

Building with Nature (BwN): Standards Framework

BwN describes "individual Standards that collectively form a definition of **high-quality green infrastructure**." There are 6 Core Standards, 2 Wellbeing Standards, 2 Water Standards and 2 Wildlife Standards as below. This GI Plan/Statement signposts the standards:

CORE Standards

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 - Secured Effective Place-keeping

WELLBEING Standards

Standard 7 - Brings Nature Closer to People
Standard 8 - Supports Equitable and Inclusive Places

WATER Standard

Standard 9 - Delivers Climate Resilient Water Management
Standard 10 - Brings Water Closer to People

WILDLIFE Standards

Standard 11 - Delivers Wildlife Enhancement
Standard 12 - Underpins Nature's Recovery

Developments should seek to retain existing habitats within the proposal and avoid the loss of vegetation where possible. If this is not possible, developments should seek to mitigate for the loss of habitats and/or provide enhancement measures to provide net benefits for biodiversity.

The wider development seeks to implement, enhance and manage new habitats within the Landscape Character Areas. Within the site, new planting includes trees, shrubs herbaceous plants, and grass seeding

New tree planting will be proposed within the site. **[BwN 1, 2, 3, 7, 11,12]**

Ground cover planting at the rain garden to the north and around the car park area will provide visual interest, and increase biodiversity. **[BwN 1, 2, 3, 7, 11]**



Ornamental and rain garden planting

Introduction

This **Green Infrastructure Plan/Statement** relates to a proposed extension building, new access, and parking at the Norish chilled food distribution centre, Wrexham industrial estate, North Wales. The site currently comprises *"semi-improved neutral grassland, marshy grassland, standalone water, dense scrub (including willow carr), mixed woodland, hardstanding and buildings."* (Ref: Just Mammals Limited).

Refer also to the Landscape Strategy by Tir Collective Landscape Architects, the Preliminary Ecological Appraisal by Just Mammals Limited, the Biodiversity Mitigation Strategy by TSL Projects Ltd. on behalf of Tetra Tech Group Ltd. and the Arboricultural Report by Martin Boardman & Associates.

Policy Context

Planning Policy Wales (PPW)

PPW aims to contribute towards the delivery of sustainable development, embedding the principles of the Well-being of Future Generations (Wales) Act 2015. PPW ingrains Placemaking Wales Charter and how sustainable development can be achieved through implementing placemaking.

Section 6.2 sets out **green infrastructure** should be given early consideration in development proposals and how it should be integrated into developments.

Paragraph 6.2.12 states " A **green infrastructure statement should be submitted with all planning applications**. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal... The green infrastructure statement will 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 has been applied**."

Paragraph 6.2.14 states "Development proposals should be informed by the priorities identified in green infrastructure assessments and locally based planning guidance. The **Building with Nature standards** represent good practice and are an effective prompt for developers to **improve the quality of their schemes and demonstrate the sustainable management of natural resources**."

Section 6.4 describes **biodiversity and ecological networks** and provides a summary of the **Step-Wise Approach** and how it should be used to "**maintain and enhance biodiversity, build resilient ecological networks and deliver net benefits for biodiversity** by ensuring that any adverse environmental effects are firstly avoided, then minimised, mitigated, and as a last resort compensated for."[1]

Paragraph 6.4.12 states "providing evidence in the Green Infrastructure Statement that the step-wise approach has been followed, a scheme of enhancements must be provided to ensure a **net benefit for biodiversity**."
In relation to **trees, woodland and hedgerows, paragraph 6.4.37** sets out their importance for biodiversity and "connecting habitats for resilient ecological networks and make an essential wider contribution to landscape character, culture, heritage and sense of place..."

