VALE OF GLAMORGAN

REPLACEMENT LOCAL DEVELOPMENT PLAN

2021 - 2036

GREEN INFRASTRUCTURE ASSESSMENT OF KEY SITES

November 2025

BACKGROUND PAPER - BP32A

RLDP CDLN

VALE of GLAMORGAN BRO MORGANNWG

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Executive Summary

i. This background paper sets out the strategic role of Green Infrastructure (GI) in shaping sustainable development and high-quality places as part of the Vale of Glamorgan Replacement Local Development Plan 2021-2036 (RLDP). The background paper forms a part of the evidence base for the RLDP and details how GI has been integrated across spatial policies, site allocations and development management frameworks aligning with national planning policies and supporting sustainable placemaking principles.

ii. The background paper supports the delivery of national policy objectives as set out in Planning Policy Wales (Edition12), Future Wales: The National Plan 2040, the Environment (Wales) Act 2016 and the Well-being of Future Generations (Wales) Act 2015 and responds to the Nature Emergency declared by the Welsh Government in 2021 and endorsed by the council.

iii. GI refers to a connected network of natural and semi-natural features, green spaces and water systems that deliver multiple environmental, social and economic benefits. These include enhanced biodiversity, sustainable water management, carbon capture and improved health and well-being.

iv. The background paper seeks to define the strategic importance of GI in local planning, assesses the current GI network and identifies opportunities for the protection and enhancement of the identified GI assets, and will inform emerging policy and site-specific decisions that deliver multifunctional benefits through nature-based solutions that move beyond traditional green space provision to integrate natural features with the built environment.

v. To ensure that GI is considered from the outset in the planning and design of new development, the background paper includes site specific GI Assessments which have been prepared for all proposed RLDP key site allocations.

vi. The key site GI assessments identify key features, constraints and opportunities related to biodiversity, landscape, connectivity and ecosystem resilience and are included/summarised in the background paper. The site-specific GI assessments will form a critical evidence base for master planning, site development briefs and future planning applications ensuring that GI is a core consideration in delivering sustainable, resilient developments.

vii. The information in the background paper provides a robust evidence base and strategic direction for embedding GI principles across the RLDP. It highlights the critical role of GI in delivering a wide range of cross-cutting benefits for biodiversity, climate resilience, place making and community well-being and illustrates the Vale of Glamorgan's commitment to GI within the RLDP framework, providing a more sustainable, equitable and resilient future for the Vale of Glamorgan in line with national planning aspirations.

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1. Introduction

1.1 The Green Infrastructure Assessment is one of several background documents prepared as part of the evidence base to support the Vale of Glamorgan Replacement Local Development Plan (RLDP).

1.2 The Green Infrastructure Assessment (GIA) is an integral part of the evidence base for the RLDP. Its purpose is to ensure that the impacts of the RLDP on green infrastructure are considered strategically, considering a wide range of evidence. This methodology to considering green infrastructure is deliberate and sets out to ensure a stepped improvement to the piecemeal approach that was previously taken to considering ecology and biodiversity concerns.

1.3 This GIA follows guidance set out by NRW1, which has been provided specifically to inform the drafting of GIAs for Planning Authorities when producing RLDPs. The guidance provides an overview of the relevant datasets to consider when creating a GIA, and how this data could be used. The method for producing a GIA as set out by NRW results in a systematic approach to identifying the Vale's baseline for green infrastructure and where priorities and opportunities exist. The production of a GIA to inform the evidence base of the RLDP also ensures that green infrastructure is considered at the earliest possible stage in the planning process. Toward this, the GIA includes five key steps:

- **Step 1: Setting the Baseline**
- **Step 2: Identifying Priorities**
- **Step 3: Identifying Opportunities**
- **Step 4: Site Assessment**
- **Step 5: Monitoring and Review.**

1.5. The Council previously commissioned CBA Studios to produce a GIA, as part of the Council's Green Infrastructure Strategy. Their work completes Steps 1 to 3, as they set the baseline for green infrastructure in the Vale, identified priority areas for intervention and opportunities for enhancement. The 'CBA Studios GIA' can be found in Appendix 1 and as it completes the first 3 Steps of a GIA, it includes the majority of the information required to support the RLDP. In respect of the RLDP, paragraph 2.2.2 states the following:

'*The RLDP is currently being prepared and is scheduled for adoption in 2026. The GI Strategy will form a key component of its evidence base. In particular, the GI Assessment (Section 3) of the Strategy will be used to inform decision making in both developing the RLDP and on future planning applications*.'

[1] NRW, 2023. *Green Infrastructure Assessments: A guide to key Natural Resources Wales' datasets and how to use them as part of a Green Infrastructure Assessment.* Online. Available at: Guidance Note 042 Green Infrastructure Assessments (final June 2021 (naturalresources.wales) [Accessed 16/07/24].

1.6. This GIA seeks to summarise and signpost the key outcomes from the CBA Studios GIA in relation to Steps 1 to 3, before completing Steps 4 and 5. Therefore, the Council's GIA comprises both this Paper and the CBA Studios GIA, and they should be read together as they are intrinsically linked. To assist, Appendix 1, displaying the CBA Studios GIA has been published separately to this document, so that both can be used concurrently.

1.7. As above, this paper completes Steps 4 in full. Step 4 has resulted in high level principles being established for the RLDPs Key Sites. It is intended for these high-level principles to be reflected within the eventual LDP Written Statement. These sites will deliver the majority of housing on new sites from adoption of the RLDP through to 2036.

1.8. Following the completion of Step 4, a further section has been included to take stock of the 4 completed Steps and communicate how these have been translated into Policy to inform the RLDP. The GIA is completed by Step 5, which sets out the anticipated monitoring framework for the RLDP, in respect of green infrastructure.

Responding to the Nature Emergency

1.9. On the 30th of June 2021 the Welsh Government declared a Nature Emergency. Following this, The Vale of Glamorgan Council declared a Nature Emergency on the 26th of July 2021. These actions were taken following the identification that 17% of species within Wales are threatened with extinction. In making this declaration it, the Vale considered that more had to be done to address this threat to biodiversity and a commitment was made to no net loss of biodiversity in the County2. This GIA, and the CBA Studios GIA, have been produced in this context and seek to reflect the Vale's declaration and ensure that its values are reflected within the RLDP.

What is Green Infrastructure?

1.10. Paragraph 6.2.1 of Planning Policy Wales (Edition 12) defines green infrastructure as follows:

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

[2] Vale of Glamorgan Council, 2021. *Vale of Glamorgan Council declares nature emergency*. Online. Available at: Vale of Glamorgan Council declares nature emergency [Accessed 16/07/24].

trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks.'

1.11. The Green Infrastructure Approach seeks to sustainably manage the many, often conflicting, pressures for housing, industry, transport and travel, energy, agriculture, nature conservation, recreation and aesthetics. Section 2.4 of the CBA Studios GIA introduces this Approach and discusses multifunctionality, ecosystem services, connectivity and the benefits of GI.

1.12. A summary of the benefits of GI, taken from the CBA Studios GIA, are displayed below in Figure 1.

Figure 1: Identifying the Benefits of Green Infrastructure (Box 2.5 of CBA Studios GIA)

BOX 2.5 GI Benefits

Health & Well-being

- Supporting physical well-being by providing quality green spaces for walking, cycling, sports and recreation.
- Providing more opportunities and places for children to play.
- Improving mental well-being by providing access to nature and attractive green spaces and breathing spaces.
- Providing opportunities for growing food locally and healthy eating.

Biodiversity & Ecosystem Resilience

- Protecting and enhancing biodiversity.
- Providing new and connecting existing habitats or natural features, to allow species movement and increase available habitat areas.
- Preventing fragmentation of habitats.
- Allowing diverse habitats to be created which are rich in flora and fauna.
- Protecting aquatic species through appropriate management of waterside habitats.
- Improving soil health and creating habitats through the use of agroecology methods.

Climate Change and Sustainability

- Reducing CO^2 emissions by providing non-vehicular travel routes and encouraging walking and cycling.
- Providing carbon storage and sequestration in vegetation.
- Providing shelter and protection from extreme weather.
- Managing flood risk: living roofs, large trees and soft landscape areas absorb heavy rainfall.
- Providing for storage of surface water in times of peak flow in SuDS/other water features.
- Cleaning and cooling air, water and soil, countering the 'heat island' effect of urban areas.
- Saving energy: living roofs insulate buildings, and large trees provide shade, reducing the need for air conditioning.
- Reducing CO^2 emissions through limiting food miles by locally growing produce.

Social Cohesion

- Improving community cohesion and social inclusion.
- Creating green spaces for socialising, interaction and events.
- Providing improved physical connections through green networks to get between places; and to communities, services, friends and family and wider green spaces.
- Creating opportunities for community participation and volunteering.
- Providing spaces for education and training.

Economy

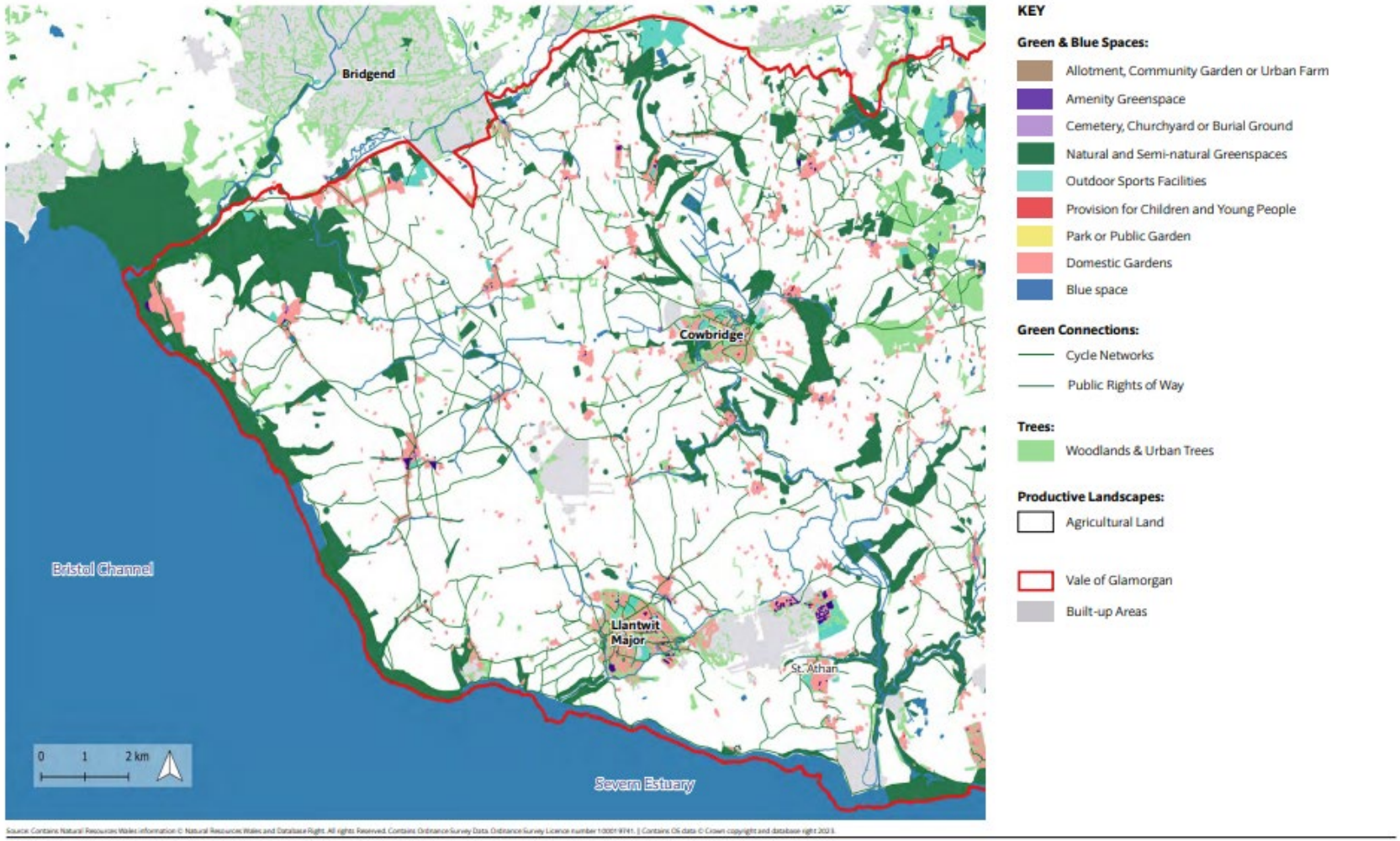
- Supporting a reduction in healthcare costs and increased productivity.
- Attracting businesses and inward investors by creating attractive settings.
- Helping attract and retain a quality workforce and generating employment.
- Supporting the local green economy, including using greener farming techniques such as implementing agroecology methods.
- Reducing environmental costs such as those associated with the reduction of flood risk.
- Improving the image of a place and boosting property values.
- Helping developers get the most out of the site by combining uses, e.g. open space & Sustainable Drainage Systems (SuDS), helping development viability.
- Saving energy and money for residents and end users.

