

# PARC BUSNES PORTH CYMRU – MODEL FARM

## Green Infrastructure Statement



JCD0064  
September 2024

## REPORT

| <b>Document status</b> |                            |                    |                    |                    |                    |
|------------------------|----------------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Version</b>         | <b>Purpose of document</b> | <b>Authored by</b> | <b>Reviewed by</b> | <b>Approved by</b> | <b>Review date</b> |
| 1                      | ES Update                  | LS                 | LR                 | DP                 | Sept 2024          |
|                        |                            |                    |                    |                    |                    |
|                        |                            |                    |                    |                    |                    |

## Approval for issue

Darren Parker

September 2024

The report has been prepared for the exclusive use and benefit of our client and solely for the purpose for which it is provided. Unless otherwise agreed in writing by R P S Group Limited, any of its subsidiaries, or a related entity (collectively 'RPS') no part of this report should be reproduced, distributed or communicated to any third party. RPS does not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report. The report does not account for any changes relating to the subject matter of the report, or any legislative or regulatory changes that have occurred since the report was produced and that may affect the report.

The report has been prepared using the information provided to RPS by its client, or others on behalf of its client. To the fullest extent permitted by law, RPS shall not be liable for any loss or damage suffered by the client arising from fraud, misrepresentation, withholding of information material relevant to the report or required by RPS, or other default relating to such information, whether on the client's part or that of the other information sources, unless such fraud, misrepresentation, withholding or such other default is evident to RPS without further enquiry. It is expressly stated that no independent verification of any documents or information supplied by the client or others on behalf of the client has been made. The report shall be used for general information only.

### Prepared by:

**RPS**

2 Callaghan Square  
Cardiff  
CF10 5AZ

### Prepared for:

**Legal & General (Strategic Land) Ltd**

## Contents

|   |   |    |
|---|---|----|
| 1 | INTRODUCTION .....                        | 1  |
| 2 | SITE CONTEXT AND EXISTING BASELINE .....  | 5  |
| 3 | OVERARCHING GI APPROACH .....             | 8  |
| 4 | INTEGRATING THE STANDARDS FRAMEWORK ..... | 10 |
| 5 | NEXT STEPS .....                          | 18 |

## Figures

Figure 1: The Seven Connected Well-Being Goals for Wales

Figure 2: Application Site Context

Figure 3: Overarching Biodiversity Plan

Figure 4: Diversity and Connectivity Plan

# 1 INTRODUCTION

- 1.1 On 7 February 2024, Welsh Government published the revised Planning Policy Wales (PPW) Edition 12. PPW 12 included revisions to Chapter 6 (Biodiversity), one of these key changes being the recommendation for a Green Infrastructure Statement to be submitted with all planning applications. The aim of this Green Infrastructure Statement ('GI Statement' or 'the Statement') is to evidence how green infrastructure has been incorporated into the 'Application Site', defined as the red line boundary of the planning application.
- 1.2 This GI statement has been prepared on behalf of Legal & General (Strategic Land) Ltd (the Applicant) in support of a Hybrid application comprising demolition of existing buildings and erection of 44.75ha Class B1/B2/B8 Business Park, car parking, landscaping, drainage infrastructure, ecological mitigation and ancillary works (all matters reserved aside from access) within Area A and change of use from agricultural land to country park (Use Class D2) within Area B.
- 1.3 Additional information regarding the development proposals is provided within Chapter 2: Site Description and Development Proposals of the Environmental Statement (ES).

## Policy Context

### Planning Policy Wales

- 1.4 Green Infrastructure (GI) is the network of natural and semi-natural features, such as green spaces, rivers and lakes, that intersperse and connect places. For small developments, GI can include landscaping, grass verges and sustainable drainage systems, whereas on a larger development scale this can consist of, but not be limited to, the creation of species rich meadows, woodlands and the improvement of linkages between areas of existing biodiversity value.
- 1.5 PPW makes it clear that the quality of development should be enhanced by integrating GI through appropriate site selection and use of creative design. Section 6.2 'Integrating Green Infrastructure and Development' states:

*'With careful planning and design, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, to overcome the potential for conflicting objectives, and contribute to health and wellbeing outcomes.'*

*'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 (Paragraph 6.4.21) has been applied.'*
- 1.6 The GI Statement should highlight any baseline data considered and surveys and assessments undertaken, including habitats and species surveys, arboriculture surveys and assessments, sustainable drainage statements, landscape and ecological management plans, open space assessments, green space provision and active travel links.
- 1.7 Additionally, the GI statement should demonstrate how the Building with Nature Standards have been considered as part of the development proposals and how the step-wise approach has been incorporated.
- 1.8 PPW Chapter 6 states that the 12 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.

### The Well-being of Future Generations (Wales) Act 2015

- 1.9 The Well-being of Future Generations (Wales) Act ('the Act') outlines the seven well-being goals:
  1. A prosperous Wales
  2. A resilient Wales
  3. A healthier Wales
  4. A more equal Wales

5. A Wales of more cohesive communities
6. A Wales of vibrant culture and thriving Welsh language
7. A globally responsible Wales



Figure 1: The Seven Connected Well-Being Goals for Wales

1.10 The Act outlines a definition of “sustainable development” as *‘the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.’*

1.11 The Act places a duty on public bodies to align with the ‘sustainable development principle’ meaning that any bodies must act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

### Vale of Glamorgan Local Development Plan 2011-2029 (Adopted June 2017)

1.12 The development plan for the Application Site is the VoG Local Development Plan (LDP), adopted in 2017.

1.13 A number of policies are relevant to green infrastructure:

**Policy MD2 - Design of New Development** sets out criteria for new development to ensure high quality, healthy, sustainable and locally distinct places. Of particular relevance are:

- (1.) Be of a high standard of design that positively contributes to the context and character of the surrounding natural and built environment and protects existing features of townscape or landscape interest;
- (5.) Provide a safe and accessible environment for all users, giving priority to pedestrians, cyclists and public transport users;
- (7.) Where appropriate, conserve and enhance the quality of, and access to, existing open spaces and community facilities;
- (8.) Safeguard existing public and residential amenity, particularly with regard to privacy, overlooking, security, noise and disturbance;

- (9.) Provide public open space, private amenity space and car parking in accordance with the council's standards;
- (10.) Incorporate sensitive landscaping, including the retention and enhancement where appropriate of existing landscape features and biodiversity interests;
- (12.) Mitigate the causes of climate change by minimising carbon and other greenhouse gas emissions associated with their design, construction, use and eventual demolition, and include features that provide effective adaptation to, and resilience against, the current and predicted future effects of climate change.

**Policy MD9 - Promoting Biodiversity** states that new development proposals will be required to conserve and where appropriate enhance biodiversity interests unless it can be demonstrated that:

1. The need for the development clearly outweighs the biodiversity value of the site; and
2. The impacts of the development can be satisfactorily mitigated and acceptably managed through appropriate future management regimes.

