for loss off onsite biodiversity and ecosystem resilience.
5. **Compensate (offsite)**

Used only as a final resort, where onsite compensation is not possible/fully possible. This must be informed by a full ecological survey of the compensation site to provide a baseline. Offsite compensation should then normally take the form of:

- Habitat restoration
- Habitat creation
- Long term management agreement to enhance existing habitats.

6. Long Term Management

Long Term Management of retained and new GI assets to secure enhancement.

As part of a GI led masterplanning process, the GI Opportunities & Constraints identified the following aims;

Summary of Effects, Mitigation & Enhancement

The following summarises the process and results of the GI led input to the masterplanning process.

Preliminary Ecological Appraisal Report (PEA) E22112501/01 Doc 01 - January 2023 and the subsequent Ecology Addendum Note E24126201/Doc 04 – August 2024, which summarises the Ecological baseline and recommended ecological mitigation adopted in the landscape/GI Desing response. The Green Infrastructure Context Plan (24890901-SBC-XX-DR-L-101) illustrates the site context and off-site GI network and corridors, notably the block of woodland along the eastern edge of the site and area of semi-improved natural grassland to the south. Connection to the wider GI network to the north and west are distanced by the local road network.

Ecological Survey have contributed to the GI masterplanning process which has informed the current development proposals and proposed GI assets discussed below, following the PPW 12 Stepwise approach.

Landscape GI proposals are illustrated on the Site GI Plan (2490901-SBC-XX-DR-L-102)

1. Avoid

Ecology, Landscape and Arboricultural survey has identified the GI assets of greatest value to contribute to the development decision making. Overall, there has been a net loss of habitat, unavoidable as resulting from the development needs. However, the landscape design approach aims to retain the woodland blocks to the west and east and avoiding where possible the semi-improved neutral grassland to the south.

2. Minimise

The masterplanning approach will notably retain external connecting GI corridors, minimising truncation of connections and maintaining wider GI connectivity offsite and around and linking through the eastern edge of the development. The development approach and notably the landscape design approach, have been reviewed to minimise the impact on existing habitats outside the development footprint.

3. Mitigate

Retained GI is identified within the landscape strategy focusing primarily on the retention of the existing woodland corridors to the western and eastern boundaries of the site that form important north-south connections. East-west GI corridors will also be strengthened through the inclusion of a native hedgerow with tree planting, along the southern boundary of the site. The development aims to mitigate the loss of 1no. Class C tree with the 16no. additional trees, which will also provide screening from any future development to the south. Additional mitigation, including the provision of Bat and Bird boxes and log pile hibernacula are proposed to enhance the retained habitat network.

4. **Compensate (onsite)**

To accommodate the development 1no. Goat Willow (*Salix caprea*), a Class C tree will need to be removed. However, it is proposed that the loss of this tree will be compensated through additional tree planting (19no. in total). Species will include Common Alder, Silver Birch and Large Leafed Lime, all of which are native to the UK and will provide additional wildlife value to the site. In addition, it is proposed that 90 lin/m of new native hedge will also be planted. This hedge will also provide wildlife benefits, in the form of creating new 'green corridors' through the site, as well as providing shelter and a food source for a range of bird, mammals and invertebrates.

It is proposed that approximately 320m² of amenity shrubs will be planted, predominately within areas surrounding the proposed site infrastructure. While it is noted that the majority of these proposed shrubs are non-native, many are 'pollinator friendly' and therefore of wildlife value.

Other wildlife benefits to the site will be achieved through the planting of over 150m² of wildflower. Drawing 2490901-SBC-00-XX-DR-L-003 illustrates the proposed soft landscape works. Subject to planning conditions, the inclusion bird (onto existing trees) and bat boxes can also be installed, together with a log pile hibernacula within the retained tree/scrub corridor.

5. **Compensate (offsite)**

Due to the site constraints, additional off-site compensation is proposed immediately adjacent to the north eastern boundary of the site (between the access road and the existing self storage units). This includes 92lin/m of native hedgerow, 347m² of wildflower and 3no. native trees. This additional planting will assist in creating important wildlife habitats and help to strengthen the north-south GI corridors and to the *NRW New Priority Area Lowland Wetland* to the north of the site.

6. **Step 6: Long Term Management**

The greatest benefit resulting from the proposed development would be the opportunity for the long-term management of retained and new GI assets to secure a range of enhancements for their multi-functional value and longevity, including enhanced GI corridors through the site.

The site will benefit from an active Management Plan, which should also include a strategy for the long term management of the woodland blocks to the eastern and western boundary, together with the proposed new planting. Long term management of these components could secure meaningful enhancement of these key GI components.

GI Conclusion

The above stepwise GI assessment demonstrates that negative impacts have been minimised where possible, through the assessment and design process, whilst achieving the necessary development outcomes. The proposed landscape/GI approach strengthens the current GI network connections and provides the opportunity to secure beneficial long-term management, enhancing the retained and proposed GI components.