tir collective
LANDSCAPE ARCHITECTS

Land west of Mount Road
Green Infrastructure Statement

R02

03 March 2025

This **Green Infrastructure Statement** has been prepared by:

On behalf of:

REWE 11 Limited

With input from:

Ecology

Arboriculture

Drainage

Document Control:

Client:	REWE 11 limited		
Project:	Land west of Mount Road		
Job number:	TC24283		
Document title:	Green Infrastructure Statement		
Revision:	01	Status:	Draft
Date:	13 February 2025		
Prepared by:	Emma Hayes CMLI		
Checked by:	Lee Morris CMLI		
Revision:	02	Status:	Final for PAC
Date:	03 March 2025		
Prepared by:	Emma Hayes CMLI		
Checked by:	Lee Morris CMLI		

Contents

01 Introduction 4

02 Policy Context 6

03 Existing Green Infrastructure 9

04 Landscape Strategy 13

05 Green Infrastructure Statement 15

06 Conclusion 18

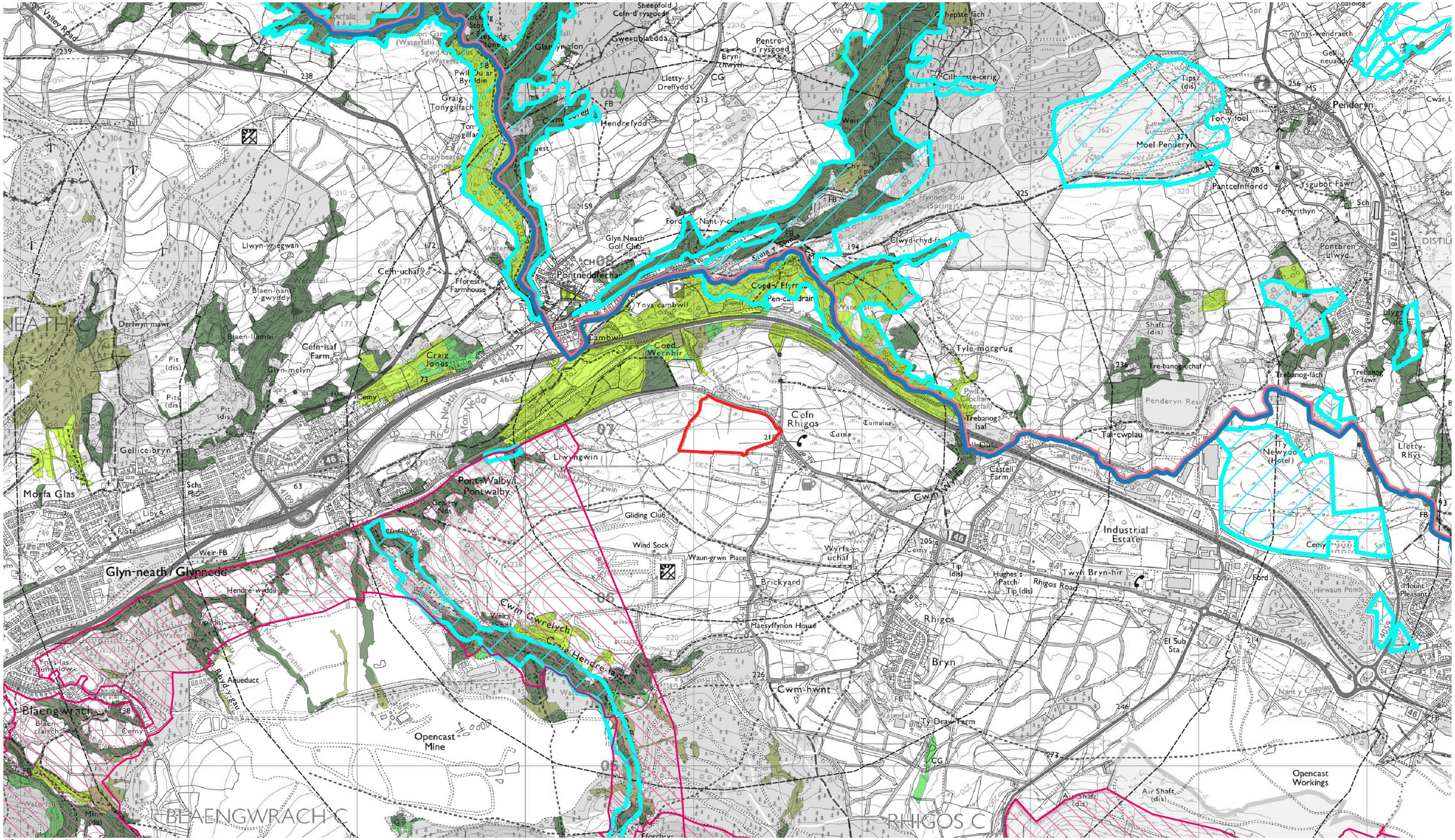


Figure 1: Site location

Scope

Tir Collective is instructed by REWE 11 Limited to prepare this **Green Infrastructure Statement**, which relates to the proposed battery storage development circa 1.7km to the west of Rhigos National Grid Substation on land west of Mount Road, Rhigos.

Proposals at the site would include installation of battery energy storage system (BESS), together with high voltage substation compound, transformer stations, inverters, site access, internal access tracks, security measures, access gates, other ancillary infrastructure. Access would connect the battery storage area with Mount Road to the east via an existing track alignment, which heads south from the site, then heads east along existing filed boundaries, to the west and south of Cefn Farm. The proposed development would have a temporary lifespan of 40 years. The proposed development also incorporates various landscape and ecological enhancements such as new native hedgerow, tree and scrub planting.

The site covers 5.2 hectares to the west of the hamlet of Cefn Rhigos, circa 800m to the southeast of the village of Pontneddfechan and 1km to the northwest of the village of Rhigos. The proposed development would be situated in the southwest corner of the site.

The site comprises part of a large sized semi-improved grassland field with boundaries largely lined by mature trees and open boundaries with scattered trees.