The **planting of new trees, hedgerows, groups of trees and areas of woodland** should be promoted as part of new development. Existing trees/ groups of trees, hedgerows and areas of woodland must be protected "where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function."[2]

In relation to the permanent removal of trees, woodland and hedgerows, it "will only be permitted where it would achieve significant and clearly defined public benefits."[3]

The step-wise approach must also be followed. Where loss is unavoidable, PPW sets out the requirements of replacement planting, which "shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of **at least 3 trees of a similar type and compensatory size planted for every 1 lost.**"[4]

1. Paragraph 6.4.11, Planning Policy Wales Edition 12, February 2024
2. Paragraph 6.4.35 Planning Policy Wales Edition 12, February 2024
3. Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024
4. Paragraph 6.4.43 Planning Policy Wales Edition 12, February 2024

The stepwise approach to maintaining and enhancing biodiversity

The stepwise approach for this Green Infrastructure Plan/Statement is an eight-step process, inspired by Swansea Council's Biodiversity Supplementary Planning Guidance. It is a useful SPG which demonstrates a stepwise approach to development, not just for within Swansea but for developments in other jurisdictions including Wrexham. It comprises the following which are referred to in this GI plan/statement:

- **Step A: Identify and Assess** existing or potential important habitats or species and ecological connectivity corridors.
- **Step B: Avoid** loss of any existing or potential important habitats or species, or fragmentation of ecological connectivity.
- **Step C: Respond and Design -** Identify and assess existing or potential important habitats or species and ecological connectivity corridors.
- **Step D: Mitigate** for any unavoidable harm or loss to important habitats or species or the fragmentation of ecological connectivity.
- **Step E: Compensate -** Address the residual effects of a proposal after avoidance and mitigation have been considered and provide appropriate compensation.
- **Step F: Enhance -** Explore all opportunities to enhance biodiversity and ecosystem resilience, proportionate to the scale and nature of the proposal.
- **Step G: Manage -** Submit and implement long term management plan of agreed and appropriate mitigation, compensation and enhancement measures.
- **Step H: Monitor -** Submit and implement a monitoring plan to ensure that the development and associated mitigation, compensation and enhancement measures deliver the attributes or resilience post-construction.

Landscape Strategy

The landscape strategy is based on retaining where possible existing habitats which immediately surround the existing and proposed buildings and the parking/access area in the south. The existing habitats comprise semi-improved neutral grassland, marshy grassland, and scattered trees as identified by Just Mammals' Preliminary Ecological Appraisal. Further detailed assessment of individual trees and groups of trees/vegetation have been identified within the Arboricultural Report by Martin Boardman & Associates. Wider site habitats which include scrub and woodland will be retained, but any encroachment into these areas will be minimal.

Several existing trees and blocks of vegetation will need to be removed to accommodate the development, but others will need to be removed due to arboricultural reasons, regardless of development plans.

The tree planting will be provided where possible which will help contribute towards amenity and biodiversity values. Species selection will be suitable for location such as those which can tolerate damp conditions. Tree species will also be native and include long-lived, keystone species.

Ornamental shrubs will be provided around the new parking area for visual interest, and species selection will include a combination of flowering evergreen and deciduous plants. The drainage strategy includes swales, but there will be a rain garden to the north. The rain garden will be planted with shrub species to provide year-round interest.

Green Infrastructure

The elements that are considered to form the existing green infrastructure of the site and surrounding context are:

- Mixed woodland, dense scrub and standing water
- Individual trees
- Neutral and Marshy grasslands
- Other habitats of ecological value

The green infrastructure elements are described further here; identifying and assessing existing or important habitat or species and ecological connectivity corridors which have been informed by desktop studies and specialists' reports. The following paragraphs also describe how each green infrastructure element is to be retained, mitigated, and /or enhanced.

Mixed woodland, dense scrub, and standing water

The mixed woodland and dense scrub make an important contribution to landscape character. They are also important green infrastructure elements for their biodiversity and habitat value.

The mixed woodland is *"confined to a small area on a north-east facing slope in the northern area of the site."* (Ref: Just Mammals). The proposals at the site will not affect the mixed woodland area. It will all be retained - **Step A and Step B.**

The dense scrub is *"located around the periphery of the site. It varies in density, ranging between relatively open at the base to complete and impenetrable thicket."* (Ref: Just Mammals). **Step A.**

Some minor areas will be affected by the development proposals, but the majority of the scrub will be retained. The landscape scheme does not propose replacement scrub planting because the vast majority will not be affected by the development. **Step C.**

The scrub area includes species such as bramble, blackthorn, hawthorn, field rose and dogwood which should naturally regenerate in areas where there will be disturbance due to the development. Opportunities for mitigation scrub planting could be created within the neutral grassland area to the north if necessary. **Step D.**

There are *"two distinct areas of standing water or ponds... in the south-east... water levels appear to be relatively low, although it is apparent that water is present all year-round due to the presence of certain floral species."* (Ref: Just Mammals) shown in images below. (Ref: Tetra Tech).



