

Land at Heol Goi, St Clears Green Infrastructure Statement

July 2024

01 Introduction

Scope

Tir Collective is instructed by Obsidian to prepare this **Green Infrastructure Statement** which relates to a proposed residential development at Heol Goi, St Clears. The site is located on the south-west side of St Clears, at OS grid reference SN276159.

The Site

The proposed site comprises part of a gently sloping field to the south of the A40 on the south-west side of St Clears. The tree-lined edge of the A40 forms the northern boundary; a housing estate lies to the west and a new housing development is under construction on the eastern side. A hedge and minor road lie to the south, see **Figure 1**.

Ecology

The Preliminary Ecology Assessment (PEA) has been prepared by Wyndrush Wild Ecology, 23rd May 2024. An earlier survey by Fiona Lanc of Habitat Matters was carried out in June 2021, across a larger site than the current application area. The eastern part of this original site has been granted planning permission for a housing development, the construction of which is ongoing.

The Preliminary Ecology Assessment (PEA) prepared by Wyndrush Wild Ecology confirmed that *"The proposed development does not present a significant risk to habitats on or adjoining the site, and no priority habitats or protected species are affected."*

Arboriculture

The Combined Arboricultural Impact Assessment/ Method Statement has been prepared by Tree Check Arboriculture Ltd.

It confirms that *"There are no conflicts between the RPA's of trees on site with the current proposed layout of buildings or heavy structures"*.