The site field forms part of the regular fieldscape on the south side of the Neath valley. The landscape that contains the site is influenced by past industrial activity. The site field is large and regular in shape, with boundaries that follow the local field pattern and the local road Rhigos Road immediately to the north. The east boundary is defined by a linear belt of woodland, including a line of coniferous trees. The southern and southwest boundary are defined by an open boundary with scattered mature trees and scrub. The northwest boundary is defined by scattered mature trees and a linear strip of mature trees.

The site is situated on a gentle north facing slope of the River Neath and is influenced by several drainage features. The highest point of the site is along the southwest boundary with a high point of 229m AOD (Above Ordnance Datum). The site falls in a northerly direction with a low point of 207m AOD in the northwest corner.

A line of pylon towers and overhead cables crosses the landscape immediately to the south of the site.

The north of the site is located within the locally designated Coed Wernhir SINC (Site of Importance for Nature Conservation). The SINC includes extensive areas of marshy grassland and is part of an extensive habitat mosaic.

The landscape baseline conditions of the site are described in further detail within Landscape and Visual Appraisal (LVApp), which was also produced by Tir Collective. It describes the landscape of the site and provides assessment of effects on landscape character and visual amenity. Tir Collective with input from **GE Consulting** also produced the Landscape and Ecological Management Plan (LEMP), which sets out the design, management and maintenance of the landscape and ecological proposals.

Key

- Site boundary (excluding cable route)
- 1km buffers from site boundary
- Bannau Brycheiniog National Park
- Special Landscape Areas

Ancient Woodland sites:

- Ancient Semi Natural Woodland
- Ancient Woodland Site of Unknown Category
- Plantation on Ancient Woodland Site
- Restored Ancient Woodland Site

Ecology designations:

- SSSI sites

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) Edition 12, February 2024

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…"

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

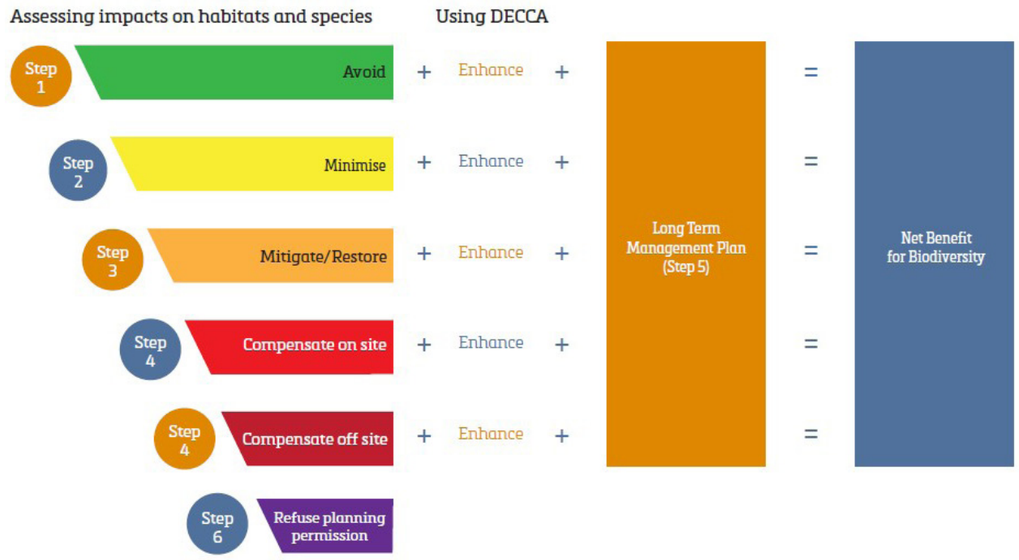
The **planting of new trees, hedgerows, groups of trees and areas of woodland** should be promoted as part of new development. Existing trees/ groups of trees, hedgerows and areas of woodland must be protected "where they have ecological value, contribute to the character or amenity of a particular locality,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

2 Paragraph 6.4.39 Planning Policy Wales Edition 12, February 2024
3 Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024
4 Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024

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…"[5]

5 Paragraph 6.6.19 Planning Policy Wales Edition 12, February 2024



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

Local Planning Policy

Rhondda Cynon Taf Local Development Plan, Adopted March 2011

The site is located in Rhondda Cynon Taf Unitary Authority. Relevant LDP policies in relation to the site and green infrastructure and biodiversity include:

AW 8 - Protection and Enhancement of the Natural Environment states "Rhondda Cynon Taf's distinctive natural heritage will be preserved and enhanced by protecting it from inappropriate development.

Development proposals will only be permitted where:-

1. They would not cause harm to the features of a Site of Importance for Nature Conservation (SINC) or Regionally Important Geological Site (RIGS) or other locally designated sites, unless it can be demonstrated that:-

a) The proposal is directly necessary for the positive management of the site; or

b) The proposal would not unacceptably impact on the features of the site for which it has been designated; or

c) The development could not reasonably be located elsewhere and the benefits of the proposed development clearly outweigh the nature conservation value of the site.

2. There would be no unacceptable impact upon features of importance to landscape or nature conservation, including ecological networks, the quality of natural resources such as air, water and soil, and the natural drainage of surface water.

All development proposals, including those in built up areas, that may affect protected and priority species will be required to demonstrate what measures are proposed for the protection and management of the species and the mitigation and compensation of potential impacts. Development proposals must be accompanied by appropriate ecological surveys and appraisals, as requested by the Council.

Development proposals that contribute to the management or development of Ecological Networks will be supported.

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.

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 the environment.

