Green Infrastructure Statement

Ti’r Isha Employment Area Sarn

This document has been prepared by:

Roberts Limbrick

Gloucester Office:
The Carriage Building
Bruton Way
Gloucester
GL1 1DG

Newport Office:
1 Gold Tops
Newport
NP20 4PG

London Office:
4th Floor, Devonshire House
60 Goswell Road
London
EC1M 7AD

03333 405 500
mail@robertslimbrick.com
robertslimbrick.com

Project Number:	10291
Revision:	A (Issued for PAC)
Issued:	10.01.2025

Roberts Limbrick

Table of Contents

01 Introduction

Preface

Roberts Limbrick have been instructed to prepare this Green Infrastructure Statement (GIS) which relates to the development of an employment unit (Use Class B1, B2 or B8), with indicative access and circulation, hard and soft landscaping and drainage infrastructure.

It supports an outline planning application with all matters reserved for the Ti'r Isha Employment Site, which forms part of a wider initiative of a total of 4 sites just north of Bridgend by CENIN.

CENIN are a Welsh-based, family-owned business that believes in creating a cleaner, more sustainable future for generations to come. They do this through the development of integrated energy systems and the production of a range of sustainable cement and binders.

The GIS should be read in conjunction with the surveys, reports and proposals for the application stated below:

- Preliminary Ecological Assessment Report_794-PLN-WWP-JPW1777-1 - RPS 2024
- Conceptual Surface Water Drainage Strategy_ 21344-RPS-SD-ZZ-DR-D100-P01- RPS 2025
- Proposed Concept Site Plan_10291-RL-XX-ZZ-DR-A-P2001_P2 - Roberts Limbrick 2024
- Landscape Masterplan 10291_P8001_P02 - Roberts Limbrick 2025

Due to recent changes in Welsh Government policy, a Green Infrastructure Statement should now be submitted with all planning applications. The statement will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal.

Site Location

Existing Aerial Photograph & Site Location

The site is located near Bridgend, which lies alongside the M4 motorway, and sits approximately half way between Cardiff (20 miles to the east) and Swansea (20 miles to the west) in South Wales. The town of Bridgend has a population of around 50,000 and is within the Cardiff Capital Region.

The site is located just north of the motorway, adjacent to the village of Sarn. Sarn is located in Bridgend County Borough, about three miles north of Bridgend town.

Sarn lies just east of the confluence of the Ogmore and Llynfi rivers and the village itself has a population of around 2500. This area north of Bridgend is known as the Valleys Gateway.

The site is located between the A4063 dual carriageway and the M4 motorway close to the M4 junction 36. It is opposite the McArthur Glen Group Bridgend Designer Outlet and adjacent to the Sarn Park Service Station and associated Days Inn hotel.

The site itself is currently an unused greenfield site with no vehicular access. It is composed of a mixture of native woodland, grassland and hedgerows, with an existing watercourse running roughly through the centre.

02 Planning

National Planning Policy

Planning Policy Wales (Edition 12) - February 2024

Policy **6.2.1** describes Green Infrastructure as:

"the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places. Component elements of green infrastructure can function at different scales and some components, such as trees and woodland, are often universally present and function at all levels. At the landscape scale green infrastructure can comprise entire ecosystems such as wetlands, waterways, peatlands and mountain ranges or be connected networks of mosaic habitats, including grasslands. At a local scale, it might comprise parks, fields, ponds, natural green spaces, public rights of way, allotments, cemeteries and gardens or may be designed or managed features such as sustainable drainage systems. At smaller scales, individual urban interventions such as street trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks"

Within **6.2.11** it goes on to state that the *"quality of the built environment should be enhanced by integrating green infrastructure into development"* and the Green Infrastructure Statement will be *"an effective way of demonstrating positive multi-functional outcomes which are appropriate for the site in question and must be used for demonstrating how the step-wise approach has been applied"*

This series of updated policy has a stronger emphasis on taking a proactive approach to green infrastructure and references the **Building with Nature Standards - Delivering High Quality Green Infrastructure in Wales** as an example of good practice to ensure that appropriate considerations have been taken into account.

The green infrastructure statement should be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach (Paragraph 6.4.15 of Planning Policy Wales) has been applied. This is the means of demonstrating the steps which have been taken towards securing a net benefit for biodiversity.

The Step Wise Approach

The Step Wise approach has been summarised below:

1. **Avoid**
2. **Minimise**
3. **Mitigate/Restore**
4. **Compensate**

Avoid

Aim to maintain biodiversity by avoiding loss or damage to biodiversity (i.e. the variety of species and their abundance). Consider whether the development is really needed, whether it could be located elsewhere, sited or designed differently, or incorporate or be replaced in part by a nature based solution.

