



Coed Darcy Masterplan
Design & Access Statement - Part 1

Nov 2024



Preface

This Design and Access Statement has been prepared by Powell Dobson Architects and its design team on behalf of St. Modwen Developments Ltd. The vision and desire for the regeneration of Coed Darcy is to create a recognisable, legible, desirable place to live and visit and to embrace and integrate with the Phase 1 development already completed. Coed Darcy will become a place with a clear identity in terms of urban design concept and architectural language, and a benchmark for high quality design and placemaking.

Coed Darcy will be accessible and well-connected to the wider area through new and improved green infrastructure networks and safe pedestrian and cycle routes between communities. We will create a greener, more sustainable neighbourhood focused around a series of high quality community and landscape spaces encouraging incidental, social interaction through a variety of different uses for the benefit of the whole community – new and existing. This will be done through the formation of a natural ‘greenway’ connecting key landscape features within and around the site to provide a continuous route around Coed Darcy and out into neighbouring communities, for both leisure and active travel. We will also create, sustainable, desirable homes that are designed to improve well-being through access to green spaces and nature, with layouts have the flexibility to adapt to the changing pattern of family living.

This document sets out our vision, summarises the opportunities and constraints of the site, and identifies the key structuring elements and how they have developed into the proposals submitted as part of the application. This is a document in two parts; Part 1 the structural elements of the DAS and Part 2 to define the design principles for the next stages of Coed Darcy which the local residents will take a collaborative role in helping us shape these key principles as the planning application is progressing.

The document supports an outline application for residential and mixed use development at Coed Darcy, Neath Port Talbot.

Project Team:

Client: St. Modwen Developments Ltd.

Architects & Masterplanners: Powell Dobson Architects

Landscape Architects: Soltys Brewster

Civil Engineers: PJA

Planning Consultant: Savills

Ecology: Ecology Solutions

Energy, Climate Change and Sustainability: Arup

Transport: Atkins

Acoustics & Air Quality: Atkins

Cost Consultant/Employer’s Agent: Cumming Group

Date: 11/12/2021

Author: Alastair Fraser

Revision: G

Job No.: 21009

Checked: BK

Address: Powell Dobson Cardiff
Suite 1F, Building 1,
Eastern Business Park, Wern Fawr Lane,
Old St Mellons, Cardiff, CF3 5EA

Contact Details: tel.: +44 (0)33 33 201 001
email: alastair.fraser@powelldobson.com

IMPORTANT NOTICE The information in this document and any attached files is CONFIDENTIAL and may be legally privileged or prohibited from disclosure and unauthorised use.

The copyright in the drawings or other documents or information contained in this medium is vested in Powell Dobson. Registered office: Powell Dobson Ltd., Suite 1F, Building 1, Eastern Business Park, Wern Fawr Lane, Old St Mellons, Cardiff, CF3 5EA registered in England & Wales No: 3873802

Contents

1. Objectives

- 1.1 Vision
- 1.2 Document Purpose

2. Introduction

- 2.1 Site Location

3. Context analysis

- 3.1 Policy context
- 3.2 Landscape Context
- 3.3 Visual Context
- 3.4 Transport Links
- 3.5 Social and Economic
- 3.6 Character Appraisals
 - Site History
 - Local Context
 - Llandarcy Village
 - Skewen

4. Site Analysis

- 4.1 Constraints and Opportunities
- 4.2 Topography
- 4.3 Drainage
- 4.4 Landscape and Ecology
- 4.5 Access and Movement
- 4.6 Active Travel
- 4.7 Other Considerations

5. Masterplan Framework & Placemaking Vision

- 5.1 The Vision
- 5.2 Masterplan Structuring Elements
- 5.3 Existing Site Character
- 5.4 The 15 Minute Neighbourhood
- 5.5 Key Placemaking Principles
- 5.6 Community Consultation

6. The Proposals

- 6.1 The Illustrative Masterplan
- 6.2 Landscape & Green Infrastructure
- 6.3 Street Hierarchy
- 6.4 Development Character
- 6.5 Site Character
- 6.6 Character Areas:
 - Village Centre
 - Main Street
 - Neighbourhood Core
 - Development Edge
- 6.7 Indicative Levels / Strategic Land Form
- 6.8 Sustainability

7. Parameters Plans

- 7.1 Land Use
- 7.2 Scale
- 7.3 Movement
- 7.4 Green Infrastructure
- 7.5 Drainage

8. Conclusion

- 8.1 Conclusion





OBJECTIVES

1.1 Vision

The vision of St. Modwen Developments Ltd. and the design team is to provide a high quality, sustainable community with placemaking at its heart, the masterplan vision aims to:

- Complete the urban village that began with Phase 1.
- Integrate and enhance the existing Phase 1.
- Integrate the existing landscape, biodiversity and historic features into the new place.
- Establish a place that is distinctive & authentic.
- Establish a well-connected place that is inclusive & accessible to all.
- Provide a mix of uses to support the principles of the “15 minute neighbourhood”.
- Provide up to 2000 new sustainable homes.
- Use the topography to create distinctive places and landmarks.
- Integrate health and wellbeing into the built environment through meeting places, increased connectivity and biophilic principles.
- Create clear and attractive pedestrian and cycling routes.
- Create streets designed as places for people more than for cars.
- Provide different types of public spaces that work for all ages.
- Consider carefully the relationship between topography and pedestrian/cycle movement across the site.
- Create a biodiversity positive environment.
- Create different character areas and Neighbourhoods that still feel part of a coherent whole.

To support this the masterplan has been developed around the key 6 placemaking principles set out in the DCFW and Welsh Government Placemaking Charter of which Powell Dobson and St. Modwen Developments Ltd. are signatories.



One of the key aims of the development is to utilise the extensive and varied existing landscape features on the site to inform development form and site character. These features can provide a uniqueness and important resource for residents and the following statements provide the Vision of the project team in terms of landscape enhancement and integration.

“Maximise access to and management of the sites retained varied landscape features, both those natural - woodlands, rock escarpments and man-made as a result of the refinery works - terraced retention features and reservoirs”

“Use the existing ‘Site Character Areas’ to integrate the existing landscape, biodiversity and historic features as a framework, to contribute toward the development of a unique development from and new ‘placemaking character areas”

“Connect existing landscape features into the natural ‘greenway’ and opportunities to improve the ongoing off-site active travel routes into the surrounding communities including North into Skewen and South to Jersey Marine and Swansea beyond”

“Create a main square at the heart of the site, framed by the new school and navigating the level change formed by the existing embankment, creating an interesting piece of open space with potential for a mix of uses including a shop and a cafe/restaurant”

“Creation of a network or urban ‘greenways’, a series of formal green streets that connect the main square out to formal open space areas framing key long views and connecting the site to the natural greenway”

“Developing a series of buildings connected by public streets with consideration of the topography across the site to create a well connected high quality new neighbourhood comprising approximately 2,000 sustainable, low carbon homes”

1.2 Document Purpose

The Outline Planning Application will seek permission for

Residential uses (C2 & C3 use class), including land for education (D1 use class) with associated public open space, commercial uses (A1, A2, A3, B1, D1 & D2), commercial / employment (B2 & B8) uses, public open space, highway works, sustainable drainage, ecological mitigation and enhancement, landscaping, ground remediation, and associated engineering and infrastructure works with all matters reserved except for strategic access.

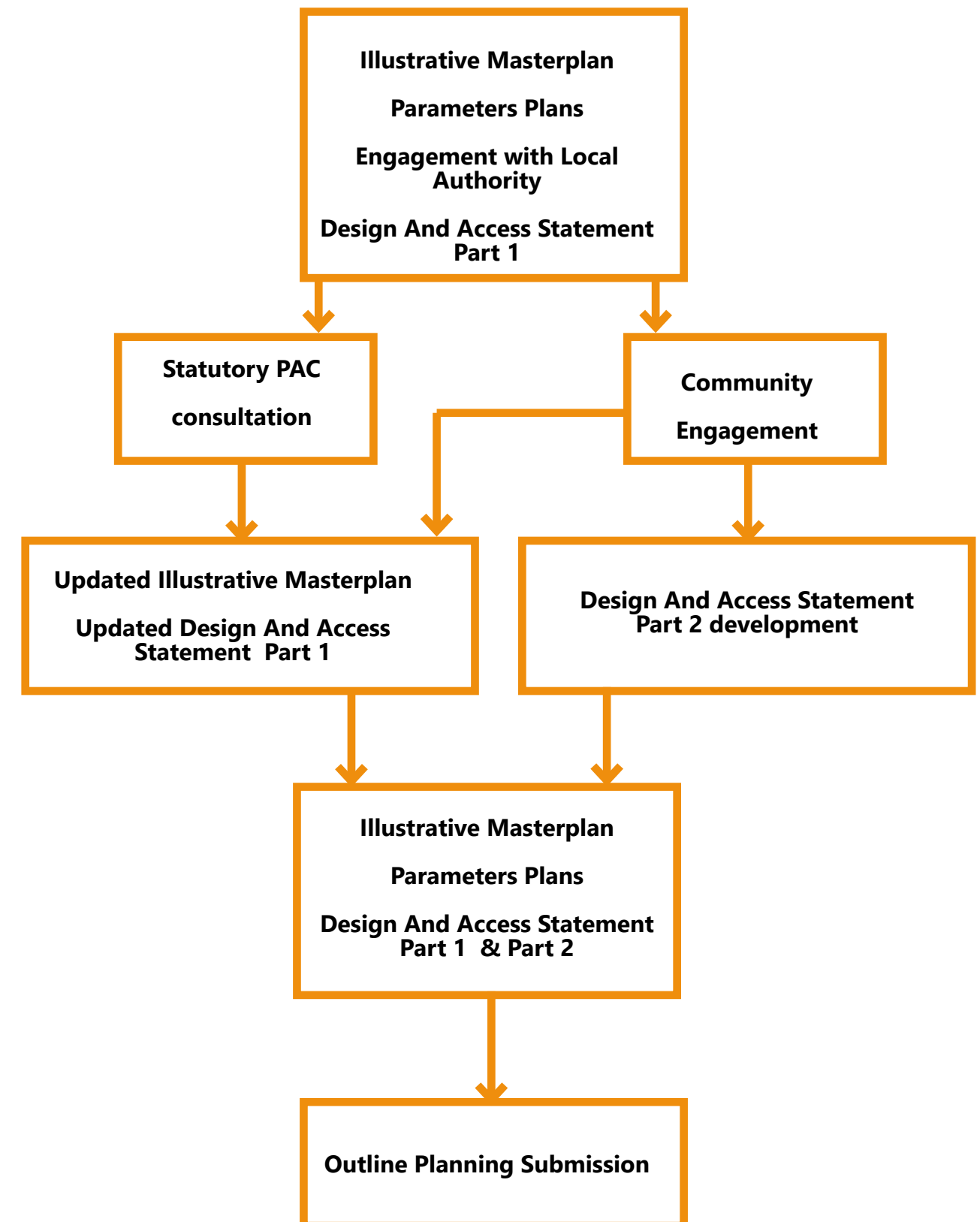
The Design and Access Statement for Coed Darcy is being prepared as a 2 stage document. Part 1 of the DAS is a structural document containing all of the information needed for an outline planning application. Part 2 being the design framework to inform sub-masterplans and reserved matters applications. This is the first stage document and sets out the overarching masterplan vision with a focus on core placemaking principles, establishing the key development parameters for the site, including:

1. Land Use
2. Scale
3. Movement
4. Green Infrastructure
5. Drainage

It is important to St. Modwen Developments Ltd. that this is a fully inclusive and collaborative process with the views of Phase 1 residents included as part of this second stage DAS in defining the character, identity and principles for the next stages of delivery of Coed Darcy.

The second stage Design and Access Statement will include more focused design coding to establish clear and coherent detailed design principles for the different character areas and neighbourhoods at Coed Darcy in order to support successful delivery of the masterplan vision as set out in the Outline planning Submission and the first stage Design and Access Statement. The stage 2 DAS will provide guidelines for architecture and the landscape in each of its character areas including from street layouts, building formations, colour palettes and materials, and any key landscape management and design matters.

St Modwen Developments Ltd. and the Design Team have committed to undertake a series of engagement events with the existing residents in Phase 1 at Coed Darcy to inform and help shape the character of the remaining site. The structure of the document and its status and use in relation to future Reserved Matters Planning submissions is the subject of ongoing discussion with the Local Authority Planning Department. As a result, the Stage 2 DAS will be progressed with local residents as the planning application progresses through the statutory consultee stage. The completed Stage 2 DAS will be submitted at a later date to be considered as part of the outline planning application before determination.







Introduction

2.1 Site Location

Coed Darcy sits on the western edge of the Neath Port Talbot Principle Area. The next nearest and large settlement is Neath to the east, providing services, hospitals and the nearest railway station. Swansea is the nearest major centre to the South West of the site, Skewen is the nearest local centre with a station connecting into Swansea. Rail links direct from Neath include London Paddington.

The site is bounded to the East by the M4, the masterplan area is bisected by the Swansea District railway running east - west. Several statutory and planning designations relate to the area surrounding the development site. The Crymlyn Bog is recognised as a site of international and national wildlife importance (NNR, SSSI, SAC and Ramsar Site) and sits on the Western edge of the site. NPTCBC have identified areas to the south and east of the development area as Green Wedges which make an important contribution to the landscape setting. A large reservoir to the North is in third party ownership.

Llandarcy Village to the South East is a designated conservation area. Phase 1A and B of the development was granted reserved matters consent in 2012 and includes just under 300 houses. This phase is now complete.





LLANDARCY VILLAGE



VIEW TOWARDS PHASE 1



RAIL LINE BISECTING SITE



VIEW EAST FROM THE SITE



CRYMLYN BOG



RESERVOIR



WESTERN PERIMETER



BOUNDARY WITH PHASE 1



PHASE 1



RESERVOIR



DARCY BUSINESS PARK



WILLIAM KNOX HOUSE





Context Analysis

3.1 Policy Context

The planning policy framework for the determination of this application is provided by the content and scope of National Planning Policy, which is contained within the tenth edition of Planning Policy Wales (PPW) and its associated Technical Advice Notes (TANs), together with the Local Planning Policy and its supplementary planning guidance.

The planning policy context for this application is provided in detail in the Planning Statement that accompanies this application however a summary of the key policy considerations are set out below.

PLANNING POLICY WALES

National planning policy is contained within the eleventh edition of Planning Policy Wales (PPW), published by the Welsh Government in February 2021. PPW is supported by 21 topic-based Technical Advice Notes (TANs), which are also relevant. PPW is the Welsh Government’s principal planning policy document, setting out the context for sustainable land use planning policy, within which Development Plans are prepared and developed. Section 3.17 of PPW relates to Design and Access Statements. It sets out that a DAS should communicate what development is proposed, and demonstrate the design process that has been undertaken. It should explain how the objectives of good design and placemaking have been considered from the outset of the design process.

TECHNICAL ADVICE NOTES

This application has been prepared in deference to TAN 2 (Planning and Affordable Housing), TAN 4 (Retail and Commercial Development), TAN 5 (Nature and Conservation), TAN 11 (Noise), the latest version of TAN 12 (Design), which was updated in March 2016, TAN 15 (Development and Flood Risk), TAN 16 (Sport, Recreation and Open Space), TAN 18 (Transport), TAN 23 (Economic Development) and TAN 24 (The Historic Environment).

WELL-BEING OF FUTURE GENERATIONS ACT

The Well-being of Future Generations (Wales) Act came into force in 2015 and seeks to improve the social, economic, environmental and cultural wellbeing of Wales. The Act puts in place seven wellbeing goals in order to make sure that everyone works towards the same vision. The well-being goals aim to achieve: A Prosperous Wales; A Resilient Wales; A Healthier Wales; A More Equal Wales; A Wales of Cohesive Communities; A Wales of Vibrant Culture and Thriving Welsh Language; A Globally Responsible Wales

FUTURE WALES

Future Wales: The National Plan 2040 (Future Wales). Future Wales outlines the Welsh Government’s strategies for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, delivering growth in the right areas, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.

Future Wales sub-divides Wales into four regions with the application site located within the South West Wales region. A total of 36 policies are contained within Future Wales of which 19 are thematic and the remainder relate to the four regions.