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.*"

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

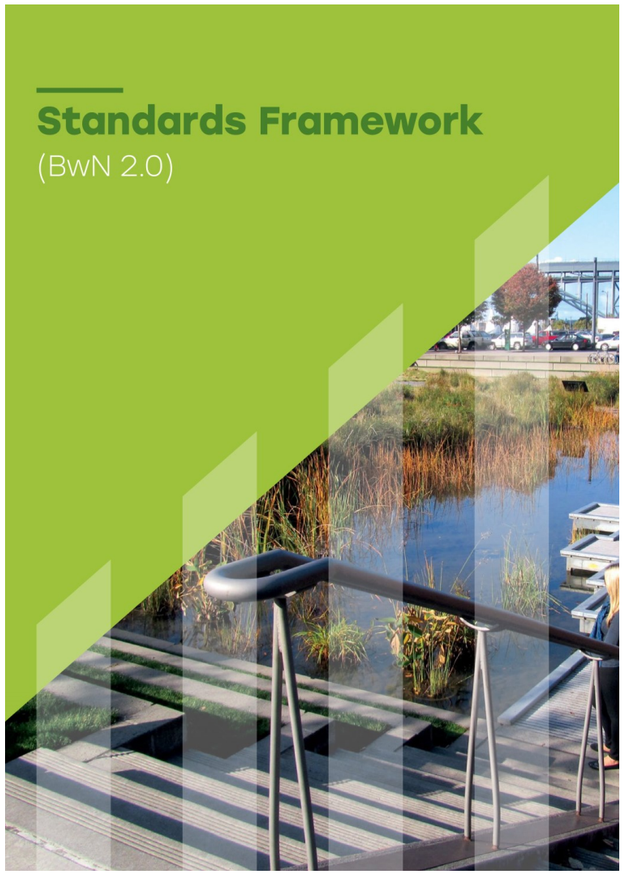
WATER Standards

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
Surveys have been carried out to confirm the green infrastructure features at the site and its surrounding context.





03 Existing Green Infrastructure

The elements that are considered to form the existing Green Infrastructure (GI) of the site and surrounding context are as follows:

- Trees
- Ecology and Habitat
- Watercourses and drainage

Trees

The tree survey and categorisation report was produced by **Tree Check Arboriculture Ltd** on the 14th February 2025.

The report highlights that tree cover on the site is sparse and largely confined to the periphery, where it exists in the form of hedgerow boundaries or their unmaintained remnants, often having developed into isolated standard trees. The only trees situated away from the site boundary are a pair of standard trees within the main field where they remain as the sole remnants of a historic banked hedgerow.

The tree survey identified 45 individual trees, 13 tree groups, 2 hedgerows and 1 woodland. No Category A (high retention value) trees were identified on site. 18 individual trees, 7 tree groups and the 1 area of woodland were surveyed as Category B, which have moderate retention value. 12 individual trees were surveyed as Category U, which are recommended for removal prior any work beginning on site. The remaining 15 individual trees, 6 tree groups and 2 hedgerows were surveyed as Category C, which have low retention value, see Figure 1.

All the trees surveyed range between young to mature with the majority being early mature. Species surveyed include: Blackthorn *Prunus spinosa*, Common alder *Alnus glutinosa*, Common ash *Fraxinus excelsior*, Common beech *Fagus sylvatica*, Common dogwood *Cornus sanguinea*, Common hawthorn *Crataegus monogyna*, Common holly *Ilex aquifolium*, Crab apple *Malus sylvestris*, Goat willow *Salix caprea*, Grey alder *Alnus incana*, Hazel *Corylus avellana*, Hybrid larch *Larix x eurolepis*, Leyland cypress *X Cuprocyparis leylandii*, Lodgepole pine *Pinus contorta*, Pedunculate oak *Quercus robur*, Scots pine *Pinus sylvestris*, Silver birch *Betula pendula*, and Sitka spruce *Picea sitchensis*.