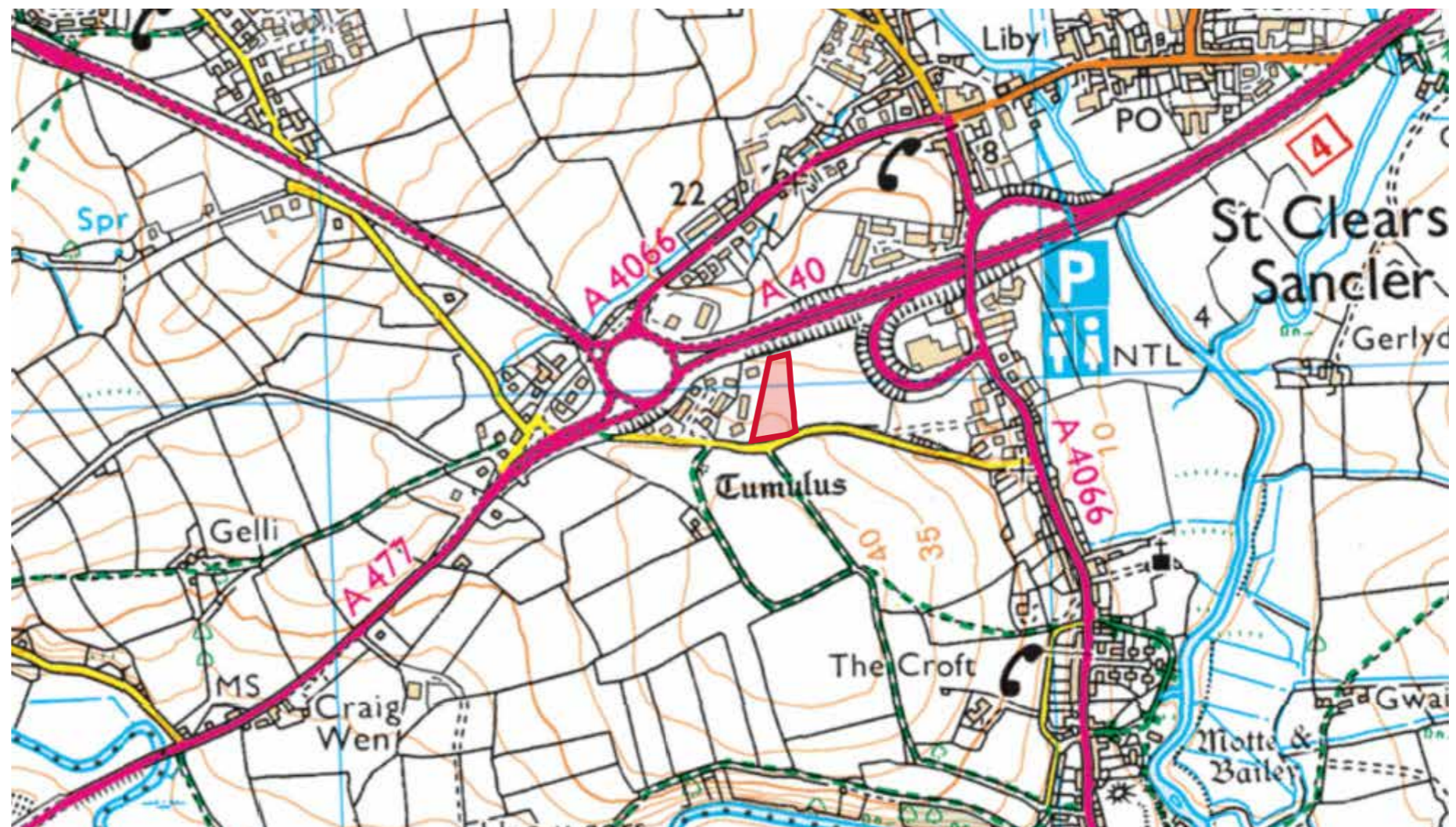


Figure 1: Site Location



Figure 2: Site Context

02 Policy Context

Wales Legislation

Well-being of Future Generations (Wales) Act 2015

The Act requires public bodies to carry out **sustainable development**. Sustainable development principle is "the process of improving the economic, social, environmental and cultural well-being of Wales." The principle is made up of five ways of working, including **looking to the long-term**; taking an **integrated approach**; involving a **diversity** of the population; **working collaboratively**; and **preventing issues**.

It sets out seven well-being goals including resilience and being globally responsible.

Environment (Wales) Act 2016

The Act is intended to work alongside the Well-being of Future Generations Act. It included a new biodiversity duty to **reverse the decline of biodiversity and to secure long-term resilience**.

Section 6 states "A public authority **must seek to maintain and enhance biodiversity... and in so doing promote the resilience of ecosystems**". In relation to resilience of ecosystems, the following "must be taken into account:

- (a) diversity between and within ecosystems;
- (b) the connections between and within ecosystems;
- (c) the scale of ecosystems;
- (d) the condition of ecosystems (including their structure and functioning);
- (e) the adaptability of ecosystems."



The seven well-being goals from Well-being of Future Generations (Wales) Act, 2015

National Planning Policy

Future Wales: The National Plan

The plan provides a strategy for addressing key national priorities through the planning system, including achieving climate-resilience, developing strong ecosystems and improving the health and well-being of our communities. It also embeds the principles of the Well-being of Future Generations (Wales) Act 2015.

The key policy in relation biodiversity and green infrastructure is **Policy 9 – Resilient Ecological Networks and Green Infrastructure**. It states, "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."

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.**"

¹ Paragraph 6.4.11, Planning Policy Wales Edition 12, February 2024

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."¹

¹ Paragraph 6.4.39 Planning Policy Wales Edition 12, February 2024

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."² 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."³

Finally, in relation to **SuDS**, paragraph 6.6.18 states "The provision of SuDS must be considered as an **integral part of the design of new development** and considered at the earliest possible stage when formulating proposals for new development." Paragraph 6.6.19 goes on to state "Design for multiple benefits and green infrastructure should be secured wherever possible..."⁴

² Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024

³ Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024

⁴ Paragraph 6.6.19 Planning Policy Wales Edition 12, February 2024



The Step-Wise Approach from PPW Edition 12, Chapter 6

Local Planning Policy

Carmarthenshire Local Development Plan 2006 - 2021

The current Carmarthenshire County Council Local Development Plan was adopted on the 10th December 2014 and identifies where new developments such as housing, employment, community facilities, and roads, will go. It provides a framework for local decision-making and brings together both development and conservation interests to ensure that any changes in the use of land are coherent and provides maximum benefits to the community.

In relation to green infrastructure, the following policies apply:

- EQ4 Biodiversity
- EQ5 Corridors, networks and features of distinctiveness
- EP3 Sustainable drainage
- GP1 Sustainability and high quality design
- REC3 Proposed new open space
- SC1 Sustainable communities
- SP1 Sustainable places and spaces
- TR4 Cycling and walking

Carmarthenshire's Green and Blue Infrastructure Assessment (Technical Report)

The purpose of the Green and Blue Infrastructure (GBI) Assessment by Carmarthenshire County Council is to "inform the development and implementation of the 2nd Deposit revised Local Development Plan (rLDP) 2018-2033."

The document sits alongside other assessments including the Integrated Sustainability Appraisal and Public Open Space Assessment which together fosters an inclusive and transparent process when developing associated land management policies.

The GBI Assessment discusses the benefits that GBI can provide across several themes including:

Health & Well-being

"...spending time in and around nature provides protection against a range of diseases, including depression, diabetes, obesity... other research has shown that people are more active if they live within attractive and inspiring natural environments."

Sense of Place

"GBI can make a positive contribution to improving quality and sense of place... Multifunctional GBI situated close to places where people live, socialise, and work, has been shown to be strategically important for quality of life".

Social Cohesion

"Quality greenspaces can positively impact several key social indicators... street trees and accessible greenspace have been shown to make neighbourhoods more attractive, relaxing, comfortable, and welcoming."

Economy

"Protecting and investing in GBI can support economic and sustainable growth."