1.14 A number of policies have been developed to reflect local circumstances in order to manage the distinctive characteristics of the Vale of Glamorgan, these include:

- Policy MG17 – Special Landscape Areas
- Policy MG18 – Green Wedges
- Policy MG19 – Sites and Species of European Importance
- Policy MG20 – Nationally Protected Sites and Species
- Policy MG21 – Sites of Importance for Nature Conservation, Regionally Important Geological and Geomorphological Sites and Priority Habitats and Species

## **Vale of Glamorgan Replacement Local Development Plan 2021-2036 Preferred Strategy**

1.15 Work on the Vale of Glamorgan Replacement Local Development Plan was formally commenced in May 2022 which will replace the existing adopted LDP once adopted and will cover the period 2021-2036. The RLDP is currently at Preferred Strategy stage and is subject to consultation.

1.16 The Preferred Strategy is not the final RLDP and as such it does not include all the policies, land use proposals or infrastructure that will be required to support development. This detail will be set out in the Deposit RLDP which will be subject to public consultation in early 2025.

1.17 However, currently a number of policies have been proposed at preferred strategy stage that concern green infrastructure and ecosystem resilience:

### **SP18: Green Infrastructure**

Development proposals will incorporate measures that protect and enhance high quality green infrastructure provision and maximise its functionality. To achieve this, development proposals must:

- a. Strategically incorporate existing green infrastructure into design, taking advantage of opportunities that are presented by existing and potential assets, through following the principles of placemaking.
- b. Protect and enhance connectivity between green infrastructure assets.
- c. Achieve biodiversity net benefit.
- d. Protect landscapes designated for their geological, natural, visual, historic or cultural significance.
- e. Employ nature-based solutions, including the Building with Nature Standards, where possible.
- f. Provide amenity open space, which fulfils a wide range of roles.
- g. Facilitate environments that promote mental and physical health and well-being.

- h. Promote urban cooling and shading, sustainable drainage systems, and allotments and community orchards.

#### **SP19: Biodiversity And Ecosystem Resilience**

Biodiversity in the Vale of Glamorgan will be protected, maintained and enhanced. Development must provide a net benefit for biodiversity and improve the resilience and connectivity of ecosystems. To achieve this, all developments must:

- a. Demonstrate that there has been an overall net benefit for biodiversity proportionate to the nature and scale of the development.
- b. Ensure that UK/European protected species and habitats are protected in accordance with statutory requirements.
- c. Protect the integrity of statutory and non-statutory designated sites ensuring that they are properly protected and managed.
- d. Be directed away from areas of high ecological value.
- e. Incorporate green infrastructure at the early stages of design, that protects and enhances existing site features and improves the connectivity of the ecological network.
- f. Incorporate nature-based solutions within development to support biodiversity and build ecosystem resilience within the site and the wider area.
- g. Development on or adversely affecting other non-designated sites or wildlife corridors with biodiversity value will only be permitted where it can be demonstrated that the need for the development outweighs any harm caused by the development and that net biodiversity benefit measures can be provided.

## 2 SITE CONTEXT AND EXISTING BASELINE

### Development Site Context

- 2.1 The Application Site extends to 44.79ha and lies wholly within the Vale of Glamorgan Council's administrative boundary. It sits adjacent to Cardiff Airport, 14km south west of Cardiff city centre, 2km east of Barry and immediately north and west of Porthkerry Country Park.
- 2.2 The Application Site is bounded to the north by Port Road (A4226), open agricultural land to the east, Porthkerry Country Park to the south and Cardiff Airport's runway to the west.
- 2.3 The Application Site is currently in agricultural use, with pasture fields and croplands being the dominant uses. The land is considered to be of moderate to poor agricultural quality, with the majority in Grades 3b and 4 as per the agricultural land classification.
- 2.4 The field system is enclosed by hedgerows of varying heights and density and is managed through annual cutting. There are a number of buildings on the Application Site including the Model Farm farmhouse and associated barn buildings.
- 2.5 A Public Right of Way (PRoW) runs along the eastern boundary of the Application Site.
- 2.6 The Application Site in relation to the surrounding context and constraints is included in **Figure 2**.

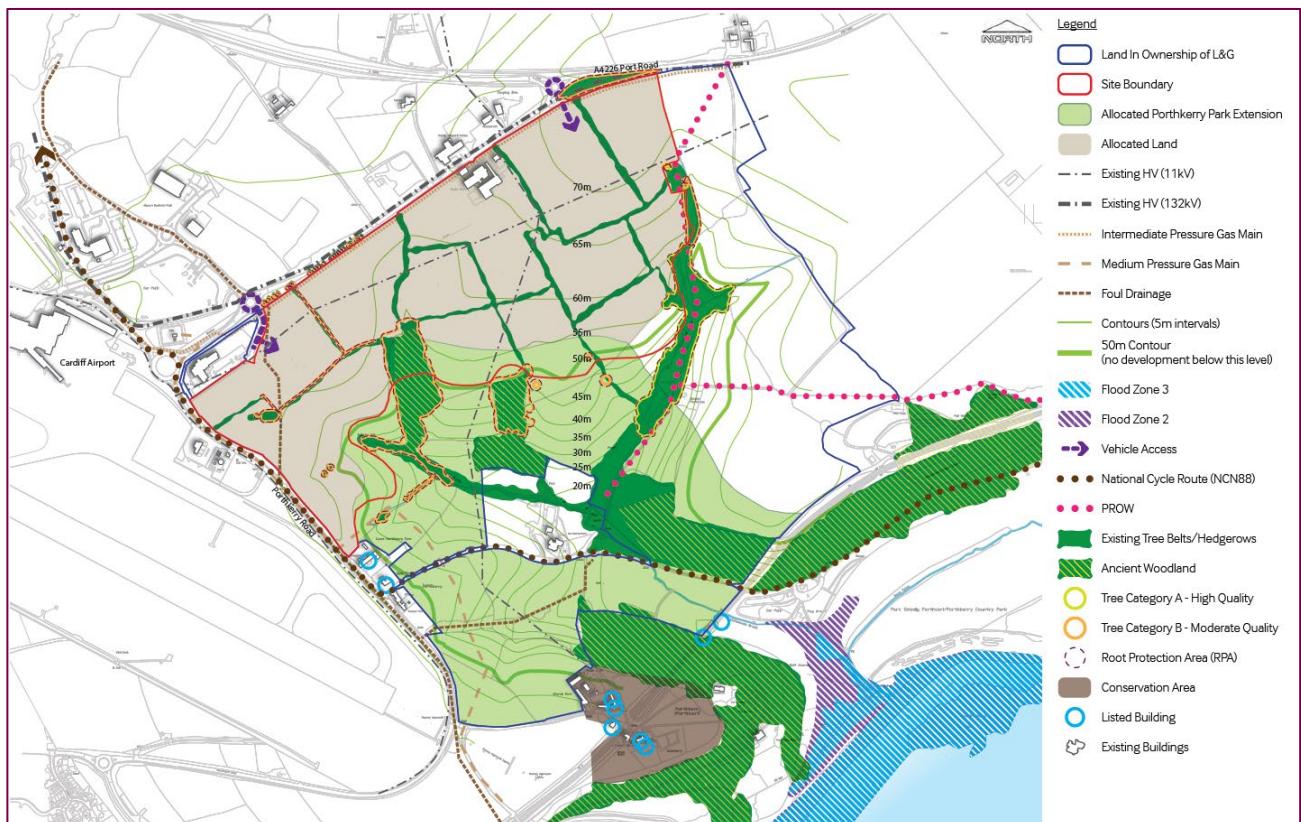


Figure 2: Application Site Context

## Landscape

2.7 The land to the north, known as Nant Llancarfan, is allocated as a Special Landscape Area (SLA) in the adopted Vale of Glamorgan Local Development Plan.