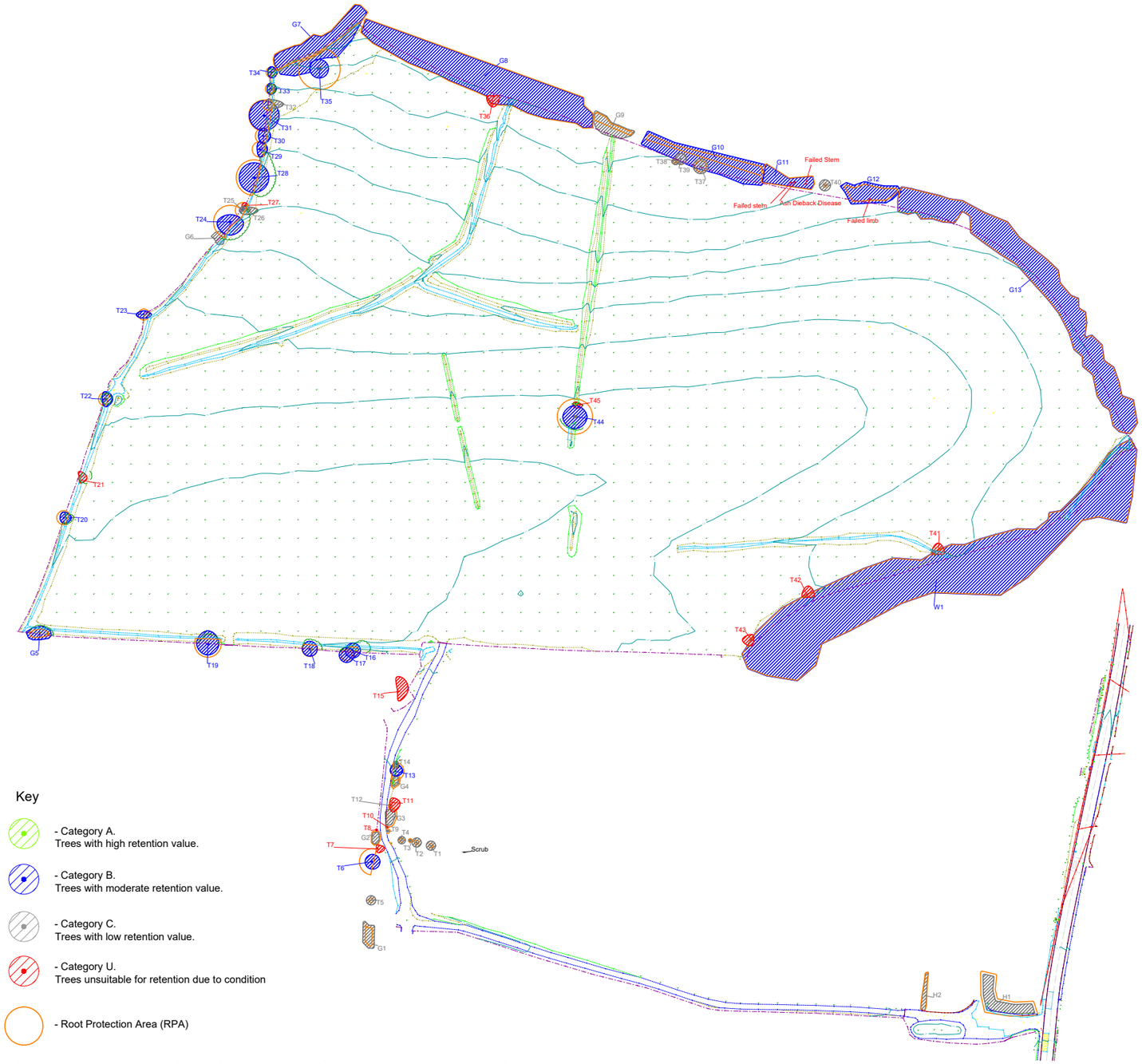


Figure 1: Tree Constraints Plan, produced by Tree Check Arboriculture Ltd.

Ecology and Habitat

An Ecological Impact Assessment (EcIA) was completed by **GE Consulting** in February 2025.

The desk study confirmed that part of the locally designated **Coed Wernhir SINC (Site of Importance for Nature Conservation)** is located within the north of the site. It is designated for semi-natural deciduous woodland, part of which is ancient woodland (beyond the site). It also includes extensive areas of purple moor-grass and rush pasture, potential marsh fritillary butterfly habitat and high potential as amphibian habitat.

0.06km to the west of the site is a watercourse, which is blanket designated as a SINC.

The Site comprises a single field of priority habitat purple moor-grass and rush pasture and lowland dry acid grassland, with an area of mire containing heath and moss species to the southeast of the Site. A central band in the middle of the Site receives light sheep grazing. Several wet ditches and flushes run from south to north throughout the Site, with a small unnamed watercourse running the length of the western boundary. Mature oak trees are present on the Site boundary to the south and west, with a single mature oak present in the centre of the Site. Tree lines run adjacent to the north and eastern boundaries and are associated with a permanent wet ditch. A permanent pond with emergent aquatic vegetation, fed by surface water drainage ditches and the watercourse is present adjacent to the western boundary. The northwest section of the Site is within the boundary of Coed Wernhir SINC. As the areas of purple moor-grass and rush pasture and lowland dry acid grassland qualify as priority habitat, these are considered to be of County importance. The trees, watercourses/ wet ditches and pond are considered to be of Local importance, see Figure 2.

In relation to species, it is considered necessary to undertake an eDNA and Habitat Suitability Index (HSI) survey of accessible ponds to ascertain whether Great Crested Newts (GCN) are present on Site. This will be undertaken in 2025. Owing to suitable habitat features and presence of species from historical records, it is considered necessary to undertake automated detector surveys for commuting and foraging bats. This will be undertaken in 2025.

As suitable habitat is present within the Site in the form of tussocky pasture, tree lines and watercourses, as well as presence of notable and protected bird species records from within the Site and the wider landscape, it is considered necessary to undertake breeding bird surveys. This will be undertaken in 2025.

Due to the Site being within a SINC designated for potential marsh fritillary presence, as well as surrounding habitat being either designated or suitable for marsh fritillary, it is considered necessary to undertake further surveys for marsh fritillary. This will be undertaken in 2025.

Finally, as the presence of habitat on Site creates suitable opportunities for reptiles, it is considered necessary to undertake a reptile survey to ascertain whether reptile populations are present within the Site and, if found, their significance within the local area. This will be undertaken in 2025.