Biodiversity

"One of the primary drivers of habitat and species loss is unsustainable land use...the protection of existing and provision of new or improved habitats through GBI can provide important refuges for wildlife... GBI can improve connectivity between existing areas of nature... and increase ecological

resilience. SuDS can improve water quality... even small green patches have a potential to benefit movement of biodiversity."

Climate Change

"In both urban and rural areas, it is important to recognise how land can affect the rate of carbon emissions and the incidence of flooding. GBI will play an increasingly important role in increasing climate resilience within our towns and villages. Increasing the surface area of green cover can provide a number of benefits towards tackling climate change."

Guidance

Placemaking Wales Charter

The **Placemaking Wales Charter** has been developed by Welsh Government and the Design Commission for Wales in collaboration with the Placemaking Wales Partnership. The charter outlines six placemaking principles that cover the range of considerations that contribute to establishing and maintaining good places.

Landscape Institute Green Infrastructure: An integrated Approach, 2013

The document defines **Green Infrastructure (GI)** as *"the network of natural and semi-natural features, green spaces, rivers and lakes... 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..."*

The Landscape Institute recommends *"local authorities ensure that GI is a core requirement in their policy documents" and "developers be aware of an area's strategic GI goals and appreciate how those goals contribute to mitigating the environmental impacts of new development and creating beautiful places."* The **Placemaking Wales Charter** has been developed by Welsh Government and the Design Commission for Wales in collaboration with the Placemaking Wales Partnership. The charter outlines six placemaking principles that cover the range of considerations that contribute to establishing and maintaining good places.

Well designed, maintained and connected green infrastructure is an essential component of good placemaking. The design of the proposed development should focus on well connected GI with multi-functionality to maximise the benefits to residents and the environment.

Building with Nature Standards

The **Building with Nature Standards** Framework 2.0 involves twelve Standards, arranged across four groups. There are six Core Standards and three themes, Wellbeing, Water and Wildlife, containing two Standards in each.

The six Core Standards underpin the delivery of high-quality green infrastructure through design, planning and development. The Standards in the Wellbeing, Water and Wildlife themes build on this to target specific aspects:

CORE Standards

- Standard 1** Optimises Multi functionality 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

WELLBEING Standards

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

WATER Standards

- 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



03 Existing Green Infrastructure

Desktop studies and field surveys have been carried out to confirm the green infrastructure features at the site and its surrounding context. The elements that are considered to form the existing Green Infrastructure of the site and surrounding context are:

- Trees and vegetation
- Habitat of ecological value
- Public Rights of Way
- Residential gardens

The GBI elements are described in the following sections, identifying and assessing existing or potentially important habitats or species and ecological connectivity corridors. This has been informed by the desktop studies, field surveys and specialist surveys / reports. It summarises the first two stages of the Stepwise approach, which are **Step 1: Avoid** and **Step 2: Minimise**.



Figure 3: Oblique View from Google Earth

Trees and vegetation

The Combined Arboricultural Impact Assessment/ Method Statement has been prepared by Tree Check Arboriculture Ltd. The surveys followed the methodology as set out in the British Standard 5837:2012.

The overall findings of the report notes that the site is bordered by a scrub to the north (G1) and hedgerow to the south (H1), refer to **Figure 4**.

G1 to the north is **Category B** and it comprises "small trees growing amongst dense bramble and scrub growth on an embankment outside of site but within influencing distance, providing visual and acoustic screening between the site and the main road to the north". Species include Holm oak (*Quercus ilex*), Common hawthorn (*Crataegus monogyna*), Goat willow (*Salix caprea*), Dogwood (*Cornus sp.*) and Sycamore (*Acer pseudoplatanus*).

H1 is a "mixed native, woody hedge bordering the site. Providing habitat and screening between the site and the road". It is **Category B** and it comprises Blackthorn (*Prunus spinosa*), Common ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*), Wych elm (*Ulmus glabra*), Common hawthorn (*Crataegus monogyna*).