Minimise

When all options for avoiding loss or damage to biodiversity have been exhausted, development should seek to minimise the initial impact on biodiversity and ecosystems on the site by:

- maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems
- retaining existing features (e.g. trees, hedgerows, ponds), and
- using innovative solutions to avoid damage and maintain existing biodiversity features and ecosystems.

Mitigate

Where after measures to minimise impact, biodiversity and ecosystems could still be damaged, the proposed development should aim to mitigate that damage - 'like for like' in the case of priority habitats and species and in every case seek to build ecosystem resilience within the site and where possible the wider area.

Having mitigated loss, a scheme of enhancements should be provided to ensure a net benefit for biodiversity. These could include on-site habitat creation and/or could be part of the development itself using biodiverse nature based solutions such as SUDS, green roofs, woodland expansion, and wetland creation. Improving ecosystem resilience through the DECCA attributes, particularly improving connectivity to the immediate surroundings would be a key contribution to on-site mitigation and enhancement.

Compensate

When all other options have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes, off site compensation for unavoidable damage must be sought.

Compensation measures should be guided by place-based evidence and the priorities as set out in SoNaRR, the Area Statement and/or Green Infrastructure Assessment and must be secured and established far enough in advance before the loss of biodiversity on site.

Appropriate compensation measures or tools could include:

- biodiversity enhancements with demonstrable ecological relationship to the site,
- translocation and restoration of site features, habitats and species, and/or
- contribution to an approved levy scheme or habitat bank.

Compensation should be at least 'like for like' in terms of type, quality and extent and be context appropriate.

Summary of the Step Wise Approach - Planning Policy Wales Edition 12, Page 148

Building with Nature - Delivering High Quality Green Infrastructure in Wales

Building with Nature sets out a framework of best practice and revolves around six Core Standards which provide the foundation for distinguishing green infrastructure from a more conventional approach to the design and delivery of open and green space. They are as listed below:

- Standard 1: Optimises Multifunctionality and Connectivity
- Standard 2: Positively Responds to the Climate Emergency
- Standard 3: Maximises Environmental Net Gains
- Standard 4: Champions a Context Driven Approach
- Standard 5: Creates Distinctive Places
- Standard 6: Secures Effective Place-keeping

Local Planning Policy

Adopted Bridgend Replacement Local Development Plan 2018-2033
Written Statement, Adopted 13th March 2024

The following relevant local plan policies have been identified:

Policy SP4: Mitigating the Impact of Climate Change states that;

All development proposals must make a positive contribution towards tackling the causes of, and adapting to the impacts of Climate Change. Means of achieving this may include:

5) Having a design, layout and landscaping which: (i) helps wildlife and habitats to adapt to the changing climate; (ii) assists cooling of the urban environment, including the use of passive building techniques where appropriate;

7) Directing development away from flood risk areas, and avoiding development that increases the risk of flood and coastal erosion, including through the deployment of sustainable urban drainage systems where relevant.

All applications for development proposals must clearly demonstrate how they contribute to climate change mitigation and adaption.

DNP6: Biodiversity, Ecological Networks, Habitats and Species

All development proposals must provide a net benefit for biodiversity and improved ecosystem resilience, as demonstrated through planning application submissions. Features and elements of biodiversity or green infrastructure value should be retained on site, and enhanced or created where ever possible, by adopting best practice site design and green infrastructure principles. Development proposals must maintain, protect and enhance biodiversity and ecological networks / services. Particular importance must be given to maintaining and enhancing the connectivity of ecological networks which enable the dispersal and functioning of protected and priority species.

DNP7: Trees, Hedgerows and Development

This policy emphasises the importance of retaining and protecting trees, woodlands and hedgerows of public amenity or natural/cultural heritage value, or that provide important ecosystem services.

Where trees are to be replaced a scheme for tree replacement must be agreed prior to the commencement of development, including details of planting and aftercare. If tree works are recommended, the works must comply with BS 2998:2010 Tree Works - Recommendations.

DNP8: Green Infrastructure

Development proposals will be required to integrate, protect and maintain existing green infrastructure assets and to enhance the extent, quality, connectivity and multi-functionality of the green infrastructure network. Where the loss or damage of existing green infrastructure is unavoidable, appropriate mitigation and compensation will be required. All developments must seek to maximise, as far as practicable, the amount of green infrastructure on the site, as well as the interconnectedness of green infrastructure within and around the site to the wider green infrastructure network. Development must also maximise opportunities to achieve multi-functionality by bringing green infrastructure functions together. All major developments will be required to submit a Green Infrastructure Assessment.