SUPPLEMENTARY PLANNING GUIDANCE

The following Supplementary Planning Guidance (SPG) is also of relevance to the proposed development:

- Affordable Housing SPG (October 2016)
- Open Space Provision (July 2017)
- Biodiversity and Geodiversity SPG (May 2018)
- Design Guide SPG (January 2017).
- Renewable & Low Carbon Energy SPG (October 2016)
- Pollution (October 2016)
- Parking Standards (October 2016)

NEATH PORT TALBOT COUNTY BOROUGH COUNCIL LOCAL DEVELOPMENT PLAN (2011-2026)

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that a planning application decision should be made in accordance with the authority's adopted development plan, unless material considerations indicate otherwise. In this instance, the statutory development plan for this application site is provided in the Neath Port Talbot County Borough Council LDP (2011–2026). The application site is allocated within the LDP under Policy SRA1 Coed Darcy Strategic Regeneration Area.

Relevant planning policies are listed in the table opposite

PLANNING HISTORY

- St. Modwen Developments Ltd. purchased the former Llandarcy Oil Refinery site from BP.
- Outline planning permission granted (P2005/0393) in February 2008 for 4,000 dwellings, 41,200sqm B1, 3,800sqm retail space and 8,000 other community / education uses.
- Significant infrastructure requirements secured by the S106 – including remediation obligations, highways works, the Southern Access Road, 3 primary schools and 1 secondary school.
- 95 planning conditions, including reserved matters to be submitted by 7 March 2023.
- Extensive remediation works undertaken.
- Phase 1 (Persimmon Homes) approved in 2012 – up to 300 homes subsequently delivered, and Northern Access Road
- Section 106A application considered 2019/20, up to resolution to grant permission in June 2020 – for reduced affordable housing (15%) and revised triggers to delivery of infrastructure.
- LDP allocation as a Strategic Regeneration Area (quantum / type of uses consistent with outline planning permission)
- Designated a new National Growth area in Future Wales February 2021.

LIST OF RELEVANT POLICIES

- **Policy SP1: Climate Change**
- **Policy SP2: Health**
- **Policy SP3: Sustainable Communities**
- **Policy SP4: Infrastructure**
- **Policy SP7: Housing Requirement**
- **Policy SP16: Environmental Protection**
- **Policy SP18: Renewable & Low Carbon Energy**
- **Policy H1: Housing Sites**
- **Policy AH1: Affordable Housing**
- **Policy EC1: Employment Allocations**
- **Policy EC3: Employment Area Uses**
- **Policy SRA1: Coed Darcy Strategic Regeneration Area**
- **Policy SP15: Biodiversity and Geodiversity**
- **Policy EN8: Pollution and Land Stability**
- **Policy SP20: Transport Network**
- **Policy TR1: Transport Proposals**
- **Policy TR2: Design and Access of New Development**
- **Policy SP21: Built Environment and Historic Environment**
- **Policy SP10: Open Space**
- **Policy OS1: Open Space Provision**
- **Policy OS2: Protection of Existing Open Space**
- **Policy BE1: Design**
- **Policy SP19: Waste Management**
- **Policy W3: Waste Management in New Developments**

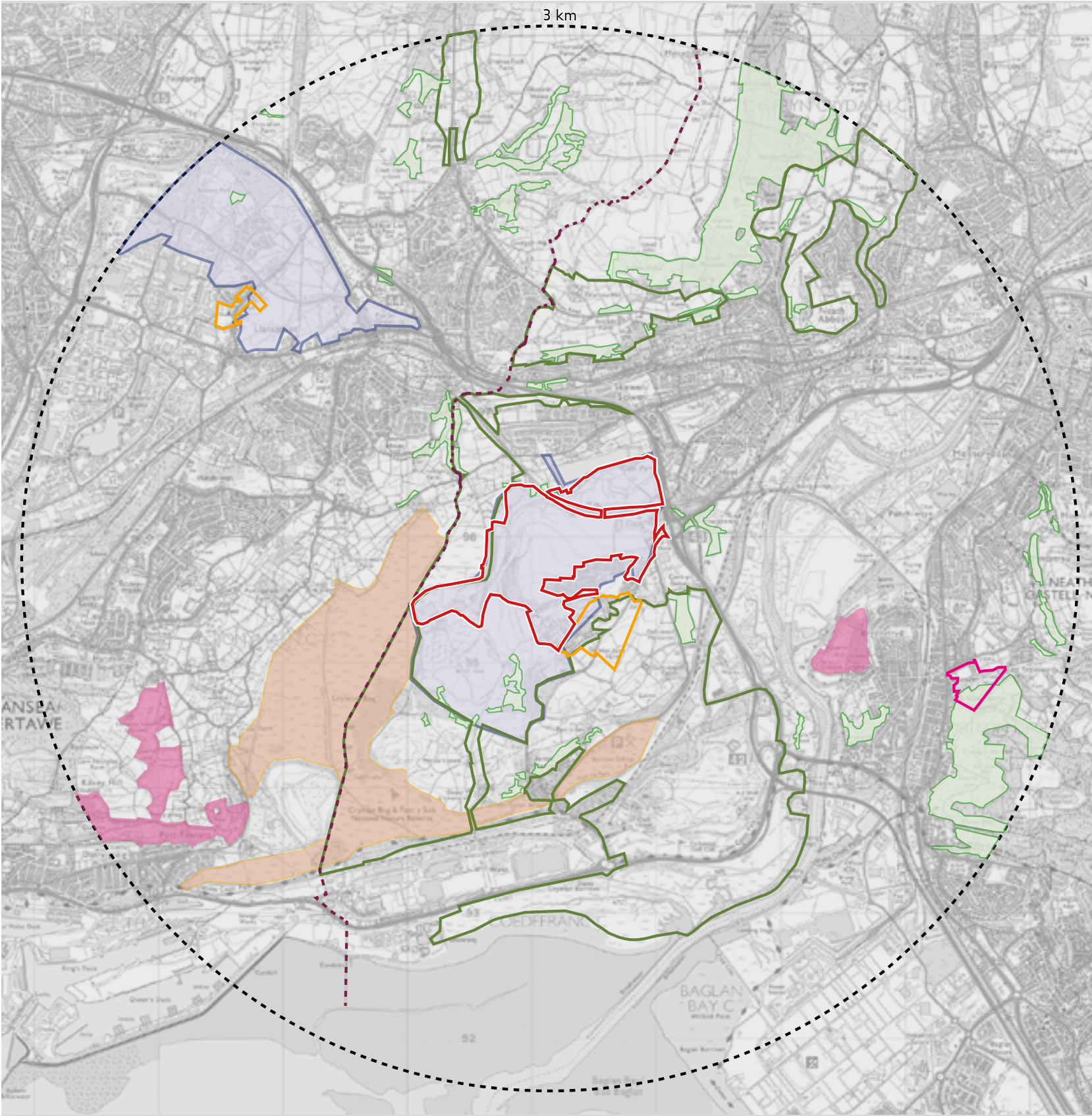
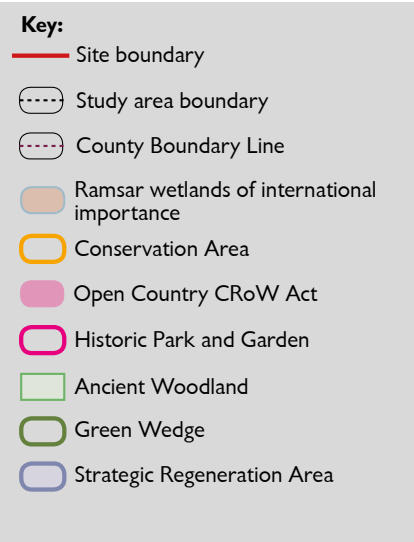
3.2 Landscape Context

Landscape Context

The site is predominantly brownfield land, subject to remediation following the removal of the BP refinery and associated infrastructure. The topography within and adjacent to the redline site boundary is complex with rock exposures, steep man-made slopes often colonised by scrub and woodland, including a railway cutting and a series of large platforms that offer potential for development. Existing commercial properties are located within the Darcy Business Park within the site, to the east and to the south, accessed via Tank Farm Road. Residential development, constructed recently and forming Phases 1a and b, extends along a central ridge forming a high point enclosing much of the proposed development site extending north. This housing is outside the redline application boundary.

The site is further enclosed to the south-east by the Gelli-bwch Hills, a series of steep-sided lowland hills, with a mosaic landcover of fields and wooded areas, rising prominently to form distinctive features above the lower Neath Valley and the adjacent coastal lowlands. Intervening lower-lying areas contain the small settlements including Llandarcy Village and Jersey Marine, with larger-scale commercial and light industrial developments beyond, including the Bay Studios, Amazon depot and the landmark Swansea University Bay Campus.

To the west of the site, Crymlyn Bog forms an extensive area of lowland wetland, comprising a uniform cover of marshy grasses and reeds, with willow and birch scrub growth in places. The disused Glan-y-wern and Tennant Canals extend through this area. A landfill site is located to the south-west, rising above the adjacent low-lying areas.



3.3 Visual Context

Summary of Landscape Character Effects

This LVIA submitted as part of the application documents has examined the likely effects on the proposed development on the former BP oil refinery site on landscape character and visual amenity within a 3km study area. This was undertaken through the application of an acknowledged methodology for landscape and visual assessment, which established an appropriate scope for the landscape and visual assessment undertaken.

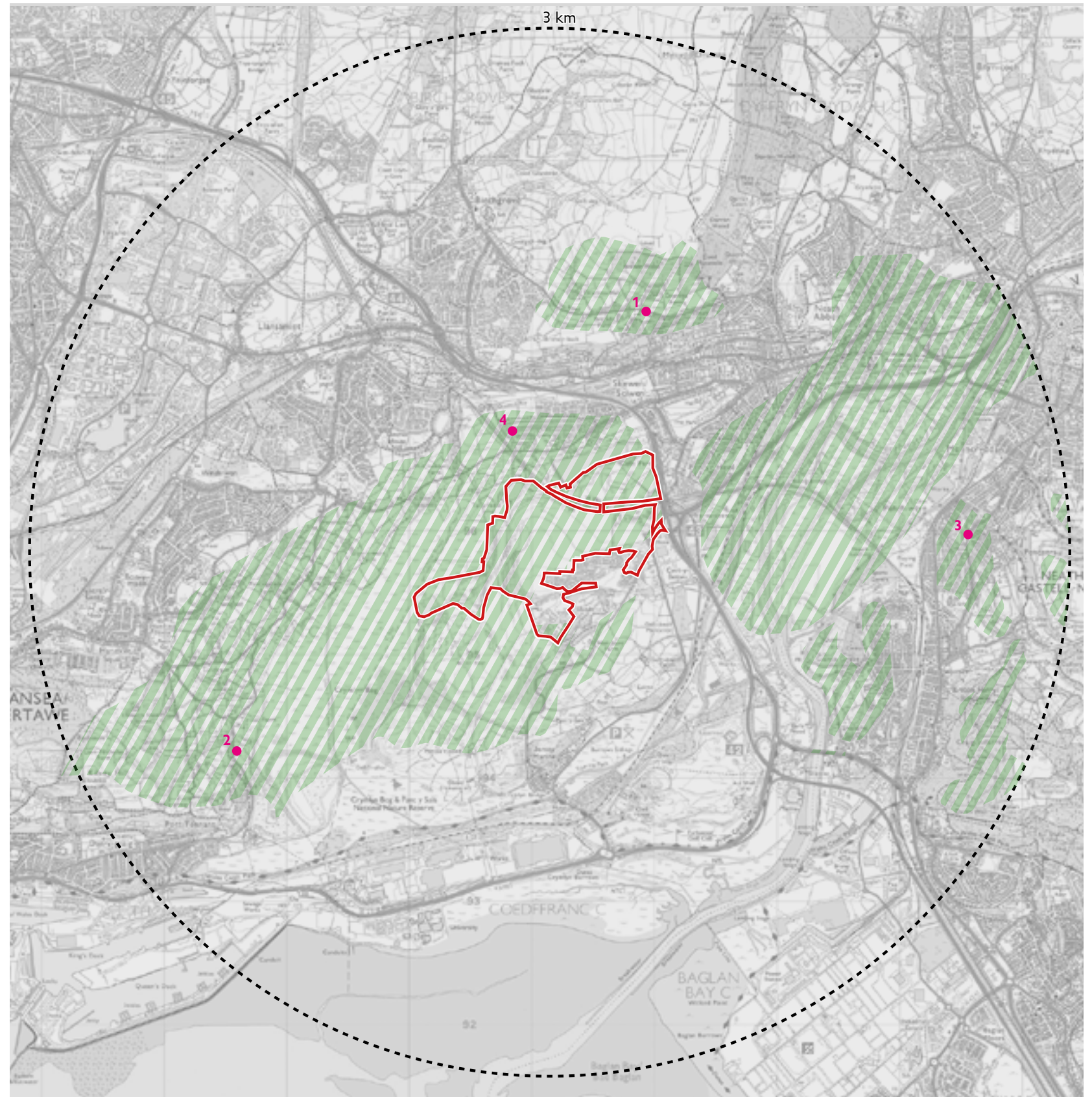
A total of 11no. LCAs (Landscape Character Area) within the 3km study area were identified where it was considered in theory effects on landscape character may occur as a result of the proposed development. Following the assessment, it was concluded that significant effects are likely to only occur within the site itself (LCA 10 Gelli-bwch Works). The character within this LCA is currently defined by the scrub vegetation following the remediation works associated with the former BP oil refinery site and the new housing development (Phase 1a and b) to the south eastern boundary of the LCA. Following completion of the development, the character of the landscape will be defined by modern housing development, although the retention of existing boundary vegetation, the implementation of new planting and a management regime are all seen to positively contribute to the landscape character.

A small parcel of land within LCA 07 Crymlyn Bog lies within the proposed development site boundary. Within this area there will be also be direct effects on landscape character as a result of the implementation of a habitat mitigation area. Consequently, any effects on landscape character are considered to be positive.

From the remainder of the land within LCA 07 Crymlyn Bog and all other surrounding LCAs within the study area, it is predicted that effects on landscape character will not be significant, as the proposed development will be accommodated into the existing landscape without changing the existing baseline conditions that currently define their character.

From 3 of the 4 viewpoints effects on visual amenity are considered to be not significant. From these locations it is considered that the proposed development could be visually absorbed together with the existing elements that define the view and therefore the overall characteristics of the view will not change.

From viewpoint 4, Cymlyn Gardens, Skewen, from a modern housing estate, with views towards the existing housing to Phase 1a and b and also the scrub vegetation of the former BP oil refinery site. Therefore, although effects on visual amenity are predicted to be significant, they are considered to result in a slight positive effect on visual amenity as views of the derelict industrial land will be replaced by development that is more in keeping with the surrounding landscape.



3.4 Transport Links

The Coed Darcy site, is well served by existing and proposed transport infrastructure – as illustrated by the diagram (right). In addition, its development will provide important new links including the delivery of active travel measures.

As well as Public Rights of Way (PRoWs) and new and proposed cycle routes, the site benefits from existing bus routes and local rail services as well as future planned provision out with control of the development.

Coed Darcy also has excellent highway links, including the nearby M4 corridor, which offers access to further employment and leisure opportunities.

KEY

- Site Boundary
- Ownership
- Cymlyn Bog
- Developed Area
- Motorway
- Major Roads
- Minor Roads
- Railway Lines & Station
- National Cycling Route



ACTIVE TRAVEL

Connectivity for pedestrians and cyclists is currently very restricted. The redevelopment of Coed Darcy will help integrate the settlement, as well as significantly improve the connectivity of existing settlements through the creation of new high quality active travel links to and across the site.

There are no public rights of way (PROW) on the site, however the development of Phase 1 under the previous permission has resulted in increased access to the site. As such, there is evidence of the remaining land being used for some recreational use. There are opportunities for pedestrian connections to the surrounding communities, including Llandarcy to the south, Skewen to the North East and Llansamlet to the North West. There is also significant opportunities to create pedestrian networks within the site to provide interaction with the important landscape features within and surrounding the site.

Cycling connectivity is also very limited, with the only cycle provision provided on road via the B4290 north to Skewen and South to Jersey Marine and Swansea beyond. There is also off road provision provided adjacent to the M4 corridor connecting Skewen with Briton Ferry. Both the on road and off road provisions are not without their issues and the site provides a significant opportunity to improve pedestrian and cycle connectivity for the area.