2.8 Much of the surrounding landscape to the north, south and east can be considered rural in nature, but the character to the west is dominated by large scale infrastructure associated with Cardiff Airport (runway and terminal building), Cardiff and Vale College's International Centre for Aerospace Training ("ICAT") campus and the British Airways Maintenance Cardiff hanger, which lies beyond the Airport.

## Topography and Flood Risk

2.9 The Application Site is located on gently sloping land 70 to 50m AoD which faces south towards the coast which is less than 1.2km away at its closest point. The surrounding landscape can be described as rolling lowland with wooded lowland valleys to the south. The east to west valley associated with the River Waycock approximately 0.9km to the north. However, the land generally rises travelling north of the Application Site to approximately 90m AoD near Whitton Rosser Farm. To the north-east the land in the open lowland valley is generally lower lying than the Application Site.

2.10 The Application Site is drained by a number of minor water courses including the Whitelands Brook and the Bullhouse Brook. There are also a number of springs, and a well, located within the Application Site boundary. These minor watercourses follow the topography of the Application Site to converge and flow towards the southeast of the study area, and eventually discharge beneath a railway viaduct, located off the south-east corner of the Application Site. Major watercourses within the study area reflect the topography of the surrounding landscape. The majority of the major watercourses flow southwest towards Llancatal and Burton, before converging on the western edge of the study area and eventually discharging into the Bristol Channel. The land surrounding the Application Site to the south contains a numerous drainage ditches, springs and minor watercourses that issue on areas of higher ground and drain into the major river systems.

## Biodiversity

2.11 No statutory designated sites are located within the Application Site. Several statutory designated sites have been identified within a 2km search area and include Barry Woodlands, Cliff Wood – Golden Stairs and Fferm Walters which are all Sites of Special Scientific Interest (SSSI). A further two statutory sites, Cliff Wood – Golden Stairs Local Nature Reserve (LNR) and Cwm Talwg Woodlands LNR have also been identified within 2 km of the Application Site.

2.12 More than 20 non-statutory designated sites have been identified, of note are North West Bullhouse Brook, North Bullhouse Brook and South of Church Farm which are all Sites of Importance for Nature Conservation (SINC). These three sites are within the Application Site. North West Bullhouse Brook SINC is partially within the Application Site and North Bullhouse Brook SINC and South of Church Farm are located within the area proposed for Extension to Porthkerry Country Park. North West Bullhouse Brook SINC and North Bullhouse Brook SINC are underpinned by their designations as ancient woodlands. South West of Church Farm is designated for unimproved grassland characteristics, though the grassland is currently in an unfavourable condition. Knock Man Down Wood, another SINC is partly located within the Application Site, in the south.

2.13 More than half of the Application Site comprises a working farm with the presence of domesticated animals (sheep and cattle), rotational croplands, improved grazing pasture and associated hedgerow boundaries. The farmland is headed in the north by a series of farm buildings that include a farmhouse, barns and associated agricultural infrastructure. Ancient woodland and hedgerows are located along the southern limits of the Application Site.

2.14 Habitats within the proposed extension to Porthkerry Country Park are homogenous with the Application Site. Croplands, improved grasslands/grazing pasture, ancient woodland, intact and defunct hedgerows and several species-poor semi-improved grasslands make up the area proposed for the extension to Porthkerry Country Park. Ancient woodland, semi-natural broadleaved and scrub are also present. Whitelands Brook and Bullhouse Brook are two slow flowing watercourses that run to the east and south (respectively). The watercourses converge within an ancient woodland in the south.

2.15 Many bat species have been recorded using habitats within the Application Site. Common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula* have all been identified roosting, commuting and foraging. Several other species have also been identified, these include *Myotis* sp., lesser horseshoe *Rhynolophus hipposideros* and greater horseshoe *Rhynolophus ferrumequinum*. Brown hare *Lepus europaeus* and harvest mouse *Micromys minutus* are other mammals that have been identified within the Application Site

2.16 The breeding bird assemblage identified within and in proximity to the site is Ss made up of primarily common and widespread birds with several species typical of farmland environments such as skylark *Alauda arvensis* and linnet *Carduelis cannabina*. Other notable birds identified include whitethroat *Sylvia communis*, starling *Sturnus vulgaris*, yellowhammer *Emberiza citrinella* and grasshopper warbler *Locustella naevia*.

2.17 The ecological baseline conditions of the Application Site have been studied since 2018. Three Preliminary Ecological Appraisals (PEA) have been undertaken, one in 2018, 2022 and 2024 (which have included habitat surveys and desk studies). A series of further ecological surveys and assessments have also been undertaken to inform the necessary avoidance and mitigation measures, all of which were undertaken in 2019. The following further ecological surveys and assessments were undertaken between 2023 and 2024 to update previous survey work, and to support the appeal stage of the proposed development:

- Bat emergence, activity and aerial inspection surveys;
- Dormouse surveys;
- Badger and otter surveys;
- Breeding bird surveys; and
- Great crested newt eDNA sampling

2.18 The findings of the PEAs and further ecological surveys are set out in specific reports submitted as part of the outline planning application and for the appeal stage, with summaries of relevant ecological receptors set out in the Chapter 9: Ecology of the Environmental Statement<sup>1</sup>.

---

<sup>1</sup> RPS (2024) Land at Model Farm. Environmental Statement – Chapter 9: Ecology.

### 3 OVERARCHING GI APPROACH

3.1 The overarching approach to creating, enhancing and connecting existing and new green infrastructure is set out in a number of documents and plans that were submitted as part of the planning application between 2018 and 2023. These include:

- JCD0064-003-T-210511 Concept Masterplan
- JCD0064-006-J-210607 Parameter Plan – Green Infrastructure
- JCD0064-007 Hedgerow, Scrub and Woodland Plan
- 210520\_ECO01271-002 Rev A Proposed Additional Mitigation and Wildlife Enhancement
- Biodiversity Strategy \_A\_191014 Report Final

3.2 Two plans have been produced specifically for this GI statement, these are The Overarching Biodiversity Plan (**Figure 3**) and the Diversity and Connectivity Plan on (**Figure 4**). Both plans have combined elements from the above submitted plans and documents:

3.3 The step-wise Approach<sup>2</sup> has been adopted throughout the evolution of the outline development proposals through avoiding sensitive receptors (ancient and semi-natural broadleaved woodland and watercourses), minimising footprint (reducing hedgerow loss and provide exclusion zones to existing habitats), maintaining habitat connections), and mitigating predicted impacts (replacement of all lost hedgerows, creation of grassland and scrub, restoration of existing hedgerows and woodland, provision of new resting places for species). The step-wise approach will be an integral part of the decision making throughout the detailed design stage. The outline development design incorporates proposed measures to maintain and enhance ecosystem resilience and the maintenance of ecological networks. This is illustrated on the Diversity and Connectivity Plan (**Figure 4**). The Diversity and Connectivity Plan also demonstrates enhanced connectivity, new ecotones and dispersal routes that would be achieved as part of the development proposals. Current landscape and biodiversity design for the Model Farm development has been prepared based on a wide range of factors, incorporating consultation with the Vale of Glamorgan Council and Natural Resources Wales.