Existing Green Infrastructure - Wider Context

Natural Resources Wales
- Green Infrastructure

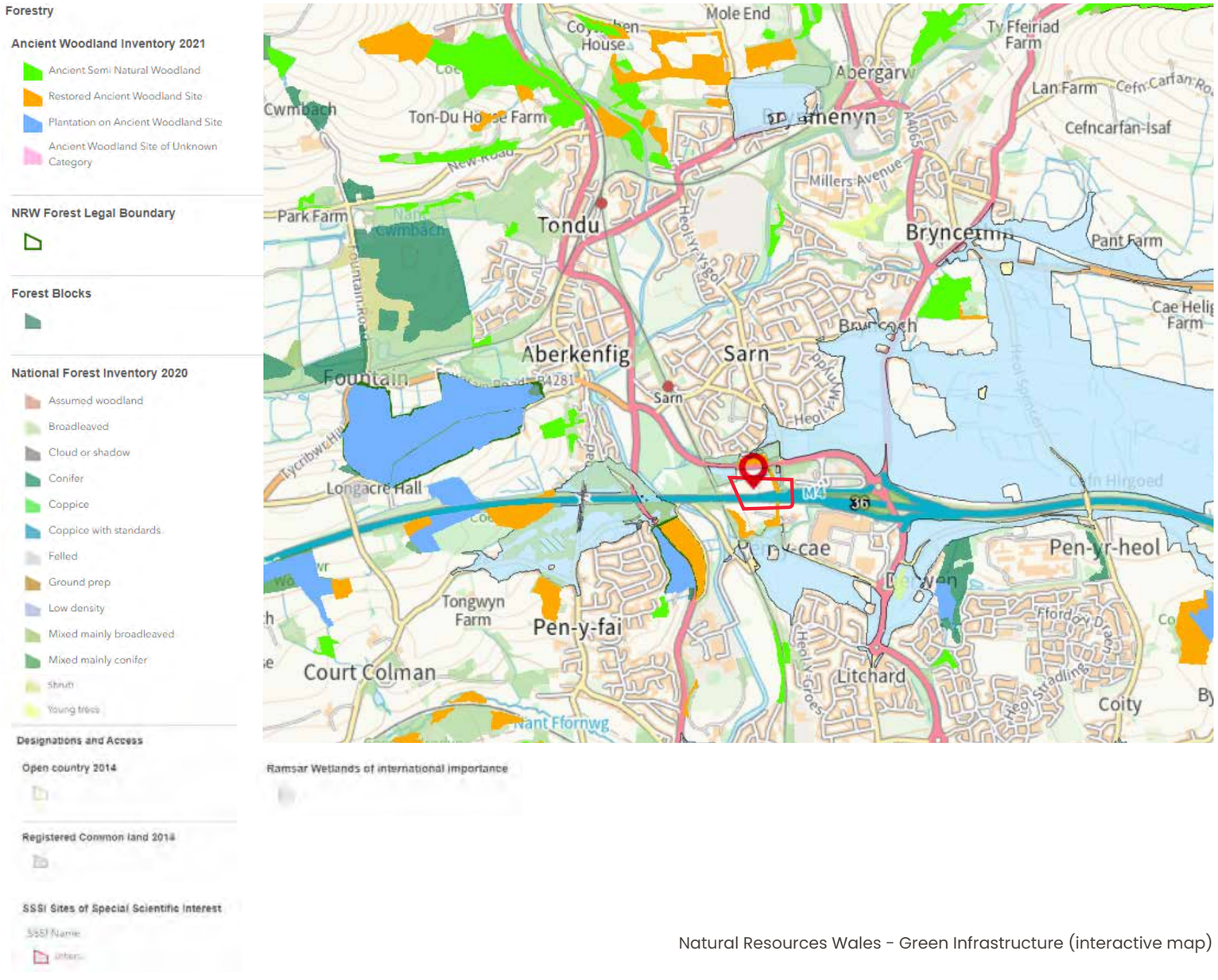
This map highlights the key areas of different types of green infrastructure in the area surrounding the site.

This helps to provide a baseline understanding of the site's importance in connecting to other key local green infrastructure features, and how it could be enhanced to improve its role in the wider network.

It has to be noted that this service does not indicate some elements of GI in great detail, such as hedgerows/field boundaries which form a significant part of this landscape.

It can be seen from this base data that the site is well connected to large areas of broadleaved woodland, which is ecologically positive.

However, restored ancient woodland sites are fragmented in the local area, largely by road infrastructure. In larger areas, but with poorer connectivity, are blocks of plantation on ancient woodland sites, as well as registered common land.