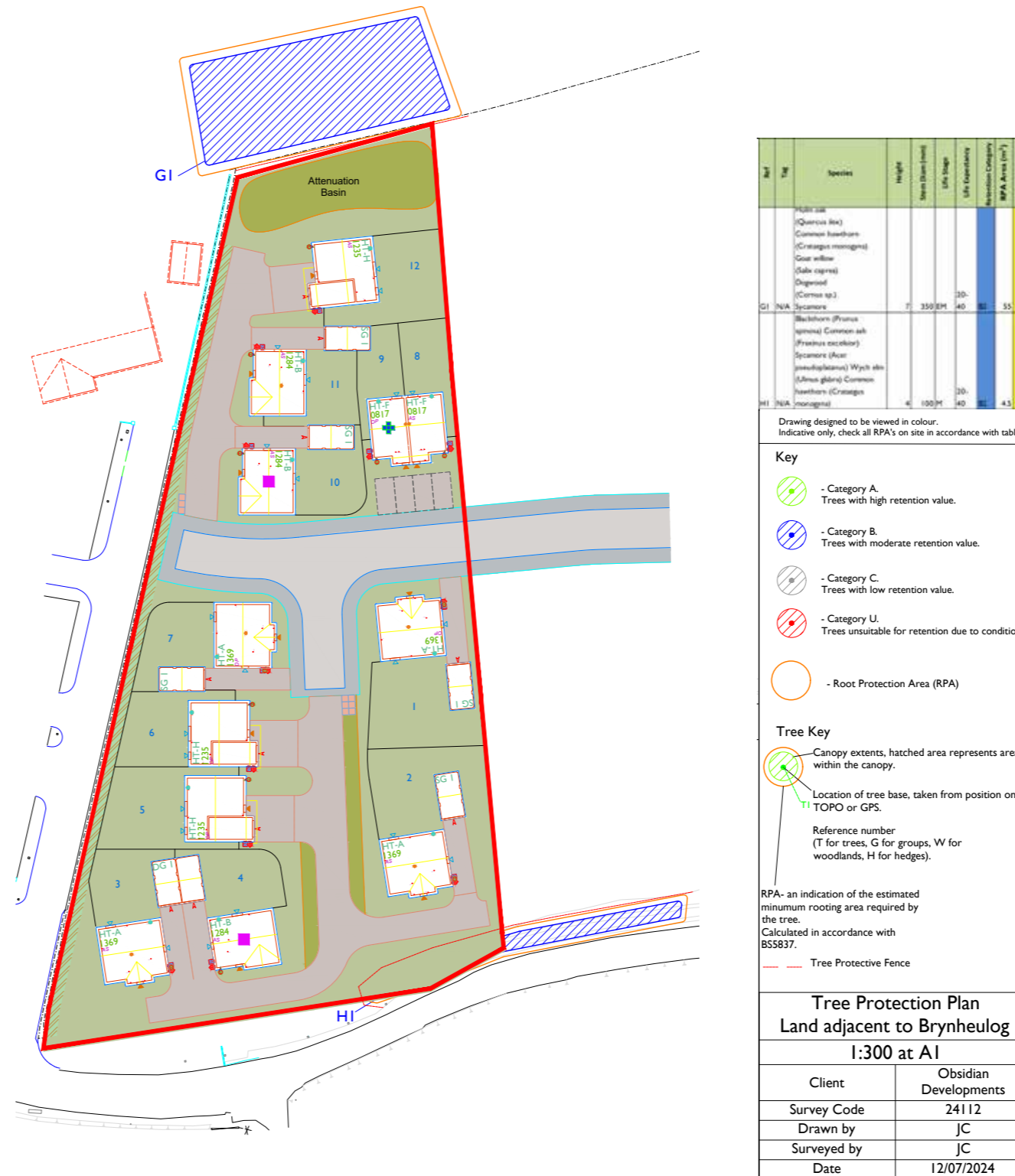


Figure 4: Tree Constraints Plan (Tree Check)

Habitat of ecological value

A Preliminary Ecological Survey Appraisal (PEA) was undertaken in August 2023 by Amber Environmental Consultancy. The PEA provides identification of any designations within the site and its context. The PEA also seeks to identify any protected habitats and species within the site. This is a reflection of Stepwise Approach **Step 1: Avoid** and **Step 2: Minimise**.

The habitats at and adjoining the site location were recorded in detail. The application area comprises one main habitat type: improved grassland (B4). A narrow strip along the northern edge of the field is referable to marshy grassland (B5) and poor semi-improved grassland (B6). There are hedges (intact species-poor J2.1.2 and hedge with trees J2.3.2) alongside the site, together with a fence / defunct hedge (J2.2.2), refer to **Figure 5**.

The survey confirmed:

- No badger setts, latrines or signs of foraging were found on the site. The development is unlikely to affect badgers.
- There is no suitable habitat for otters or water voles.
- As described by Lanc (2022), the site is generally unsuitable for reptiles and amphibians. No further survey should be required.
- The roadside hedge is low and regularly trimmed. It is poorly connected into the wider landscape, running between the roads and buildings of St Clears and a small housing estate with fences and walls to the west. It is not considered suitable habitat for hazel dormouse and no evidence of this species was found.
- Hedgehogs have been recorded within 500m of the site and there is anecdotal knowledge of hedgehogs within back gardens in Lower St Clears. The site itself is not currently considered to be good hedgehog habitat but as it develops to provide areas of new habitat, including gardens, it may become more attractive.
- The grassland is of little or no value to nesting birds, and no birds of conservation concern are likely to nest here. The hedges and scrub fringes provide some potential nesting habitat, but are unlikely to support species of significant conservation concern; none were seen.