3.4 These factors include the need to consider the existing baseline, reinstatement of permanent and temporarily lost habitats and features, expansion of the existing green infrastructure (woodland, hedgerow, scrub and grassland), and introduction of new features to enable biodiversity to prosper. Some of these features include:

- Native species of plants, of local provenance source where available.
- Protection of North West Bullhouse Brook SINC and its ancient woodland habitat through a 15 m buffer, planted with native species of local provenance.
- Establishment of a 10 m protection buffer along the wooded corridor in the east, to protect the woodland and Whitelands Brook
- Establishment of a green infrastructure and greenspace corridor from north to south through the Application Site, connecting North West Bullhouse Brook SINC to the proposed hedgerow in the north. This will be approximately 85 m in width at its most southerly point and 30 m its most northerly extent.
- Incorporation of nature-based solutions such as Sustainable Drainage Systems (SuDS)
- Expansion of existing woodland to restore natural/wild ecotones and support the long-term functioning of ancient woodland

3.5 Detailed information on the planting palette for the proposed green infrastructure is not available at present but all species included within planting plans will be native, aligned with the local character,

---

<sup>2</sup> The step-wise approach is a system devised by the Welsh Government based on the mitigation hierarchy and defined within Planning Policy Wales 12.

specific to each habitat and managed, maintained and monitored to ensure successful establishment.

3.6 The current proposals will be developed further through detailed design stage. Detailed green infrastructure proposals and the appropriate delivery and aftercare will be designed in consultation with the Vale of Glamorgan Council and set out within a Detailed Biodiversity Management Strategy.

## 4 INTEGRATING THE STANDARDS FRAMEWORK

4.1 The proposed development's approach to integrating green infrastructure within the concept masterplan with reference to Building with Nature's Standards Framework and seven well-being goals for Wales<sup>3</sup>, is set out below.

4.2 Where applicable, reference has been made to the DECCA (Diversity, Extent, Condition, Connectivity and Adaptability), to demonstrate how the development proposals have considered ecosystem resilience and the enhancement of ecological networks. The DECCA framework is defined as:

- Diversity between and within ecosystems;
- Extent – maintain and increase the area of semi-natural habitat/features and linkages between them;
- Condition, including structure and functioning of ecosystems, which is affected by multiple complex pressures including climate change, pollution, invasive species, land management neglect etc;
- Connectivity between and within ecosystems; and
- Adaptability and other Aspects of resilience, i.e. adaptability, recovery and resistance to environmental pressures.

### Building With Nature Standards

#### Standard 1: Optimises Multifunctionality and Connectivity

4.3 The purpose of Building Standard 1 is “*... to ensure that green infrastructure features form and contribute to creating an optimal multifunctional network within the development and wider area, contributing towards the restoration, creation and enhancement or expansion of these networks to achieve the maximum benefits for people, wildlife and environment*”.

4.4 Green infrastructure improvements are a key strategic principle which were developed throughout the design process from the outset and Concept Masterplan stage. The landscape proposals have retained and strengthened the existing framework of field hedgerows and woodland which form an important part of the green infrastructure on the Application Site. The proposed hedgerow management and new tree planting will benefit green infrastructure connections beyond the Application Site and wider landscape between the existing woodlands, including the wooded corridor of Whitelands Brook on the eastern site boundary and other tree groups. The proposals include a 42ha public open space extension to Porthkerry Country Park to the South. There will be new links to the existing Public Right of Way and pedestrian/cycle links to the local network and surrounding area.

4.5 Additionally, new scrub edges, rough grassland, wetland habitat features associated with the SuDS will offer wildlife stepping stones through the Application Site to the wider landscape, allowing wildlife to disperse within an enhanced ecosystem. The new interfaces between expanded woodlands and new grasslands will offer increased multifunctioning ecotones that will allow biodiversity to flourish, including colonisation of species not currently encountered within the application site.

#### Standard 2: Positively Responds to the Climate Emergency

4.6 The purpose of Standard 2 is “*... to minimise the vulnerability and exposure of the green infrastructure to wider climate-related hazards and impacts and ensure it maximises opportunities to contribute to net zero carbon goals and nature recovery*.”

4.7 Sustainability in relation to access and movement and surface water management are design principles that particularly respond to climate change issues.

---

<sup>3</sup> The Well-being of Future Generations (Wales) Act 2015

4.8 To ensure that the Application Site is accessible by sustainable methods of travel the high-quality Spine Road, will provide a footway and a shared use foot/cycle way providing a walking and cycling route through the Application Site with connections to the existing walking and cycling network including and the proposed extension to the Porthkerry Country Park. This includes access to the National Cycle Network (NCN) route 88 which can be accessed on Porthkerry Road. There is also a local cycle route from Rhoose which connects the Application Site to the Rhoose (CIA) Railway Station. The Spine Road in the development will incorporate bus stops to enable public transport to penetrate the Application Site. This infrastructure and a high-quality Travel Plan will enable the development to reduce its impact on the highway network through journeys being made by more sustainable methods of travel.

4.9 SuDS solutions for surface water management will be integrated into the landscape design of Model Farm and reduce flood risk. SuDs will be created in the form of swales, attenuation areas and ditches so that run off is restricted, slowed and captured to avoid overland flow and risk of pollution. Most notably there will be a series of attenuation swales on the southern side of the new development. As well as controlling surface water these natural features will filter and clean run off as well as being a haven for wildlife.

4.10 Woodland expansion, woodland management, scrub planting, new hedgerows and new rough grassland will act as carbon sinks, with tens of hectares of new green infrastructure proposed to offer new benefits for wildlife whilst integrating nature-based solutions. With new woodlands and wetland habitats proposed, populations of non-vascular plants and lichens will increase, boosting the capacity for tackling the absorption of greenhouse gases, ultimately enhancing the resilience of the habitat network to environmental pressures.

### **Standard 3: Maximises Environmental Net Gains**

4.11 The purpose of Standard 3 Maximises Environmental Net Gains is to “*... ensure new development uses green infrastructure to help mitigate any unavoidable residual harms to the local environment resulting from development, particularly from new sources of air or noise pollution and soil degradation. As with all Standards, the purpose here is to secure benefits that go beyond statutory minimums and encourage greater enhancement of the local environment for people and wildlife, which in-turn aids individual wellbeing, social cohesion, community wellbeing and supports wildlife*”.