Natural Resources Wales - Green Infrastructure (interactive map)

03 The Site

Existing Site Photographs

For photo locations, see Existing Site Plan, page 18.

1. View looking West into site from existing access track

2. View looking West

3. Himalayan balsam present on the site

4. View looking at northern site boundary - a number of trees suffering from Ash Dieback

5. View looking towards woodland in North West site corner

6. Existing ancient woodland present on site

7. Existing watercourse on site and surrounding natural plant typology

Existing Site

The site comprises of a broadly rectangular parcel of land, measuring approximately 4.14ha. There is currently no vehicular access to the site, so new access would be required from the A4063 dual carriageway.

The site currently comprises an area of largely flat grassland, large areas of broadleaved woodland in the northwest and restored ancient woodland in the eastern side.

The site boundaries are composed of hedgerows and trees, which also divide the site internally as a result of existing field structure.

It currently features fields, wooded areas, a historic wall and a watercourse running through it, roughly splitting the site in half. There is also a significant presence of Himalayan balsam along existing field boundaries internally.

Ash Dieback is prevalent, especially within tree belts to the northern and southern site boundaries.

Existing Site Plan - Roberts Limbrick, 2024

Existing Site - Ecology

RPS' Preliminary Ecological Assessment Report (794-PLN-WWP-JPW1777-1-December 2024) describes the site as having the following habitat types:

Ancient Semi-natural Woodland - The east of the site contains a large block of ancient semi-natural woodland, comprised of a range of broadleaved species including sessile oak, ash, field maple, wild cherry, and large-leaved lime. Penduculate oak, holly, hawthorn, aspen, beech, elm and white poplar are present along the field edge of the woodland block. Mature and veteran oak trees are present within the woodland. This area classifies as the Priority Habitat type 'Lowland Mixed Deciduous Woodland'.

Semi-natural Broadleaved Woodland - The west of the site is largely a block of semi-natural broadleaved woodland, the majority of which comprises dense willow. The woodland lacks a distinct understorey and is heavily shaded by the willow canopy. The ground flora at the time of the survey was limited and characterised by ivy, scattered enchanter's nightshade and hart's-tongue fern. Mature oak and ash are present along the southern boundary of the woodland.

Plantation Broadleaved Woodland - Two sections of plantation broadleaved woodland border the site, one to the north between the grassland fields and the A4063, and one to the south between grasland fields and the M4. The woodlands comprise young trees and shrubs including ash, sycmaore Acer pseudoplatanus, field maple and hawthorn.

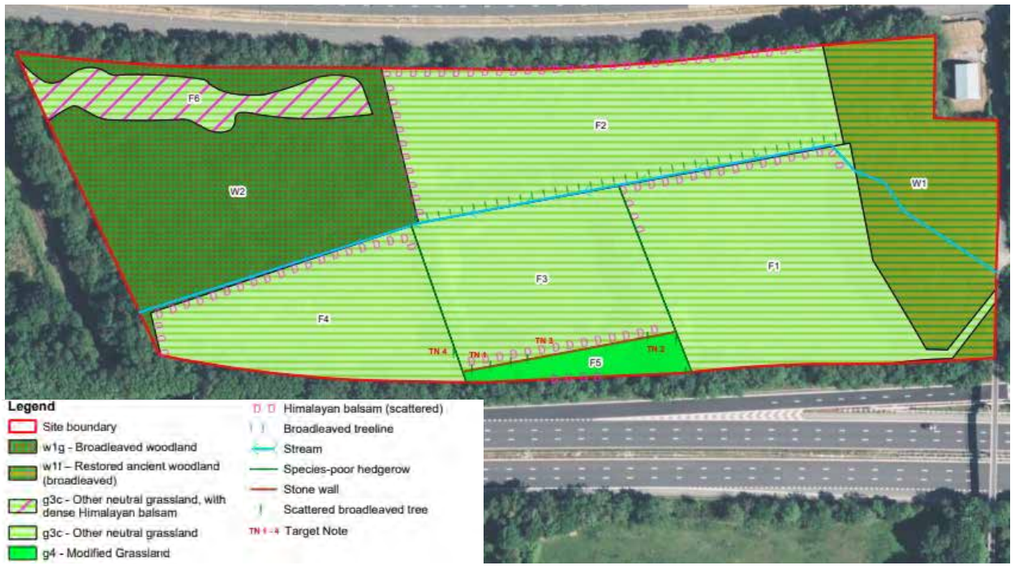
Neutral Grassland -The four larger fields within the site (F1-4) are characterised by abundant Yorkshire fog and common bent with scattered soft rush present in low abundance. Average sward height is 10-20cm. In F6, bramble has encroached along the boundaries and Himalayan balsam spread throughout the field.