Existing pond 1A



Existing pond 1B

A small sized population of Great crested newts has been recorded during surveys in these areas, along with common toads and other amphibians, and they have been confirmed as breeding ponds. (Ref: Tetra Tech, 2024) **Step A.** To ensure the proposed development will not affect the population of great crested newts mitigation measures have been provided within the Biodiversity Mitigation Strategy (BMS) by TSL Projects Ltd. on behalf of Tetra Tech Group Ltd. This includes detailed descriptions of installation, maintenance and time of provision for mitigation methods, a brief description of which is described below:

- Temporary Amphibian Fencing (TAF) is to be erected around the site boundary to prevent amphibians from entering the development area. Drift fencing will also be installed within the perimeter of the TAF, accompanied by adjacent pitfall traps at 5m intervals, the active use of which to be mid-March to October inclusive. **Step B and Step D**.
- Five Refugia to be created, three prior to commencement of pitfall trapping and two upon completion of the works. These to consist of stacked logs, brash, branches, removed site vegetation and leaf litter during site clearance. **Step E and Step F.**
- Three Hibernacula to be created, two prior to commencement of pitfall trapping and one upon completion of the works. These to consist of brick rubble, logs and loose top soil with a covering of turf. **Step E and Step F.**
- Enhancement of existing ponds. This will involve the selective removal of overhanging vegetation around the water bodies to create open and sheltered areas, in addition to increasing sunlight in the pond. No more than 60% of the pond shoreline should be shaded, with less shading preferable, especially for the southern shoreline. Material removed as part of this enhancement should be retained to contribute to building the Refugia and for new refugia in the future. It is also recommended that pond 1A be de-silted, as a build up of leaf litter is noted to be negatively impacting the water quality and suitable live egging material. **Step E and Step F.**

Individual trees

An Arboricultural Report has been prepared by Martin Boardman & Associates. The tree categorisation within the report forms a source of data for Stepwise approach, **Step A.** The tree survey has identified trees on site and provided categorisations. It noted that there are no Tree Preservation Orders (TPOs) on the site. The survey identified 11 category U trees will need to be removed due to arboricultural reasons.

In order to facilitate the development, 12 trees are to be removed, which are all low category trees (C category).

To address tree loss at the site, the green infrastructure proposals include **Step D**, **Step E** and **Step F**. Mitigation for tree loss is provided through planting 36 new native species trees.

Proposed tree species within the marshy grassland to the east to include Alnus glutinosa (common alder), Betula pubescens (downy birch), and Salix alba (white willow).

Proposed tree species within the semi-improved neutral grassland at the north, south and west to include Quercus robur (common oak), Caprinus betulus (hornbeam), Sorbus aucuparia (rowan) and Tilia cordata (small leaved lime).



Neutral and Marshy Grasslands

Neutral grassland is *"present surrounding the majority of the existing buildings on site. it appears to be regularly managed and is of a uniform height."* (Ref: Just Mammals). In addition *"a collection of circa **20 bee orchid (Ophrys apifera) rosettes** was identified at the southern edge of the site."* **Step A.**

The neutral grassland will be predominantly affected due to the extension building in the west, the creation of a new car park and access road in the south, and smaller building extensions in the east. The bee orchid rosettes will also be affected by the creation of the parking area.

Mitigation for the Orchids as noted in Just Mammal's report include encouraging bee orchids to *"colonise along the northern edge of the scrub habitat through scarifying an area of soil to mimic the level of soil disturbance favoured by bee orchids, as well as enriching the existing soil with lime to create a more calcareous character..."* and "*Hand-broadcasting seeds of a 'cover crop' species...*" such as "*...Emorsgate EM6.*" **Steps C, D and E**.

The marshy grassland in the east will be partially affected due to the creation of a swale and mitigation tree planting, although the creation of these features will help increase biodiversity, contribute towards managing rainwater runoff, and mitigate for existing vegetation being removed.