PUBLIC TRANSPORT

The area is relatively well served by Public Transport. Existing bus routes 38, 155, X7 and the T6 travel along the A4290 and include routes to Swansea, Skewen, Neath and Glynneath. The closest railway station is Skewen which is served by regular weekday and weekend services by the 38 and 155 buses. Skewen Railway Station provides local and national connections including direct trains to Swansea, Neath, Cardiff, Crewe and Chester. The Bus and rail services to Neath all connect to Neath Rail Station, which is on the National mainline to London, providing excellent commuting opportunities.



Skewen Train Station

HIGHWAY NETWORK

Coed Darcy lies to the west of the M4 corridor, with direct connection to junction 43 providing excellent vehicle connections. Junction 43 also serves as the main access connection to Neath via the A465, which will have convenient access from the site. Intersecting the M4, to the east of the site is the B4290, which is a key route serving Skewen to the north and Jersey Marine and Swansea to the south.



Local Bus Stops on the B4290

FUTURE METRO PROVISION

Welsh Government/Transport for Wales has investigated the potential of providing a railway station connection on the district line which dissects the site. This is a consideration for the future, as funding and delivery of the Metro station is not under St. Modwen Developments Ltd's control. However Land has been reserved on the plan as requested by Welsh Government in order not to compromise the future provision being considered. For the avoidance of doubt, this is outside of the application red line boundary and will be subject to a further planning application in due course.

The future station would involve the provision of new platforms, access steps and ramps and associated parking provision behind the existing Courtyard commercial units to the north of Darcy Business Park.

The future station provision would greatly enhance the travel connections for the site and provide significant, sustainable travel for residents.



Existing Cycle Active Travel Route to Skewen

3.5 Social and Economic

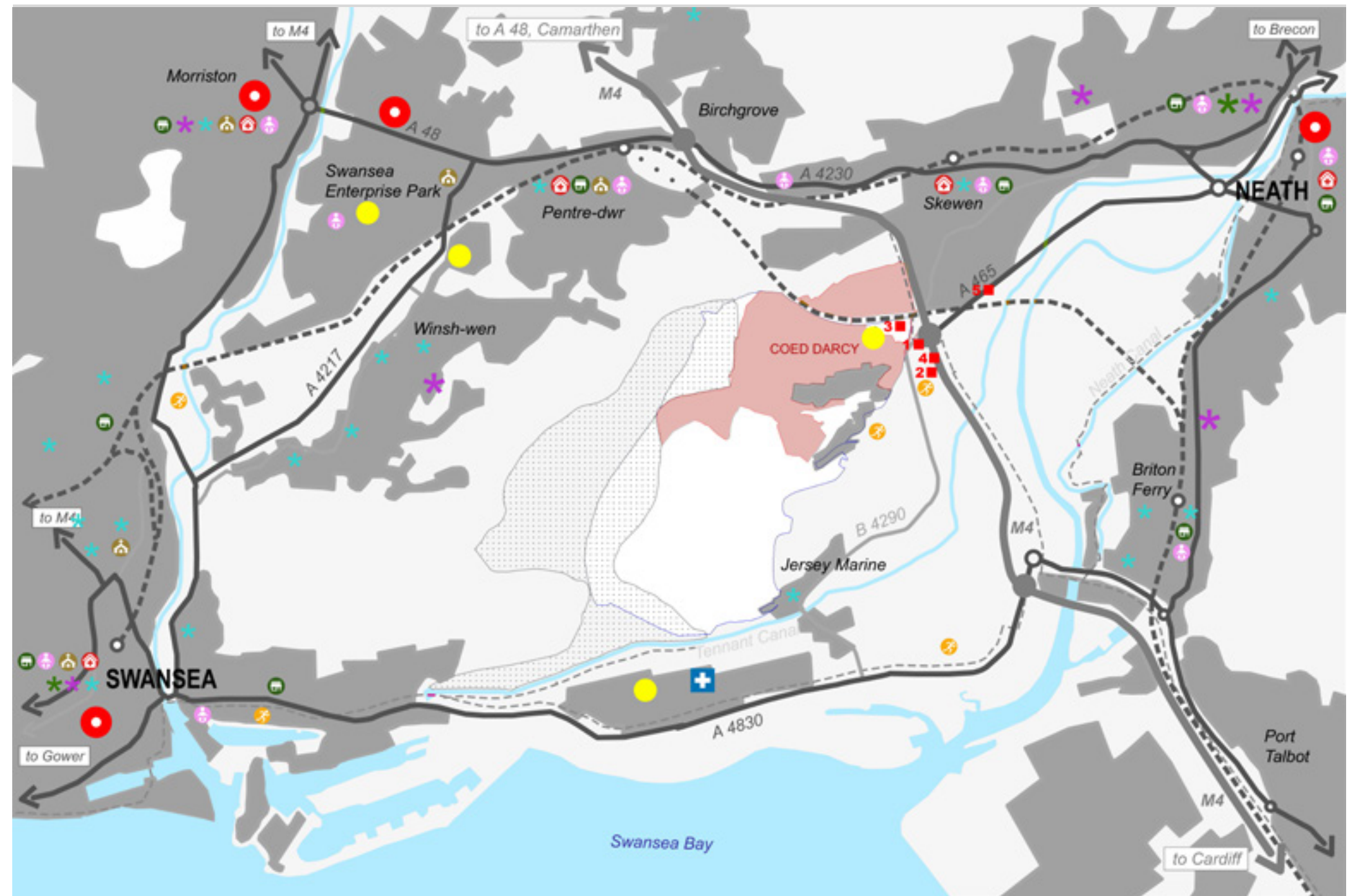
There are a range of facilities within the immediate vicinity of the site, with further local facilities found a short distance from the site in the surrounding residential centres.

The nearest local centre is Skewen, which has a wide variety of local facilities and services, and is approximately 1.5 miles away. Other local services can be located in Neath and LLansamlet, which are slightly further but still easily accessible.

The nearest major centre is Swansea which is approximately 6 miles away.

KEY

-  Site Boundary
-  Ownership
-  Cymlyn Bog
-  Developed Area
-  Town Centre and Retail Areas
-  Key Employment Areas
-  College
-  Secondary School
-  Primary/Junior School
-  Sports Facilities
-  Local Shops
-  Hospital
-  Nursery
-  Church
-  Medical Centre
- Nearby Facilities**
-  1 Harvester Pub/ Restaurant
-  2 David Lloyd Gym/ Swimming Pool
-  3 Screwfix Hardware Shop
-  4 Holiday Inn Hotel
-  5 Esso Petrol Station



EDUCATION

There are a number of primary and secondary schools within the local area. Local primary school provision is located at Coedffranc Primary School and Abbey Primary school to the north in Skewen, as well as Crymlyn Primary School to the South.

Local secondary school provision is provided by Cefn Hengoed Community School to the west and Ysgol Bae Baglan to the South.



Coedffranc Primary School

EMPLOYMENT

There are extensive local employment opportunities, including within Darcy Business Park, situated to the east of the development site and contractors yard industrial area to the south. There are other local employment opportunities within the various commercial uses around junction 43, including a hotel, pub, sports complex and college.

Further opportunities are available in the local centres of Skewen, Neath and Swansea as well as along the M4 and via the rail network, including to Cardiff.



Darcy Business Park

OPEN SPACE & RECREATION

The site is very well served by local open space and recreation facilities. There was a new local park constructed as part of the phase 1 and existing local facilities at Llandarcy Village Park. There are also extensive facilities at Skewen Park, which has all weather football basketball and tennis courts as well as a skate park. It also contains local bowling and cricket clubs.

Other recreation facilities can be found at Llandarcy Park and David Lloyd Gym located at Junction 43 of the M4. These include swimming and sports facilities including sports clubs and coaching for all ages.

It is intended that the development of the site will create further open space opportunities for the local community, including facilities provided as part of the proposed school.

The sites natural setting also provides a great opportunity to provide recreation and active travel opportunities by allowing connections into the significant green infrastructure that surrounds the site. These can be in the form of walkable, interactive routes, with signage and activity points.



Skewen Park & Memorial Hall

LOCAL FACILITIES

There are a number of local facilities provided in close proximity to the site located at Darcy Business Park and Junction 43. These include:

- Harvester Pub / Restaurant
- David Lloyd Gym / Swimming Pool
- Screwfix Hardware Shop
- Holiday Inn Hotel
- Cafe Darcy
- The Pavillion

A wider range of facilities can be found in Skewen which include:

- Esso Petrol Station
- Restaurants
- Churches
- Post Office
- Local Centre Shopping
- Community Hall
- Nursery
- Medical Centre
- Dentist

A wider range of facilities can be found at Neath and at the retail parks on the eastern edge of Swansea, including Fabian Way and Morfa Retail Park; as well as Swansea city centre.



New Road Skewen (Local Centre)



Ysgol Bae Baglan



Junction 43

3.6 Character Appraisals

SITE HISTORY

Llandarcy was named from Llan, meaning church or 'parish of' and D'Arcy after William Knox D'Arcy, a British businessman who successfully secured oil exploration and mining rights that were to transform the Iranian oil industry. The existing listed William Knox House was named in his honour.

Prior to the first construction of the oil refinery, the site constituted arable farmland, which was split between a number of farm ownerships. The site was known for being rich in coal from as early as the 12th century, where it was used for iron making, with small cottage industries starting up. The nearby rivers facilitated the transport of the Iron and the production of copper in Neath from the 17th century. As the industry expanded, the Glan-y- Wern (later Tennant Canal) was built to transport coal mined from Glan-Y-Wern Colliery, to the west of the Crymlyn Bog, to the river Neath.

At the end of the 19th Century, Jersey Marine developed around the Tennant Canal. Skewen to the North also saw mass expansion with housing for local workers. The South Wales Railway (now the Great Western Mainline) construction also contributed to the expansion of the area, linking Neath with an ever expanding Swansea. Further railway networks were constructed including the Swansea District Line which dissects the site further enabling settlement expansion in the area.

In 1901, William Knox D'Arcy secured a 60-yr concession to explore for oil in then Persia (modern day Iran). Oil rights were granted for the majority of the country excluding five provinces, forming what is currently Northern Iran. One of the world's then largest oil fields was discovered at Masjed Soleiman in 1908 with D'Arcy owning rights to retain all of the same with the Persian Government retaining a 16% profit. The British Government formed an alliance called the Anglo-Persian Oil Company in 1908 with D'Arcy as a Director of the same. In 1954, the same company was changed to the British Petroleum Company, the antecedent of the modern day BP plc. The oil discovered from the 1908 mining exploration was to have a transformative impact on the UK with Llandarcy becoming the location of the UK's first oil refinery site.

Construction of the Oil refinery started in 1917 following the construction of the East Swansea Docks. The site was chosen for its proximity to the sea and the docks as well as its shelter for potential naval attack. The proximity of a ready supply of local labour was also key to the establishment and success of the refinery. There was a pause in construction due to World War 1, with works commencing in 1921 with the construction of works houses at Llandarcy Village. The refinery officially opened in 1922 and grew rapidly. Major ground works to address the surrounding terrain was carried out to allow further development.

As the site demanded more resource, including water for cooling the plat systems, a 13 million gallon reservoir was constructed, currently situated to the north of the development site. A freight railhead was also brought into the site to allow easier transport of materials.

By 1973 the site employed 2000 people, however due to the effects of the world oil crisis and excess refining capacity in the country, the refinery switched to the manufacture of specialist lubricants. During this time the M4 motorway was constructed including junction 43, adjacent to the site, provided fast, direct road links.

The refinery however could not survive the economic climate of the 80's and the main oil refinery closed in 1985, with the last plant operation closed in 1998. The refinery was then demolished and with St. Modwen Developments Ltd. acquiring the site in 2008, significant remediation works have since taken place.



LOCAL CONTEXT

The immediate context for the site is the Phase 1 development carried out under the previous outline masterplan, with the reserved matters application approved in May 2012 (ref P2011/0880). The basis of the architectural style was established in the Town Code as part of the outline approval. The Code identifies distinctive character areas for Coed Darcy, with parameters for both built form and landscape treatment being set. These were aimed at achieving a robust, sustainable and legible place, with 'a characteristically Welsh character typical of the local area'.

Phase 1 fell within the Neighbourhood Place Character Area. The Design and Access Statement submitted as part of the reserved matters application describes the architectural design ethos and compliance with the Town Code as follows:

- Development structure – a blend of formal streets and informal mews
- Building frontage to streets
- Block type back-to-back and court type
- Primary frontage at the north-eastern gateway as per legibility requirements
- Topography handled by stepping down of buildings, and through terracing of rear gardens
- Higher density development closer to the mixed-use centre, reducing to medium density as per density requirements
- 2 – 3 storey building height
- Buildings at focal locations have an increased scale to aid legibility
- Variable building set backs
- Simple, cohesive materials palette
- Predominantly semi-detached building types
- Some use of apartments
- Boundaries of railings on walls, railings, and planting
- Both narrow and wide fronted dwellings
- Dwellings of 2 – 2 1/2 storeys
- A traditional appearance reflective of the local character
- Predominantly render with some use of brick in tertiary streets and mews areas.
- Coping to stone walls
- Use of chimneys to reflect street type and formality
- Door surround details
- Clipped eaves/verges to smaller dwellings
- Projecting eaves on larger dwellings
- Square and vertical window openings

Phase 1 is now complete and examples of the final built form are below. Whilst it is clear that phase 1 responds well to the principles set out within the original code it is clear that the integration of the materials into the site has had some issues, most notably the weathering of the predominant render material. Any future development can build on the basis of a traditional architectural style, however more emphasis can be placed on the exposure and robustness of materials to inform the location and detail of architectural materials.



LLANDARCY VILLAGE

The next closest settlement from which the site can take contextual influence is Llandarcy Village. Constructed in the 1920's to house the workers from the oil refinery site it is now a conservation area because of its model village principles.

Consisting of exactly 100 houses and flats, each property was designed to be different, with a constant main render material with contrasting stone, brick and tile hanging detail materials. The roof material is predominantly clay tile.



SKEWEN

The largest settlement in the area, Skewen started as an Industrial village serving the iron and coal industry historically associated with the Llandarcy area. Buildings are of typical Welsh industrial vernacular, using robust materials and simple detailing. Skewen has undergone rapid expansion in various stages, and suburbs reflect 1930's ,post war and early 20th century styles.







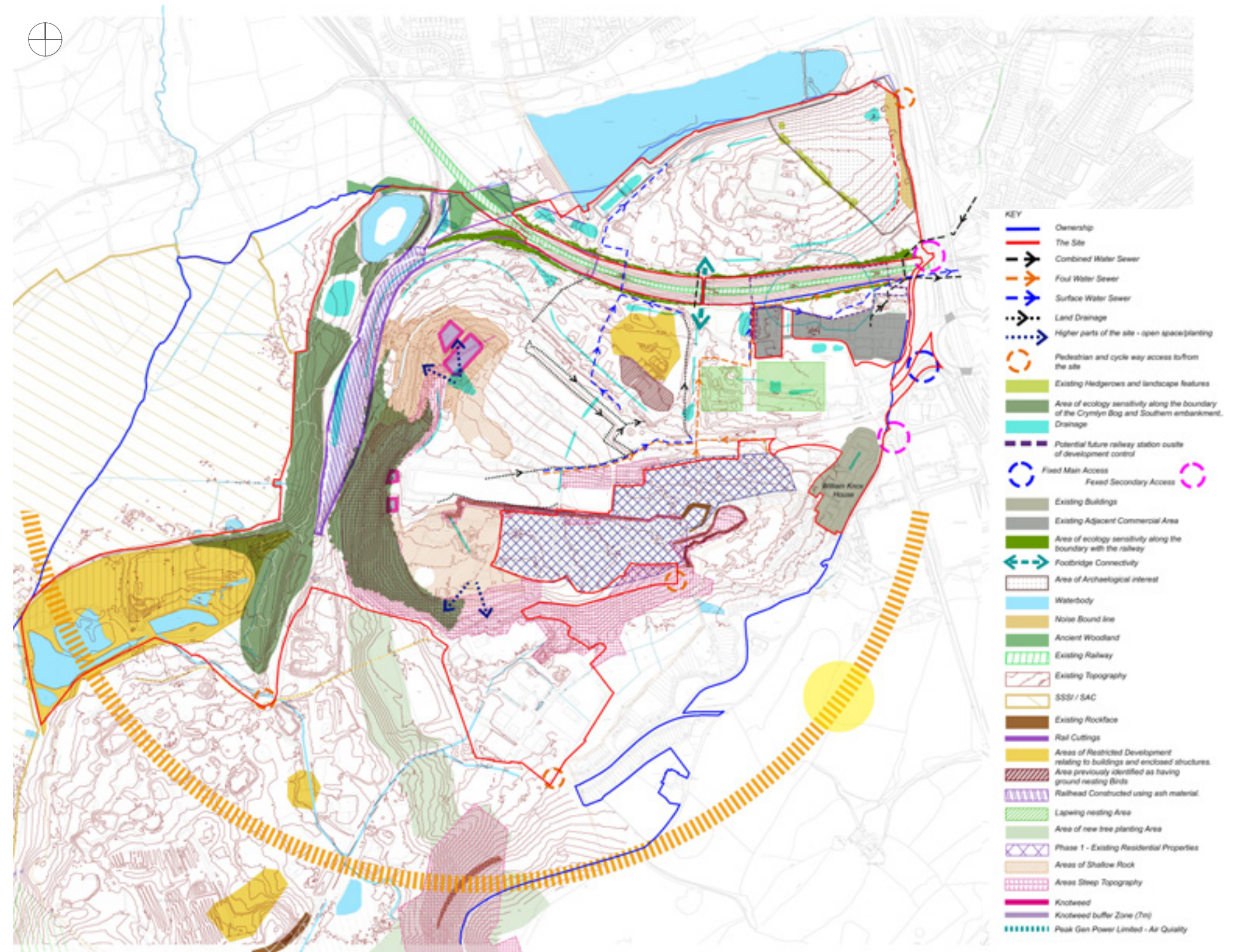
Site Analysis

4.1 Constraints and Opportunities

A thorough investigation and appraisal of the site has been undertaken which has identified existing constraints as well as the opportunities and principles for the successful development of the site and adjoining land within the allocation. The plan opposite illustrates the key opportunities and constraints that have influenced the development of the masterplanning proposals.