Modified Grassland - The small field in the south of the site (F5) is dominated by perennial rye grass *Lolium perenne*. Other species present amongst the sward include common bent, cock's foot and Yorkshire fog.

Treelines - The site is divided by a central treeline comprising peduncualte oak and ash, some pollarded, and also holly, hawthorn and blackthorn. The treeline base has a 0.3m high bank, on which is growing Hart's tongue-fern, ivy and soft shield-fern. A shorter treeline in the southern section of the site comprises large sycamore and ash, including TN1 and TN2, as well as a dead ash TN3.

Hedgerows - Two hedgerows divide fields in the southern section of the site, comprised of a mixture of ash, holly, blackthorn and hawthorn, typically 3m wide and 2-4m high. Some shrubs have developed into small trees and the hedgerow lacks a dense structure and larger trees, except a mature ash tree TN4. There is a small section of hawthorn hedgerow adjoining the central treeline.

Stream - The shallow banks are dominated by grasses, with ragged robin, brooklime, purple loosestrife, meadowsweet and rushes present along the stream margins.



Existing Site Habitat Map - RPS, 2024

04 The Proposals

Green Infrastructure Strategy

Native Woodland

Ornamental Frontage Planting

Native Tree Planting

Native Scrub

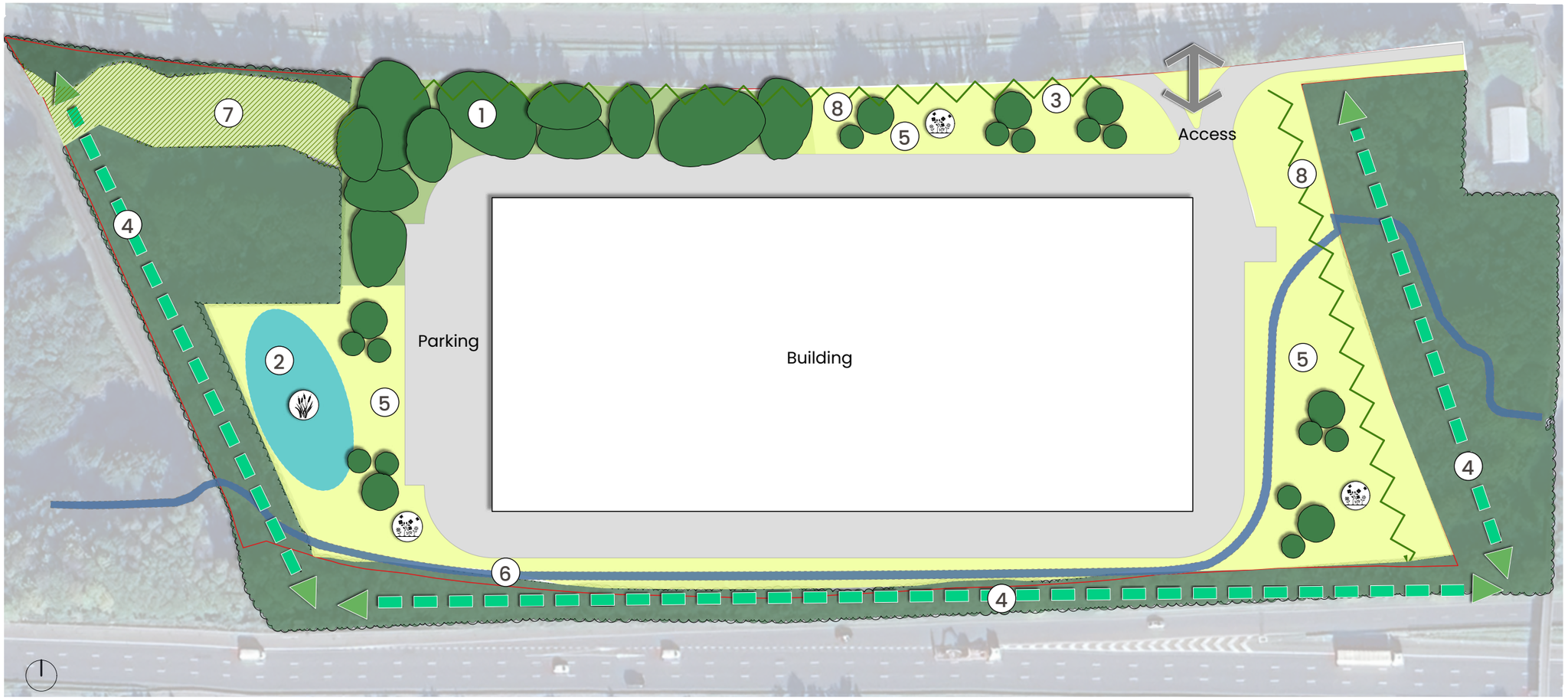
Wetland Meadow

Native Hedgerow

Wildflower Meadow

The green infrastructure strategy for the site seeks to:

- retain and enhance the site's existing key habitat features wherever possible;
- improve the variety of habitats across the site;
- maintain ecological connectivity where possible;
- integrate sustainable drainage proposals into the landscape;
- create a visually attractive, green and biodiverse setting to the development.