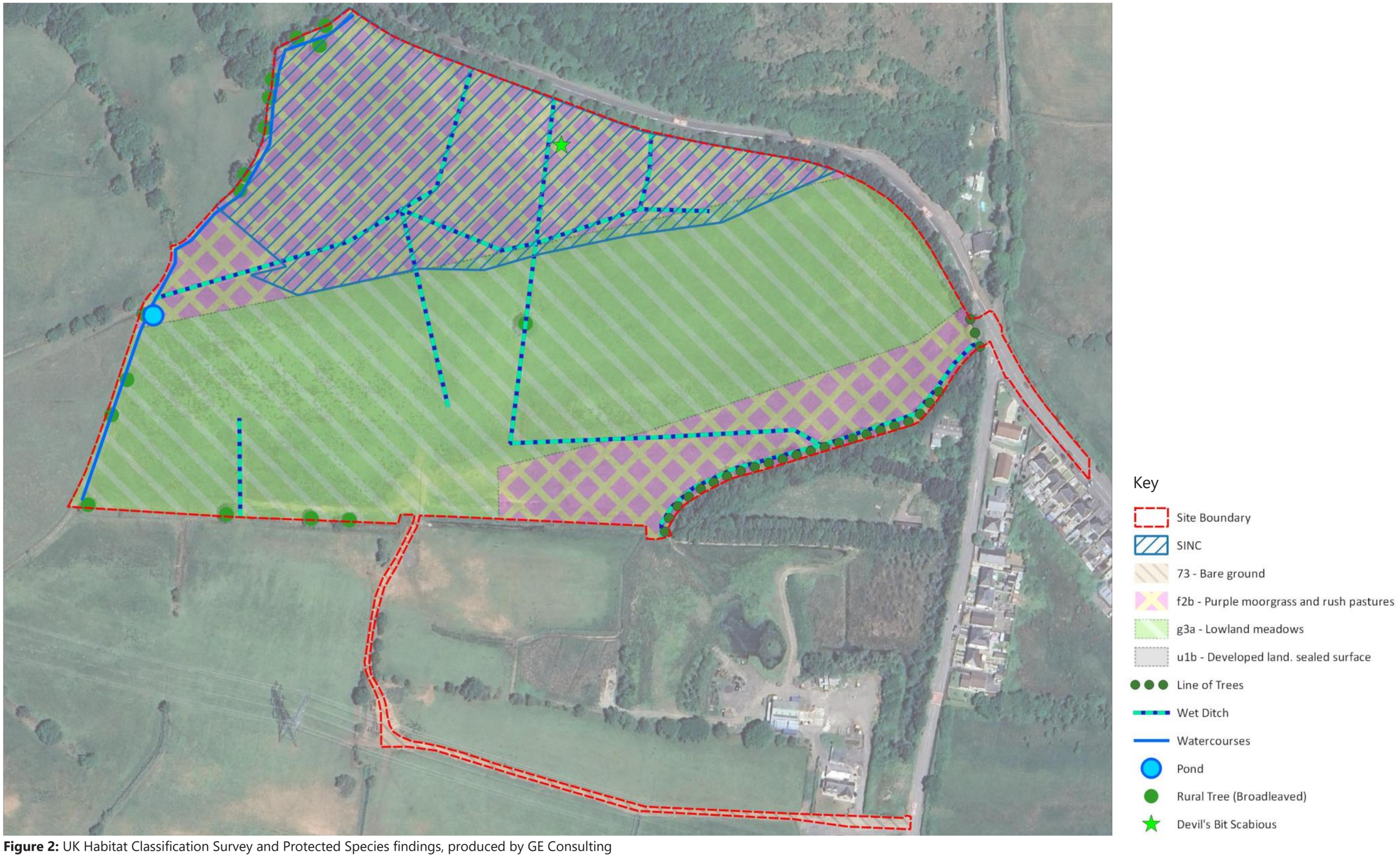


Figure 2: UK Habitat Classification Survey and Protected Species findings, produced by GE Consulting

Watercourses and drainage

A **Outline Surface Water Drainage Strategy** was produced by **JBA Consulting** in February 2025. It included a topographic survey undertaken by Landmark Surveys Wales in October 2024. It confirmed ground levels are highest in the southwest of the site at approximately 228.49m AOD. Generally, the ground declines in a northerly direction, with the lowest ground levels in the north-western corner of the site at approximately 204.61m AOD. The proposed access track is at a level of approximately 228.38m AOD at the point where it joins Mount Road in the southeast.

In relation to watercourses, there are no NRW Main Rivers crossing the site. However, there is a network of Ordinary Watercourses and drainage ditches that cross through, and bind the site, see Figure 3. These waterbodies ultimately flow in a northerly direction towards the Mellte River which is approximately 1km to the north of the site.

The geology of the site was also assessed using the British Geological Survey (BGS) GeoIndex. It indicates that the site is underlain by South Wales Lower Coal measures Formation, comprised of mudstone, siltstone, and sandstone. Some of the site is shown to have no record of superficial deposits, with the majority of the site indicated to be underlain by Devensian Till. A small area in the southeast is shown to be underlain by Peat.

The soils on site have been assessed on the Cranfield University Soilscape viewer and are described as slowly permeable wet very acid upland soils with a peaty surface, and impeded drainage.

Given the underlying geology and assumed soil type, along with being unaware of any existing surface water drainage infrastructure across the site, it is assumed that currently surface water drains via evapo-transpiration losses, slow infiltration into the underlying soils, and runoff towards existing drainage ditches and ordinary watercourses that are located within and around the site.