SUMMARY OF CONSTRAINTS & OPPORTUNITIES:

- Areas of steeply sloping ground.
- Embankments forming the lower plateaux relating to the previous use.
- The exposed Rock escarpment running East -West.
- Areas of high ecological importance around the southern embankments.
- Area of shallow bedrock making development more difficult.
- The railway line which dissects the site in two.
- Footbridge connectivity over the railway line.
- Existing drainage strategy for phase 1.
- DIME area (area of contaminated land) cannot currently be developed for residential use.
- Area of ecological sensitivity along the boundary with the railway line.
- Area of ecological sensitivity along the boundary of the Crymlyn Bog.
- Existing adjacent commercial and residential areas.
- Lapwing Nesting Areas.
- Existing buildings including the listed William Knox House.
- Fixed access locations.
- Provide open space/planting on more visually exposed/higher parts of the site.
- Existing hedgerows and landscape features.
- Noise from the M4.
- Pedestrian and cycle way access to/from the site.
- Drainage and SUDs features.
- The potential future railway station outside of development control.



4.2 Topography

The topography of the site represents both a significant challenge, requiring substantial cut and fill to enable development, but also an opportunity to contribute to the character of the development, create identity, support legibility and maximise long views out of the site

The main body of the undeveloped site area consists of 2 lower plateaus of gradients between 1:20 & 1: 45 split from the rest of the site by an embankment that formed the edge of former refinery road. The land then rises to the South from +49.00 with a peak of +80.00 with fantastic views across to Swansea Bay and the Crymlyn Bog. Beyond this edge the land drops away steeply to the South and West. A large retaining structure built around an exposed rockface formatting the current boundary between phase 1 and rest of the site.

The parcel to the North of the railway rises South to North from +41.00 to +53.00, and West to East from +29.00 to +53.00 to a central peak before falling away to the boundary with the Northern Reservoir at circa +30.00

There are 2 peaks formed by bedrock close to the surface which are being considered for quarrying to maximise developable area.



Retaining wall and exposed rockface

Embankment formed by former road - - - - -



4.3 Drainage

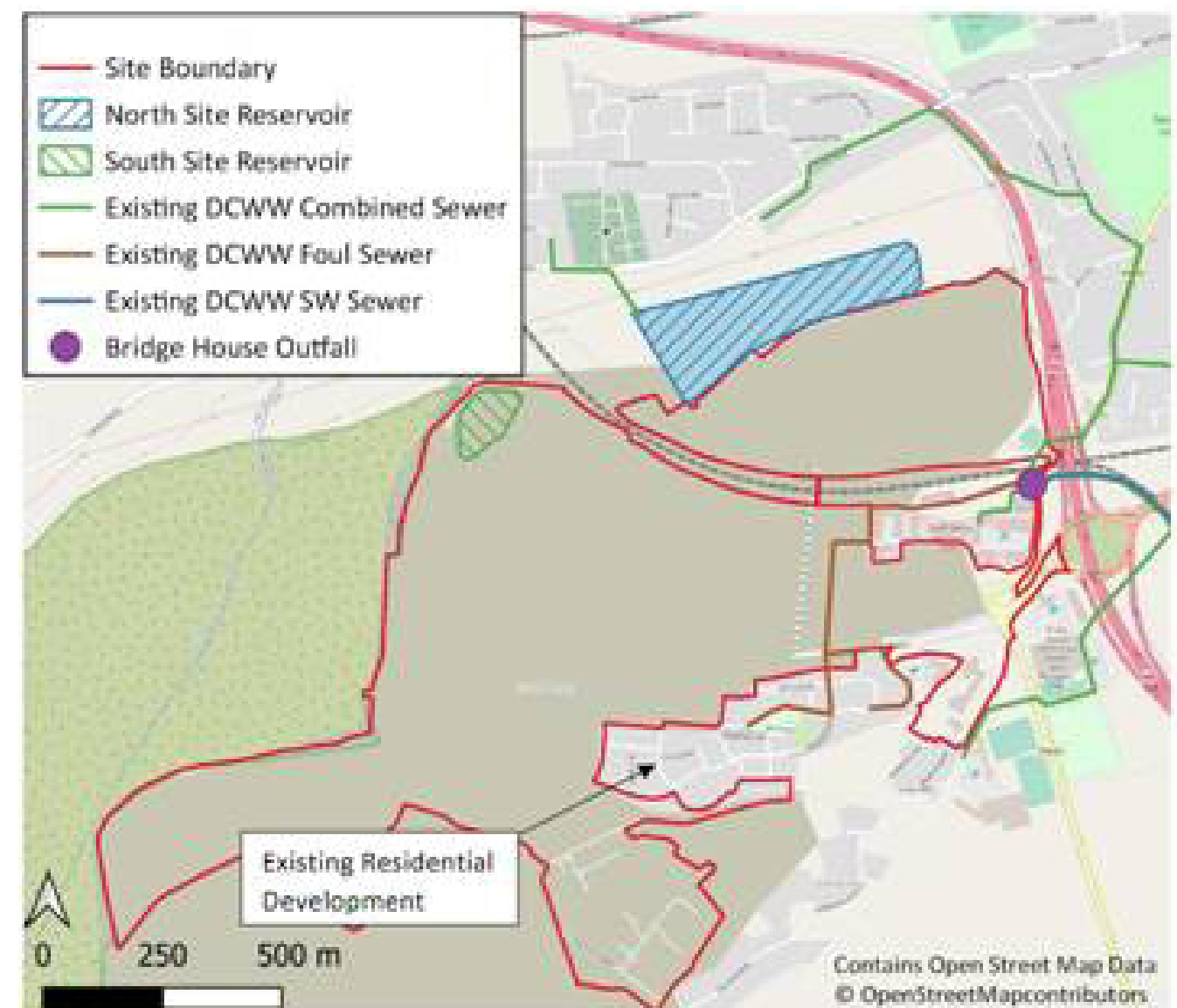
-In general topographic terms the site falls to two principal drainage catchments, eastwards towards the River Neath and westwards towards the Crymlyn Bog. The River Neath lies approximately 900m east of the Site and the Crymlyn Bog forms much of the western boundary of the development area.

Elements of historic drainage infrastructure remain on site which provide a partially functioning drainage system which is to be adapted for the proposed development. These principal elements of the existing drainage network include:

- The 'South Site Reservoir' (SSR), which lies within the north eastern area of the Site, currently discharges at an unregulated rate via the Permit controlled Tal-y-Wedu discharge into the Crymlyn Bog. The Tal-Wedu also receives flow from remnant on-site and off-site (non refinery) infrastructure from the north of the former refinery.
- The SSR was one of a number of lagoons across the wider site which accepted refinery drainage and which acted as de-facto oil interceptors and settlement lagoons. Water was discharged via regulated discharges into the Crymlyn Bog. The lagoons, including the South Site Reservoir, underwent remediation and reclamation to remove historic contamination impacts.
- In general the Crymlyn Bog receives flow from a number of ditch courses running through the development area, some of which are linked to remnant refinery infrastructure. Flows are unattenuated and include overland surface flows.
- The 'North Site Reservoir' (NSR) forms the northern boundary of the Site and sits outside of the proposed development area. The NSR receives flow from the Site but also from outside the areas controlled by St Modwen. Water from the NSR is currently pumped to the Dwr Cymru Welsh Water (DCWW) sewers east of the Site (via the Bridge House outfall) which outfalls directly to the River Neath.
- A number of DCWW sewers cross the Site boundary, including a combined sewer system (which is present in the north-east of the Site) and a foul drainage network which serves the existing residential development and Coed Darcy Business Park.

From review of the NRW Flood Map for Planning, the development Site is identified to lie outside the maximum flood extents from Rivers and Seas. Furthermore, the majority of the Site lies within Zone A of the Development Advice Mapping (DAM) which is considered the most appropriate area for development with regard to flood risk.

The NRW Flood Map for Planning, Surface Water and Small Watercourses Mapping identifies areas of surface water ponding associated with existing depressions on Site, the SSR and low lying areas in the south-east of the Site. The low lying areas in the south-east of the Site are not proposed to be developed, the existing Site will be re-profiled and surface water from the Site will be managed by sustainable drainage systems (SuDS). As part of the design, measures will be implemented to ensure there is negligible increase in surface water flood risk on-and off-site and ensure that exceedance flows will be directed away for property.



4.4 Landscape and Ecology

Ecology Context

The Site is located within an ecologically diverse landscape where frequent statutory and non-statutory designated sites are present. Of particular relevance, the Crymlyn Bog SAC, Ramsar, National Nature Reserve and SSSI which lies adjacent to the Site and the Coed Darcy GCN Area SINCR is partially within the Site. Other designated sites of relevance include Crymlyn Burrows SSSI, located approx. 1.8km south of the Site at its closest point reference to the NNR.

The Site itself comprises a large area of previously developed land which has been subject to extensive remediation, vegetation clearance, and reprofiling over an extended period. These previous works, undertaken in accordance with the consented OPP, have resulted in habitat clearance across the vast majority of the study Site albeit localised mature habitats, such as areas of mature woodland, have remained.

The duration, extent, and timings of the previous remediation and reprofiling works have varied across the study Site, with some areas having been subject to works very recently, and other areas having been left undisturbed for several years. Resultantly, whilst the majority of the Site comprised bare ground as recently as 2016, the staggered cessation of construction related works has allowed for a range of early successional habitats to establish.

The structure and botanical composition of these habitats varies significantly across the study Site, ranging from large areas of predominantly bare ground, to sparse ephemeral/perennial vegetation, floristically diverse dry grasslands, species-poor grazed grassland, wetland, ponds, scrub, and woodland.

In many instances, particularly for early successional habitats, the botanical communities are diverse and support a good range of grasses, sedges, and forbs. In particular, early successional terrestrial habitats to the north of the railway, and along the western boundary of the study area, typically support a more diverse floral assemblage. In contrast, large central areas of the study area support very limited vegetation and are dominated by bare ground, or include for vegetation more typical of disturbed ground and of a ruderal nature.



4.5 Access and Movement

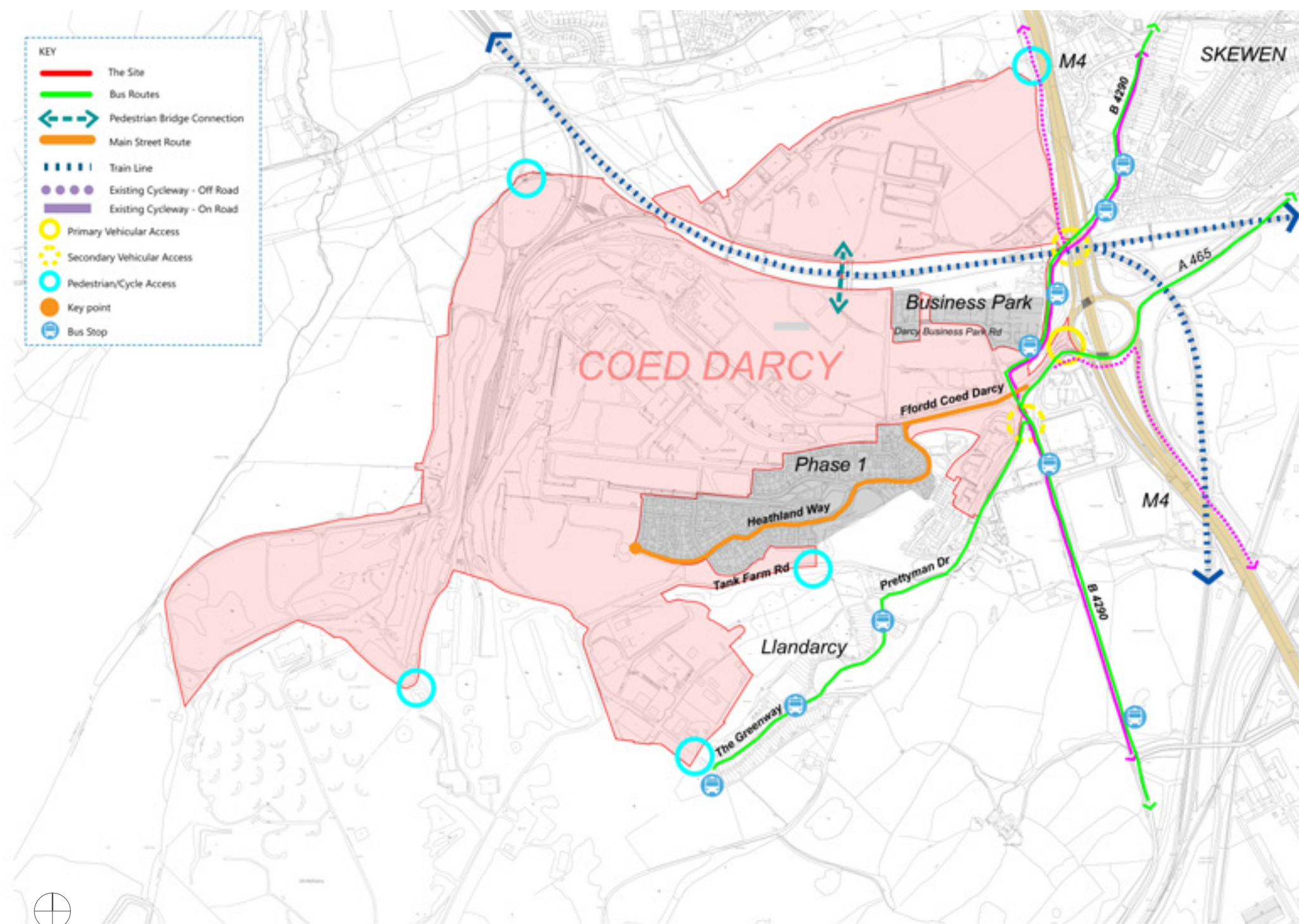
All significant transport infrastructure is located to the east of the site. Primary access to the site is from the new road layout created as part of the previous application enabling works, connecting directly from Junction 43 of the M4.

A secondary site access, to the parcel north of the railway line, is located from the B4290, which utilises an existing service track access to the north site reservoir. The capacity of the B4290 is limited, so additional works to the connection with Junction 43 will need to be carried out.

This service track also forms part of the existing cycle network, connecting Skewen with Briton Ferry, utilising a section of the M4 to the south.

The B4290 currently also provides the main public transport network for the site, with a number of bus services. There are bus stops located to the rear of the David Lloyd sports centre and to the east of Coed Darcy Business Park, a short walk from the site. It is expected that the redevelopment will provide opportunity to bring Bus connectivity further into the site, serving the new occupants.