Sense of Place

- Improving townscape, landscape quality and visual amenity.
- Preserving heritage and cultural expression.
- Reinforcing local landscape character.
- Making places more interesting and distinctive.

1.13. As displayed in Figure 2 and 3, the Vale contains a wide range of green infrastructure assets. They include public and private assets, with and without public access. Grouped together they represent the area's existing GI network. It should be recognised that some 'landscape scale' assets extend across administrative boundaries, such as the River Ely and the coastline surrounding the River Ogmore Estuary.

Figure 2 – Green Infrastructure Typology Vale of Glamorgan (West)



CBA

December 2023

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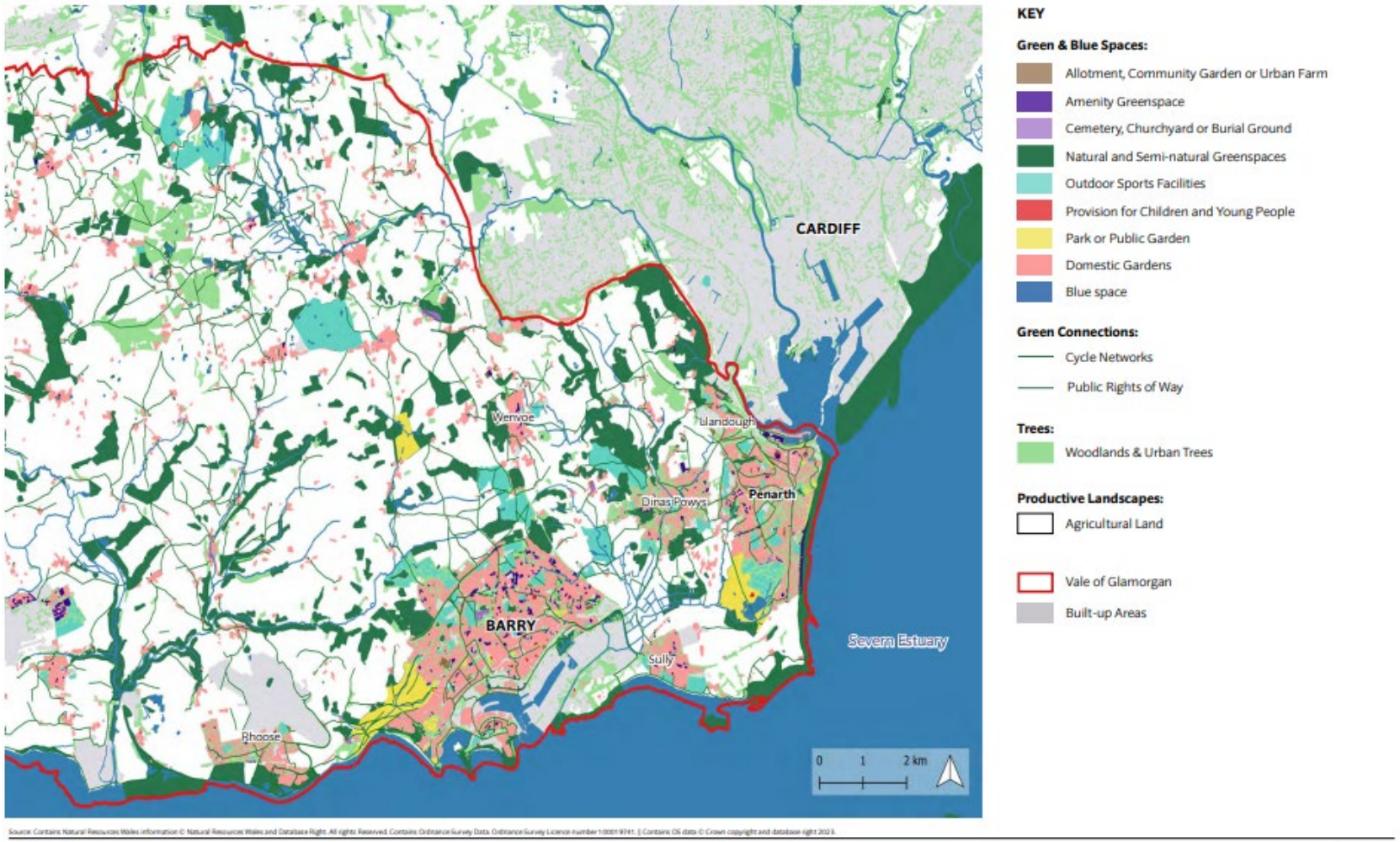
VALE OF GLAMORGAN
GREEN INFRASTRUCTURE STRATEGY

MAP 3.1a
GREEN INFRASTRUCTURE TYPOLOGY (WEST)

Figure 3: Green Infrastructure Typology Vale of Glamorgan (East)



CBA

December 2023

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VALE OF GLAMORGAN
GREEN INFRASTRUCTURE STRATEGY

MAP 3.1b
GREEN INFRASTRUCTURE TYPOLOGY (EAST)

2. Policy and Legislative Framework

2.1. The CBA Studios GIA provides a policy and legislative context relevant to when that document was completed in December 2023. A comprehensive framework is provided here to ensure the robustness of this Paper and also build upon that presented in the CBA Studios GIA. A comprehensive review, which identifies the relevance of the policy and legislation in detail, is included in Appendix 1 of the CBA Studios GIA.

Climate and Nature Emergency Declarations

2.2. Underpinning the GIA are declarations of climate and nature emergencies at a national and local level. On 29 April 2019, the Welsh Government declared a Climate Emergency in Wales. The Vale of Glamorgan Council declared a Climate Emergency on the 29th of July 2019. The Welsh Government Minister for Environment, Energy and Rural Affairs Lesley Griffiths said:

"I believe we have the determination and ingenuity in Wales to deliver a low carbon economy at the same time as making our society fairer and healthier. Tackling climate change is not an issue which can be left to individuals or to the free market. It requires collective action."

2.3. These were followed in 2021 by further declarations of nature emergencies, to reverse biodiversity loss and protect endangered species. The Welsh Government declared a Nature Emergency on the 30th of June 2021, and the Council followed suit on the 30th of July 2021. In making the declaration, Deputy Leader of the Council, Lis Burnett, stated the following:

"…*more needs to be done, with particular attention paid to the threat to biodiversity. Protecting biodiversity is as important as tackling climate change. The impact of the latter can mean that species and the food they need are out of sync. For example, the caterpillars that blue tits and great tits need to feed their young might not be available at the right time of year because the leaves those caterpillars feed on bloomed either too early or too late*."

<u>International Context</u>

International Memorandum of Understanding on Nature Based Climate Action (2015)

2.4. Recognising the importance of the nature-based approach as a key component of climate change action, the Welsh Government initiated and is a founding signatory to the International Memorandum of Understanding on Nature Based Climate Action.

2.5. As founding signatories to the international Nature Based Climate Action Memorandum of Understanding, the Welsh Government has committed to:

- promote investments in enhancing ecosystem resilience as part of the response to the need for mitigation and adaptation.

- look to natural or “green” infrastructure solutions to reduce climate risk and provide wider ecosystem services whilst safeguarding biological diversity and ecosystem health.
- the use of tools and assessments that promote the understanding of the wider value of biodiversity and healthy ecosystems in addressing climate change and providing wider multiple benefits.
- the development of tools to measure the benefits of integrated approaches to climate change (including ecosystem services, safeguarding biological 9 diversity, carbon sequestration, and wider co-benefits that support increased resilience).
- the need for enhanced technical and scientific cooperation and measurement in relation to implementation, and
- foster closer links between ecosystem management, climate-change adaptation and sustainable development.

COP28 30x30 Biodiversity Goal (2023)

2.6. The 30x30 goal, agreed at COP28, aims for at least 30% of land and sea areas, especially those crucial for biodiversity, to be effectively, equitably managed, and ecologically represented through well-connected conservation systems. Additionally, the framework seeks nature-based contributions to global climate mitigation efforts to the tune of at least 10 $GtCO_{2e}$ per year.

National Context

Well-being of Future Generations (Wales) Act 2015

2.7. The Well-being of Future Generations Act provides an overarching vision to create a Wales that is conscious of the implications of its decisions on future generations. Fundamentally, it seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own. It aims to improve social, economic, environmental and cultural well-being in Wales, and collectively considers these the four facets of sustainable development. This Act sets the context for the green infrastructure approach, facilitating a balance that considers environmental well-being equal to other priorities. The Act includes 7 well-being goals, which public bodies must work toward:

- A More Equal Wales – A society that enables people to fulfil their potential no matter what their background or circumstances.
- A Prosperous Wales – An innovative, productive and low carbon society which recognises the limits of the global environment & uses resources efficiently and proportionately, and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities
- A Resilient Wales – 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).

- A Healthier Wales – 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.
- A Wales of Cohesive Communities – Attractive, viable, safe and well-connected communities.
- A Globally Responsible Wales – 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.
- A Wales of Vibrant Culture and Welsh Language – A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, sports and recreation.

Environment (Wales) Act 2016

2.8. The Environment (Wales) Act 2016 introduces the Sustainable Management of Natural Resources (SNMR) and sets out a framework to achieve this as part of decision-making. The objective of the SMNR is to maintain and enhance the resilience of ecosystems and the benefits they provide. The Act requires us to set out the challenges our natural resources and ecosystems face and the opportunities they can provide. This means looking at the ways we currently manage our natural resources and how we can reduce the pressures on them.

2.9. Sustainable management of natural resources is defined in the Environment Act as:

'using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of present generations of people without compromising the ability of future generations to meet their needs, and contributing to the achievement of the wellbeing goals in the Well-being of Future Generations Act.'

2.10. The principles of sustainable management of natural resources:

- Require us to think about the complex relationships between nature and people over the long term.
- Help us to think about the benefits that we get from natural resources now and in the future, recognising the ways they support our well-being; and
- Encourage us to think about ways of making our ecosystems more resilient.

2.11. Section 6 of the Environment (Wales) Act 2016 requires Public Authorities, which exercise their functions in relation to Wales, to maintain and enhance biodiversity and promote the resilience of ecosystems (referred as the Section 6 Duty). To comply with this duty, Welsh Government Guidance states that Public Authorities must embed the consideration of biodiversity and ecosystems into their early thinking and business planning, including any policies, plans, and projects, as well as their day-to-day activities.

Future Wales: The National Plan 2040 (2021)

2.12. Future Wales is the national development plan for Wales and sets out the strategic level approach to development across the Country. It sets a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, decarbonisation, developing resilient ecosystems and improving the health and well-being of our communities. It sets out that: *'The strategic focus of Future Wales on urban growth requires an increased emphasis on biodiversity enhancement (net benefit) in order to ensure that growth is sustainable.'*

2.13. Amongst a range of national planning policy, Policy 9 (Resilient Ecological Networks and Green Infrastructure) provides the strategic context in relation to green infrastructure. This sets out to reverse the decline of biodiversity and increase the resilience of ecosystems.

Planning Policy Wales (Edition 12) (2024)

2.14. Planning Policy Wales (PPW) sets out the national objectives for sustainable development within Wales and signposts to a series of Technical Advice Notes (TANs). PPW highlights the fundamental role which green infrastructure has in shaping places and improving well-being, by providing multiple functions and benefits for social, economic, and environmental resilience. It states that planning authorities should adopt a strategic and proactive approach to GBI, which should be fully integrated into development planning.

2.15. On the 11th of October 2023 the Minister for Climate Change wrote to Local Authorities setting out that Chapter 6 of PPW was being updated with immediate effect. This was followed by the publication of Edition 12 in February 2024. Chapter 6 of PPW relates to Distinctive and Natural Placemaking and Well-being. The changes to this Chapter focus on its biodiversity and green infrastructure aspects, seeking to improve protection and the weight given to these factors in decision making. Notably, PPW sets out that outputs from a Green Infrastructure Assessment must address:

- The identifying of landscape, biodiversity, geodiversity, and historic and cultural features in which green infrastructure plays a part, which are already being safeguarded as part of multi-functioning urban and rural landscapes.

- The nature emergency identifying and demonstrating how a net benefit for biodiversity will be secured and the attributes of ecosystem resilience enhanced, making the links to other land management activity, such as local nature recovery plans, and identifying land which

may be required for the protection, retention and restoration and recovery of nature (and in providing a net benefit for biodiversity). This includes recognising the value of designated sites, and natural resources such as peatlands, as part of resilient ecological networks. In urban areas, the protection and provision of green infrastructure should be considered alongside the needs of wider maintenance regimes, and any role development may have in making an effective contribution. The assessments may assist in identifying how the impact of INNS and the risk of introducing or spreading INNS will be managed.

- The reduction of pollution, as far as possible, by identifying green infrastructure/nature-based solutions which form part of, or complement, wider activity at a catchment scale to address pollution and improve the restoration of riverine and other habitats.