- No bat survey was carried out. There is no potential for roosting bats on the site – the hedgerow trees are not mature enough to have developed significant potential roost features, and there are no buildings on site. The field is unlikely to be of significance to foraging bats, but the hedges may be used as commuting corridor features.

Recommendations for mitigation include:

- Soft landscaping should avoid using any invasive or potentially invasive species – native species should be preferred.
- As described by Habitat Matters, to minimise potential impacts on commuting bats or other nocturnal wildlife, a lighting plan should be included to ensure that any site-lighting (eg: security lights) is pointing into the site and is hooded to prevent unnecessary light spill into the adjacent field boundaries.

Enhancements for Biodiversity Net Benefit include:

- New habitats will be created through planting small areas of native tree and shrub species within the site and, over time, gardens will develop.
- Native tree and shrub planting could be carried out along the southern boundary of the site to provide new woodland habitat, improved wildlife linkages and enhance / protect the existing boundary hedge.
- Pollinator-friendly plants could be included in the landscape planting for insects and bee bricks will be included on each property, built into a sheltered south or west facing wall. The western screening brick wall would be ideal for this.
- Hedgehog gateways should be included in all fences between gardens
- Integrated bat boxes should be included on houses
- Bird nesting features should be provided on each property, e.g. artificial house martin nests or swift bricks

- The proposed attenuation basin should be designed with wildlife in mind, with exposed natural clay where possible and a maintenance regime which avoids summer mowing of surrounding edges. The marshy grassland flora developing in this area should be encouraged to redevelop along shallow edges, with supplementary planting of native species such as ragged robin and yellow flag iris.

Public Rights of Way

There are no public footpaths within the site; refer to **Figure 5**. The public right of way network can be accessed off Heol Goi to the south and to the west via crossing the A477.

Residential gardens

The rear gardens surrounding the site contribute to the green infrastructure of the neighbourhood, provide some amenity grass, hedges, shrubs and trees, including occasional mature trees to the road frontages.