There are a few other possible connection points into the site, which can be used mainly for active travel pedestrian and cycle routes. To the south, there is the existing Tank Farm Road, which is used as access to Contractors Yard, an area of light industrial units. To the south of Contractors Yard there is an existing gate onto The Greenway, which could provide connection to Llandarcy Village. To the north, there is existing service access points onto Heol Crymlyn which could be utilised for pedestrian / cycle connectivity, however would be subject to securing additional Active Travel funding.



4.6 Active Travel

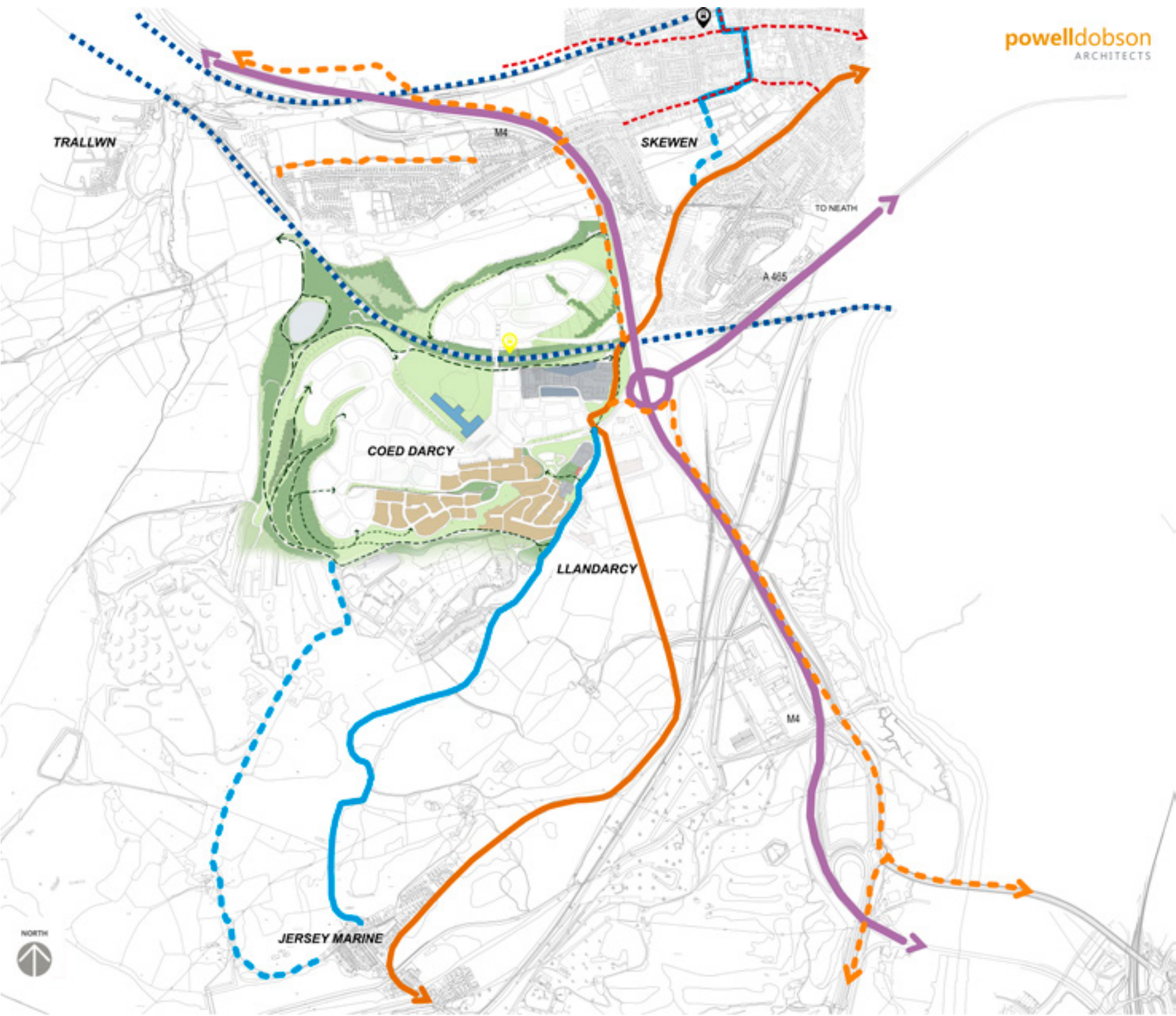
ACTIVE TRAVEL

The Active Travel Act (Wales) 2013 requires Welsh Councils to prepare, publish and keep under regular review an Active Travel Network Map (ATNM) which comprises:

- Existing routes – a public record of the existing routes in the County Borough the council considers suitable for Active Travel meeting Welsh Government standards; and
- Future routes – setting out the council’s aspirations for the next 15 years, identifying improvements to existing routes or additional new routes the council considers should be added to the network.

Neath Port Talbot Council ATNM is currently out for consultation with the public to seek input. This round of consultation closes on the 22nd of October (2021).

Previous and current consultation has highlighted the Coed Darcy site as an opportunity for increased Active Travel. A summary of the key active travel routes around the site can be found in the diagram opposite.



powelldobson
ARCHITECTS

4.7 Other Considerations

AIR QUALITY

An air quality assessment was carried out as part of the application documents and a summary of the key findings are as follows:

The assessment included a review of existing air quality conditions, a qualitative assessment of construction dust and dispersion modelling to estimate the impacts and potential for significant effects due to the operation of the Project.

The construction phase of the Project has the potential to generate dust and PM10 emissions, which may have a short-term adverse impact at nearby human health receptors. With appropriate mitigation measures in place however, these works should not result in a significant residual effect at these receptors. The measures should be secured within a Dust Management Plan for the site.

The local air quality assessment for the operation of the Project was carried out using detailed dispersion modelling. Annual mean NO₂, PM10 and PM2.5 concentrations were estimated at sensitive receptor locations in the vicinity of roads likely to be affected by changes in road traffic movements. Estimated concentrations of all pollutants were shown to be below relevant AQS objectives at all receptors (including receptors to be constructed as part of the Project), in all scenarios. Impacts on NO₂, PM10 and PM2.5 concentrations as a result of the operation of the Project were modelled to be negligible at all modelled receptors.

NOISE

A noise assessment was carried out as part of the application documents and a summary of the key findings are as follows:

Appropriate noise assessments have been undertaken in accordance with government guidance and current best practice to assess the suitability of the proposed development on the site for a mixed-use development.

Existing ambient noise levels predicted on a large proportion of the development site could achieve the daytime and night-time BS 8233 internal design criteria with windows open. Areas of higher ambient noise (such as nearer the M4 Motorway) would still be able to achieve the daytime and night-time internal design criteria with windows closed (using standard thermal double glazing and a standard trickle vent).

The BS 8233 design criteria for external noise is likely to be achieved across the vast majority of the site. A small area is expected to exceed the BS 8233 upper design criteria for external noise, however, further noise mitigation is possible when considering the layout of buildings within the plot which should ensure the design criteria is achieved.

No existing sources of industrial or commercial sound were observed to be adversely affecting the development site. Any new commercial or industrial sources, including any fixed building services plant, should be designed to comply with BS 4142 rating noise limits during the detailed design stage.

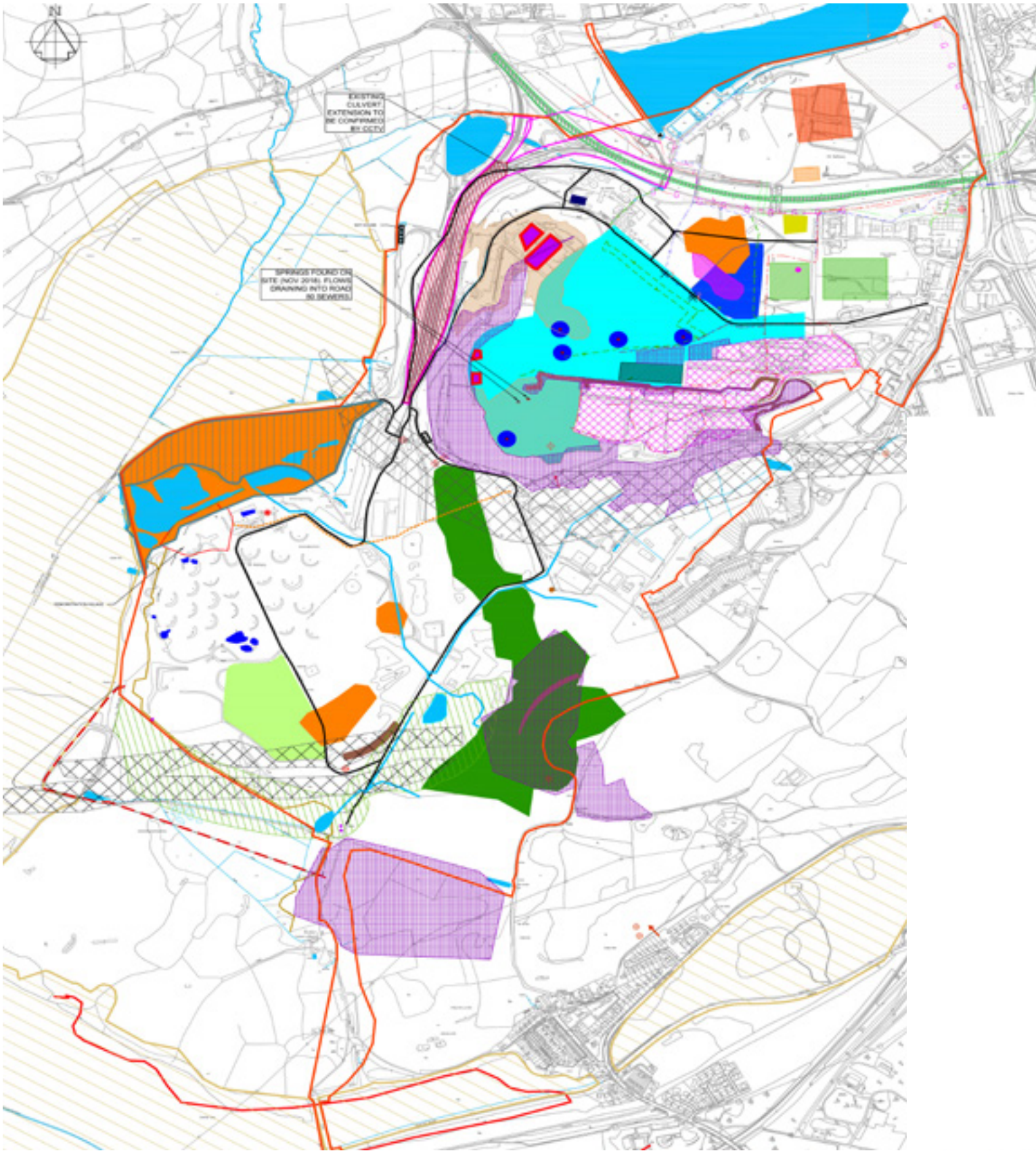
GROUND CONDITIONS / CONTAMINATION

The site has a legacy of impact resultant from its previous use as an oil refinery. These impacts include:

- A modified topographic profile which created a series of plateaux on which refinery plant was located. This modified profile has created some notable topographic features such as exposed rock faces.
- Evidence of structural remnants. Although much was removed during earlier phases of reclamation many structural remnants remain which include foundation bases, retaining walls, historic drainage and process pipework.
- Residual contamination. The site is affected by varying degrees of contamination resultant from refinery operations, notably the release of petroleum hydrocarbons and organic chemicals. A remediation programme from 2008 resulted in the removal of many areas of gross contamination. This included the removal of free phase oil and the reclamation of the lagoons at the site margins which form part of the existing active drainage system. Recent investigations have broadly mapped areas of contamination including impacts by hydrocarbons, heavy metals and localised asbestos.

The next phase of reclamation will include assessment the proposed topographic form and the residual contamination to determine appropriate mitigation strategies to ensure risk to future site occupants and the wider environment are manageable in the long term.

Technical Constraints Plan





5 Masterplan Framework & Placemaking Vision

5.1 Vision

The assessment of the site and its context, together with the consultation with stakeholders has helped shape an exciting vision for the site. Coed Darcy can become an innovative and sustainable new '15-minute neighbourhood' to meet the current and future needs of Neath and the wider Swansea Bay region.

The redevelopment of Coed Darcy has the ability to create a recognisable and desirable place to live and visit and become a place with a clear identity in terms of urban design and architectural language, and a benchmark for high quality design and placemaking.

It can become an accessible and well-connected to the surrounding neighbourhoods through new and improved green infrastructure networks and safe pedestrian and cycle routes between communities.

It can form a natural 'greenway' connecting key landscape features within and around the site to provide a continuous route around Coed Darcy and out into neighbouring communities for both leisure and active travel. Along with providing better connections to the wider area, we will create a neighbourhood centre in Coed Darcy with a variety of potential facilities including shops, school and café.

We can create contemporary, sustainable, desirable homes that are designed to improve well-being through access to green spaces and nature, with layouts have the flexibility to adapt to the changing pattern of family living. This is summarised in the concept plan opposite and supported by a series of key development principles



KEY DEVELOPMENT PRINCIPLES

- **Maximising access to and management of the sites varied landscape features, both those natural - woodlands, rock escarpments and man-made as a result of the refinery works - terraced retention features and reservoirs.**
- **Using the existing 'Site Character Areas' Integrate the existing landscape, biodiversity and historic features as a framework, to contribute toward the development of a unique development from and new 'placemaking character areas'**
- **Connecting these features into the natural 'greenway' and opportunities to improve the ongoing off-site active travel routes into the surrounding communities including North into Skewen and South to Jersey Marine and Swansea beyond.**
- **Creation of a main square at the heart of the site, framed by the new school and navigating the level change formed by the existing embankment, creating an interesting piece of open space with potential for a mix of uses including a shops and a cafe/restaurant.**
- **Creation of a network or urban 'greenways', a series of formal green streets that connect the main square out to formal open space areas framing key long views and connecting the site to the natural greenway.**
- **Developing a series of buildings connected by public streets with consideration of the topography across the site to create a well connecting high quality new neighbourhood comprising approximately 2,000 sustainable, low carbon homes.**

5.2 Masterplan Structuring Elements

RETAINED ELEMENTS

Existing key landscape features within and around the site contribute to form a strong landscape setting and clear identity for the site. This includes natural features including the Crymlyn and Llandarcy Bogs, the woodland embankments, new Oak woodland planting and wildflower meadows.

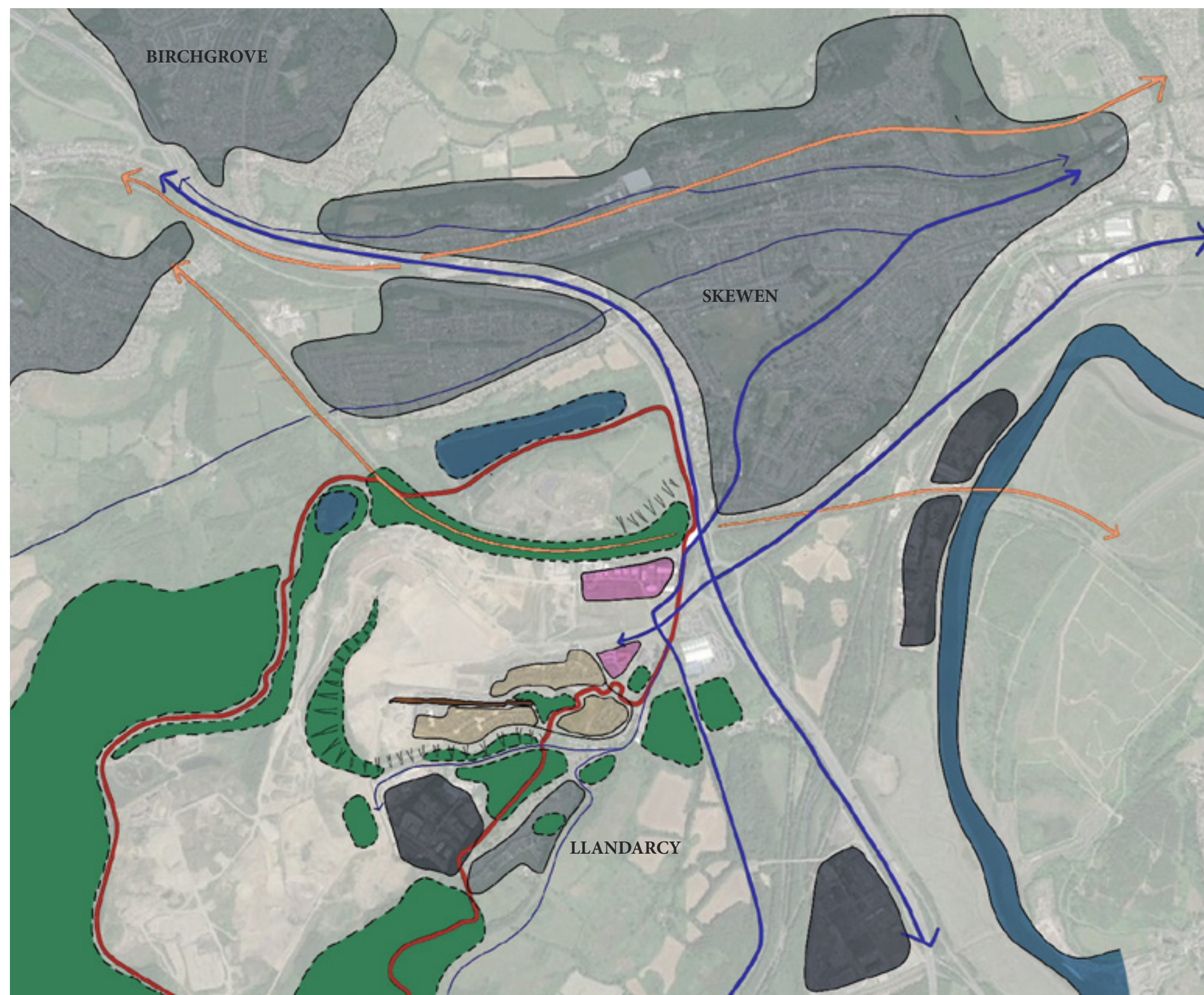
There are a number of key features formed out of the industrial heritage of the site, including exposed rock escarpments, terraced land forms, embankments to form plateaus and the reservoirs

There are also a number of fixed elements that must be retained:

1. Darcy Business Park
2. The DIME area (Area of Restricted Development relating to buildings and enclosed structures).
3. William Knox House - a locally listed building.
4. The completed and occupied homes within Phase 1 and Heritage Gate.