4.12 The key characteristics of the standard include to:

3. mitigate unavoidable harmful environmental impacts through green infrastructure;
4. improve the local environment by delivering environmental net gains with regards to air, water and soil quality and, where there is scope, space for people and wildlife; and
5. where applicable, address local priorities for environmental net gain – demonstrated through meeting the linked Building with Nature Standards, in particular Standard 04 Champions a Context Driven Approach.

4.13 More than 3000 m of new hedgerows are proposed for the development. Whilst this includes replacement of hedgerows lost to the development, a net increase in hedgerow habitats and enhancement of existing hedgerows will be delivered. Higher value habitats such as ancient woodland, semi-natural broadleaved woodland and watercourses will be protected and enhanced as part of the development. The higher value habitats will be expanded through the delivery of new native woodland, structurally diverse native scrub, native broadleaved trees and better quality, species-rich grasslands. These habitats will collectively offer areas of shelter to terrestrial and semi-aquatic wildlife and offer dense buffers to protect against environmental pressures.

4.14 The creation of water features and wetland habitats through SuDS will provide water regulation to maintain water quality and minimise pollution impacts on existing and newly proposed habitats. The designated open spaces will form mosaics with newly the proposed blue and green infrastructure, to allow people to embrace new, wild ecosystems.

4.15 To integrate characteristics of the existing farmland landscape, wildflower croplands will be introduced into areas of existing areas of arable farmland. These will include sacrificial arable crops and wildflower species that maximises food sources for many species of wildlife year-round.

## Standard 4: Champions a Context Driven Approach

4.16 The purpose of Standard 4 is “*... to ensure from the outset that the project team and development’s green infrastructure features take account of and is shaped by existing local policy, physical landscape and community priorities*”.

4.17 The layout and design has been shaped through feedback from consultation with the local authority and stakeholders and shaped by a series of agreed design principles. The evolution of the design from July 2018 is shown through a series of figures in the Model Farm Design and Access Statement.

4.18 The Application Site does not form part of any statutory landscape designations and there are no nationally designated landscapes within the 5km study area. It is situated less than 100m south of the locally designated and non-statutory Nant Llancarfan SLA at its closest point in the northeast of the Application Site. Porthkerry Country Park which is also locally designated as a Green Wedge in the LDP forms most of the southern boundary of the Application Site.

4.19 Screening mitigation is incorporated as a new belt of native woodland planting proposed along the extent of the southern boundary in association with the new attenuation areas. Additionally, an area of new woodland is proposed in the south west corner to soften the impact on the group of properties associated with Lower and Upper Porthkerry Farms. The extensive new native planting proposed as part of the new green infrastructure will more than mitigate for the loss of the vegetation to allow site access. The proposed 42ha extension to the very well-used Porthkerry Country Park will benefit the communities within the settlements close by as well as the wider community within the Vale. The proposed development lies within Rhoose Hinterland Visual and Sensory Aspect Area (VLFGLVS641) and LCA 26 - Rhoose and Porthkerry Hinterland. The landscape and visual impact assessment (LVIA) assesses that the initial effects of the development at a local scale will be significant in the short term as agricultural fields are developed for the business park. The effect on the Visual and Sensory Aspect Area and LCA 26 would be Minor adverse, initially. As the landscape proposals mature the effects will be reduced so the effects even at the local scale will not be significant.

## Standard 5: Creates Distinctive Places

4.20 The purpose of Standard 5 is “*... to ensure the design of green infrastructure, alongside any built form, is integral to the creation of a great place and used to reinforce the distinctiveness of the local area*.”

4.21 The description of the host LCA 26 Rhoose and Porthkerry Hinterland states that ‘*a key area is the wooded valley area of Porthkerry Country Park*’ and that ‘*this forms a distinctive steeply side incised valley system in the plateau running down to the coast at Porthkerry*’ The proposals extend Porthkerry Country Park by 42 hectares to the southern boundary of the proposed business park. New connections for both people and wildlife between the development and the Country Park will dramatically enhance green infrastructure locally. There will be a soft edge to the southern part of the business park which will include SUDS features, retention of existing hedgerows and trees and new native tree planting. This is shown on the Parameter Plan – Green Infrastructure in the DAS. The incorporation of existing and new green infrastructure elements is summarized below:

- Retention of existing landscape features which contribute to the local character of the area.
- Protection of Whitelands Brook corridor adjoining the eastern site boundary
- Incorporation of much of the existing hedgerow network and landscape buffers into the scheme layout
- Provision of functional greenspace of biodiversity value as part of the SUDS scheme (swales, attenuation areas and ditches)
- Off-site native woodland and scrub planting
- Links to public rights of way through high quality green space
- Connection to existing cycleway.

## Standard 6: Secures effective Place-keeping

4.22 The purpose of Standard 6 is “*... to ensure early and effective planning for and implementation of management, maintenance and monitoring of green infrastructure*”.

4.23 The key characteristics of the standard include to:

- achieve a more resource efficient approach to management and maintenance; and
- ensure the long-term management and maintenance of the green infrastructure, including through a suitable governance structure that can adapt the management plan as required to deliver the outcomes and benefits, sufficient funding, and appropriately trained and qualified personnel.

4.24 All existing, enhanced and newly proposed habitats within the Application Site will have aims, targets and specific management prescriptions to enable them to reach favourable conditions. This will be aligned to the outline Biodiversity Management Strategy (produced and submitted as part of the planning application) and finetuned within a Detailed Biodiversity Management Strategy (following application consent).

4.25 All habitats and features including wildlife boxes and hibernacula will be monitored carefully and accordingly to ensure they reach their desired state and are able to support the local assemblage of wildlife for the long-term.

## Standard 7 Brings Nature Closer to People

4.26 The purpose of Standard 7 is “*... to ensure green infrastructure features are available and accessible to all, at all times, optimising their use and enjoyment*”.

4.27 As part of the proposal, 42ha of land in Legal & General’s ownership will be transferred to the Vale of Glamorgan Council to facilitate an extension to Porthkerry Country Park, which will provide increased opportunities for recreation and amenity, habitat creation and connectivity and biodiversity management.

4.28 Retention of the existing habitat network will contribute to the local character of the area and create an enhanced green infrastructure framework with green links to Porthkerry Country Park. The existing use as arable and grazing pasture, in addition to maintained woodland, will be enhanced to a more diverse and biodiversity-rich land use.

4.29 Green open spaces have been proposed as part of the development proposals and integrated within the proposals for green infrastructure. The green open spaces would allow people to surround themselves with wooded habitats, water features and enhanced grasslands. New, better quality joined up habitats will promote biodiversity and increase areas available for birds and other wildlife to colonise. As result, additional, nature related acoustics such as bird song will be available in new areas for people to hear, supporting human wellbeing<sup>4</sup>.

## Standard 8 Supports Equitable and Inclusive Places

4.30 The purpose of Standard 8 is “*... to ensure that green infrastructure is used to enhance social cohesion and overcome cultural barriers, encouraging all people to use and enjoy such features*.”