Other habitats of ecological value

The Preliminary Ecological Appraisal (PEA) prepared by Just Mammals Limited and provides a point of reference for mitigation and biodiversity enhancements. **Step A.**

The PEA provides mitigation recommendations for orchids (see previous paragraphs), otters and badgers, nesting birds and bats.

The mitigation summary provided by the PEA outlines:

- **Orchids** - as per the previous paragraphs.
- **Otters and badgers** - precautionary measures to be undertaken during the construction phase.
- **Nesting birds** - demolition works to be undertaken outside thee bird nesting season and installation of three bird boxes to be provided on mature trees along the eastern boundary.
- **Additional enhancement measures: Bats** - installation of two crevice bat rocket boxes, each on a 5m pole, located at the border of scrub and marshy grassland along the eastern boundary.

All recommendations within the PEA have been reflected and included within the green infrastructure proposal for the site, reflecting **Step D, Step E** and **Step F.**

The Biodiversity Mitigation Strategy (BMS) provides detail of measures to be implemented and maintained in order to avoid and minimise impacts on the following:

- **Great crested newt (and other amphibians)** - as per mitigation measures stated in earlier section of this document under 'Mixed woodland, dense scrub, and standing water'
- **Dingy skipper and grizzled skipper (Butterflies)** - installation of butterfly banks and butterfly scrapes. For detail of construction and maintenance refer to BMS.
- **Badgers and Hedgehogs** - a pre-commencement survey is recommended two to six months before the scheme's start date to establish if any new badger setts have been established. Works will also be restricted to daylight hours and kept to as short a time period as possible. Qualified ecologist to supervise vegetation clearance and implement appropriate measures if any hedgehogs or badgers are discovered.

All recommendations within the BMS have been reflected and included within the green infrastructure proposal for the site, reflecting **Step A, B, D, E** and **F.**

Project Sakura

Green Infrastructure Plan / Statement

GI.**1**

Application boundary line

Extent of land under same ownership

Existing trees to be retained. Black dash denotes root protection area

Existing trees to be removed

Existing vegetation (predominately scrub) to be retained - approximate extent. **NOTE:** Measures are recommended along the northern edge of the scrub habitat to encourage bee orchids to colonise. Refer to Just Mammal's Preliminary Ecological Appraisal which also suggests hand broadcasting of a cover crop such as Emorsgate EM6 seed mixture.

Marshy grassland to be retained

Neutral grassland to be retained

Existing pond to be retained

Proposed tree planting to mitigate for trees lost due to the development and to help increase biodiversity.

Proposed planting areas including the rain garden to the north for amenity and biodiversity value.

Proposed plant species around the new car park in the south to include:

Choisya ternata (Mexican orange blossom), Prunus laurocerasus 'Zabeliana' (cherry laurel 'Zabeliana'), Lonicera nitida 'Maygreen' (shrubby honeysuckle), Pachysandra terminalis (Japanese spurge), and Cistus x corbariensis (hybrid rock rose).

Proposed plant species at the rain garden to the north to include:

Cornus alba 'Sibirica' (westonbirt dogwood), Hydrangea 'Preziosa' (Hydrangea), Hypericum calycinum (rose of Sharon), and Geranium 'Johnson's Blue' (Cransebill).

Swales to be seeded with a suitable species-rich grass mix such as Emorsgate EM8 'Meadow Mixture for Wetlands'.

Indicative location of proposed crevice bat rocket box, on a 5m pole. Placement to be located at the border of the scrub and marshy grassland and not too close to trees

Indicative location of proposed bird box, to be installed along the eastern boundary on mature trees.

Indicative location of proposed Hibernacula

Indicative location of proposed Refugia

Orange flexinet / heras fencing *

Indicative location of Butterfly bank

Indicative location of Butterfly scrapes

* Refer to Biodiversity Mitigation Strategy (March 2025) for further detail regarding installation and timings of provision

0 10 20 30 40 50 metres

Scale 1:750 @ A0

North

TC24206 Landscape scheme v11.dwg 21.03.2025

tir collective LANDSCAPE ARCHITECTS
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