KEY

	Adjacent settlement
	Commercial/ Industrial Use
	Key Landscape Features
	Reservoir
	Early Phase Residential
	Existing Business Use



EARLY OPPORTUNITIES FRAMEWORK

Those existing key landscape features within and around the site contribute to form a strong landscape setting and clear identity for the site, providing great opportunities for play, active travel and leisure as well as connection into the wider area.

KEY

Adjacent settlement

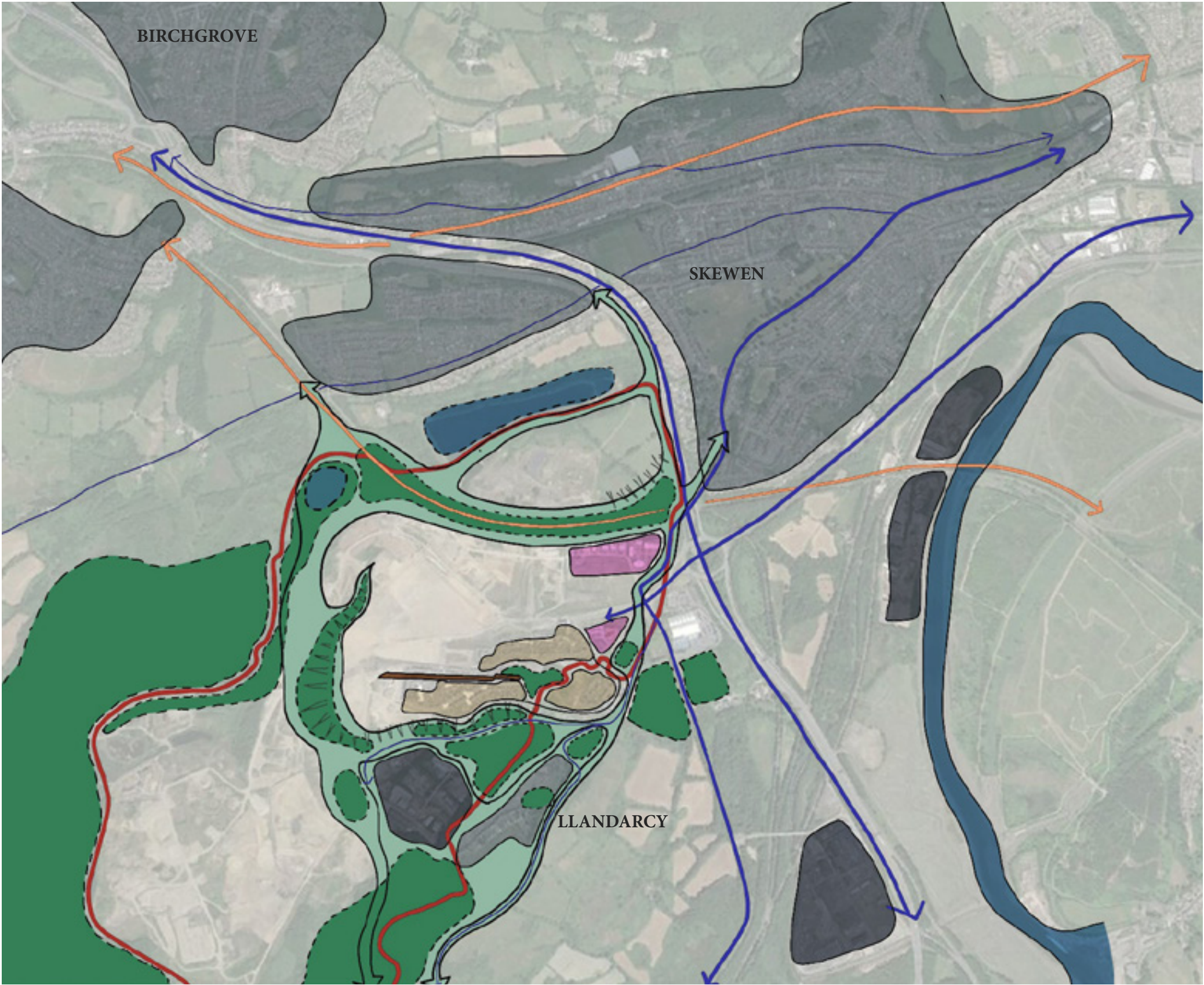
Commercial/ Industrial Use

Connected Landscape Features

Reservoir

Early Phase Residential

Existing Business Use

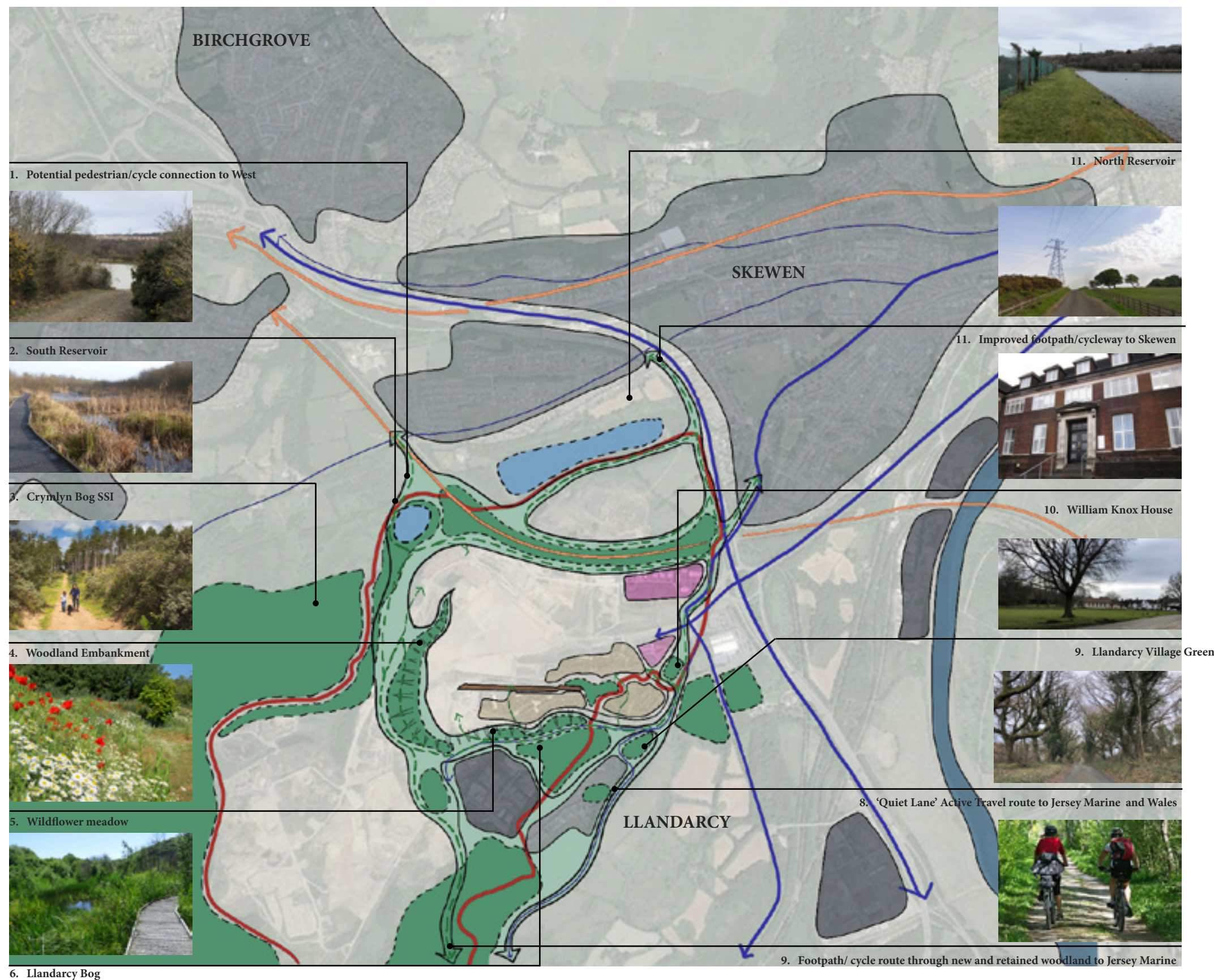


NATURAL GREENWAY

The existing natural features which surround the site provide an excellent opportunity to utilise these assets for the benefit of the new community.

The masterplan seeks to form a natural 'greenway' connecting key landscape features within and around the site to provide a continuous route around Coed Darcy and out into neighbouring communities for both leisure and active travel.

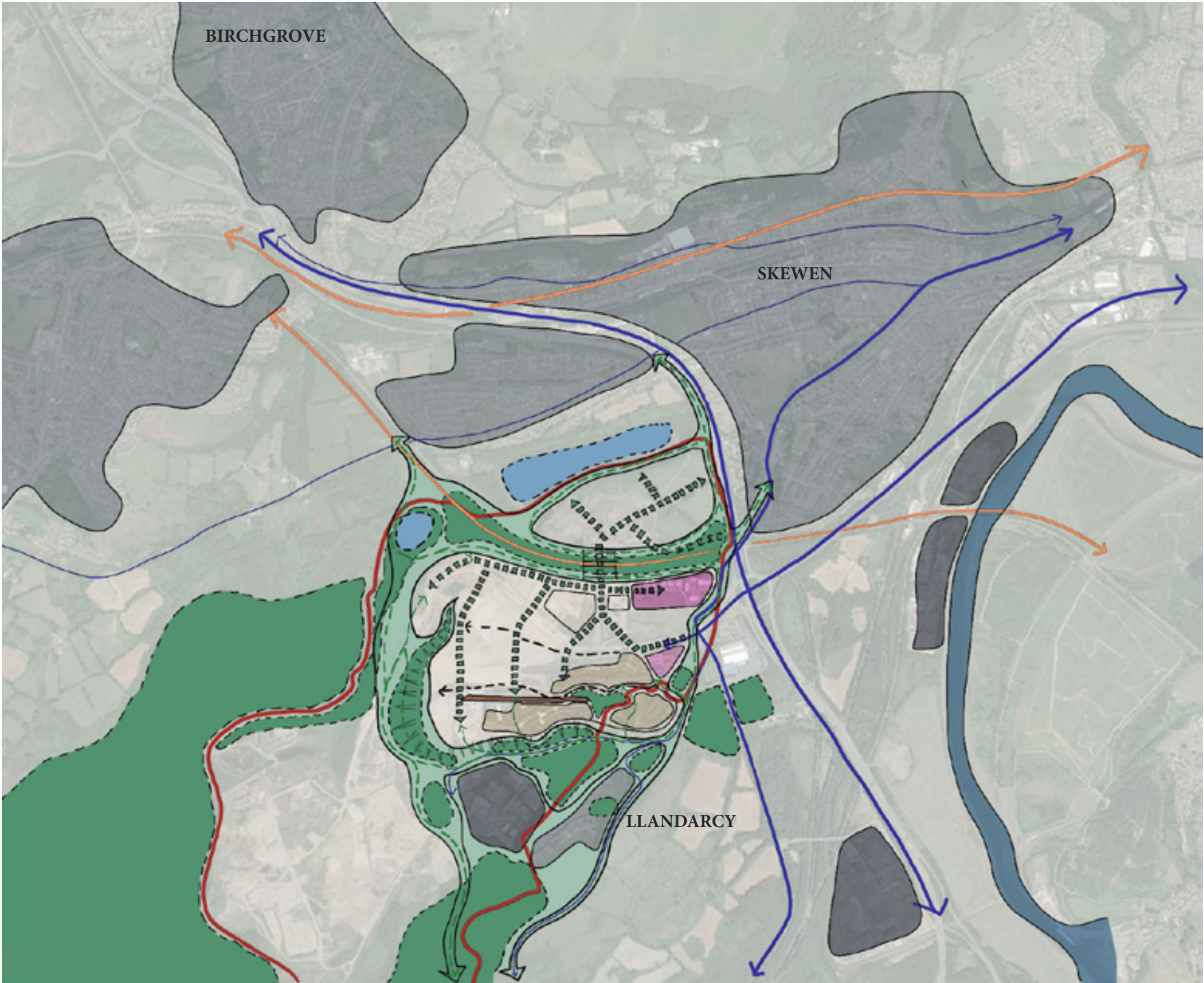
This will be achieved by enhancing and extending key landscape and vegetation features, as well as carefully allowing access through the use of managed paths and trails.



URBAN GREENWAYS

Create a network of urban 'greenways': a series of formal green streets containing SAB features suitable to topography and active travel routes across the site. These will act as key movement routes into and out of the site into neighbouring communities and connecting to the natural greenway.