4.31 Although the Application Site is private land, the public will gain close access through the proposed development and via Public Rights of Way on the eastern side of the proposed business park to the new extension to Porthkerry Country Park. The connections to Porthkerry Country Park and to the coast beyond is part of the key design principles. Views towards the proposed business park are screened and softened by enhancement of the existing hedgerows and native species soft landscape and SuDS features. Porthkerry Country Park is an is important part of accessible green infrastructure that links the local landscape with Barry and the wider countryside.

---

<sup>4</sup> Chowdhury, M. R (2019) The Positive Effects of Nature on your Mental Wellbeing.

## Standard 9 Delivers Climate Resilient Water Management

4.32 The purpose of Standard 9 is “*... to ensure new development uses green infrastructure as a means of above ground water management for regulating water quality and water quantity and flow*”.

4.33 The proposed surface water drainage scheme will be integrated into the landscape design of the Model Farm development and providing elements to control the disposal of runoff from the redeveloped site and to provide quality treatment via a SuDS treatment train.

SuDS will be created in the form of swales, attenuation areas and ditches so that run off is restricted, slowed and captured to avoid overland flow and erosion. In addition to controlling surface water, these natural features will filter run off from potential pollution, as well as providing a haven for wildlife. Flooding events would be controlled by the SuDS features and proposed native planting within swales/attenuation basins would contribute to carbon sequestration, further contributing to the proposed development’s climate resilient water management. Standard 10 Brings Water Closer to People

4.34 The purpose of Standard 10 is “*... to ensure that water management constraints and requirements on a project are used as opportunities to enhance the development to create and sustain better places and benefits for people and nature*.”

4.35 A number of attenuation areas and swales have been proposed illustrated on **Figure 4**. Features integrated into the SuDS include native wildlife planting including wet meadow and marsh specific species, as outlined in Table 2 below. The proposed creation of new wetland/marsh habitat has also been proposed, in proximity to SuDS features. This would increase the availability of wetter habitats within the Application Site, delivering enhanced wildlife stepping stones. SuDS and wetland features will be proximal to open green spaces and areas used by people as part of the extension to Porthkerry Country Park, bringing water closer to people and contributing to enhanced human wellbeing.

## Standard 11: Delivers Wildlife Enhancement

4.36 The purpose of Standard 11 is to “*... enhance existing and create new, linked habitat for wildlife ... [support] the conservation status of priority species and habitats and [deliver] positive benefits for wildlife, within and beyond the boundary (and life) of the development*”.

4.37 The key characteristics of the standard include to:

- deliver a biodiversity enhancement;
- follow the mitigation hierarchy approach; and
- employ appropriate mechanisms to secure the successful implementation of green infrastructure (e.g. an appropriate managing group, funding and personnel).

4.38 The Overarching Biodiversity Plan on (**Figure 3**) illustrates the extent to which biodiversity enhancement has been designed and will be delivered as a minimum, as part of the Model Farm development. The plan illustrates existing habitats, retained and enhanced habitats and new features that will benefit a wide range of native and notable species. The biodiversity design has been set out with the Step-Wise Approach in mind, to ultimately deliver a net benefit in a holistic, practicable and landscape-appropriate way.

4.39 A net increase in hedgerows, woodland and scrub has been proposed which goes above and beyond the necessary measures for supporting the long-term conservation of dormice and commuting and foraging bats. Sympathetic, low intervention management of woodlands will aim to deliver benefits for both woodland birds and invertebrates. The provision of new, diverse grasslands and specific croplands will deliver new nesting and foraging opportunities for skylark, and other ground nesting birds, equally benefiting the wider farmland bird community. These habitats will also introduce new features and enhanced ecotones, with an array of opportunities for mammals such as harvest mouse, brown hare and European hedgehog. The new grassland-woodland-scrub ecotones will offer areas for the creation of forms, selection of harvest mouse nest sites and corridors for commuting through the landscape.

4.40 Woodland protection measures and SuDS will allow natural restoration of Whitelands Brook and Bullhouse Brook, allowing favourable conditions to return. The net increase in wooded habitats will

expand the shelter available for otter, badger and smaller mammals such as polecat, hedgehog and brown hare.

4.41 Neil Hemington state, in his 'Securing Biodiversity Enhancements' address to Heads of Planning in 2019:

*"A net benefit for biodiversity can be secured through habitat creation and/or long term management arrangements to enhance existing habitats, to improve biodiversity and the resilience of ecosystems"*

4.42 Table 1 sets out a summary of the proposals necessary to deliver a net benefit biodiversity within the Application Site. The estimated areas of existing, enhanced and proposed green infrastructure are within Tables 7, 8 and 9 of Chapter 9 (Ecology) of the Environmental Statement.

**Table 1 Proposed/Existing Habitat Types, Features and Their Functions**

| Habitat Type and Feature   | Function  |
|--|---|
| Proposed native woodland planting and woodland management  | Protection of existing woodland, management of existing woodland, carbon sequestration, shelter for larger mammals, larger nesting and foraging areas for woodland birds and woodland invertebrates, wildlife corridors.<br>Also acts as a screening measure along the southern boundary to soften views from a number of viewpoints. |
| Hazel dominated scrub  | Commuting, foraging and nesting resources for dormice, commuting routes for bats, wildlife corridor.  |
| New mixed-species scrub planting   | Commuting routes and foraging resources for bats, nesting habitat and dispersal routes for dormice, nesting and foraging habitat for breeding birds, cover and dispersal route for reptiles and amphibians, structural diversity for woodland edges, wildlife corridor.   |
| Swales / attenuation areas, Drainage, filtration, pollution control, foraging resource for birds, meadow planting and wetland creation | Drainage, filtration, pollution control, foraging resource for birds, meadow planting and wetland bats and terrestrial invertebrates, new breeding areas for amphibians.  |
| Sacrificial arable crop with wildflowers   | Nesting opportunities and foraging resources for farmland birds and terrestrial mammals, foodplants for invertebrates.  |
| Rough grassland and marsh habitat  | New opportunities for ground nesting birds and grassland nesting mammals such as brown hare and harvest mouse, foraging resource for mammals and terrestrial invertebrates, wildlife stepping stones.   |
| Areas proposed for open space  | Retention and enhancement of land to offer combined benefits for biodiversity and people.   |
| New and enhanced species-rich hedgerows  | Improve connectivity within the Application Site and connectivity to the wider landscape, corridors for wildlife to disperse, foraging resource, natural soil and flood management.   |
| Bat Boxes (tree mounted and integrated)  | New roosting features comprising integrated and tree mounted features to supplement the roosting resource.  |
| Bird boxes   | Additional nesting opportunities for smaller passerine birds, such as house sparrow.  |
| Dormouse boxes   | Additional opportunities alongside new natural nesting habitat to provide breeding opportunities.   |
| Hibernacula  | Shelter, cover and resting places for active and hibernating reptile and terrestrial invertebrates.   |

4.43 The delivery of the landscape and biodiversity design as part of the Model Farm development will be secured through appropriate planning conditions and a Section 106 agreement between the Vale of Glamorgan Council and Legal and General.