- The climate emergency by ensuring the multi-functional benefits provided by trees and woodlands are identified; for example, by increasing tree canopy cover in urban areas to ensure shading against increased temperatures, and by requiring effective natural flood management and sustainable drainage schemes. Such measures may also help maintain good air quality and appropriate soundscapes.

- The health and well-being of communities by ensuring they have accessible natural green spaces of various sizes and scales within reasonable walking and cycling distances; and • How the planning system should secure the implementation and management of green infrastructure, recognising its dynamic nature, over the long term.

National Natural Resources Policy (2017)

2.16. The focus of the NNRP is the sustainable management of Wales' natural resources, to maximise their contribution to achieving goals within the Well-being of Future Generations Act. The policy sets out three National Priorities as follows:

- Delivering nature-based solutions.
- Increasing renewable energy and resource efficiency; and
- Taking a place-based approach.

2.17. The State of Natural Resources Report shows that investment in our natural resources, in areas which deliver the most in terms of both ecosystem resilience and benefits across all the well-being goals, can help:

- Increase green infrastructure in and around urban areas.
- Ensure coastal management and adaptation.
- Increase canopy cover and well-located woodland close to towns and cities where it will have the greatest recreational and ecosystem service value.

- Maintain, enhance, and restore floodplains and hydrological systems to reduce flood risk and improve water quality and supply; and,
- Restore of our uplands and managing them for biodiversity, carbon, water, flood risk and recreational benefits.

Planning (Wales) Act 2016

2.18. The Planning Act Wales sets out a framework for sustainable development in accordance with the Well-being of Future Generations Act and has the purpose of ensuring that the development of land contributes to improving the economic, social, environmental, and cultural well-being of Wales. The planning system is central to achieving sustainable development in Wales. It provides the legislative and policy background to manage the land use in the public's interest so that it contributes positively to the achievement of the well-being goals.

Active Travel (Wales) Act 2013

2.19. The Active Travel (Wales) Act promotes walking and cycling as the preferred option for shorter, everyday journeys such as those to and from the workplace or education establishment, or to access health, leisure or other services and facilities. The Active Travel Act requires LAs to produce Integrated Network Maps, identifying the walking and cycling routes required to create fully integrated networks for walking and cycling to access work, education, services, and facilities.

Local Context

Vale of Glamorgan Local Development Plan 2011-2026

2.20. The adopted LDP currently sets the basis for the consideration of impacts on green infrastructure. Green infrastructure is integral to the LDP; however, the context is generally reactive and primarily seeks to protect existing green infrastructure assets and ecological designations, and a suite of policies exists to do this. Policy MD9 (Promoting Biodiversity) does seek to secure biodiversity enhancements were possible.

Vale of Glamorgan Well-being Plan 2023-2028

2.21 The Vale's Well-being Plan sets out the priorities for the partners that sit on the Vale's Public Service Board, up to 2028. Its evidence base identifies the threats faced by green infrastructure in the Vale, and particularly biodiversity, citing the declared Nature Emergency. The Plan sets three sets three Well-being objectives:

- A more resilient and greener Vale
- A more active and healthier Vale
- A more equitable and connected Vale

2.22 As set out, the first objective relates directly to green infrastructure, and at its core is responding to the climate and nature emergencies.

Vale of Glamorgan Council Corporate Plan 2020-2025

2.23 The Corporate Plan sets out the key drivers for the Council up to 2025. It sets out how the Council will work to achieve our vision of strong communities with bright futures. The Plan includes four priorities, one of which is *'To respect, enhance and enjoy our environment'*. This includes 8 actions linked to green infrastructure that the Council have committed to:

1) Work to reduce the organisation's carbon emissions to net zero before 2030 and encourage others to follow our lead as part of minimising the negative impact of our activities on the environment.
2) Work with and empower community groups and other partners to sustain local facilities including public toilets, libraries, parks, play areas and community centres.
3) Protect, preserve and where possible enhance our natural and built environment and cultural heritage.
4) Work with the community and partners to ensure the local environment is clean, attractive and well managed.
5) Work with the community, developers and others to ensure that new developments are sustainable and that developers mitigate their impacts, integrate with local communities and provide necessary infrastructure.
6) Provide effective waste management services and work with our residents, partners and business to minimise waste and its impact on the environment.
7) Minimise pollution recognising the detrimental impact it may have on the environment and people's well-being.
8) Work to reduce the impact of erosion, flooding and pollution on our coastal areas and watercourses

Vale of Glamorgan Climate Change Challenge Plan 2021-2030

2.24 The Council's Climate Change Challenge Plan sets out the Council's response, up to 2030, to the declared Climate Change Emergency. It challenges the Council to *'be a leader, encourage and support others to do things differently, and change how we work',* and builds upon the Corporate Plan commitments for strong communities with bright futures. The Challenge Plan seeks to bring together interventions to address the causes and impacts of climate change taking place across the council, to ensure a cohesive response to issues.

2.25 The Plan is arranged by the need to 'Demonstrate strong leadership', 'Fulfil our responsibility to current and future generations' and 'Make a difference now'. Challenges exist within these priority areas, and in relation to green infrastructure the following challenge is of relevance:

‘Protect and enhance green and blue space, biodiversity and, ecosystem resilience and improve understanding of the importance of our natural environment.’

3. Setting the Baseline

3.1 Section 3 seeks to fulfil 'Step 1: Setting the Baseline' of the NRW guidance, providing reference to the CBA Studios GIA. In setting the baseline, the green infrastructure that currently exists in the Vale has been considered. In doing this, the key ecological assets and ecological networks have been identified, as well as their condition and threats to them.

Methodology

3.2 The CBA Studios GIA draws on national and local policy and evidence, NRW's Welsh Information for Nature-based Solutions (WINS) mapping, and the detailed GI assessment set out in Appendices 2 and 3. The assessment was also informed by the Vale of Glamorgan Council Officers Green Infrastructure Plan Workshop in December 2022 (see Appendix 4).

3.3 The national and local evidence includes a wide range of GIS datasets to provide an evidence base setting out the existing GI assets throughout the Vale. The datasets used to inform the GIA are identified in Appendix 2 of the CBA Studios GIA. Using this data allows for the network of natural areas within the County to be mapped, facilitating further analysis and priority identification.

3.4 The typologies mapped by CBA Studios are consistent with the NRW Guidance, ensuring that the approach taken is robust and recognised. The following typologies are mapped, as identified and described in Box 3.1 of the CBA Studios GIA:

- Allotment, community garden or urban farm.
- Cemetery churchyard or burial ground.
- Amenity greenspace.
- Park or public garden.
- Outdoor sports facilities.
- Provision for children and young people's play.
- Natural and semi-natural greenspace.
- Domestic garden.
- Blue spaces.
- Cycle networks.
- Public rights of way.
- Urban trees.
- Woodlands.
- Agricultural land.

3.1. For the purposes of plotting, the typologies were grouped as follows:

- Green and Blue Spaces, which most of the Vale's green infrastructure typologies fall into, are public or private areas where green infrastructure is present, such as parks and public gardens.
- Green Connections, which are linkages for travelling between areas of green infrastructure using active travel, cycle paths and public rights of way.
- Trees, which covers woodland and urban trees; and
- Productive Landscapes, which identifies agricultural land.

3.2. Within these broad typologies there are a range of assets. Assets are specific green infrastructure features of the environment, for example, a specific park, agricultural field or woodland. Assets range in scale and can be an individual gardens or an entire coastline. In some cases, individual assets include a range of green infrastructure typologies. For example, Porthkerry Country Park is an asset that includes, amongst other typologies, woodlands, public rights of way and amenity greenspace.

Results of CBA Studios GIA

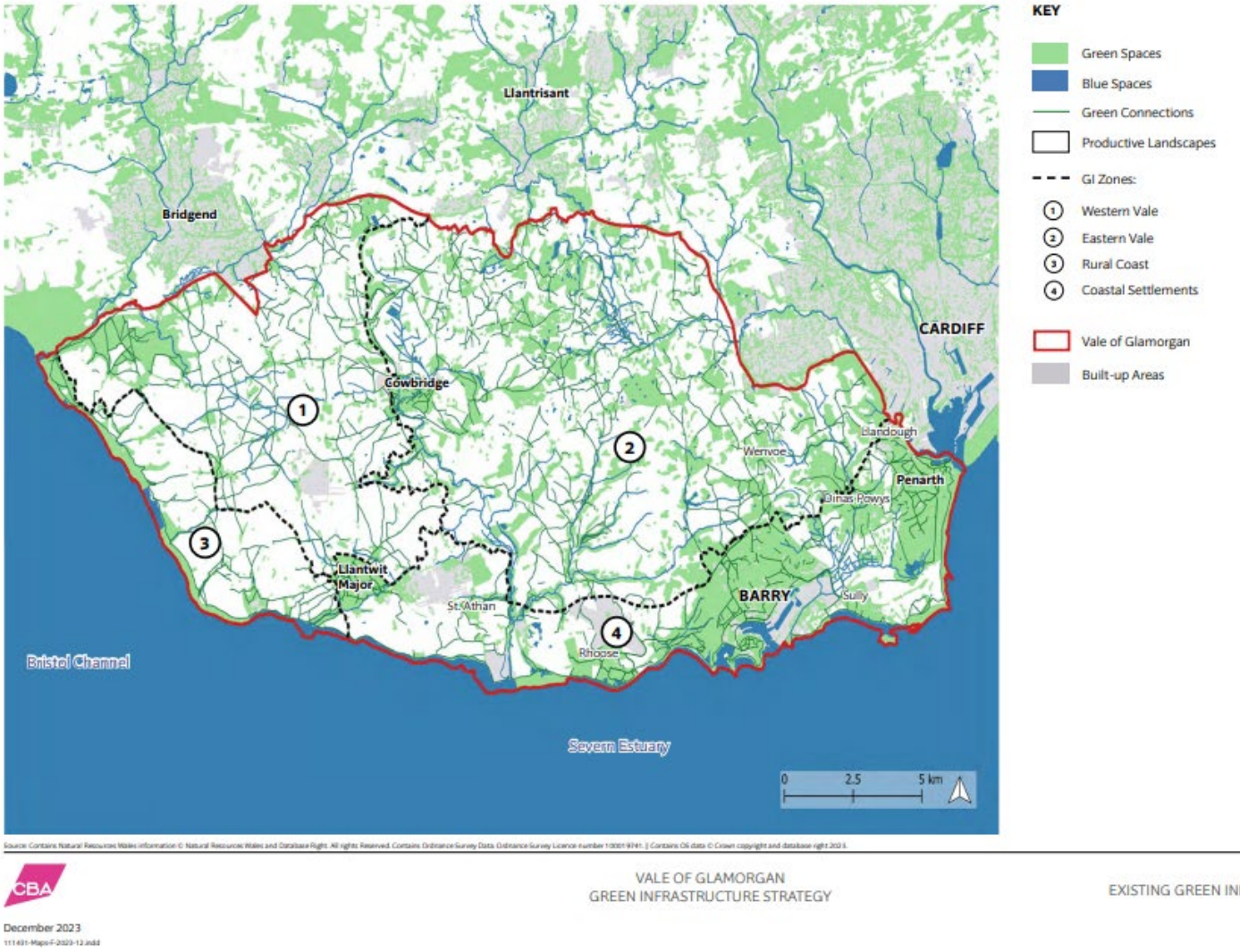
3.3. Section 3 of the CBA Studios GIA (Green Infrastructure Assessment) assesses the Vale's green infrastructure assets by grouping them as follows:

- Water Assets (Page 22-24).
- Biodiversity Assets (Page 24-26).
- Landscape and Heritage Assets (Page 24-28); and
- Accessible Greenspace Assets (Page 28-30).

3.4. A green infrastructure functionality/ecosystem services assessment is also included in Appendix 3 of the document, and this provides further insight into the Vale's assets. This breaks the Vale down into 4 'broadly defined' zones, as shown in Figure 4, which are based on similar landscape and environmental characteristics. For example, Zone 4 relates to 'Coastal Settlements', and is described as follows:

'The Coastal Settlements encompasses the south-east coastline of the Vale of Glamorgan. The zone features a section of the Glamorgan Heritage Coast, which stretches for 14 miles from Porthcawl to Aberthaw. The area is characterised by coastline, urban coastal settlements and prominent built features such as Cardiff International Airport and MOD St Athan. Main settlements within the area include Barry, Penarth, Dinas Powys and Llantwit Major. The Cadoxton, Kenson, Waycock and Coldbrook are

Figure 4 – Green Infrastructure Strategy - Map 3.9 Existing Green Infrastructure Network



the main watercourses in the area. The zone includes Porthkerry and Cosmeston Lakes Country Parks which are important assets for both biodiversity and access for local communities.'

Water Assets

3.5. The Vale is crossed by several watercourses, primarily running north to south and into the Severn Estuary, which abuts the Authorities southern boundary. There is a need to manage this water environment appropriately, to ensure biodiversity, flood management, water and soil quality are maintained and enhanced, and to ensure that new development is designed appropriately for the changing climate.