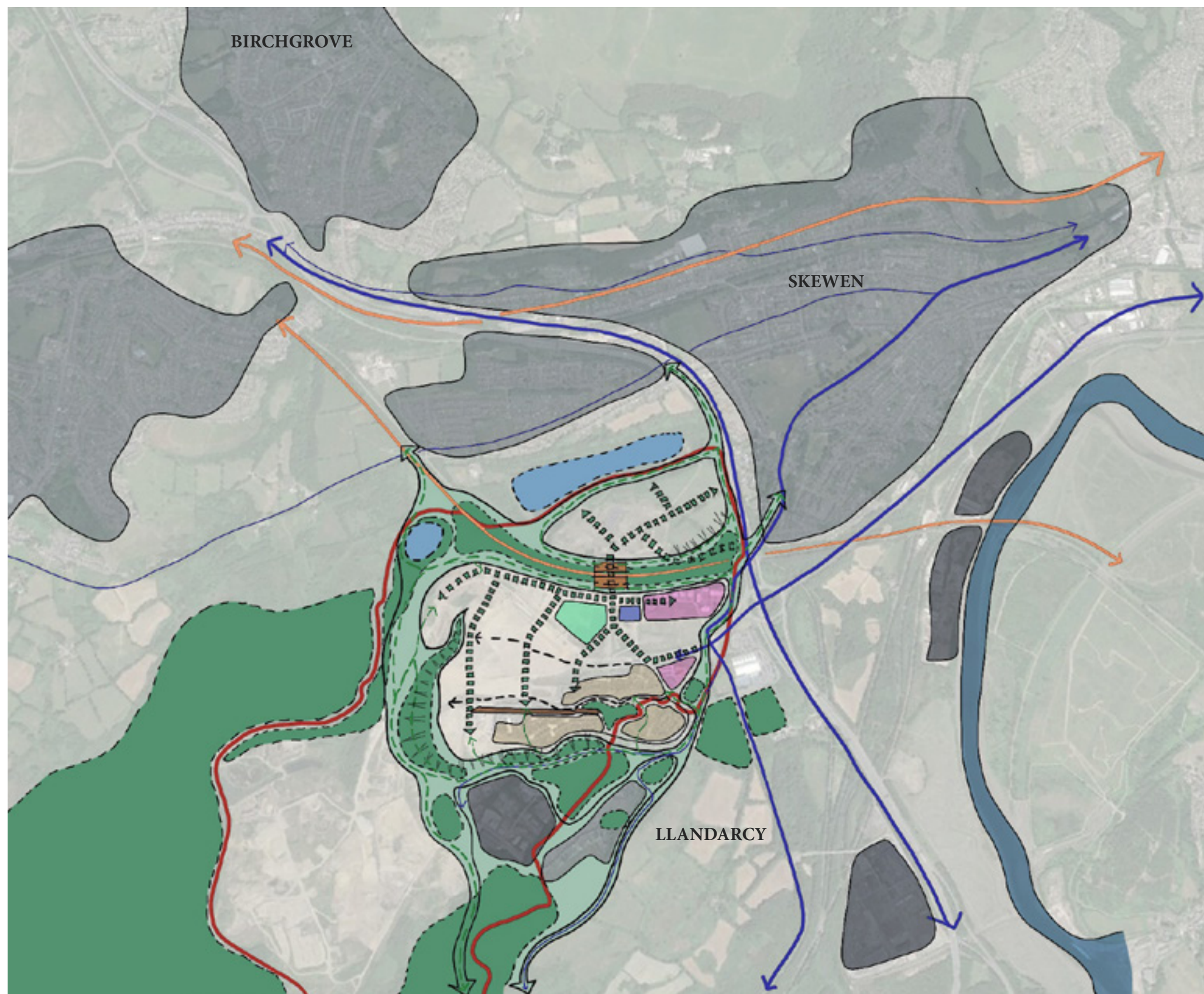
This gives a prominence to Green Infrastructure to the layout, routing the new place into its existing landscape context, whilst providing a key health and wellbeing benefit to its residents.



LOCAL FACILITIES

Coed Darcy has the opportunity to be a thriving community. The heart of the site will provide a range of services and facilities that the new community needs to thrive. The development proposes that at the centre of the site there will be provision for a local centre, providing shops and amenities. This is adjacent to the school, which will be separated by a public space for community use.

There is also allowance within the masterplan for the provision of a future railway station, adjacent to the existing business area which will be extended, although its delivery is outside the control of this application.



5.3 Existing Site Character

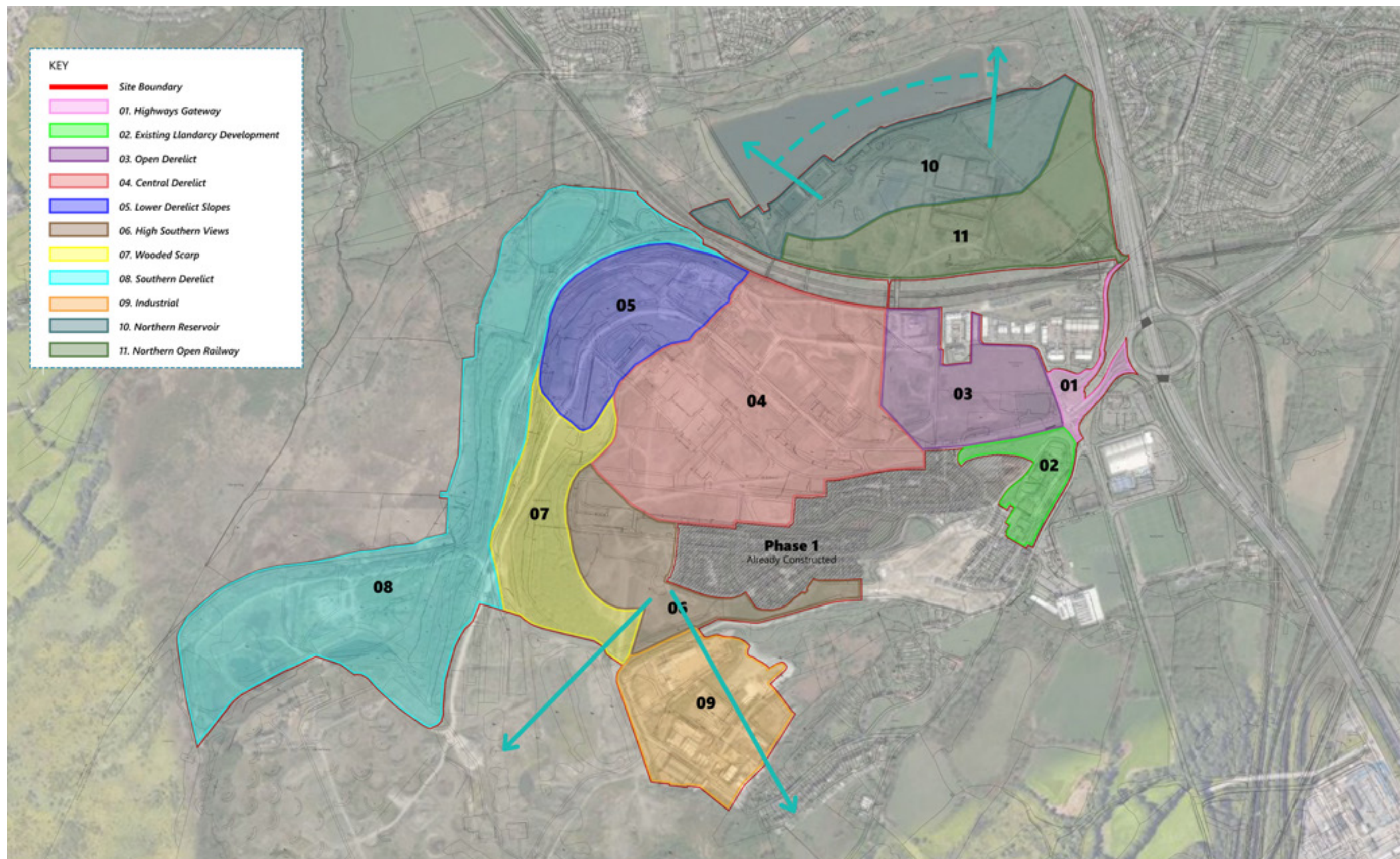
The comprehensive analysis of the site in the previous chapters has highlighted that the site has an established pattern of existing characters and specific areas. These are defined by various factors including their location, setting, topography, previous and current use. However the most important feature highlighted in the site review is its relationships to the various landscape typologies, which are numerous and important. The following text and diagram opposite highlights the key existing character areas on the site, which can be used as an opportunity to define and enhance the proposed masterplan character areas.

- 1. Highway Gateway**
Character dominated by the existing highways network adjacent to existing development, and the M4 corridor
- 2. Existing Llandarcy Development**
Character dominated by principally existing development form.
- 3. Open Derelict**
Character dominated by the open generally flat nature of the site and northern and southern existing development. No internal distinguishing features of note.
- 4. Central Core**
The principal major open site dominated by the exposed derelict nature of the site, rising to the south, with open views dominated by hillsides to the north and west. The cliff and exposed rock faces to the south are notable features.

- 5. Lower Derelict Slopes**
A lower lying area of site with views to the north western wooded boundary and landscape hillside beyond. A sense of contained enclosure with a close relationship to the woodland to the south and slopes which visually detach the area from the central site. No internal distinguishing features of note.
- 6. High Southern Views**
The highpoint of the site with distant south and south western views toward Swansea Bay and Swansea City, dominating the character.
- 7. Wooded Scarp**
A dense wooded scarp with poor access.
- 8. Southern Derelict**
The south western lower lying semi-vegetated southern derelict site.

- 9. Existing Industrial**
Existing low grade Industrial unit area.
- 10. Northern Reservoir**
Northern slopes of the northern site, dominated by its north facing with rolling topography from western to northern aspect with views towards the mix of residential and vegetated hillside beyond. No internal distinguishing features of note.
- 11. Northern Open Railway**
Southern facing with rolling topography from southern to eastern views. Railway transportation cutting to the south and M4 to the east are perceptible boundary features. Major level change towards the south east. No internal distinguishing features of note.





5.4 The 15 Minute Neighbourhood



The 15-minute neighborhood concept involves a range of principles that provide residents access to most, if not all, of their needs within a short walk or bike ride from their home.

It's based upon four pillars:

1. proximity
2. diversity
3. density
4. ubiquity.

15-minute policies can transform urban spaces into connected and self-sufficient neighborhoods, reducing car use and encouraging active travel are central to delivering the 15-minute vision.

The 15-minute neighborhood serves as an organising principle for urban design that improved quality of life for residents, by improving air quality and making neighborhoods safer, quieter, more diverse, inclusive and economically vibrant.

With respect to Coed Darcy, this means using and enhancing the connectivity to surrounding communities and facilities, whilst providing new amenity's, not present or too far away, for new and existing residents to use.

The diagram opposite and the following text describes the key 15 minute principles that have been used to inform the proposed masterplan, to deliver a sustainable and successful community.



WALKING

The diagram above shows the 15 minute walking distance from the key settlements within the area. What this demonstrates is that the entire site is of a proximity that can be easily accessed of foot from the new village center, where a diversity of facilities including shops, cafe and school are proposed. It also shows that all properties have substantial access to green infrastructure and open space, which is fundamental to the vision, to improve health and well-being. Other existing facilities incorporated into the masterplan, including Darcy Business Park and the possible future Metro station are also easily accessed

Parts of the site are also within walking distance to the surrounding settlements of Skewen and Jersey Marine, which allows access to the existing facilities they contain. Residents of these settlements will also have access to the new facilities proposed for Coed Darcy, increasing the likelihood of these to thrive.

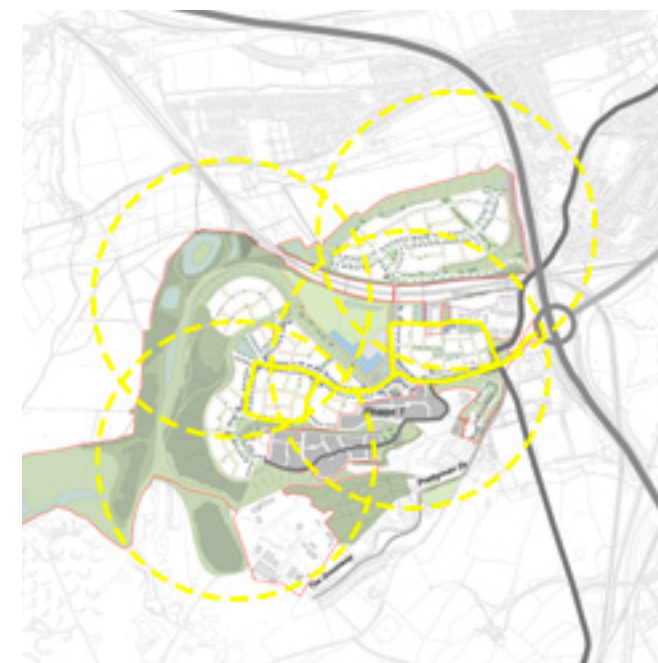


CYCLING

The diagram above shows 5 minute cycle distances, highlighting the 15 minute journey which greatly exceeds the extremities of the map.

This allows residents the ability to access facilities further afield, including the train station at Skewen, providing significant commuter benefits for residents who perhaps work in Neath or Swansea. This provides a great opportunity to reduce car impact and improve health.

The proposed active travel improvements that the site can enable are a direct response to the desire for the development to deliver a well-connected, easily accessible place that reduces car dependency.



PUBLIC TRANSPORT

As well as the connection to Skewen train station, the site also proposes other public transport improvements and opportunities which offer convenient connections.

The masterplan proposes an extension to the local bus network into the site. This diagram shows that all parts of the site can be within standard walking distance (500m) to a bus stop. This allows wider connectivity and opportunities to residents where walking or cycling may not be possible.

The allowance of land for the possibility of a future Metro station is also a key consideration of the masterplan and would offer a significant benefit to the site and surrounding developments

5.5 Key Placemaking Principles

The proposals have been developed in conjunction with the current National and Regional planning policy regarding placemaking which include:

- Planning Policy Wales – Edition 11 (PPW11)
- Design Guide SPG (January 2017).

PPW11 defines placemaking as:

“Placemaking is a holistic approach to the planning and design of development and spaces, focused on positive outcomes. It draws upon an area’s potential to create high quality development and public spaces that promote people’s prosperity, health, happiness, and well being in the widest sense. Placemaking considers the context, function and relationships between a development site and its wider surroundings. This will be true for major developments creating new places as well as small developments created within a wider place. Placemaking should not add additional cost to a development, but will require smart, multi-dimensional and innovative thinking to implement and should be considered at the earliest possible stage. Placemaking adds social, economic, environmental and cultural value to development proposals resulting in benefits which go beyond a physical development boundary and embed wider resilience into planning decisions.”

St. Modwen Developments Ltd. and Powell Dobson Architects are signatories to the Placemaking Charter Wales, developed by Welsh Government and the Design Commission for Wales in collaboration with the Placemaking Wales Partnership – a multi-disciplinary group representing professions and organisations working within the built and natural environment. The Charter includes six placemaking principles that those who sign-up agree to promote as part of their support for placemaking.

- **People and community**
The local community are involved in the development of proposals. The needs, aspirations, health and well-being of all people are considered at the outset. Proposals are shaped to help to meet these needs as well as create, integrate, protect and/or enhance a sense of community and promote equality.
- **Location**
Places grow and develop in a way that uses land efficiently, supports and enhances existing places and is well connected. The location of housing, employment and leisure and other facilities are planned to help reduce the need to travel.
- **Movement**
Walking, cycling and public transport are prioritised to provide a choice of transport modes and avoid dependence on private vehicles. Well designed and safe active travel routes connect to the wider active travel and public transport network and public transport stations and stops are positively integrated. Mix of uses Places have a range of purposes which provide opportunities for community development, local business growth and access jobs, services and facilities via walking, cycling or public transport. Development density and a mix of uses and tenures helps to support a diverse community and vibrant public realm.
- **Public realm**
Streets and public spaces are well defined, welcoming, safe and inclusive with a distinct identity. They are designed to be robust and adaptable with landscape, green infrastructure and sustainable drainage well integrated. They are well connected to existing places and promote opportunities for social interaction and a range of activities for all people.
- **Identity**
The positive, distinctive qualities of existing places are valued and respected. The unique features and opportunities of a location including heritage, culture, language, built and natural physical attributes are identified and responded to



5.6 Community Consultation

PUBLIC ENGAGEMENT

Prior to the submission of the outline planning application, the applicant undertook early public consultation to inform the emerging proposals. A summary of the extent of consultation undertaken is set out below. Drop-in sessions took place within an existing retail unit of the phase 1 development on:

- 29th July between 3 and 7pm
- 3rd August between 4 and 7pm

At the drop-in sessions, members of the St. Modwen Developments team and a member of the appointed planning consultancy team from Savills were available to discuss the proposals with residents. Boards displayed the progression of the scheme. The sessions were advertised on the St Modwen's Coed Darcy website, via the Management Company for phase 1 and a letter was posted to every resident in phase 1. It is estimated that 50+ households attended and to date, 12 feedback forms have been received.

Separate to these events, regular meetings have taken place the Working Group which is made up of residents and the Local Ward Councillor for Coedffranc West. The key messages to come out of these sessions were:

- Residents want to see the character and identity of Coed Darcy preserved through the next stages of development;
- Residents were happy that proposals are coming forward for the next stages of development; opportunities to further build the local community;
- Residents want to see a local shop; and
- Residents want to see the school come forward.

This engagement process was important in shaping the proposals and full details of the discussion. The boards which were presented can be found opposite.

PRE-APPLICATION DISCUSSIONS

Bi-weekly meetings have taken place with NPT and a number of planners and other officers since April 2021. Planning officers, policy officers, ecology officers, drainage officers, transport officers, education officers plus others have all been in attendance at various points.

DESIGN REVIEW PANEL

The initial scoping proposals were tabled with the panel of the Design Commission for Wales (DCFW) on 13th May 2021. DCFW response was positive; they endorsed opportunities to create a '15 minute' neighbourhood and they encouraged to develop a movement strategy to avoid car domination and integration of the green infrastructure through the street hierarchy.