## Standard 12 Underpins Nature's Recovery

4.44 The purpose of Standard 12 is to “... ensure that opportunities to restore and improve the connectivity of existing and planned for habitats are taken” to help sustain “... wider ecological networks and nature recovery goals”.

4.45 Key characteristics of Standard 12 are to:

- identify and, where appropriate, protect existing and planned for key habitat areas for the benefit of priority species;
- identify and protect effective links with or stepping-stones to and from the Application Site and existing and planned for, local ecological networks, large-scale areas for wildlife and designated sites beyond the Application Site;
- restore, enhance or create effective links with existing on-site habitats (where present) and existing and planned for ecological habitats and networks beyond the Application Site; and
- maximise the potential for effective linkages between habitats and enhancement of adjacent and nearby wildlife assets and networks.

4.46 The Natural Resource Policy (NRP)<sup>5</sup> defines Resilient Ecological Networks as:

*“networks of habitat in good ecological condition linking protected sites and other biodiversity hotspots across the wider landscape, providing maximum benefit for biodiversity and well-being. Such nature networks have existing or potential for healthy resilient ecosystems which provide a range of important ecosystem services as well as allowing the movement of species across landscapes in response to climate change.”*

4.47 The Diversity and Connectivity plan (**Figure 4**) illustrates how the biodiversity design for the Model Farm development would enhance the area within the Application Site for biodiversity, in keeping with the DECCA framework to support Resilient Ecological Networks. The plan illustrates the extent of existing, enhanced and newly proposed habitats, how they provide intra connectivity, joined up and coherent ecological networks, and corridors to the wider landscape. The design of habitats on both the Diversity and Connectivity Plan and Biodiversity Plan aim to emulate wilder ecotones, representative of historic, natural landscapes with the aim of reducing groomed habitat edges and enhancing structural diversity.

4.48 High quality habitats sensitive to landscape change such as ancient woodland, nearby SINCs and watercourses will be protected through exclusion zones. The exclusion zones will ensure root protection and prevent direct impacts. Management of existing woodlands through sympathetic, low intervention management would reverse declining conditions and restore them to healthy, functioning habitats. The cessation/reduction of agricultural processes will reduce eutrophication and provide opportunities for notable species of vascular plants to colonise areas that are currently too fertile to support them. Equally, reduction in eutrophication will restore watercourses that are currently in a declining condition.

4.49 Dark corridors, wildlife stepping stones and diversity within existing, retained habitats and within newly proposed habitat mosaics will help increase ecosystem functioning and resilience to environmental pressures, allowing the landscape to prosper for the long-term

## Seven Well-being Goals

4.50 The proposal aims to deliver against three of the seven Well-being Goals of The Act. These are: a resilient Wales, a healthier Wales and a globally responsible Wales. The proposal in alignment to these three goals is outlined below.

---

<sup>5</sup> Welsh Government (2017) Natural Resources Policy.

## A resilient Wales

4.51 The Act defines this goal for Wales as '*A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change)*'.

4.52 Ecosystem resilience would be maintained and enhanced via the enhancement and strengthening of existing habitats and ecological networks, and introduction of new measures to improve existing conditions at the Application Site, in line with the DECCA Framework. These measures relate to green and blue infrastructure and include proposed native woodland planting and woodland management, new and enhanced species-rich hedgerows, introduction of woodland buffers, and protection of SINCs.

4.53 Additionally, incorporation of nature-based SuDs measures assists in the delivery of climate-resilient water management by regulating surface water runoff and contributing to carbon sequestration via native planting designed into the SuDS system.

## A healthier Wales

4.54 This goal aims for '*A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood*'.

4.55 As part of the proposal, 42ha of land in Legal & General's ownership will be transferred to the Vale of Glamorgan Council to facilitate an extension to Porthkerry Country Park, which will provide increased opportunities for recreation.

4.56 Green open spaces have been proposed as part of the development proposals and integrated within the proposals for green infrastructure. The green open spaces would allow people to surround themselves with wooded habitats, water features and enhanced grasslands.

4.57 Improving sustainable access to recreation facilities through the extension to Porthkerry Country Park, providing opportunities for people to adopt healthier lifestyles. By enabling public recreation, this aligns with the goal of a healthier Wales

## A globally responsible Wales

4.58 The Act defines the following goal as '*A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being*'.

4.59 The application proposal will provide 44.79ha of employment land, making a significant contribution, at a strategic location in the Cardiff Capital Region, to ensuring there is a sufficient supply of employment land to meet the needs and requirements of a range of future employment scenarios. The provision of high-quality business and employment space will be an important catalyst to draw in operators in the aerospace and high-tech manufacturing sectors and it is estimated that once fully operational, the business park could provide a significant number of skilled jobs, having significant socio-economic benefits on the local area.

Whilst providing economic benefits, the Application Site has been designed in a way that is responsible in delivering net benefit for biodiversity. This GI statement demonstrates the biodiversity benefit that is being proposed as part of the application. As outlined by Table 1 above, a number of measures including new and enhanced woodland and hedgerow planting, meadow and wildflower planting, proposed wetlands and attenuation areas are proposed. Additionally the introduction of bat boxes and dormouse boxes and, proposed improvement on the current agricultural land use ensuring the state of biodiversity and the resilience of ecosystems is left in a better state than before.

4.60 Overall, the proposed development accords with the Sustainable Development Principle of the Act by achieving contributions towards the economic, social, environmental, and cultural well-being of Wales.