3.6. Section 3.3 of the CBA Studios GIA reviews Water Assets. It identifies areas of flood risk, and particularly the negative impacts of the Storm Dennis in February 2020, which had significant impacts on Dinas Powys in particular. The Vale's watercourses and water bodies are generally failing to achieve

overall good status under the Water Framework Directive, and the River Ely is listed as poor. Refer to Section 3.3 and Appendix 3 of the CBA Studios GIA for further assessment of water assets.

Biodiversity Assets

3.7. The Vale supports rich biodiversity and a wide range of habitats, particularly marine due to the coastal location. Resultantly, there are a range of statutory and non-statutory designations and priority habitats located across the County (see CBA Studios GIA Maps 3.3 and 3.4).

3.8. Section 3.4 of the CBA Studios GIA reviews biodiversity assets. As above, it identifies that the Vale is well provided for in terms of natural greenspace and habitats. However, it is noted that these areas have been fragmented and degraded. A need to reverse this is communicated. Refer to Section 3.4 and Appendix 3 of the CBA Studios GIA for further assessment of biodiversity assets.

Landscape and Heritage Assets

3.9. The Vale has a wealth of natural and cultural heritage, with a collection of designations to reflect this. Large areas of the Vale are identified as Special Landscape Areas and the southwestern coastline is all Heritage Coast, reflecting the landscape value of the Vale. The Vale has a rich and varied history, including medieval castles and remnants of the Victorian era, when Barry was one of the busiest ports in the world. Resultantly, there are many listed buildings, conservation areas and county treasures across the Vale.

3.10. Section 3. 5 of the CBA Studios GIA reviews landscape and heritage assets and expands upon the above identification of the Vale's rich natural and cultural heritage. It also communicates a need to protect and enhance the integrity of these assets, which make the Vale naturally distinctive. Refer to Section 3.5 and Appendix 3 of the CBA Studios GIA for further assessment of landscape and heritage assets.

Accessible Greenspace Assets

3.11. The Vale has a wide variety and provision of accessible green spaces that serve its towns and villages. These range in scale from country parks and areas of common land to pocket parks in new neighbourhoods. Throughout the Vale a large network of public rights of way also exists.

3.12. Section 3.6 of the CBA Studios GIA relates to accessible greenspace. This shows that the Vale has a wide-ranging supply of assessable space, however, it flags a need to improve connectivity to these areas, particularly in areas with high deprivation. Refer to Section 3.6 and Appendix 3 of the CBA Studios GIA for further assessment of landscape and heritage assets.

4. Identifying Priorities and Opportunities

4.1 Section 4 of this report seeks to provide reference to the identification of priorities and opportunities that has been carried out in the CBA Studios GIA and is required by Steps 2 and 3 of the NRW Guidance.

4.2 The purpose of Step 2 is to identify the main socio-economic and environmental challenges that need to be addressed in the Vale and the extent to which green infrastructure can assist in combating them. The purpose of Step 3 is to build upon the priorities identified in Step 2 and recognise where the best opportunities are for intervention, to address challenges.

4.3 Steps 2 and 3 are dealt with in Sections 3 (Green Infrastructure Assessment) of the CBA Studios GIA and further opportunities are built upon in Section 4 (Green Infrastructure Strategy) under the 6 objectives.

4.4 It is recognised that the CBA Studios GIA does not identify any opportunity areas spatially. However, it is considered that the mapping included within the document and associated GIS data, relating to Step 1, can be used to inform where net benefit and enhancement should be achieved. For example, in locations where two designated sites are in close proximity but are currently fragmented.

4.5 Furthermore, as set out under objective 2 one opportunity is to implement the Vale's Nature Recovery Action Plan (NRAP), which is currently being drafted. The NRAP builds upon work completed by the Vale's Local Nature Partnership (LNP) and will set out the strategic approach for nature recovery in the Vale. Thus, this work will recognise where the best opportunities for intervention are. The LNP are already working on a range of projects to maintain and enhance biodiversity and promote the resilience of ecosystems[3]. Close alignment with the LNP and completed NRAP will ensure that the best opportunities for the improvement of green infrastructure are taken.

[3] Wales Biodiversity Partnership - Vale of Glamorgan (biodiversitywales.org.uk)

5. Site Assessments

5.1 The purpose of Section 5 is to provide summaries of the Green Infrastructure Statements that have been received on Key Sites. The statements display that green infrastructure has been integral to the sites design. They show where green infrastructure has been protected and where opportunities for its enhancement exists. The statements will inform the final site layout, and therefore considerable weight will be given to the principles set out in those documents and this Paper, in order to comply with Deposit Plan policies on green infrastructure and biodiversity.

5.2 The GI Statements received for each site have been published along with the wider evidence base for those sites. This section therefore summarises the main points of each document. The information is presented in varying ways as the reports themselves vary. However, all are considered to establish the green infrastructure context for the site and, importantly, the Council is satisfied that green infrastructure has informed site layout and design from the outset.

HG1 KS1 – Land at North West Barry

Existing Context

5.3 The site comprises agricultural land to the northwest of Barry located in the southwest quadrant of the Weycock Cross roundabout. The area is characterised by open arable fields interspersed by hedgerows along the top of the steep incised valley of Porthkerry Country Park. The site currently lies within a designated green wedge between Barry and Rhoose (MG18-Green Wedges of the adopted Local Development Plan refers) however the boundary of this designation will be revised to accommodate the proposed development as the need for housing within Barry is considerable. Several ancient semi natural woodlands which formed a part of Barry Woodlands are located around the site, the closest being adjacent to the southern site boundary and forming the northern edge of Porthkerry Country Park.

5.4 In terms of its landscape habitat, LANDMAP identifies that the site lies within the Rhoose – Moulton area which is characterised by improved and semi-improved grassland and arable fields. The area is identified as being of moderate value for wildlife due to the agriculturally improved land with the main wildlife interest being within the field boundaries and occasional semi-improved grassland areas. In terms of its visual and sensory character, the site is located within the Rhoose Hinterland and Porthkerry Country Park and Environs Aspect Areas and is generally described as a gently undulating lowland plateau landscape situated close to the coast, the Porthkerry area comprising a lowland wooded valley. It has a maximum height of approximately 77m AOD at New Farm toward the northeast of the area. The landcover is a pattern of mostly medium to large scale arable fields set in managed hedgerows leading to the wooded valley at Porthkerry. With a maximum height of 77, AOD at New Farm, the plateau quality and absence of woodlands in the upper area enables long views from the area towards Barry and occasionally Somerset. A railway line linking Bary to Bridgend bisects the area and the viaduct at Porthkerry provides a dramatic and positive feature.

5.5 The GI Typology present on the site is as follows:

Table 1: Existing GI Provision – HG1 KS1 Land at North West Barry	
GI Typology	**Commentary**
Group: Green and Blue Spaces	
Blue Space	The Nant Talwg watercourse flows to the east through the central part of the site and then runs through Cwm Ciddy and Mill Wood outside of the site to the southeast of the site before it joins with Barry Brook and then enters Porthkerry Country Park.
Amenity Green Space	Agricultural land. Limited amenity greenspace within adjacent residential development of Nant Talwg and the wider residential areas of northwest Barry.

Domestic Gardens	The eastern boundary of the site is adjacent to domestic gardens to the rear of Pontypridd Road and Nant Talwg way which form an unsightly residential edge.
Natural and Semi-Natural Greenspaces	Are primarily located to the south of the south and comprised of ancient semi natural woodland blocks that lie within Porthkerry Country Park. Other large woodland blocks are located to the north but are separated from the site by the A4226 Port Road.
Group: Green Connections	
Public Right of Way	There are no Public Rights of Way within the site however the adjacent Cwm-Ciddy Lane is part of a PRoW trail around Barry. Within Mill Wood, to the south of the site, lies the Valeways Millennium Heritage Trail running along the Nant Talwg watercourse.
Cycle Network	Several existing Active Travell routes run close to the site along Port Road and Pontypridd Road. Future proposed schemes that link with existing provision at Rhoose/Cardiff Airport and Barry town will further enhance the network.
Group: Trees	
Woodland	The south of the site is bordered by an extensive woodland block which forms part of the wider ancient semi natural woodlands that are evident in the surrounding area to the north of Port Road. The southern woodland, leading to Knock Man Down Wood, forms part of Porthkerry Country Park and the wooded Porthkerry valley. The site is divided by a number of mature hedgerows which act as wildlife corridors.
Urban Trees	Small number of urban trees within residential gardens and escaped hedgerows along the eastern boundary of the site.
Group: Productive Landscapes	
Productive Landscapes	The site is defined as a Productive Landscapes (agricultural pasture fields). Productive Landscape extends to the west and north of the site however to the north this is interspersed with woodland blocks. The town of Barry extends to the east.

5.6 The following threats and opportunities have been identified in relation to GI assets present on site:

Table 2: Opportunities – HG1 KS1 Land at North West Barry	
Asset	**Opportunity**
Overgrown hedgerows and treelines	Ecological connectivity across the site will be maintained and strengthened via retained field boundaries, new habitat creation, and the sensitive integration of development with existing features. Most of the established hedgerows within the site will be retained and offer the opportunity to provide attractive structuring green elements with enhanced tree planting within the development. The development offers the opportunity to create an improved settlement edge to Barry with improved hedgerows.

Public Rights of Way	PROWs are located on the western boundary of the site at Cwm Ciddy Lane and to the south east of the site within Mill wood which forms part of the Millenium Heritage Trail. The development of the site offers the opportunity to link existing PROW within the area with new GI/pedestrian routes within the site so extending the accessible network.
Nant Talwg Watercourse	The development will deliver open spaces that can be shared by the wider community including the retained Nant Talwg watercourse providing for local amenity and enhancing biodiversity.
Amenity Green Space	Develop new areas of amenity green space and green corridors to facilitate the creation of interconnected green infrastructure and biodiversity new gain.
Woodland surrounding the site	The main threat to the existing woodland blocks is their setting to suburban development however the area is already extensively used for leisure being part of Porthkerry Country Park. An opportunity for the woodland blocks is to ensure their setting is enhanced. Suitable buffers around the woodland could be created with ecotones of native scrub and species-rich grassland. New habitats and connections into the country park could also be created.

Proposed Development

5.7 The Weycock Cross Green Infrastructure Vision Statement prepared for the scheme identifies that *the primary objective of the landscape strategy is to safeguard and enhance the site's existing GI functionality while creating a distinctive and easily navigable sense of place. This approach ensures that the development integrates harmoniously with its landscape setting, including the retention and enhancement of significant existing vegetation where appropriate.* The Vision statement for the site indicates that the site will integrate with existing residential areas of Barry and provide *a development incorporating a connected network of distinctive, low-speed streets is envisaged which – together with a dedicated foot/cycle path through the site, from Port Road West to Cwm Ciddy Lane – encourages active travel. The proposals will deliver open spaces that can be shared by the wider community, including a central open space accommodating the retained Nant Talwg watercourse, providing for local amenity and play whilst enhancing biodiversity.*

5.8 In respect of Ancient Woodland, the most extensive and sensitive green infrastructure asset in proximity to the site, the Vision statement identifies that *informal open space and community woodland will be provided within the southern part of the site, providing and attractive interface with Mill Wood…and that an extensive and landscape edge alongside Knock Man Down Wood Site of Importance for Nature Conservation (SINC) including new community woodland.*

5.9 The vision concludes with: *'At the heart of the framework plan for the site is a liner area of public open space that would incorporate areas of informal play. It would form part of the green corridor through the site and connect to existing public rights of way, and trees and ancient woodland. The central valley is also the focus for active travel and the Sustainable Drainage strategy for the site (SuDS).'*

5.10 The principles which underpin the development strategy for the site and the Vision are guided by 4 elements:

- Access and Movement.
- Green Infrastructure.
- Sustainable Drainage.
- Biodiversity.

5.11 The green infrastructure Strategy for the site is shown in Figure 5.

Figure 5 – Green Infrastructure Strategy HG1 KS1 Land at North West Barry

5.12 The primary objective of the sites GI Strategy is to safeguard and enhance the existing GI features and functionality while creating a distinctive and easily navigable sense of place. The design has been led by early ecological and landscape assessments which ensure that GI forms a foundational element of the scheme layout. identifies that existing green infrastructure on site will be retained and enhanced. The strategy identifies that the existing GI value and functionality of the site is primarily related to its hedgerows and tree network which provide movement and foraging corridors likely to be used by a range of species, and which will also provide nesting opportunities for birds, reptiles and small mammals.