Figure 5: Phase 1 Habitat Map

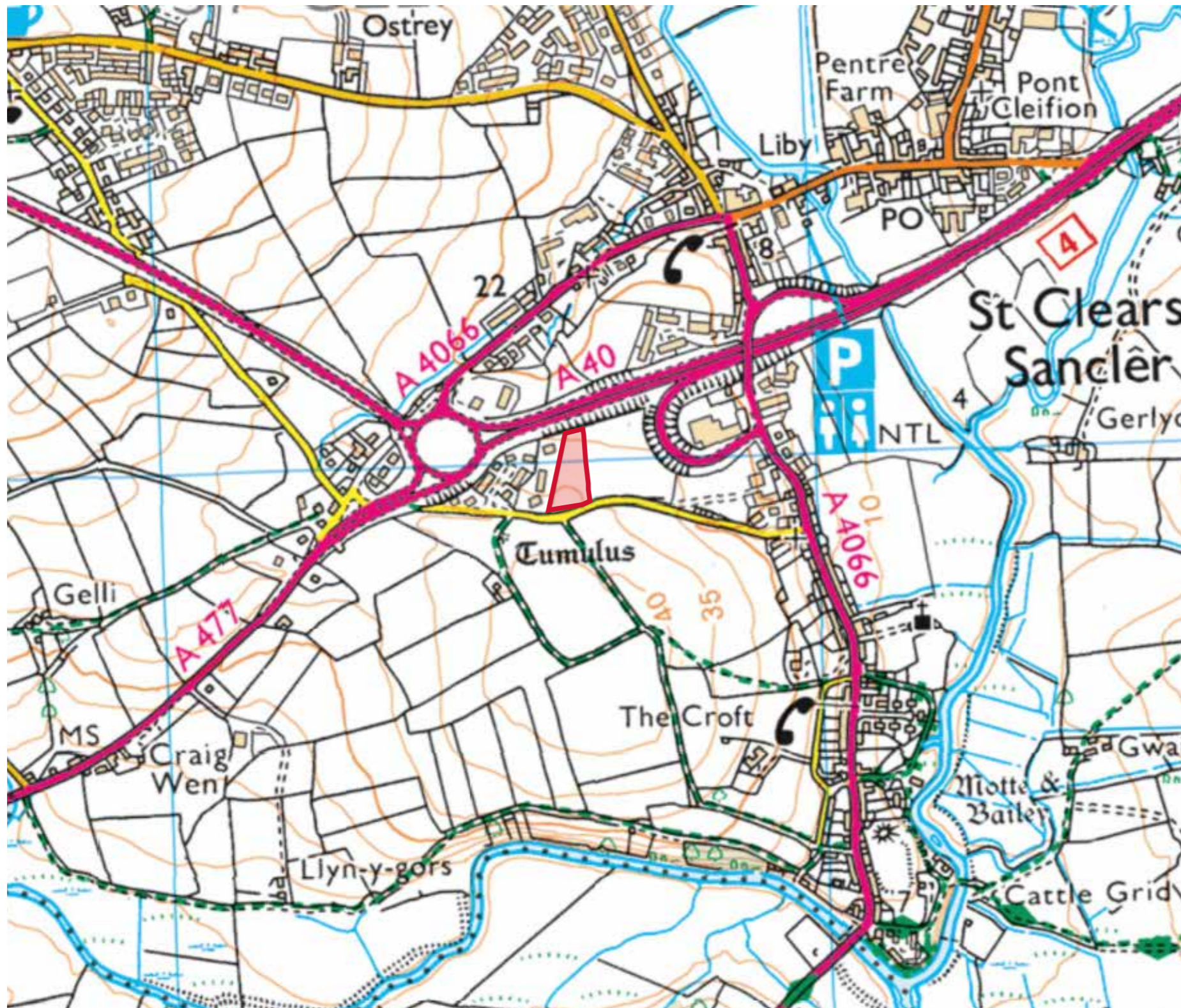


Figure 6: OS map showing public footpaths


04 Landscape Strategy

The planting strategy for Heol Goi is shown on **Figure 7**. It includes a variety of flowering and fruiting species which will provide contrast and year-round interest. Planting will include a combination of grasses, herbaceous plants and shrubs, located to define front gardens. Species-rich grass/wildflowers will edge the green spaces for interest and to increase biodiversity. Tree planting will filter views between houses and also provide some shelter.

The incorporation of SuDS features throughout will increase the amenity and biodiversity value of the green spaces within the site. Swales and rain gardens will be planted with diverse planting.

Where plant material is used of native species, there is a preference for local provenance plants, which in this case would be seed source zone 303 or 304, as defined Forest Practice Note No. 8, titled Using Local Seed Sources for Planting Native Trees and Shrubs, Forestry Commission (1999).

Key

-  Planning Application boundary
-  Existing trees to be retained and fully protected during construction in accordance with BS 5837:2012: Trees in relation to design, demolition and construction-Recommendations
-  Proposed tree [Extra Heavy Standard]
-  Proposed native boundary hedgerow planting
-  Proposed shrub and herbaceous planting
-  Proposed grass areas with areas with ecotone transition habitats and areas of wildflower, long grass. Local seed mix focused on pollinators supplied by Wyndrush Wild (<https://wyndrushwild.co.uk/>)
-  SuDS features - detention basins. Local seed mix focused on pollinators supplied by Wyndrush Wild (<https://wyndrushwild.co.uk/>)
-  SuDS features - rain gardens

0 2 4 6 8 10 20 m
 Scale @ A1 - 1:250
 TC24253 Landscape Layout v1.dwg
 17 July 2024



Figure 7: Landscape Strategy

Tree Planting

Wild Cherry - *Prunus avium*



Rowan - *Sorbus aucuparia*



Crab Apple - *Malus sylvestris*



Silver Birch - *Betula pendula*

Planting mix



The planting strategy for Heol Goi includes a variety of flowering and fruiting species which will provide contrast and year-round interest. Planting will include a combination of grasses, herbaceous plants and shrubs, located to define front gardens.

Shrubs for structure within the site will include *Spiraea japonica 'Firelight'*, *Cistus corbariensis* and *Hypericum 'Hidcote'*. Focal plants will include *Verbena bonariensis* with its bold colour and the textural form of *Pennisetum alopecuroides 'Hameln'*. There will be variations in the planting in each part of the site with a different combination of structure, texture and colour to provide visual interest.

Native species will also be included to increase biodiversity value where there is sufficient space, such as *Viburnum opulus* and *Corylus avellana*.

Native Boundary Hedgerow



The planting strategy includes native and ornamental species throughout. Specifically native mixes are proposed for sections of proposed hedgerows where there is sufficient space available. Native species are used within planting areas also; chosen to provide fruiting and flowering interest while also enhancing biodiversity.

SuDS Planting

Within the rain gardens the plants will include species which can withstand short term inundation and long periods of drought, whilst also providing seasonal interest. Robust plants with bright colours will line the SuDS adjacent to the road. In contrast, a delicate mix of plants will be provided within green spaces, combining with a damp wildflower seed mix for the larger areas (EM8: Meadow Mixture for Wetlands (by Emorsgate)).

05 Green Infrastructure Statement

A stepwise approach was utilised in the preparation of the masterplan and the landscape strategy. The first stage was to **Identify and Assess the value of** existing GI. The retention of existing GI was a priority wherever possible, in accordance with **Step 1: Avoid** and **Step 2: Minimise**. To address the loss of trees at the site, the green infrastructure proposals follow the Stepwise Approach set out in PPW12, namely **Step 3: Mitigate / Restore**, **Step 4 : Compensate** and by considering Enhancement at each stage in accordance with the **DECCA Framework**.