Landscape Features

1. Replacement native woodland
2. Attenuation basin
3. New native hedgerow to northern boundary
4. Green corridors in existing native woodland
5. Wildflower meadows with native tree planting
6. Existing watercourse diverted
7. Existing grassland
8. Proposed green corridors

Green Infrastructure Strategy - Roberts Limbrick, 2025

Drainage Strategy

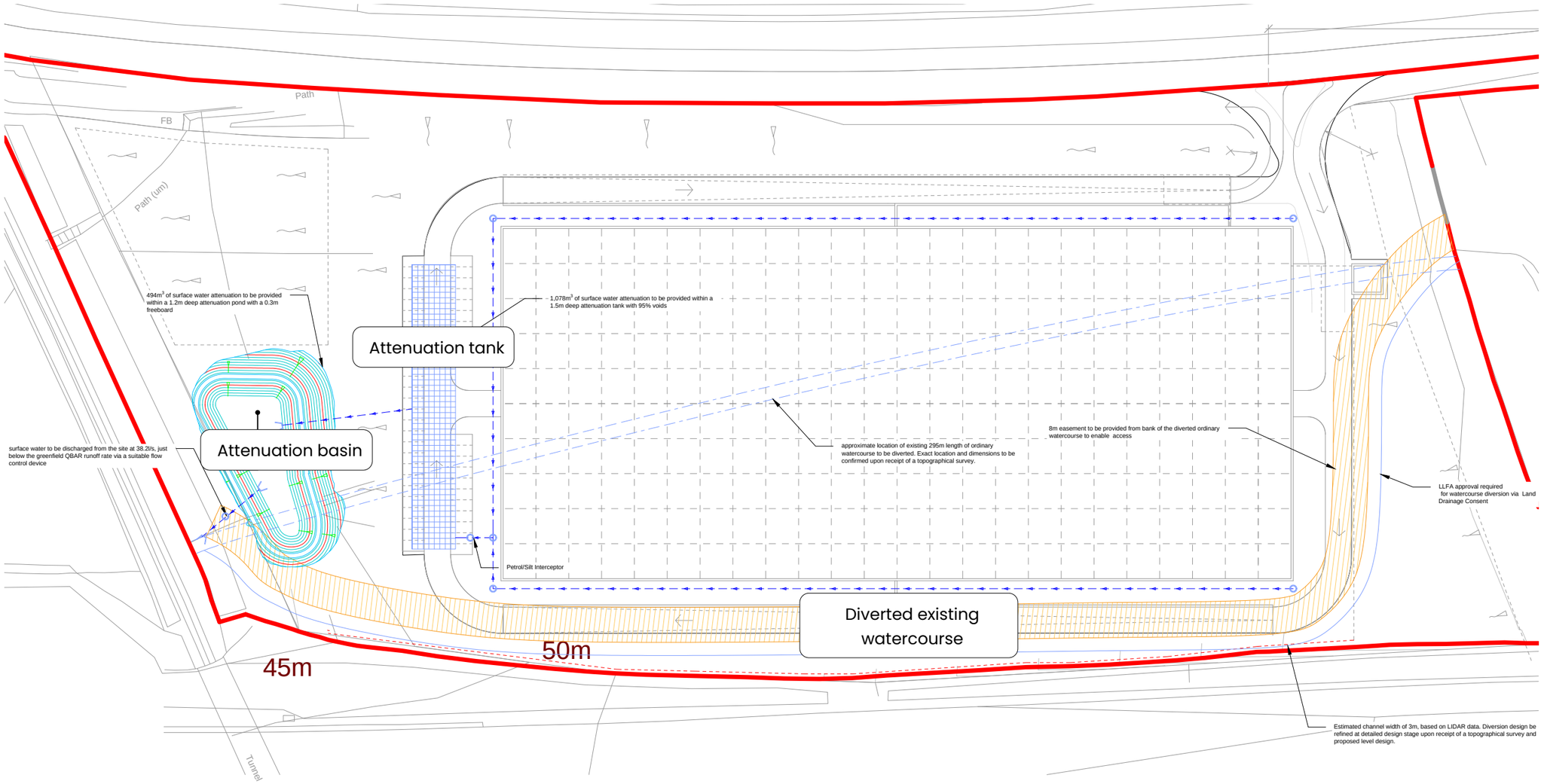
Surface Water Drainage & SUDS

In October 2018, Welsh Government published the 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining Surface Water Drainage Systems'.