5.13 In ensuring the sites existing green infrastructure is appropriately treated, and facilitating its enhancement, the site's green infrastructure strategy will achieve the following, as set out in the Green Infrastructure Statement:

Table 3: Proposed GI Provision HG1 KS1 Land at North West Barry	
Typology	**Commentary**
Group: Green & Blue Spaces	
Blue Space	The scheme will include accessible open spaces for community use, including a central area that incorporates the retained Nant Talwg watercourse—supporting local recreation and enhancing biodiversity. The site's Sustainable urban Drainage Systems (SuDS) strategy integrates a multi-phase water management approach, using swales, rain gardens, permeable paving, tree pits, and detention basins to manage surface water at source. A central SuDS corridor within the green spine doubles as a wetland park offering marginal and ephemeral habitats, improved water quality, and educational and amenity features.
Amenity Greenspace, Outdoor Sports Facilities & Provision for Children and Young People's Play	A central green spine will run through the core of the site, connecting a network of internal green spaces to a larger, multifunctional open area along the southern boundary. This southern space will enhance the landscape setting of the development, strengthen local ecological networks, and provide accessible recreational opportunities. Crucially, it also acts as a buffer to the wider landscape and Porthkerry Country Park, which lies within walking distance of the site offering future residents direct pedestrian access to one of Barry's most valued green assets. Play areas will also be provided within the central part of the site.
Domestic Gardens	Properties on the site will benefit from domestic gardens which offer the opportunity for additional green spaces.
Natural and Semi-Natural Greenspaces.	A central green spine will run through the core of the site, connecting a network of internal green spaces to a larger, multifunctional open area along the southern boundary. This southern space will enhance the landscape setting of the development, strengthen local ecological networks, and provide accessible recreational opportunities. Crucially, it also acts as a buffer to the wider landscape and Porthkerry Country Park.
Group: Green Connections	
Public Right of Way	New active travel routes and green spaces within the development will facilitate links to the existing PROW network around the site. The sites proximity to Porthkerry Country Park accessible on foot via attractive walking routes would be a significant benefit to the new community.
Cycle Network	Potential to connect directly with a new active travel route proposed along the A4226 that passes the front of the site.
Group: Trees	
Woodland	The new open space in the south of the site will act as a buffer to the wider landscape and Porthkerry Country Park and to the west, where existing

	landscape features are more fragmented, the boundary will be bolstered with new hedgerow and hedgerow tree planting. This will create a well-defined, tree lined edge to Barry's urban area while delivering a stronger north–south green corridor, linking patches of woodland situated to either side of the site. In addition, a new block of native woodland is proposed along the north-western edge, improving visual containment and biodiversity resilience.
Urban Trees	The development of the site offers the opportunity to deliver a distinctive street hierarchy with attractive tree-lined primary streets. Existing hedgerow trees will be retained where possible.

HG1 KS2 – Land to the North of Dinas Powys

Existing Context

5.14 The site comprises several small pasture fields immediately to the north of Dinas Powys and to the west of Cardiff Road. The site is currently located in the Cwrt-yr-Ala Basin Special Landscape Area, as designated by the Vale of Glamorgan LDP 2011-2026, however, as a non-statutory designation, the site is identified for removal from the Special Landscape Area as set out in Background Paper BP28. Areas of Restored Ancient Woodland and Ancient Semi Natural Woodland abut the site to the west, and these are also covered by TPOs.

5.15 In terms of its landscape habitat, LANDMAP identifies that the site is located in the south of the extensive Leckwith with Dinas Powys Woodlands area. This area is characterised by *'Landscape of steep wooded slopes interspersed by improved agricultural grasslands on flatter ground between. The base-rich Ash woodlands often support a diverse ground flora.'* In terms of its visual and sensory character, the site is located within the Penarth and Dinas Powys Urban Fringe. This area is described as *'A rolling/undulating lowland landscape rising to approximately 60m AOD in the north from approximately 10m AOD in the south. The area forms a green buffer between Penarth to the east and Dinas Powys in the west. The landcover is predominantly pastoral fields with many overgrown hedgerows containing trees. There are some wooded areas to the south mostly around Pop Hill. Farms are scattered across the area and discontinuous ribbon development has occurred along the narrow lanes over time...Many fields appear overgrown whilst others appear overgrazed. Some are used for equestrian uses...'*

5.16 The GI Typology present on the site is as follows:

Table 4: Existing GI Provision HG1 KS2 Land to the North of Dinas Powys	
GI Typology	**Commentary**
Group: Green and Blue Spaces	
Blue Space	The only Green & Blue Space within the site is East Brook watercourse Blue Space, which meanders through the east.
Amenity Green Space	Adjacent to the southwest of the site is an 'L' shaped area of Amenity Greenspace that comprises woodland, amenity grass for kick about space, and a fenced equipped play area. Smaller amenity greenspaces are scattered to the south of the site within residential areas.
Domestic Gardens	Domestic Gardens are adjacent to the southern boundary of the site and extend southwards covering the settled areas within the context of the site. This GI typology is the primary GI asset surrounding the site.
Allotment, Community Gardens, and Urban Farm	Beyond the site, to the northeast is an Allotment, Community Gardens, and Urban Farm. Another is in Cogan, to the east of the site and railway line.

Natural and Semi-Natural Greenspaces	are located on the fridges of settlement areas within the context of the site. The nearest areas are to the northwest of the site, on the east side of Pen-y-Turnpike Road with a larger area within Case Hill Wood further to the west.
Group: Green Connections	
Public Right of Way	Within the west of the site a Public Right of Way transects the site in a north to south direction, connecting the northern edge of Dinas Powys to Pen-y-Turnpike Road. Further to the north, a public footpath crosses the valley from Pen-y-Turnpike Road to the A4055.
Cycle Network	Adjacent to the eastern boundary of the site a Cycle Network route follows the A4055 Cardiff Road, connecting Dinas Powys to Cogan. Beyond the immediate context of the site, there are some Cycle Network - Active Travel routes within Dinas Powys, Cogan, and Penarth.
Group: Trees	
Woodland	As previously identified, small areas of Woodland are located adjacent to the west and northwest boundary of the site. Other areas of woodland are mainly scattered further to the west.
Urban Trees	There are some small groups of Urban Trees in the southeast corner of the site with other small, scattered groups within the adjacent settlement area to the south.
Group: Productive Landscapes	
Productive Landscapes	Most of the site is defined as a Productive Landscapes (agricultural pasture fields). Productive Landscape extends to the north, west and east of the site, surrounding settlement areas.

5.17 The following threats and opportunities have been identified in relation to GI assets present on site:

Table 5: Threat and Opportunities HG1 KS2 Land to the North of Dinas Powys		
Asset	**Threat**	**Opportunity**
Overgrown hedgerows and treelines	The main threat to this GI asset is the paddocks for horse grazing in the east of the site and nearby fields. There are signs of field boundary decline due to poor maintenance and the introduction of materials such as Heras fencing and structures.	The opportunity for the site is to remove these structures associated and infill with new native trees and/or hedgerow to fill in gaps that would reconnect gappy sections with the wider vegetation pattern. Grassland areas on the site could also be enhanced with the planting of species-rich grassland/ wildflower meadow.
Public footpath in west of site	A threat to the route is waterlogging due to the grazing of animals over winter.	There is an opportunity to improve the footpath for users and encourage active travel. Additional routes and cycle paths within the

		site could be created, that connect to the existing footpath, green spaces, and nearby cycle routes.
East Brook watercourse	A threat to the watercourse is horse grazing that leaves exposed areas of ground.	An opportunity for the site is to enhance the watercourse and create a buffer and strategically connect new SuDS features, grassland and trees/ vegetation to enhance the riparian character and habitat of the watercourse.
Woodland surrounding the site	The main threat to the woodland blocks is their setting to suburban development.	An opportunity for the woodland blocks is to ensure their setting is enhanced. Suitable buffers around the woodland could be created with ecotones of native scrub and species-rich grassland. New habitats and connections could also be created.

Proposed Development

5.18 The GI Statement sets out that *'The vision for the proposed development focuses on a green and sustainable development. With a landscape led scheme, the concept has developed around the desire for well-connected green corridors running through the centre of the scheme. A network of active travel routes would benefit from the green corridors, fostering community cohesion and encourage active travel, landscape-based exercise and play. The green wildlife corridors offer opportunity for enhancement to biodiversity to encourage natural flora and fauna.'*

5.19 In respect of Ancient Woodland, the most sensitive green infrastructure asset in proximity to the site, it states this *'would be maintained and additional parkland will be created and enhanced to provide amenity space for future residents and existing residents of the adjacent neighbourhood. The parkland also provides a transition from the approach onto Cardiff Road.'*

5.20 The vision concludes with: *'At the heart of the framework plan for the site is a liner area of public open space that would incorporate areas of informal play. It would form part of the green corridor through the site and connect to existing public rights of way, and trees and ancient woodland. The central valley is also the focus for active travel and the Sustainable Drainage strategy for the site (SuDS).'*

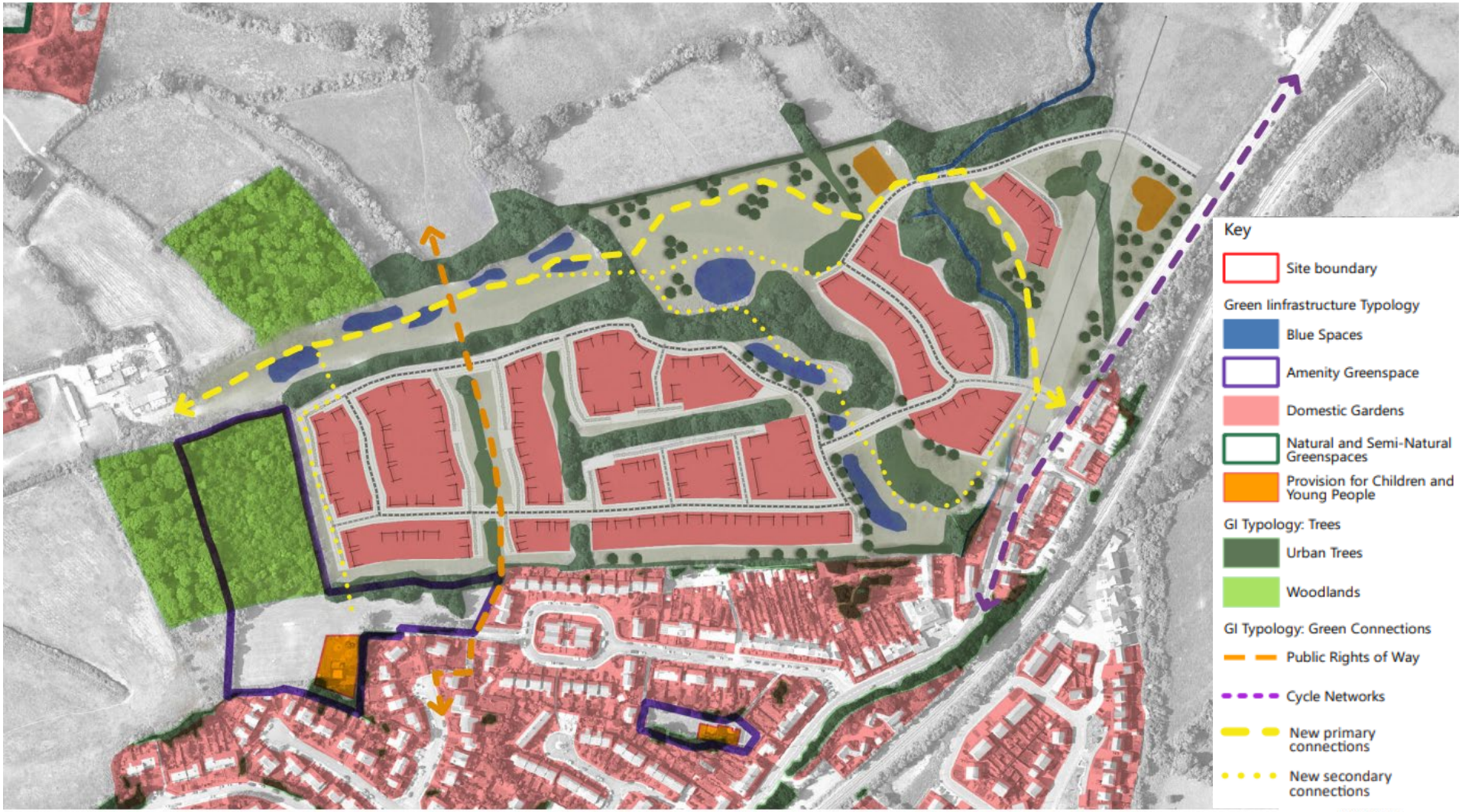
5.21 The Landscape Strategy for the site is guided by 5 themes:

- Connected Landscape.
- Biodiverse Landscape.
- Sustainable Landscape.
- Hands on Landscape.

- Active Landscape.

5.22 The green infrastructure Strategy for the site is shown in Figure 6.

Figure 6: Green Infrastructure Strategy HG1 KS 2 Land to the North of Dinas



5.23 The GI Strategy identifies that existing green infrastructure on site will be retained and enhanced. Notably, the strong routes of connectivity through the site are being retained and are being strengthened to ensure that they contribute to improving connectivity. In addition, the introduction of SuDS features will provide an enhancement for biodiversity on site, improving the functionality of the site and the connectivity for species that rely on water. Amenity open spaces will provide strong opportunities for multifunctional green infrastructure.