## 5 NEXT STEPS

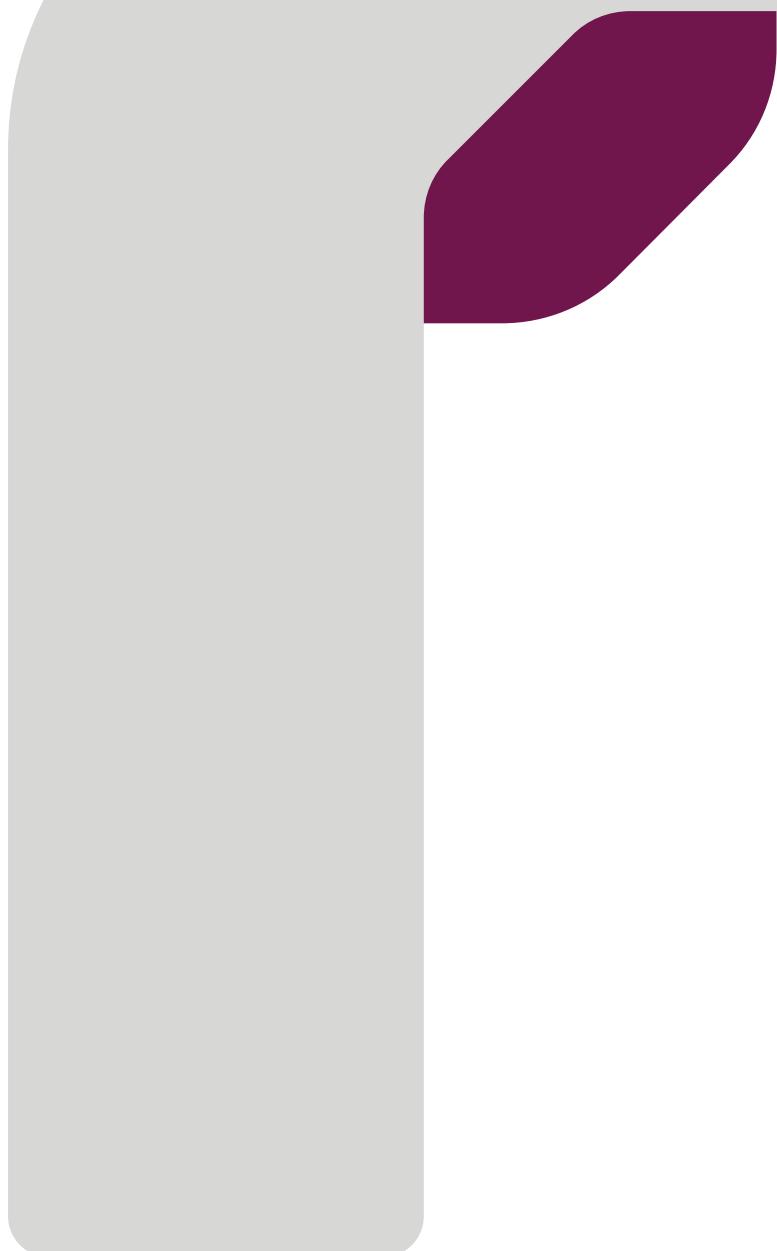
5.1 The Proposed Development has been designed to date taking into account Ecosystem Resilience and the DECCA framework (Welsh Government, 2024); relating to diversity, extent, connectivity, context and adaptability outlined in Planning Policy Wales 12. The consideration of Green Infrastructure within the Proposed Development also considered the Sustainable Development Principle of the Well-being of Future Generations Act and a number of the seven well-being goals, notably a Resilient Wales, Healthier Wales and Globally Responsible Wales.

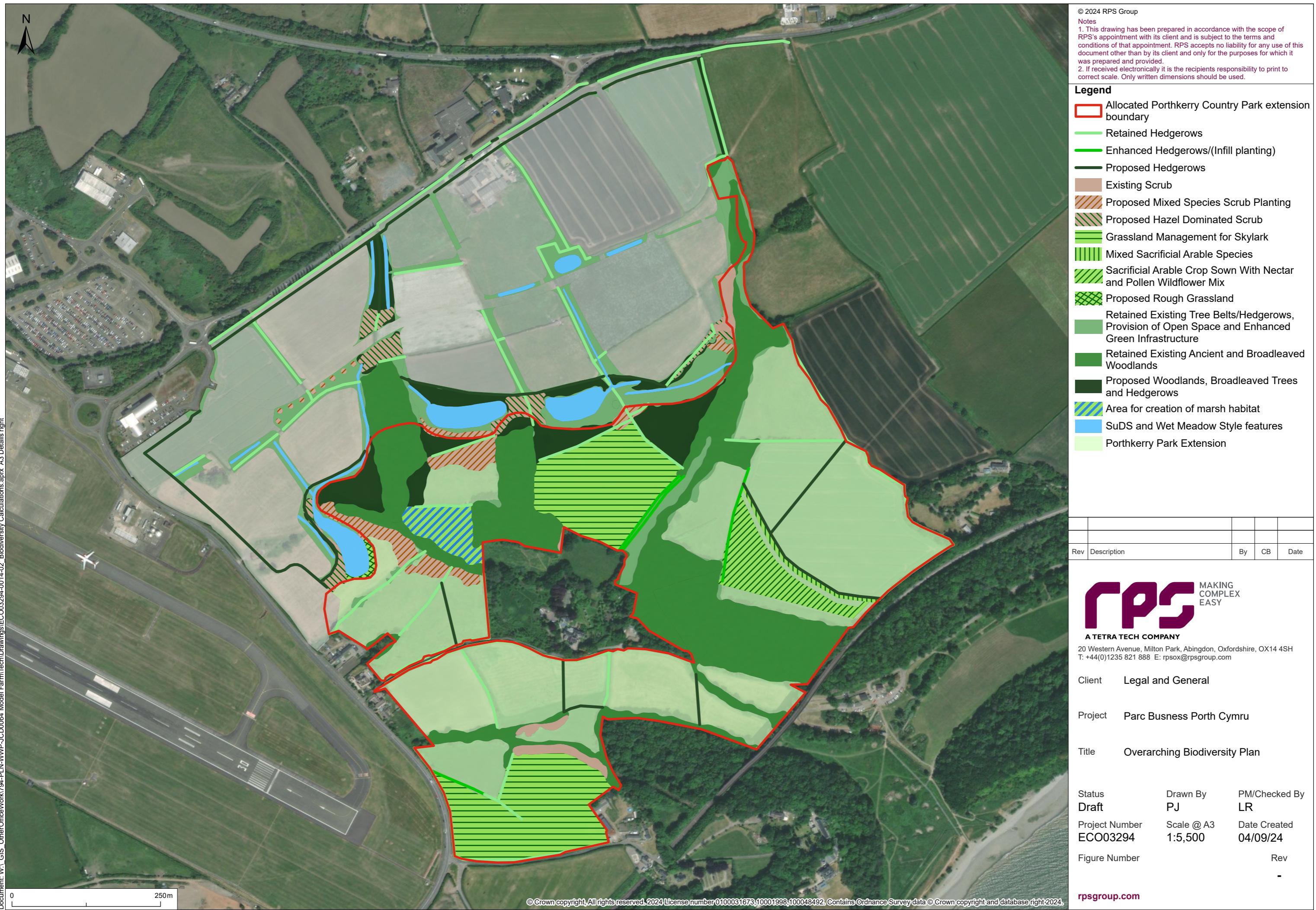
5.2 Existing documents submitted as part of the planning application (including appeal stage) will be used to develop the detailed strategy for delivering green infrastructure as part of the development proposals, following successful consent. This will ensure green infrastructure provision will remain a core element of the design. These documents are outlined below:

- JCD0064-003-T-210511 Concept Masterplan
- JCD0064-006-J-210607 Parameter plan - Green Infrastructure May 2019,
- JCD0064-007 Hedgerow, Scrub and Woodland Plan
- 210520\_ECO01271-002 Rev A Proposed Additional Mitigation and Wildlife Enhancement
- Environmental Statement Update 2024 Chapter 5: Landscape and Visual Assessment
- Environmental Statement Update 2024 Chapter 9: Ecology
- Design and Access Statement July 2019
- Sustainable Drainage Assessment July 2019
- Outline Biodiversity Management Strategy 2019
- Technical Note: The Protection of Ancient Woodlands (Arboriculture Impact Assessment) August 2022

5.3 Detailed green infrastructure proposals and the appropriate delivery and aftercare will be designed in consultation with the Vale of Glamorgan Council and set out within a Detailed Biodiversity Management Strategy. An updated GI statement will be produced following detailed design of the development proposals.

**Figure 3**  
**Overarching Biodiversity Plan**





**Figure 4**  
**Diversity and Connectivity Plan**