SuDS schemes should aim to:

- Manage water on or close to the surface and as close to the source of the runoff as possible.
- Treat rainfall as a valuable natural resource
- Ensure pollution is prevented at source, rather than relying on the drainage system to treat or intercept it.
- Manage rainfall to help protect people from increased flood risk, and the environment from morphological and associated ecological damage resulting from changes in flow rates, patterns and sediment movement caused by the development.
- Take account of likely future pressures on flood risk, the environment and water resources such as climate change and urban creep.
- Use the SuDS Management Train, using drainage components in series across a site to achieve a robust surface water management system (rather than using a single "end of pipe" feature, such as a pond, the serve the whole development).
- Maximise the delivery of benefits for amenity and biodiversity.
- Seek to make the best use of available land through multifunctional usage of public spaces and the public realm.
- Perform safely, reliably and effectively over the design life of the development taking into account the need for reasonable levels of maintenance.
- Avoid the need for pumping where possible.
- Be affordable, taking into account both construction and long-term maintenance costs and the additional environmental and social benefits afforded by the system.

The plan opposite shows the proposed drainage strategy. In order to adhere to SuDS guidance, this scheme includes an attenuation basin and attenuation tank below parking.



Proposed Drainage Plan - RPS, 2024

Green Infrastructure Proposals

Arboriculture
The proposed building is set within a strong landscape framework. The existing woodland along the western, southern and eastern boundaries forms a mature green backdrop to the site and the proposed building. Where possible, existing woodland will be retained, in addition to the planting of native replacement woodland on the northern boundary. Native tree planting will also be scattered across the site within areas of wildflower meadow.

Ecology
The eastern boundary, between the existing woodland and the development, is to be supplemented with native scrub planting, strengthening the existing site character and providing a buffer between the woodland and development to protect its biodiversity value. The northern boundary will feature a native hedgerow forming a definitive, structural boundary whilst softening the facade and supporting biodiversity. The existing area of neutral grassland in the north-eastern corner of the site will be retained and managed as wildflower meadow to increase its biodiversity. See Preliminary Ecological Assessment Report_794-PLN-WWP-JPW1777-1 - RPS 2024 for further details.

Landscape
The landscape proposals for the site comprise replacement native woodland, native scrub and native tree planting. In addition, there will be wildflower and wetland meadows, and some ornamental planting at the building frontage.