5.24 In ensuring the sites existing green infrastructure is appropriately treated, and facilitating its enhancement, the site's green infrastructure strategy will achieve the following, as set out in the Green Infrastructure Statement:

Table 6: Proposed GI Provision HG1 KS2 Land to the North of Dinas Powys	
Typology	**Commentary**
Group: Green & Blue Spaces	
Blue Space	East Brook watercourse Blue Space is the only existing Green & Blue Space within the site. It is currently threatened by horse grazing, leaving exposed areas of ground. The proposals for the site would enhance the riparian character and habitats along the watercourse. A buffer would be created from the retained watercourse with opportunities to create new connecting SuDS features along the corridor to enhance the diversity of the Blue Space.
Amenity Greenspace, Outdoor Sports Facilities & Provision for Children and Young People's Play	The existing Amenity Greenspace to the west of the site would be retained. Throughout the site, new Amenity Greenspaces would be created. Within the centre of the site a LEAP within green infrastructure is proposed and would include a 20m buffer to dwellings. LAPs are also proposed around the site. New Amenity greenspaces would also provide informal play, which would also be incorporated in SuDS features such as swales and attenuation basins. Boulders, logs and beams will encourage imaginative play within the landscape for all age groups.
Allotment, Community Gardens, and Urban Farm	There are also opportunities for an Allotment, Community Gardens, and Urban Farm space. A communal garden space will be considered due to the potential wider benefits for health and well-being, social interaction, cohesion and education. The space would provide communal growing space and areas for seating and social interaction.
Domestic Gardens	These would inherently be provided throughout the site.
Natural and Semi-Natural Greenspaces.	The proposed green corridors within the site provide an opportunity to create Natural and Semi-Natural Greenspaces. The proposed ecotones along ancient woodland edges will primarily create a buffer to the woodland. It will typically be 15m in width and may potentially incorporate informal play or access paths. Proposed grassland areas within the scheme are to be sown with a diverse native wildflower seed mix, which would provide a foraging resource for a range of species including invertebrates and birds. This may encourage interaction with nature and some educational opportunities.

Group: Green Connections	
Public Right of Way	The Public Right of Way within the west of the site is currently threatened by horse grazing that has caused water logging.
Cycle Network	Proposals for the site would seek to retain and enhance this route and connect it to the wider public rights of way, Cycle Network and areas of public access via new routes within the site. There are opportunities to enhance active travel through the site and encourage interaction with nature along the new green corridors.
Group: Trees	
Woodland	Small Woodland blocks, which are mainly designated as ancient woodland, are located adjacent to the west and northwest boundary of the site. The woodland blocks would be maintained with new ecotone buffers around the woodland created to ensure they are protected and to create new habitats. Improved management and the ecotone would also help to increase the resilience of the woodland to climate change.
Urban Trees	The retained treelines and proposed trees within the site would contribute to the Urban Trees GI Asset. Proposed street trees would be situated in widened verges, where possible, at a minimum of 3m in width to avoid the need for underground root cells. New tree planting would help to frame views and define spaces, and will include native, fruiting and flowering species. New tree and hedgerow planting would enhance the connectivity of GI Assets within the site, also linking to GI Assets beyond the site boundary. Woodland and trees within and adjacent to the site, with enhanced buffers, would create new habitats, increase resilience of ecosystems, enhance connectivity and the multi-functionality of the GI assets on the site.

HG1 KS3 – Land at Readers Way, Rhoose

Existing Context

5.25 The existing site comprises of eight agricultural fields that are located to the northwest of Readers Way, an estate road that serves dwellings in the north of Rhoose. The fields are connected by existing hedgerows and there are some occasional individual trees present amongst these. Drainage ditches are present towards the south-western area including a small culvert at the west. The hedges form an important GI asset to the site and its context. In terms of green infrastructure, there are limited further assets. Nearby there are small woodland and a pond exists to the south of the site.

5.26 The site is not located within any nationally or locally designated landscape area, although approximately 1km to the north exists the Nant Llancarfan Special Landscape Area. There are also several areas of Ancient Semi Natural Woodland within 2km of the site, with the nearest being approximately 1.2km away from the site. The Statement goes into further detail on this.

5.27 In terms of the sites landscape habitat, Landmap identifies that the site is in the Aberthaw area, which is classified as Mosaid (Level 3). The key features of this area are as follows: *'... Improved agricultural grasslands dominate but arable crops are also frequent and the underlying influences of limestone and proximity to the coast provide the conditions for fragments of notable grassland in relatively undisturbed areas such as road verges. Quarries are a feature of the area, and the airport provides an unbroken expanse of semi-improved neutral grassland.'* In terms of the sites visual and sensory character, the site is located within the Rhoose hinterland area, which is described as Mosaic Rolling Lowland (Level 3). The aspect area is described as: '*... a gently undulating lowland plateau landscape situated close to the coast. It has a maximum height of approximately 77m AOD at New Farm, toward the northeast of the area, and a low point of approximately 15m AOD, towards the coast at Rhoose Point. The landcover is a pattern of mostly medium to large scale arable fields set in managed hedgerows. The area contains no woodland. The plateau quality, and absence of woodlands, enables long views from the area, towards Barry and occasionally Somerset, it also gives the area a feeling of openness... Hedgerows are generally well maintained..'*

5.28 In terms of ecology there are no statutory designations located on site or within immediate proximity. The Readers Way Pond, a non-statutory designated SINC is located approximately 50m to the south of the site, and other SINCs are located within the Rhoose locality.

5.29 The GI typologies currently present on site are as follows:

Table 7: Existing GI Provision HG1 KS3 Land at Readers Way, Rhoose	
GI Typology	**Commentary**
Group: Green and Blue Spaces	
Blue Space	The only Green & Blue Space within the site are ditches located in the northwest of the site and a culvert located in the east. The pond where the aforementioned SINC is sited is located approximately 50m beyond the southeastern boundary of the site.
Amenity Green Space	Limited areas of amenity greenspace exist on site. There are some pockets of amenity greenspace on the surrounding housing estates outside of the site.
Domestic Gardens	Domestic Gardens are adjacent to the southern and western boundary of the site. This GI typology is the primary GI asset surrounding the site.
Outdoor Sports Facility	A relatively large Outdoor Sports Facility is located approximately 60 metres to the southwest. It includes a community centre, a bowls pitch, tennis courts and sports pitches.
Group: Green Connections	
Public Right of Way	The Valeways Millennium Heritage Trail (PROW) follows the eastern site boundary along the edge of Cardiff Airport's land and extends northward along minor roads. In the south, the trail extends southwards through Fontygary and connects onto Wales Coast Path.
Cycle Network	Cycle Network - Active Travel routes are located within Fontygary with the main section following Fontygary Road.
Group: Trees	
Woodland	Woodland is present within the wider context area at Fonmon in the northwest and towards The Dams in the southeast.
Urban Trees	Urban Trees are located throughout the context area in the south, within Font-y-Gary. They are primarily located amongst the residential properties.
Group: Productive Landscapes	
Productive Landscapes	Whilst the Statement does not identify productive landscapes, it is relevant that the majority of the site is defined as a Productive Landscapes (agricultural pasture fields). This extends north to the B4265.

5.30 The following threats and opportunities have been identified in relation to GI assets present on site:

Table 8: Opportunities HG1 KS3 Land at Readers Way, Rhoose	
Asset	**Opportunity**
SuDS features	Propose SuDS features such as swales and plant them with grass species suitable for wet and dry conditions to enhance biodiversity and to create new habitats.
Rain gardens	Provide rain gardens along streets, which would be planted with trees, shrub and perennial planting to provide seasonal and visual interest.
Hedgerow	Provide new hedgerow planting, infill existing gaps along field boundaries and to connect existing and proposed green infrastructure elements within the site and surrounding context.
Tree planting	Provide new tree planting alongside field boundaries. Street tree planting could be proposed to create a pleasant living environment with seasonal and biodiversity interest.
General planting	Plant front gardens with a range of shrubs that provide seasonal and biodiversity interest. Rear gardens could include fruit trees and species-rich grassland mixed, which would be sourced from local area.
Amenity open space	Provide new informal and landscape-based play incorporated throughout the site via a series of Local Area of Play. A Local Equipped Area of Play towards the centre of the site and further play provision within a green space in the eastern part of the site would be provided.
Sport facilities	Include three pitches for different age groups and a green gym / trim through the open space.

Proposed Development

5.31 The GI Statement sets out that *'The vision for the proposed development focuses on a green and sustainable development. With a landscape led scheme, the concept has developed around the desire for well-connected green corridors running through the scheme. A network of active travel routes would benefit from the green corridors, fostering community cohesion and encourage active travel, landscape-based exercise and play. The green wildlife corridors offer opportunity for enhancement to biodiversity to encourage natural flora and fauna.'*

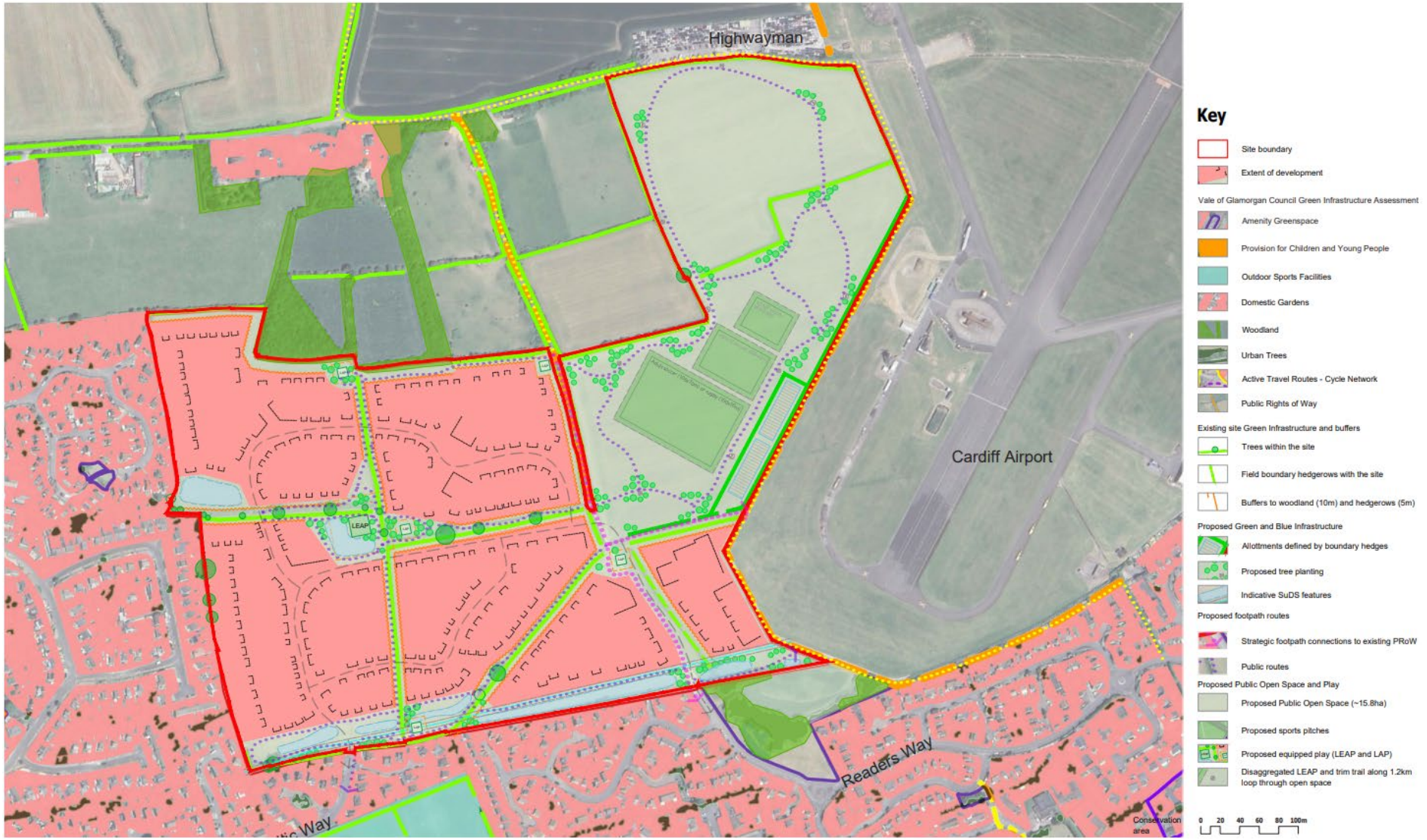
5.32 It goes into further detail, setting out that: *'The Illustrative Masterplan for the Land at Readers Way is envisaged to be an exemplar development with high standards of design. It will embrace sustainability and placemaking principles and integrate with the existing community whilst meeting The Vale of Glamorgan's strategic ambitions. It will deliver benefits for the new and existing communities which will extend to future generations, providing and supporting new facilities whilst meeting a significant proportion of the area's housing needs.'*

5.33 The Landscape Strategy for the site is guided by 5 themes:

- Connected Landscape.
- Biodiverse Landscape.
- Sustainable Landscape.
- Hands on Landscape.
- Active Landscape.