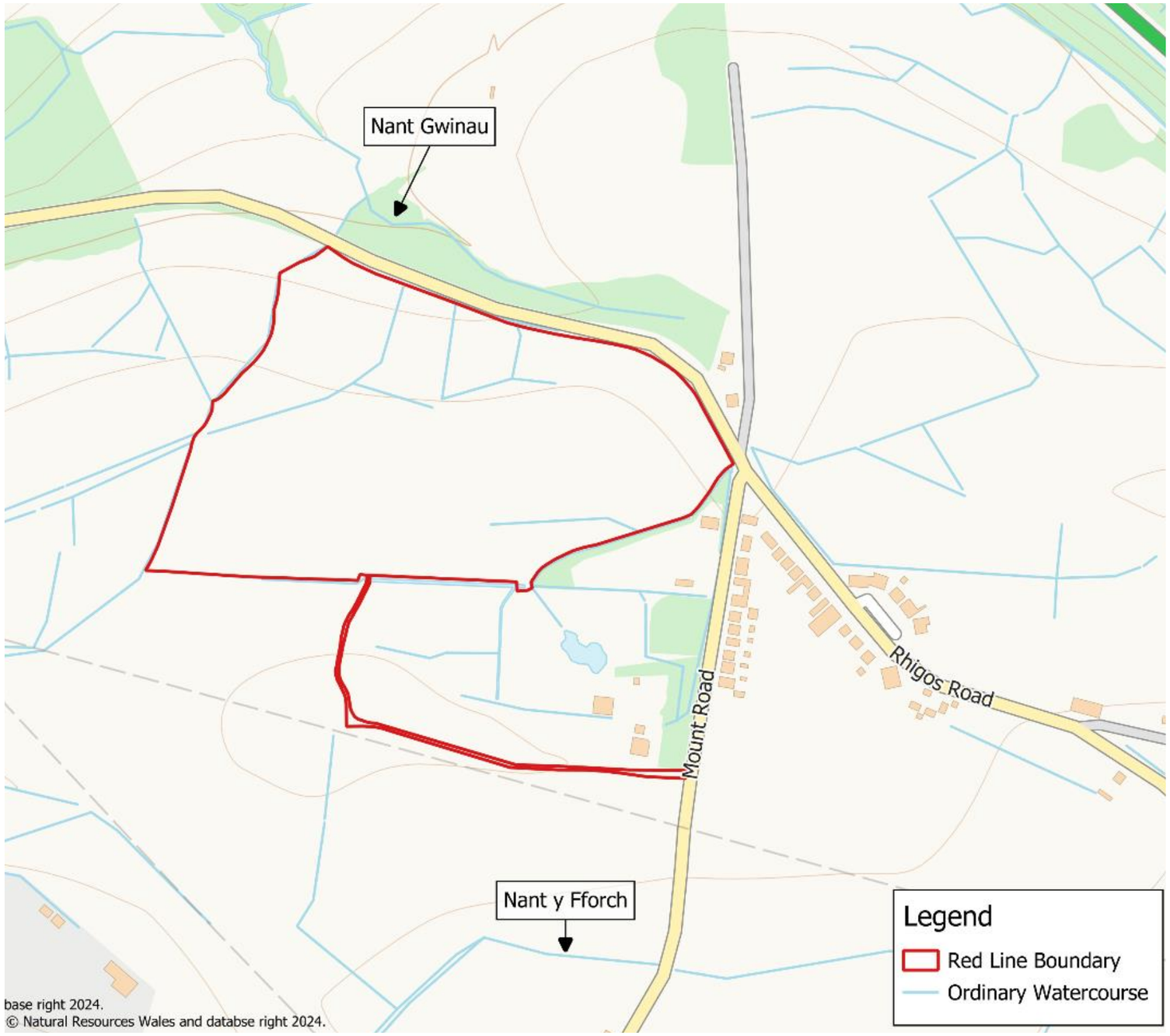


Figure 3: Nearby watercourses, by JBA Consulting

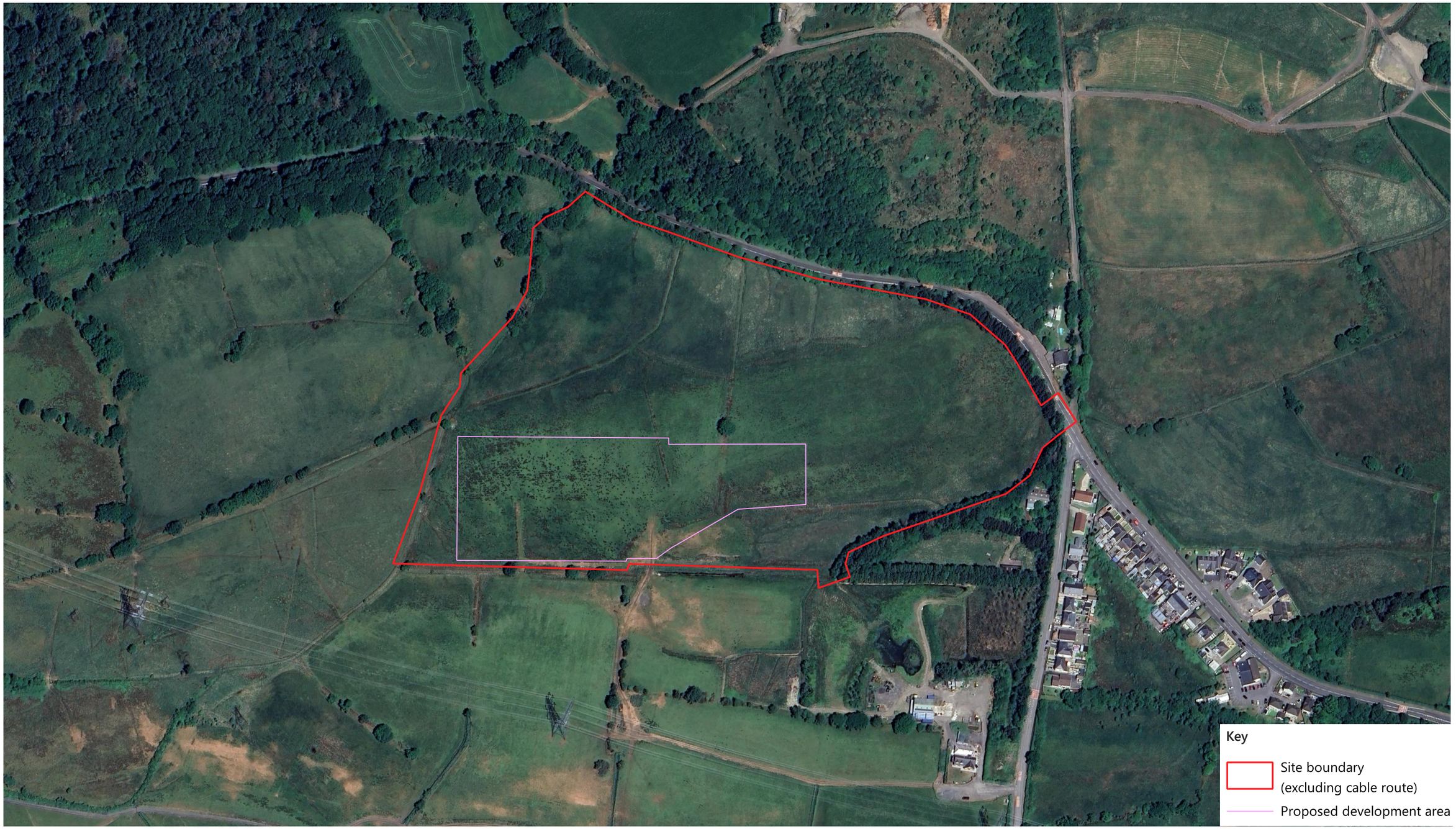


Figure 4: Aerial image of the site and location of the proposed development

04 Landscape Strategy



Figure 5: Landscape Strategy

The below list defines the key landscape design concepts, the retention of valuable habitats, and the enhancement of green infrastructure features which have guided the preparation of the landscape proposals.

- Retention, enhancement and protection of existing vegetation along field boundaries and alongside watercourses and drainage ditches.
- Proposed tree planting to reinforce the existing vegetation pattern and whilst filtering views towards the site.
- Native hedge planting on the south boundary to strengthen and gap up tree line boundaries. Species chosen will be native species of local provenance.
- Enhancement of retained grassland habitat through sensitive management
- The erection, maintenance and periodic replacement (as necessary) of bird boxes.
- The erection, maintenance and periodic replacement (as necessary) of bat boxes on suitable trees within / bordering the site.
- Habitat creation for fauna such as reptiles, mammals and invertebrates with the installation of habitat piles.
- Ecologically sensitive working practices as precautionary measures to protect species that may be utilising the site.
- A suitable buffer established around the root protection zone of each tree to be retained.

Maintenance and Management

The Landscape Ecological Management Plan (LEMP) sets out the management and maintenance of the proposed development over the 40 year operational phase of the BESS development.

The existing habitats identified as of value within the site will be retained and protected during the construction and operational phase of the development. Following decommissioning, the new areas of habitat that have been created will be retained.

The maintenance and management objectives of the proposals and enhancements are to ensure the overall design concepts are achieved and the planting is established.