Trees

The tree survey report concluded that:

- "there are no conflicts between the RPA's of trees on site with the current proposed layout of buildings or heavy structures.
- No demolition work is proposed within or adjacent to the root protection areas of retained trees.
- There is no conflict between the proposed layout of service routes and the RPA's of retained trees.
- No hard surfacing installation is proposed within the RPA of any retained trees on site.
- No excavation works within the RPA of trees is proposed. If the design is changed to include the necessity for excavation within the RPA of any retained trees, the project arboriculturalists must be consulted.
- No conflicts involving level changes are anticipated on site, although no level data has been provided. If there are any significant level changes around trees the project arboriculturalists must be consulted".

The tree planting strategy for the site is shown on the **Landscape Strategy Plan (L1)** prepared by Tir Collective. The proposals are for 19no trees comprising a mix of four different species. Native species are proposed along with fruit producing species. The proposals offer betterment because the residential development does not result in tree loss.

Habitat of ecological value

A Preliminary Ecological Survey Appraisal (PEA) provides recommendations for mitigation and enhancement, each of which are addressed below in *Green* text:

Recommendations for mitigation include:

- Soft landscaping should avoid using any invasive or potentially invasive species – native species should be preferred. *As required.*
- As described by Habitat Matters, to minimise potential impacts on commuting bats or other nocturnal wildlife, a lighting plan should be included to ensure that any site-lighting (eg: security lights) is pointing into the site and is hooded to prevent unnecessary light spill into the adjacent field boundaries. *As required.*

Enhancements for Biodiversity Net Benefit include:

- New habitats will be created through planting small areas of native tree and shrub species within the site and, over time, gardens will develop. *As required.*
- Native tree and shrub planting could be carried out along the southern boundary of the site to provide new woodland habitat, improved wildlife linkages and enhance / protect the existing boundary hedge. *As required.*
- Pollinator-friendly plants could be included in the landscape planting for insects and bee bricks will be included on each property, built into a sheltered south or west facing wall. The western screening brick wall would be ideal for this. *As required.*
- Hedgehog gateways should be included in all fences between gardens *As required.*
- Integrated bat boxes should be included on houses *As required.*
- Bird nesting features should be provided on each property, e.g. artificial house martin nests or swift bricks *As required.*
- The proposed attenuation basin should be designed with wildlife in mind, with exposed natural clay where possible and a maintenance regime which avoids summer mowing of surrounding edges. The marshy grassland

flora developing in this area should be encouraged to redevelop along shallow edges, with supplementary planting of native species such as ragged robin and yellow flag iris. *As required.*

Public Rights of Way

There are no public footpaths within the site. The public right of way network can be accessed off Heol Goi to the south and to the west via crossing the A477. The residents of the proposed will have access to Heol Goi to access the public footpath network.

Residential gardens

The property gardens in the surrounding neighbourhood would not be affected by the development. The addition of property gardens including tree, shrub and herbaceous planting within the site would add to the green infrastructure potential and biodiversity value of residential gardens.

Resilience of Ecosystems

The **Environment (Wales) Act 2016** provides a duty upon public bodies such as Carmarthenshire Council to promote the resilience of ecosystems, which is reflected in planning policy.

The proposed green infrastructure strategy would comprise areas of habitat retention (existing trees) and areas of habitat creation (wildflower lawns, tree planting, native scrub planting and rain gardens).

The planting strategy includes a combination of native and ornamental plant species to enhance biodiversity and botanical diversity. The species selected would be adaptable to wet and dry conditions, including lengthy dry spells with the rain gardens.

The range of both tree and plant species proposed would enhance the biodiversity, increase species diversity, the age diversity of vegetation and improve the resilience of habitats to climate change.

The proposed green infrastructure strategy has considered the existing green infrastructure features within and beyond the site boundary, as recommended by a stepwise approach.

The proposed green infrastructure would increase the biodiversity, species diversity, and habitat structure within the site whilst contributing to the multi-functionality of the green infrastructure elements.

Multi-functionality of Green Infrastructure

This section identifies the multi-functionality of each proposed green infrastructure element: trees, native scrub planting, SuDS, wildflower lawns, and shrub planting. These elements reflect the over arching principle of **Stepwise Step 3: Mitigate / Restore, Step 4 : Compensate** and by considering **Enhancement** at each stage in accordance with the DECCA Framework, applying the principles of good placemaking and green infrastructure.

The multi-functionality of green infrastructure is described as “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 ecosystem services. They may have obvious primary functions, but each asset can perform different functions simultaneously”.