5.34 The green infrastructure Strategy for the site is shown in Figure 7.

Figure 7: Green Infrastructure Strategy HG1 KS3 Land at Readers Way, Rhoose



5.35 The GI Strategy identifies that existing green infrastructure on site will be retained and enhanced. Notably, the strong routes of connectivity through the site are being retained and are being strengthened to ensure that they contribute to improving connectivity. The northeastern section of the site provides the greatest opportunity for green infrastructure enhancement, both on this site and likely across all sites being allocated within the RLDP. The Strategy identifies these areas as playing fields and allotments, the provision of which is a benefit to the locality. The planting of several copses of trees within this area will also provide significant biodiversity benefits, beyond those which exist at present due to the limited provision of trees at the site and in the general locality.

5.36 The Strategy identified much of the residential areas as only having a housing typology, however, there should be other, smaller, multifunctional assets located within these such as drainage features and street trees once the final scheme emerges. Given the indicative high-level nature of this work, the current level of detail displays that there is strong connectivity and areas of multifunctionality. The GI strategy will achieve the following, as set out within the statement:

Table 9: Proposed GI Provision HG1 KS3 Land at Readers Way, Rhoose	
Typology	**Commentary**
Group: Green & Blue Spaces	
Blue Space	The Blue Spaces within the site comprises the existing ditches within the north-western area. There is also a small culvert located at the east. The proposals would seek to maintain suitable buffers and ecotones away from the watercourses and ensure that species-rich grass/long grass and wildflowers help to enhance the character of the ditches and habitats along them. Opportunities to create new connecting SuDS features along the ditches could be provided which would enhance the diversity of the Blue Spaces.
Amenity Greenspace, Outdoor Sports Facilities & Provision for Children and Young People's Play	Existing Amenity Greenspaces within Fontygary would not be affected by the proposed development. The proposed development would provide new informal amenity green spaces which would include landscape-based play via a series of Local Areas of Play. A Local Equipped Area of Play towards the centre of the site and further play provision within a green space in the eastern part of the site would also be provided. In addition, provision of three new sports pitches for use by different age groups and a green gym/trim trail would be provided. New Amenity Greenspaces would also incorporate SuDS features such as swales and attenuation basins. Boulders, logs and beams will encourage imaginative play within the landscape for all age groups.
Allotment, Community Gardens, and Urban Farm	There are also opportunities for an Allotment, Community Gardens, and Urban Farm space. A communal garden space will be considered due to the potential wider benefits for health and well-being, social interaction, cohesion and education. The space would provide communal growing space and areas for seating and social interaction.

Domestic Gardens	These would inherently be provided throughout the site.
Natural and Semi-Natural Greenspaces.	Proposed green corridors within the site would provide an opportunity to create Natural and Semi-Natural Greenspaces. Proposed ecotones along existing hedges and trees would primarily create a buffer. The buffers could potentially incorporate informal play or access paths. Proposed grassland areas within the scheme are to be sown with a diverse native wildflower seed mix, which would provide a foraging resource for a range of species including invertebrates and birds. This may encourage interaction with nature and some educational opportunities.
Group: Green Connections	
Public Right of Way	The Valeways Millennium Heritage Trail in the east of the site would be protected and enhanced through minimising-built form directly adjacent to it. Verges and long grasses adjacent to the route may enhance the users experience of the trail.
Cycle Network	New public access would be provided throughout the development, connecting routes to wider public rights of way, Cycle Network and areas of public access. There are opportunities to enhance active travel through the site and encourage interaction with nature along the new green corridors.
Group: Trees	
Woodland	Woodland is present within the wider context area at Fonmon in the northwest and towards The Dams in the southeast. Trees are located throughout the context area in the south, within Font-y-Gary, located primarily amongst the residential properties. Some individual trees are within the site, along field boundary hedges. Trees within the site would be retained where possible with appropriate buffers to ensure they are protected and to create new habitats.
Urban Trees	The retained treelines and proposed trees within the site would contribute to the Urban Trees GI Asset. Proposed street trees would be situated in widened verges, where possible, at a minimum of 3m in width to avoid the need for underground root cells. New tree planting would help to frame views and define spaces, and will include native, fruiting and flowering species. New tree and hedgerow planting would enhance the connectivity of GI Assets within the site, also linking to GI Assets beyond the site boundary. Trees within the site, with enhanced buffers, would create new habitats, increase resilience of ecosystems, enhance connectivity and the multifunctionality of the GI assets on the site.

HG1 KS4 Land at Church Farm, St Athan

Existing Context

5.37 The site comprises agricultural land located to the south-east of the existing village centre of St Athan and to the east of Gileston Road (the primary access route into the village) and to the north of the B4265. St Athan primary school and Church Farm abut the site to the northwest and the remaining northern and eastern boundaries are defined by a hedge lined agricultural track. The western and southern boundaries are defined by mature hedgerows adjacent to highways and mature managed hedgerows, some in poor condition, define the fields within the site. There are no woodlands, heritage assets or Public Rights of Way within the site although PROW do run up to the site boundary in the north and east. The site is adjacent to the Upper & Lower Thaw Valley Special Landscape Area (SLA) (MG17(2) refers).

5.38 In terms of its landscape habitat, LANDMAP identifies that the site lies within the Aberthaw aspect area describes the general area as an improved agricultural landscape where agricultural grasslands dominate but where arable crops are also evident. The area is identified as being of moderate value for wildlife due to the agriculturally improved land however biodiversity interest benefits from the variety of habitats that are present within the area and range from quarries to small areas of coastal grassland. In terms of its visual and sensory character, the site is located across two aspect areas, with similar characteristics, the Lias Plateau and the Heritage Coast Hinterland. These areas are described as rolling coastal lowland plateau sloping towards the coast with a sense of openness and high intervisibility with views to the coast. Both areas are extensive and possess a variety of landcover, however in the main the areas are characterised by pastoral and arable fields set within managed hedgerows. Settlements are scattered throughout the area, many with historical cores however modern settlement extensions have in part detracted from the historic core.

5.39 In terms of ecology, the Extended Phase I Habitat Survey of the site identified that there is a limited range of habitats at the site with the site generally comprising improved grassland and a small area of ruderal vegetation.

5.40 No assessment is made of the existing GI typology within the GI statement for the site, therefore, the following assessment is made within this report using the GIS associated with the GIA:

Table 10: Existing GI Provision HG1 KS4 Land at Church Farm, St Athan	
GI Typology	**Commentary**
Group: Green and Blue Spaces	
Blue Space	There are no blue spaces within the identified site. The nearest blue spaces are in Rills Valley (200m) to the north and Llancadle Moor (350m) to the east.

Amenity Green Space	Agricultural land. There are areas of amenity greenspace within the adjacent St Athan village.
Domestic Gardens	Domestic Gardens are prevalent within the adjacent St Athan settlement. This GI typology is the primary GI asset surrounding the site.
Allotment, Community Gardens and Urban Farm.	There is no allotment provision apparent within the locality of the site or within the wider St Athan settlement.
Outdoor Sports Facilities	St Athan Recreation Ground is located approximately 400m from the site to the west. St Athan primary school grounds are located adjacent to the site to the north.
Provision for Children and Young People	A LEAP is identified within the St Athan Recreation Ground.
Group: Green Connections	
Public Right of Way	There are no Public Rights of Way within the site however PROW run to the north of the site beyond St Athan primary school and link to the eastern boundary of the site from Llancadle Moor.
Cycle Network	Several existing Active Travell routes run close to the site within St Athan and Eglwys Brewis.
Group: Trees	
Woodland	The nearest woodlands are Castleton Wood and East Orchard Wood some 300m and 600m to the north and east of the site respectively.
Urban Trees	There are some small groups of Urban Trees in the St Athan settlement to the east. Small number of urban trees within residential gardens and St Athan primary school.
Group: Productive Landscapes	
Productive Landscapes	The site is defined as a Productive Landscapes (agricultural pasture fields).

5.41 The following threats and opportunities have been identified in relation to GI assets present on site:

Table 11: Opportunities HG1 KS4 Land at Church Farm, St Athan	
Asset	**Opportunity**
Overgrown hedgerows and treelines	The GI statement has identified that the hedgerows at the site, particularly those on the external boundaries represent the features of greatest ecological importance. The retention and enhancement of the hedgerows both within and surrounding the site will improve ecological connectivity and resilience. Enhancement of eastern boundary provides opportunity to soften development edge and safeguard character of open countryside.

SuDS features	Throughout the site provide the opportunity to enhance biodiversity and visual interest with a key SuDS attenuation feature at the lowest part of the site in the south-east corner.
Tree planting	Landscape proposals for the site should include native tree and shrub species or those with a known benefit for biodiversity.
Public Rights of Way	Development of the site provides opportunities to provide enhanced connectivity with the existing PROW throughout the site providing possible access to St Athan and an alternative access to the primary school.
Cycle Routes	The southern boundary hedge provides key perimeter connectivity/buffer to B4265 and the corridor associated with it could accommodate segregated active travel routes.
Sports facilities	There is the potential opportunity for formal open space provision within the site which could also serve the adjacent primary school.
Natural and semi-natural greenspaces	The opportunity to create new meadow and scrub habitats associated with the increased hedgerow cover. Opportunity to provide a natural green landscape buffer along the eastern boundary to screen development from the east and assimilate the development into the wider surroundings.
Amenity Green Space	Develop new areas of amenity green space and green corridors to facilitate the creation of interconnected green infrastructure and biodiversity new gain. The intersection of the proposed GI corridors provides a large central opportunity for open space between both sides of the site.

Proposed Development

5.42 The initial RLDP Preferred Strategy Church Farm site allocation (SP4 KS4) comprised the previous adopted LDP site MG2 (3) Land at Church Farm, St Athan (8.47 hectares allocated for 250 dwellings) along with the opportunity to deliver a further 300 dwellings on land to the east. The proposed green infrastructure strategy for this site (now identified as HG KS4) is set out below. However, it should be noted that the site is now proposed for a mixed use development of circa 232 dwellings alongside a 1,672-1,858 sqm retail store.

5.43 The Green Infrastructure Statement prepared for the wider scheme as part of the Placemaking event identifies that it has been informed by the ecological assessments prepared for the site. The statement identifies that the site is currently in active agricultural use and that the primary biodiversity value is associated with the network of hedgerows particularly at the site edges but also the internal field boundaries. In this regard, development of the site offers the opportunity to provide significant enhancements to GI and biodiversity primarily through the retention and enhancement of existing strategic GI corridors crossing centrally from the south-west to the eastern boundary and from the south to the north. A further GI corridor should be created on the eastern

boundary of the site, again retaining existing hedgerows and providing a buffer to the open landscape to the east.

5.44 The GI strategy incorporates the Step Wise approach of Avoid, Minimise, Mitigate, Compensate and Long-term Management and considers each of the stages across the site.

5.45 The green infrastructure Strategy for the site is shown in Figure 8.

Figure 8: Green Infrastructure Strategy HG1 KS4 Land at Church Farm, St Athan

The Church Farm site is currently in active agricultural use and its Green Infrastructure (GI) and biodiversity value is predominantly associated with the network of hedges at its edges and at internal field boundaries.

The site therefore offers an opportunity to provide significant enhancement to Green Infrastructure and biodiversity. This should be delivered through the retention of strategic GI corridors crossing centrally from the south west to eastern boundary and from the south to the north.

These strategic GI corridors should seek to retain existing hedgerows where possible, while increasing permeability of these features to ensure multi-functional GI - for people and wildlife - is delivered.

A further key GI corridor should be created on the eastern boundary of the site, retaining the existing hedgerow and providing a buffer to the open landscape to the east. A missing link in the PRoW network along this boundary should be catered for within any future development proposals.

Although outside the development site, the area of highway land around the War Memorial at the south west corner of the site offers an important opportunity to enhance that space, provide a stronger gateway to St Athan from the B4265 and improve access between future development, active travel and public transport links.