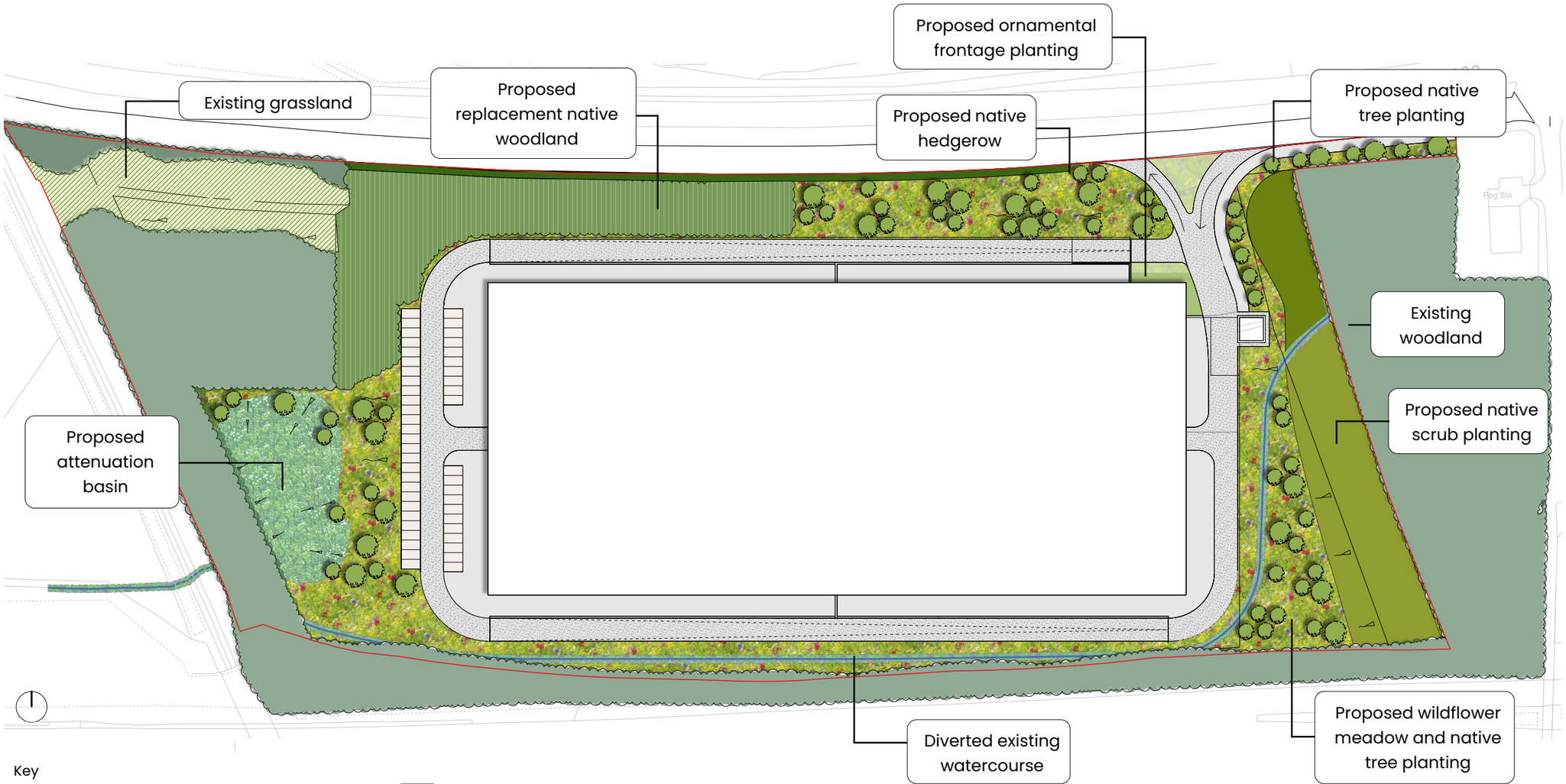
Retention of existing woodland is key to maintaining habitat and biodiversity, and will be enhanced by the planting of replacement native woodland to the north-east of the site, as well as elsewhere on the Dunraven Estate. In addition, native scrub planting in front of existing woodland at the eastern boundary will form an ecotone and a buffer between the woodland and development.

Widespread planting of wildflower meadow across the site will provide habitat for pollinators, and, when combined with proposed scattered native tree planting, contribute to ecological enhancement and a pleasing, naturalistic parkland setting. It will also frame the building at the entrance, creating an attractive, green arrival space, behind the proposed native hedgerow, which will provide boundary definition and have biodiversity value.

The attenuation basin and the diverted existing watercourse to the south of the building will be planted with an appropriate wetland meadow mix, creating habitat and attractive features visible from the car park and road.

Refer to Landscape Masterplan 10291_P8001_P02 - Roberts Limbrick 2025 for further details.

Drainage
The implementation of Sustainable Urban Drainage Systems (SuDS) in the form of an attenuation basin not only aids with surface water management, but is also a vehicle for biodiversity. By maximising the natural bio-retention properties of undeveloped land, attenuation basins increase the amount of ‘blue’ surface area. In addition to the diversion of the existing watercourse and its enhancement with wetland meadow planting, these measures provide opportunities for wildlife and help contribute to biodiversity targets.



Landscape Masterplan - Roberts Limbrick, 2025

05 Conclusion

Conclusion

The retained and proposed green infrastructure elements that form the basis of this strategy, integrate design for amenity, sustainable drainage, and biodiversity benefit.

The design incorporates a number of features that provide biodiversity value, in terms of value, quality and condition. A range of enhancements that optimise multi-functionality, and connectivity, not only within the site, but within the wider landscape have been considered.

The development proposals have considered the existing green infrastructure, particularly the existing woodland at the site boundaries. Proposals for the site seek to protect and retain these features where possible, ensuring that the existing green infrastructure network is maintained and enhanced.

Other mitigation and enhancement measures are proposed for the site, including the planting of replacement native woodland, as well as new native trees, hedgerow and scrub. There will also be off-site replacement native woodland planting elsewhere on the Dunraven Estate. The grassland will be sown with a wildflower mixture, to increase biodiversity and add visual and amenity value, alongside some ornamental planting at the building frontage.

SuDs features such as the existing watercourse and new attenuation basin being planted with a diverse mix of species within a wetland meadow mix will provide ecological benefits, as well as visual interest. These new features will also contribute to the wider green infrastructure of the site and local landscape.

Overall, it is considered that the proposed development would be in accordance with Wales' and therefore Bridgend Borough Council's guidance for Green Infrastructure.

Roberts Limbrick