The Landscape Strategy aims and the GI functions and benefits of the proposals are reviewed against the list below:

- Contribution to Placemaking
- Flood Mitigation
- Cooling and Shade
- Food
- Exercise
- Health and Wellbeing
- Calming and Inspiring
- Nutrient Cycling
- Wildlife Habitat
- Wind break
- Cleaning Water and Air

Figure 8 lists the key retained and proposed landscape assets, its green infrastructure element, and the functions of each landscape asset while signposting against the Building with Nature Standards.

Landscape asset	Green infrastructure element	Functions	Building with Nature Standards
Existing and proposed trees	Trees / vegetation	<ul style="list-style-type: none"> • Wildlife Habitat • Contribution to Placemaking • Cooling and Shade • Calming and Inspiring • Health and Wellbeing • Nutrient Cycling • Wind break • Cleaning Water and Air 	<ul style="list-style-type: none"> • 2 - Positively Responds to the Climate Emergency • 4 - Champions a Context Driven Approach • 5 - Creates Distinctive Places • 6 - Secures Effective Place-keeping • 7 - Brings Nature Closer to People
Scrub planting	Scrub	<ul style="list-style-type: none"> • Wildlife Habitat • Contribution to Placemaking • Cooling and Shade • Food • Calming and Inspiring • Health and Wellbeing • Nutrient Cycling • Wind break • Cleaning Water and Air 	<ul style="list-style-type: none"> • 1 - Optimises Multi functionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 3 - Maximises Environmental Net Gains • 5 - Creates Distinctive Places • 7 - Brings Nature Closer to People • 11 - Delivers Wildlife Enhancement • 12 - Underpins Nature's Recovery
Shrub planting within development	Trees / vegetation	<ul style="list-style-type: none"> • Contribution to Placemaking • Food • Calming and Inspiring 	<ul style="list-style-type: none"> • 1 - Optimises Multi functionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 3 - Maximises Environmental Net Gains • 7 - Brings Nature Closer to People
Proposed SuDS features	Sustainable Drainage	<ul style="list-style-type: none"> • Cleaning Water and Air • Flood Mitigation • Contribution to Placemaking • Calming and Inspiring • Nutrient Cycling 	<ul style="list-style-type: none"> • 1 - Optimises Multi functionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 5 - Creates Distinctive Places • 7 - Brings Nature Closer to People • 9 - Delivers Climate Resilient Water Management • 10 - Brings Water Closer to People
Proposed species rich grasslands	Grassland	<ul style="list-style-type: none"> • Wildlife Habitat • Calming and Inspiring • Exercise • Health and Wellbeing • Nutrient Cycling • Wildlife Habitat • Contribution to Placemaking 	<ul style="list-style-type: none"> • 1 - Optimises Multi functionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 3 - Maximises Environmental Net Gains • 5 - Creates Distinctive Places • 6 - Secures Effective Place-keeping • 7 - Brings Nature Closer to People • 11 - Delivers Wildlife Enhancement • 12 - Underpins Nature's Recovery

Figure 8: Green Infrastructure Functionality

06 Conclusions

The Environment (Wales) Act 2016 provides a duty upon public bodies such as Carmarthenshire Council to promote the **resilience of ecosystems**. The proposed green infrastructure strategy comprises a range of species, both native and non-native species to enhance biodiversity and botanical diversity.

The species selected are adaptable to wet and dry conditions, including lengthy dry spells. The range of both tree and plant species proposed would enhance the biodiversity, increase species diversity, the age diversity of vegetation and improve habitat resilience to climate change.

The proposed green infrastructure strategy has considered the existing green infrastructure features within and beyond the site boundary, as recommended by the Stepwise approach. The proposed features would increase the biodiversity, species diversity, and habitat structure on the site whilst contributing to the multi-functionality of the green infrastructure elements.

The proposals aim to create a hierarchy of spaces focused around existing and proposed green infrastructure. Naturalistic green spaces provide a setting for the development with space for play and walking within green spaces which encourage social interaction.

SuDS features are integrated into the landscape strategy, introducing flowering pollinator species to provide a source of nectar for bees and other insects.

The landscape proposals will:

- Avoid tree loss.
- Supplement existing planting with new native planting of Welsh provenance.
- Establish strong connectivity across the site for people and nature.
- Focus on habitat enhancements which improve species and age diversity to improve longevity and resilience to climate change.
- Planting and grasslands to be designed to work with nature, based on lower future maintenance requirements.
- Integrate SuDS features as part of landscape proposals to improve amenity value.
- Create a landscape that changes with the seasons to increase amenity and reinforce a connection with nature.

With regards to the **Placemaking Wales Charter** the landscape proposals make a good contribution towards the six placemaking principles, which cover the range of considerations that contribute to establishing and maintaining good places.

The proposals also contribute well to the **12 Standards of Building with Nature**, creating well connected, multi-functional green infrastructure.

Overall, it is considered that the proposed development would be in accordance with the Swansea Council Local Plan Policies relating to Green Infrastructure.



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