1. Boundary hedges to be retained where possible to protect existing character and biodiversity.
2. War memorial area to be uplifted and enhanced to provide new gateway to the village.
3. South west hedgerow is severely depleted and disconnected but could be retained as a feature within an open space GI corridor and/or enhanced to improve ecological connectivity and resilience.
4. Southern boundary provides key perimeter connectivity, buffer to B4265 and could accommodate segregated active travel routes as necessary.
5. Opportunities to provide alternative/adjacent pedestrian access to school.
6. North-south hedgerows predominantly retained but with enhanced east-west permeability to ensure connectivity across the GI corridor.
7. SuDS attenuation features can be spread throughout green corridors and open spaces, ensuring capacity, functionality and enhancing biodiversity and visual interest across the whole site.
8. Intersection of strategic GI corridors provides central opportunity for open space between both sides of the site.
9. East-west hedgerows predominantly retained but with enhanced north south permeability to ensure connectivity across the GI corridor.
10. Southern hedgerow offers potential secondary GI corridor connection.
11. Boundary hedges to be retained where possible to retain character, biodiversity value and site enclosure.
12. Key strategic SuDS attenuation likely to be required at lowest part of the site.
13. Eastern corridor provides key north south connectivity and buffer to open landscape to the east. Further SuDS and play facilities could be included.
14. Perceptual connection to East Orchard Castle - consider interpretation panels and PRoW mapping to improve accessibility.
15. Potential opportunity for formal open space or sports pitch provision which can also serve the adjacent school.

5.46 The GI statement demonstrates the potential positive multifunctional outcomes of the proposed development from a GI perspective. Biodiversity and ecosystem resilience would be delivered through a considered approach to GI and the application of the Stepwise approach to deliver positive outcomes. primary objective of the sites GI Strategy is to safeguard and enhance the existing GI features and functionality while creating a distinctive and easily navigable sense of place. The design has been led by early ecological and landscape assessments which ensure that GI forms a foundational element of the scheme layout. identifies that existing green infrastructure on site will be retained and enhanced. The strategy identifies that the existing GI value and functionality of the site is primarily related to its hedgerows and tree network which provide movement and foraging corridors likely to be used by a range of species, and which will also provide nesting opportunities for birds, reptiles and small mammals.

5.47 The site therefore offers the opportunity to provide significant enhancements to GI and biodiversity which will be delivered through the retention of strategic GI corridors crossing centrally from the southwest to eastern boundary and from south to north.

5.48 In ensuring the sites existing green infrastructure is appropriately treated, and facilitating its enhancement, the site's green infrastructure strategy will achieve the following, as set out in the Green Infrastructure Statement:

Table 12: Proposed GI Provision HG1 KS4 Land at Church Farm, St Athan	
Typology	**Commentary**
Group: Green & Blue Spaces	
Blue Space	The site's Sustainable urban Drainage Systems (SuDS) strategy envisages SuDS spread throughout the green corridors and open spaces of the site with a key strategic attenuation pond likely located at the lowest point of the site in the southeast corner. These features will not only ensure drainage capacity within the site but enhance visual and biodiversity interest. Further SuDS could be included throughout the scheme both at street level and within public open spaces and GI corridors.
Amenity Greenspace, Outdoor Sports Facilities & Provision for Children and Young People's Play	Utilising the existing hedgerows the GI strategy envisages strategic GI corridors which create a grid-network across and around the site facilitating a large central opportunity for open space between both sides of the site. War memorial area and surroundings to be uplifted to provide a new and enhanced gateway to St Athan. Potential opportunity for formal open space or sports pitch in northern part of site which could also serve the adjacent primary school. The public open space network offers significant opportunities to deliver wider GI benefits such as play, recreation, education and cycle infrastructure.

Domestic Gardens	Properties on the site will benefit from domestic gardens which offer the opportunity for additional green spaces.
Natural and Semi-Natural Greenspaces.	The proposed grid network of GI corridors creates opportunities for significant GI enhancement including the creation of wetland habitats associated with SuDS infrastructure, new meadow and scrub habitats within the green spaces and foraging/nesting opportunities for a range of species associated with increased hedgerow cover, new tree planting and grassland and aquatic habitats.
Group: Green Connections	
Public Right of Way	The strategic GI corridors will facilitate links with the existing PRO outside of the site and enhance pedestrian movement. The provision of the strategic eastern corridor provides a key north-south connectivity and a buffer to the open landscape to the east.
Cycle Network	The southern boundary provides key perimeter connectivity buffer to the B4265 and could accommodate a segregated active travel route to link with existing infrastructure within the area.
Group: Trees	
Urban Trees	The landscaping proposals should include native trees and shrub species or those with a known benefit to local biodiversity.

HG1 KS5 – Land to the West of St Athan, St Athan

Existing Context

5.49 The site is currently used for agricultural purposes and forms a series of flat open grazing fields. The site's internal hedgerows are heavily managed by agricultural practices and are low cropped and fragmented. Vegetation is limited across the site, although there is a belt of trees along the railway line and mature trees beside the B4265, both in the south of the site. The site is abutted to the south and west by roads with agricultural land beyond and to the west and north by the built form of the existing St Athan village. Three public footpaths transverse the site.

5.50 No assessment is made of the existing GI typology within the GI Statement for this site, therefore, the following assessment is made within this report using the GIS associated with the GIA:

Table 13: Existing GI Provision HG1 KS5 Land to the West of St Athan	
GI Typology	**Commentary**
Group: Green and Blue Spaces	
Blue Space	There is no blue space currently located on site and the nearest is a pond located approximately 70m to the north.
Amenity Green Space	There are areas of amenity greenspace interspersed in the adjacent St Athan settlement.
Domestic Gardens	Domestic Gardens are prevalent within the adjacent St Athan settlement. This GI typology is the primary GI asset surrounding the site.
Allotment, Community Gardens, and Urban Farm	There is no allotment provision apparent within the locality of the site or within the wider St Athan settlement.
Outdoor Sports Facilities	St Athan Recreation Ground is located immediately to the east of the site and is identified as an outdoor sports facility. This provides playing fields and a skatepark.
Provision for Children and Young People	A LEAP is identified within the St Athan Recreation Ground. This is a key GI asset and is identified in the concept plan.
Group: Green Connections	
Public Right of Way	Three public rights of way transverse the site, with two providing access from the north to the south and across the railway line and another providing access from the north to the east.
Group: Trees	
Woodland	In the wider locality there are groups of trees forming woodland; however, these groups are smaller in proximity to the site. Mature trees along the railway line and B4265.

Urban Trees	There are some small groups of Urban Trees in the St Athan settlement to the east.
Group: Productive Landscapes	
Productive Landscapes	Most of the site is defined as a Productive Landscapes (agricultural pasture fields).

5.51 The GI Statement identifies the following opportunities

Table 14: Opportunities HG1 KS5 Land to the West of St Athan	
Asset	**Opportunity**
Existing PROWs	The site's Public Footpaths can be retained or potentially realigned to form key movement corridors which provide the community with access to the wider landscape. These routes can be located within corridors of green space so that users move through areas of grassland, that are punctuated with hedgerows and tree groups. Additional recreational routes can be provided to include connections into St Athan Recreation Ground.
Existing GI assets	Existing elements such as roadside hedges, internal hedges and mature trees beside the rail line and the B4265 to can be located within areas of green space. These can be connected via other green spaces and corridors within and around the site to provide connectivity for wildlife as well providing informal recreational routes. These green spaces will provide appropriate space within which planting can be protected and thrive, as well as establishing appropriate 'off-sets' between vegetation and built development.
Hedgerow	Hedgerows on site are gappy and highly managed through current agricultural regimes. There is the opportunity in which to improve their form and structure and their overall ecological value by strengthening them with additional native species rich hedgerow planting and tree cover and managing them for ecological benefits.

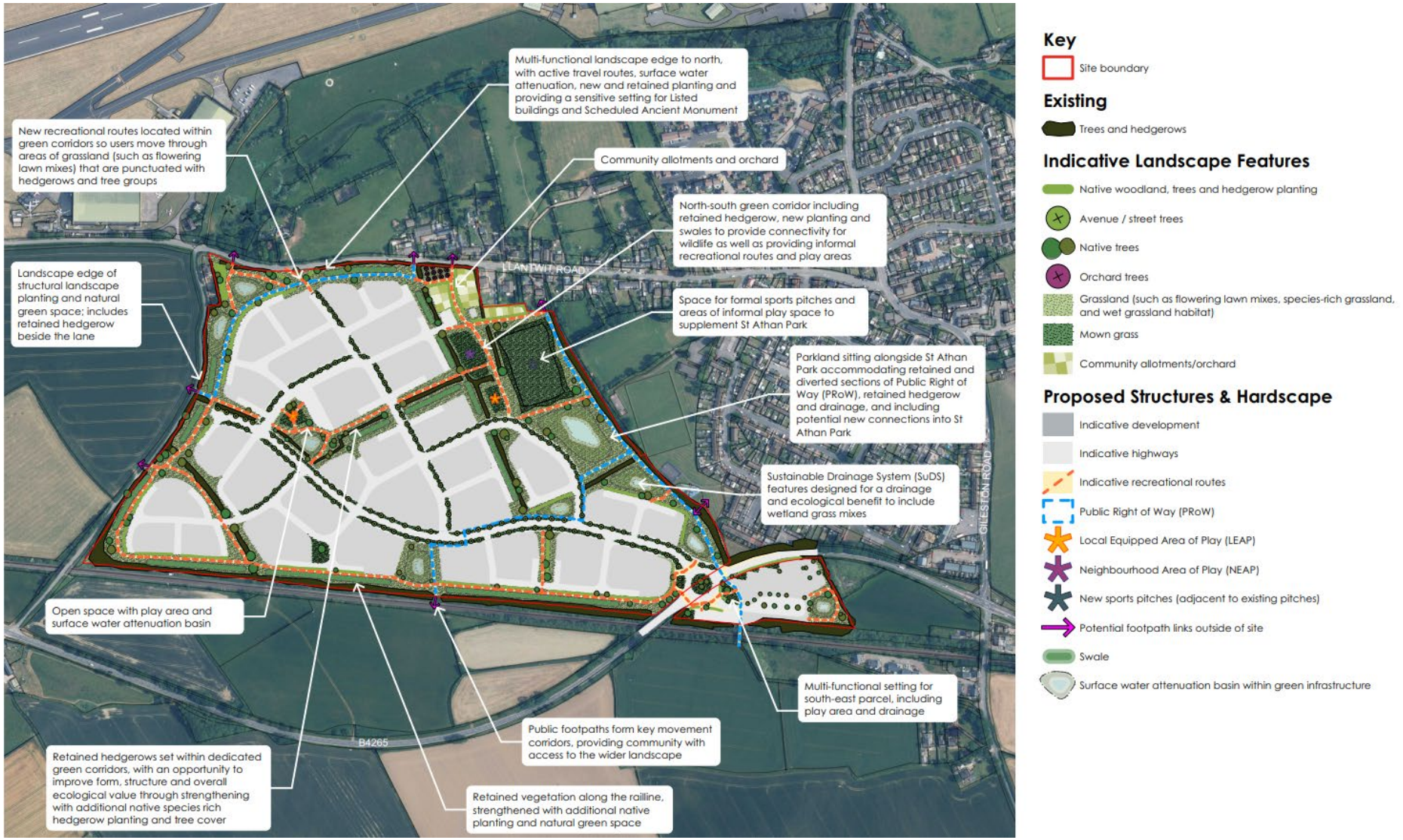
Proposed Development

5.52 The GI Statement identifies that the development is *'founded on delivering comprehensive and multifunctional green infrastructure'*. It goes on to set out that this would include: *'structural landscape planting of native woodland, trees and hedgerows; the creation of varied grassland (e.g. flowering lawn mixes, meadows, and wet grassland habitats); accessible green space and parks for sport, play and recreation; SuDS, drainage features, ponds and wetland areas; allotments, orchards and community food growing areas; public footpaths and recreational routes; street trees, pocket parks and street greening.'*

5.53 It considers that through the sites design and management: *'the development's green infrastructure would provide long term benefits for biodiversity, local*

landscape character, recreation, health and wellbeing and adaptation to climate change. New planting and habitat creation will, for example, increase tree cover and provide a wider range of habitats and landscape elements than present on-site. Creating additional sports, play and open space within the eastern part of the site, will essentially expand upon the sporting facility of St Athan Recreation Ground and will provide enhanced resource for the community.' An indicative GI Strategy for Land West of St Athan is illustrated in Figure 9.

Figure 9: Green Infrastructure Strategy HG1 KS5 at Land West of St Athan



5.54 The GI statement sets out that currently the site has limited landscape and ecological value, with no landscape features or rare or irreplaceable habitats. While limited in extent and variety, the existing vegetation on the site can be retained and suitably protected within dedicated areas of green space. The site's existing boundary and internal hedgerows and mature trees can be retained within an interconnected network of new green spaces with existing vegetation strengthened with new native planting where possible. The GI statement considers that a comprehensive and multifunctional green infrastructure framework can be delivered that retains and enhances existing features and delivers planting and habitat creation, accessible green spaces sports and play opportunities.

5.55 In this context, the site has taken a 'ground up' approach to master planning, whereby existing features within the site are retained and form an integral part of the development's wider green infrastructure, within which built development can be integrated. The site's GI Statement does not summarise the benefits for relevant typologies and Figure 9 has therefore been produced to provide a high-level overview. However the statement considers that through its design and management, the developments green infrastructure would provide long term benefits for biodiversity, local landscape character, recreation, health and well-being and adaptation to climate change.

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