Retained trees



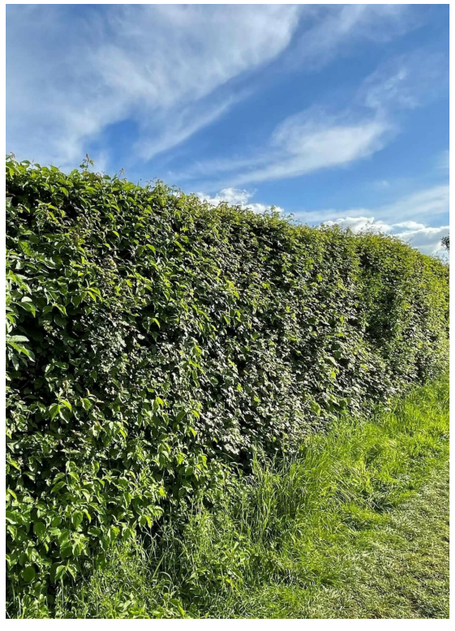


Image by Tree Check Arboriculture Ltd

Proposed native tree and hedgerow planting







05 Green Infrastructure Statement

This statement provides a description of the effects of mitigation of the individual green infrastructure components, which forms the **Step D: Mitigate**, with a view to minimising any negative impacts on biodiversity as far as possible. The proposed result in enhancements over and above mitigation for loss.

Trees

Although trees are sparse within the site, they contribute to the field pattern, landscape character and setting of the area. The landscape approach to the design of the proposed development identified this importance as **Step A: Identify and Assess** and retention was a priority wherever possible, in accordance with **Step B: Avoid** and **Step C: Respond and Design**.

During the design development of the project, consideration was given to the existing individual trees, tree groups, hedgerows and woodland on site and adjacent to the site. In addition to the landscape character contribution, they also help to reduce potential visual impacts of the proposed BESS development. It was therefore critical to the design layout of the site that these features should be retained.

The proposed BESS and substation compound is located within the southwest of the site and is set away from existing field boundaries that include scattered trees and tree groups. Tree T44, a Category B Pedunculate oak *Quercus robur,* is an isolated tree within the centre of the site. The proposed development is set away from the tree and its Root Protection Area (RPA) to ensure it would not be harmed and can be retained.

Proposed access routes would utilise existing access tracks to avoid removing any trees or groups. All these **avoid** measures has resulted in all, trees, tree groups, hedgerows and adjacent woodland being retained, except the trees surveyed as Category U, which are unsuitable for retention regardless of the development proposals.

The following **enhancement measures** are proposed for the site, which are also illustrated on the Landscape Strategy Figure 5:

- Strategic planting along the north/ northeastern boundary of the site, reflecting the character and strengthening the existing boundary. The new planting would include a belt of coniferous woodland and scrub planting adjacent to the existing coniferous tree belt, scrub planting along parts of the boundary alongside existing trees and new specimen tree planting to infill gaps.
- Further specimen tree planting is proposed inside the site, to the north of the BESS infrastructure, providing some filtering from key view directions which is appropriate to the existing sparsely treed local landscape character.
- Native hedge planting is proposed on the south boundary to strengthen and gap up the existing boundary. Hedge species chosen will be of local provenance.
- Specimen tree planting will also be provided along the length of the southern boundary hedge, alongside the existing retained trees at this boundary.
- New broadleaved woodland is also proposed at the southeast corner of the site, to strengthen the existing woodland buffer
- New broadleaved woodland at the southwest corner of the site, to provide visual screening. Trees and shrubs will comprise of a mixture of locally sourced native species such as oak, scots pine, blackthorn, alder, dog wood, hawthorn, hazel and goat willow.

The proposed woodland, tree shrub and hedgerow planting will increase the species diversity of planting on the site, will increase the extent of semi-natural habitats and linkages, improve the linear green corridors within and beyond the site, and contribute to the habitat enhancement on the site.

Ecology and Habitat

The following paragraphs identifies the **avoidance** of the ecological features of greatest importance and the **compensation** measures, as a last resort, to mitigate unavoidable impacts.

Part of Coed Wernhir SINC, a large mosaic of habitats, lies within the Site boundary. The proposed development is situated in the southwest corner of the Site and as such, no loss of habitat will occur within the SINC. To prevent the development from impacting on the SINC during the construction phase standard airborne and water pollution prevention measures, in line with the Pollution Prevention for Businesses (2024) guidance, will be followed to avoid negative impacts through pollution and run-off.

A blanket SINC designation covers all watercourses and adjacent surrounding habitat within the county borough. While the watercourse on Site is outside of the SINC, it is covered by the SINC 0.06km upstream. Therefore, to prevent any unforeseen impacts to the SINC, the watercourse will be buffered by 15m using Heras fencing (or similar) and will be subject to regular checks throughout construction to ensure they are still intact. In addition to protecting the watercourses, this buffer will also serve to protect the riparian habitats surrounding the watercourses. Furthermore, standard airborne and water pollution prevention measures, in line with the Pollution Prevention for Businesses (2024) guidance, will be followed to avoid negative impacts through pollution and run-off during construction.

In relation to habitats, the proposed layout includes the use of existing tracks and where possible, would not require any losses to boundary vegetation.

The proposals would result in the loss of some of lowland dry acid grassland and some wet ditch in the southwest corner of the Site, with the entirety of the purple moor-grass and rush pasture within the Site to be retained. To offset the loss of grassland as a result of the development, retained habitats will be enhanced through sensitive management, and important features such as watercourses and ponds are to be buffered from the development footprint.

Should any Devil's-bit scabious, of notable interest to marsh fritillary butterfly, be identified in the area set for development, these should be translocated to suitable areas outside of the development footprint.

In relation to amphibians and reptiles, to partially mitigate for the loss of tussocky grassland in the southwest of the site, all boundary vegetation, ditches and watercourse will be retained and protected with a 15m buffer as part of the development. To protect reptiles and amphibians from harm, a method statement will be followed during Site preparation and construction.

To minimise the impacts on commuting and foraging bats, all boundary vegetation will be retained and protected with a 15m buffer as part of the development. Reinstated hedgerows will increase opportunities available to commuting bats.

To minimise the impacts on the breeding bird population, all boundary vegetation, ditches and riparian habitats will be retained and protected with a 15m buffer as part of the development. Any vegetation clearance should be undertaken outside of the breeding bird season (March to August inclusive).

The following **enhancement** features are proposed for the site, which are also illustrated on the Landscape Strategy Figure 5:

- 5no. tree mounted bird nest boxes.
- 5no. tree mounted bat boxes.
- 2no habitat piles.

Watercourses and drainage

SuDs features are proposed that takes into account the impermeable areas of the compound and access tracks. The developable area has also been separated to consider the risk of contaminated fire water. As such, the impermeable area has been split to identify where surface water shall be 'clean' or 'contaminated'. The 'clean' water network comprises the internal access tracks which can be treated sufficiently by SuDS features prior to being discharged into an ordinary watercourse. The 'contaminated' water network is susceptible to contamination due to the risk of fire water, and therefore requires appropriate retention, testing, and treatment prior to being discharged of suita**bly.**

The design of the surface water management system should maximise amenity and biodiversity benefits across the site. SuDS components can contribute to improving the climate resilience of new developments. The ecological potential of the SuDS scheme can also be maximised by utilising local planting and providing measures to enhance the existing ecosystem and/or work to mitigate against the impact of the development to its surroundings.

Resilience of Ecosystems

The Environment (Wales) Act 2016 provides a duty upon public bodies such as Rhondda Cynon Taf Council to promote the resilience of ecosystems.

The illustrative landscape masterplan for the proposed development shows that new and enhanced green corridors will be created to re-enforce connectivity along field boundaries at the edges of the site and to the wider landscape. The LEMP sets out in detail the management and maintenance objectives, habitat creation, and measures to maximise ecological value.

The proposals would result in habitat enhancement and creation that will increase diversity across a range of species groups. The extent of new planting will be a significant increase, and condition will be maintained through measures identified in the LEMP. This would include sensitive management of the retained grassland habitats. Wildlife corridors and connectivity would be enhanced by woodland, tree, scrub and hedgerow planting along boundaries, which would also introduce new species to the site. Overall, the proposed development would make a positive contribution to achieving ecosystem resilience locally.

Multi-functionality of Green Infrastructure

This section identifies the multi-functionality of each green infrastructure element: woodland trees and hedgerows; ecology and habitat; and drainage and watercourses. These elements reflect the over arching principle of **Step F: Enhance**, applying the principles of good 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". Figure 5 establishes the Landscape Strategy aims, and the Green Infrastructure functions and benefits of the proposals are listed in Figure 6, against the list below:

- Retaining key natural characteristics
- Connected habitats for wildlife
- Reduce impact of climate change
- Nutrient cycling
- Wildlife habitat
- Improve water quality
- Improve soil organic matter
- Increase species and biodiversity

Figure 6 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
Retained trees and tree lines	Trees	• Retaining key natural characteristics • Wildlife habitat • Connected habitats for wildlife • Nutrient cycling	• 1 - Optimises Multifunctionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 4 - Champions a Context Driven Approach • 5 - Creates Distinctive Places • 6 - Secures Effective Place-keeping
New native tree, hedgerow and scrub planting	Trees	• Wildlife habitat • Connected habitats for wildlife • Reduce impact of climate change • Nutrient cycling • Improve soil organic matter • Increase species and biodiversity	• 1 - Optimises Multifunctionality 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
Retained ditches/ watercourse and pond	Watercourses and drainage	• Retaining key natural characteristics • Wildlife habitat • Connected habitats for wildlife • Improve water quality	• 1 - Optimises Multifunctionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 3 - Maximises Environmental Net Gains • 7 - Brings Nature Closer to People
Retained habitats	Ecology and Habitat	• Retaining key natural characteristics • Connected habitats for wildlife • Wildlife Habitat	• 4 - Champions a Context Driven Approach • 6 - Secures Effective Place-keeping • 11 - Delivers Wildlife Enhancement • 12 - Underpins Nature's Recovery
Proposed SuDS features	Drainage and Watercourses	• Improve water quality • Reduce flood risk • Wildlife Habitat • Increase species and biodiversity	• 1 - Optimises Multifunctionality and Connectivity • 2 - Positively Responds to the Climate Emergency • 4 - Champions a Context Driven Approach • 9 - Delivers Climate Resilient Water Management • 11 - Delivers Wildlife Enhancement • 12 - Underpins Nature's Recovery
Proposed bird and bat boxes, and habitat piles for habitat creation	Ecology and Habitat	• Wildlife Habitat • Connected habitats for wildlife • Increase species and biodiversity	• 3 - Maximises Environmental Net Gains • 7 - Brings Nature Closer to People • 11 - Delivers Wildlife Enhancement • 12 - Underpins Nature's Recovery

06 Conclusion

In relation to the Step-Wise Approach, the site is not located within a statutory designated landscape or site of ecological importance, but a portion of the north of the site is located in the locally designated Cefn Wernhir SINC. Several surveys for the site were carried out by a range of consultants. Desk-based studies and field surveys have ensured that important features on the site are retained and protected, including the Cefn Wernhir SINC, existing trees and adjacent woodland, and other locally valuable habitats and species.

Buffers from existing trees, ditches and associated riparian vegetation was incorporated into the development of the proposed site layout. All these **avoid** measures has resulted in all of trees within the site being retained, except for trees surveyed as Category U, which are unsuitable for retention regardless of the development proposals.

The proposed development provides an opportunity to provide tree and hedgerow planting, and to introduce new species to the site to increase resilience. The new planting would enhance connectivity on the site and to the wider area.

Enhancement features include the installation of bird and bat boxes, and hibernaculum/ habitat piles. These have the aim of providing an increase in wildlife opportunities on site post-development, contributing to the aims of Planning Policy Wales and local policy.

Overall, it is considered that the proposed development would be in accordance with PPW Edition 12 and the Rhondda Cynon Taf Local Development Plan policies relating to Green Infrastructure.



Image by Tree Check Arboriculture Ltd

tir collective
LANDSCAPE ARCHITECTS

Floor 7, Brunel House,
2 Fitzalan Road,
Cardiff,
CF24 0EB