A second DCFW review was held on the 14th Oct. 2021 to review the progress and integration of previous comments. There were no comments received on the content and structure of the masterplan, with the discussion focusing around the next stages to establish successful delivery of the vision. These comments were considered fully in the formation of the masterplan forming part of this application.





6 The Proposal

6.1 The Illustrative Masterplan

This section sets out design guidance to inform the detailed design of Illustrative Masterplan opposite. Below is a summary of the key elements of the masterplan.

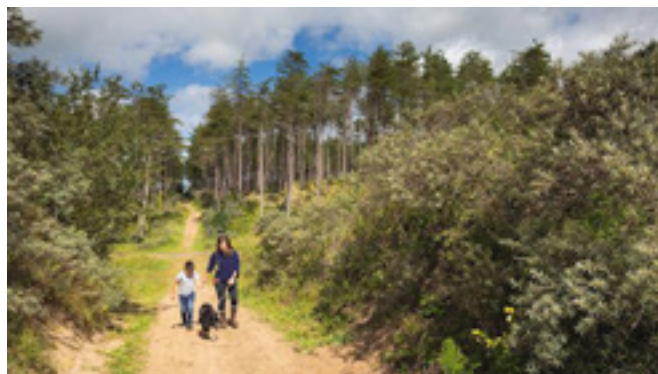
DEVELOPMENT

- 1. New through school with potential for sports facilities managed for wider community use.
- 2. Potential local centre uses (with residential use above).
- 3. Higher density housing along main spine road forming gateway into the site.
- 4. Medium density housing to form body of site.
- 5. Low density housing in more sensitive areas (to benefit amenity of adjoining residents and around landscape edges).
- 6. Landmark buildings with flexibly designed ground floor for potential commercial use dependent on demand and residential use above.
- 7. Potential extra care / mixed use residential.
- 8. Additional Commercial units extension to Coed Darcy Business Park.
- 9. Retained bowling club.



ACCESS

- 9. Primary vehicle access via Ffordd Coed Darcy onto the B4290.
- 10. Secondary vehicle access to the Northern parcel from the B4290.
- 11. Pedestrian / Cycle footbridge over the railway line.
- 12. Tree-lined main spine road.
- 13. Network of new paths and trim trails to encourage informal recreation, including around residential edges.
- 14. Pedestrian/cycle access connection to Skewen.
- 15. Pedestrian/cycle access connection to Tank Farm Road.
- 16. Pedestrian/cycle access connection to Llandarcy.
- 17. Potential pedestrian/cycle access connection to Jersey Marine (subject to funding).
- 18. Potential pedestrian/cycle access connection to Heol Crymlyn (subject to funding).
- 19. Tree-lined secondary green street.
- 20. Off road cycle route.



LANDSCAPE

- 21. Retained / enhanced areas of woodland.
- 22. Ancient woodland retained.
- 23. New areas of woodland creating continuous buffer.
- 24. Existing hedgrow retained / enhanced.
- 25. Landscaped bund.
- 26. Attenuation basin surrounded by new and retained planting.
- 27. Community civic space at the centre of the development containing retaining 'Amphitheatre' feature.
- 28. Incidental public open space responding to Neighbourhood needs.
- 29. Retained prominent rockface.
- 30. Terraced plateaux with the opportunity for mini ecology areas for biodiversity and educational benefit.
- 31. Natural play opportunities within wider landscape.
- 32. New planting and retained hedgerow.
- 33. Accessible central park alongside sports pitches.



ECOLOGY

- 34. Green Infrastructure design lead by delivering ecological connectivity, including across the wider Coed Darcy site and wider landscape.
- 35. Extensive western green buffer to function as dispersal corridor for faunal species.
- 36. Creation of dedicated ecology areas with no public access.
- 37. Open space to deliver extensive early successional habitat with floristically rich dry grasslands.
- 38. Significant topographical diversity to be designed into semi-natural greenspace to maximise micro-habitat diversity.
- 39. Network of wetland habitats to provide optimal amphibian habitat.
- 40. Integrated ecological features within main development footprint to include living roof habitat, nesting and roosting boxes.



Illustrative Masterplan

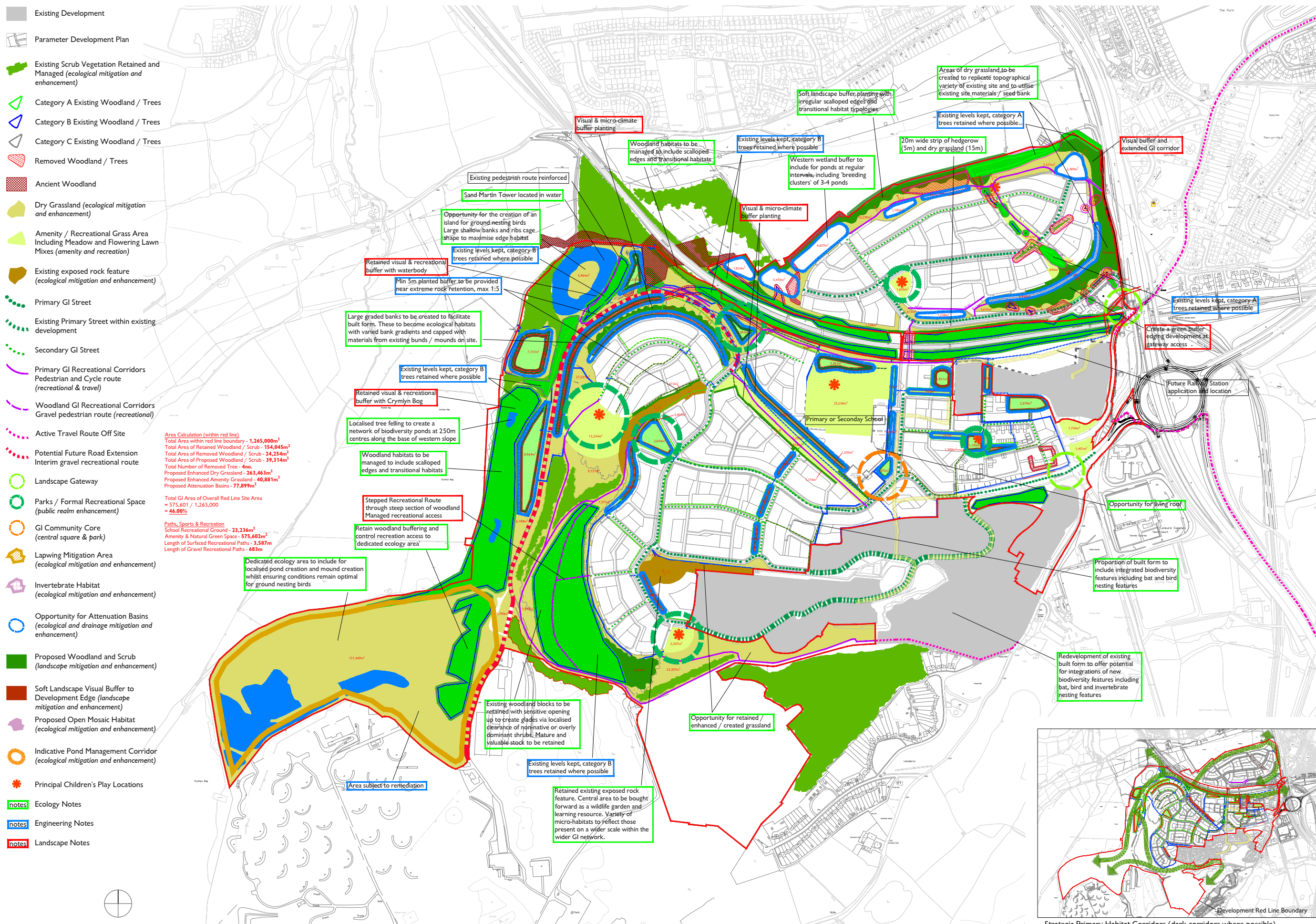


6.2 Landscape & Green Infrastructure

Throughout the design development process Green Infrastructure (GI) Constraints and Opportunities, including coordinated Landscape, Ecology, Drainage and Arboricultural issues, have informed the developing masterplan at each stage of its development. This GI led approach has culminated in the GI Masterplan for the site, and GI Statement (complaint with PPW 12 Ch. 6), which illustrates record the resulting multi-functional GI mitigation and enhancements. Some key headlines below.

1. Minimising the need to remove existing trees, scrub and woodland, with particular emphasis on class 'A' & 'B' trees, Ancient Woodland and habitat corridors, and achieve a minimum 3:1 ratio of mitigation where these elements need to be impacted.
2. Retain the most valuable habitat areas and protect them from future pressures
3. A distinct area of site, to the south west, has been identified from Ground Nesting Bird habitat enhancement with controllable recreational access
4. Principal 'Green Corridors' for habitat linkage and species distribution have been identified outside and edging development parcels with the opportunity for direct garden and structure connections for hedgehogs and common bird and bat species
5. The major woodland resource is retained and available for enhancement through management, to secure and enhance its biodiversity and recreational value
6. A network of recreational routes, connecting the development with the principal landscape resource and off-site routes has been identified
7. The attenuation strategy has been developed to integrate with the development, POS, landscape and ecological aims, benefiting the community
8. A neighbourhood based hierarchy of Green Streets and POS, linked to the wider GI structure, have been developed to be integral with the masterplan
9. The creation of linked ponds and enhanced island features to an existing water body will enhance habitat for targeted species and interpretive value
10. The Micro-climate context of development parcels has been considered, to provide shelter belts, attenuation and a degree of visible and accessible landscape context, linked with Reserved Matters landscape structure of trees, hedges and swales, to provide improved micro-climate and direct connection with nature
11. Play is focused on 'natural play', with the opportunity for some formal play in POS, with the ability to integrate this with the wider GI resource and new recreation path network.



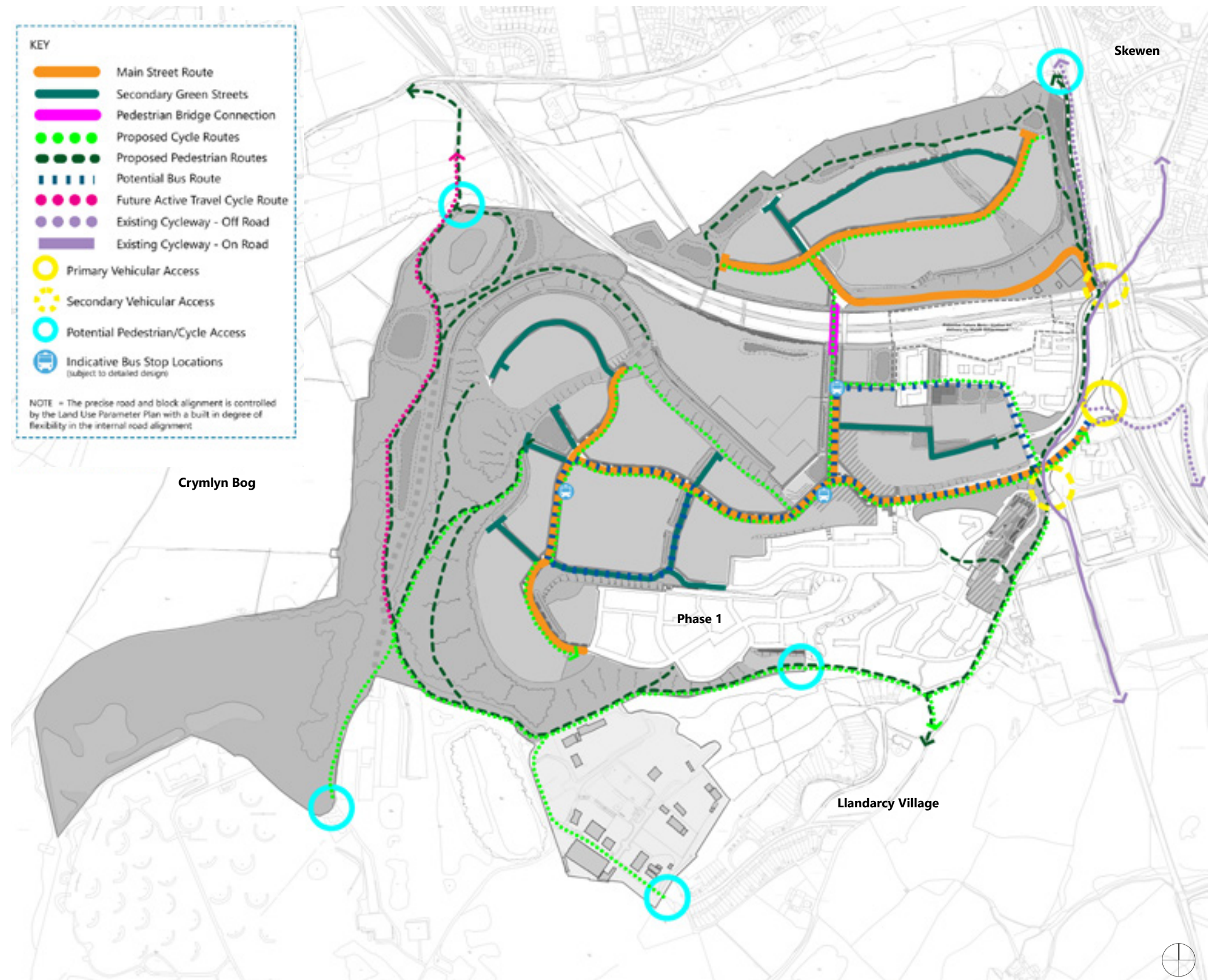


6.3 Street Hierarchy

A clear and legible street hierarchy is critical in developing a sustainable walkable neighbourhood with good connectivity for both active travel and leisure.

The key characteristics of the streetscape will also support distinctiveness legibility and underpin the character of the different parts of the neighbourhood. Each street type is considered in terms the following key design parameters:

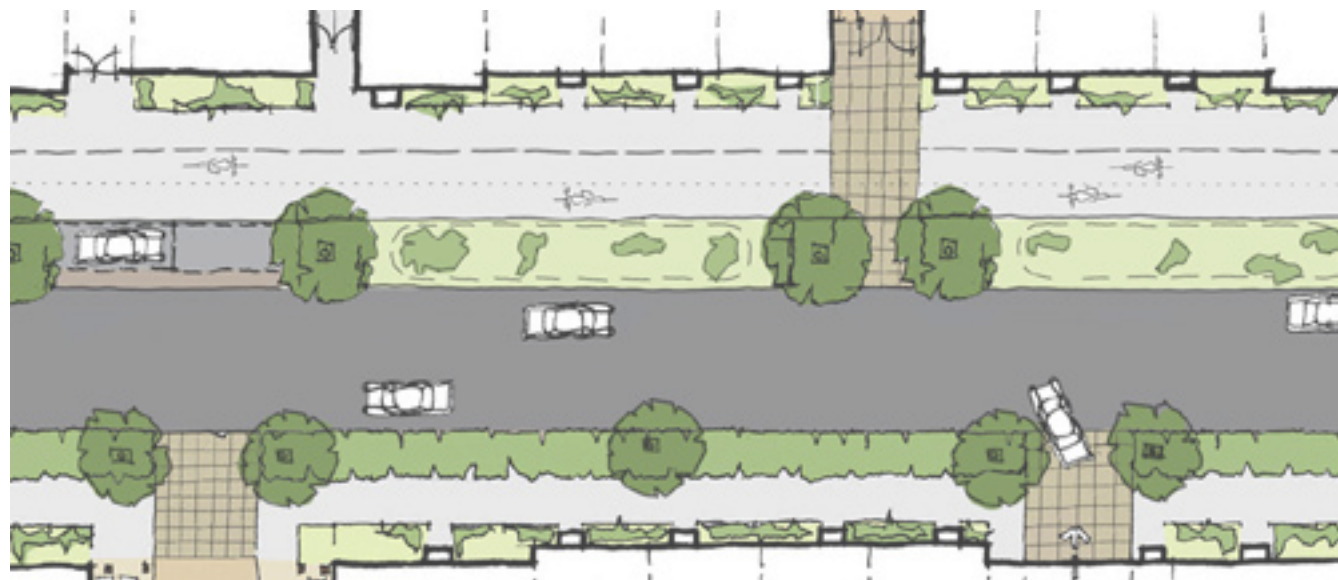
- The width and finish of the movement corridor
- Number and location of street trees
- The formality of building line
- Grouping of buildings to create Architectural Rhythm
- Response to topography
- Relationship to the landscaped character at the edges of the site
- Parking typologies
- Frontage boundary treatments
- Architectural language and materials



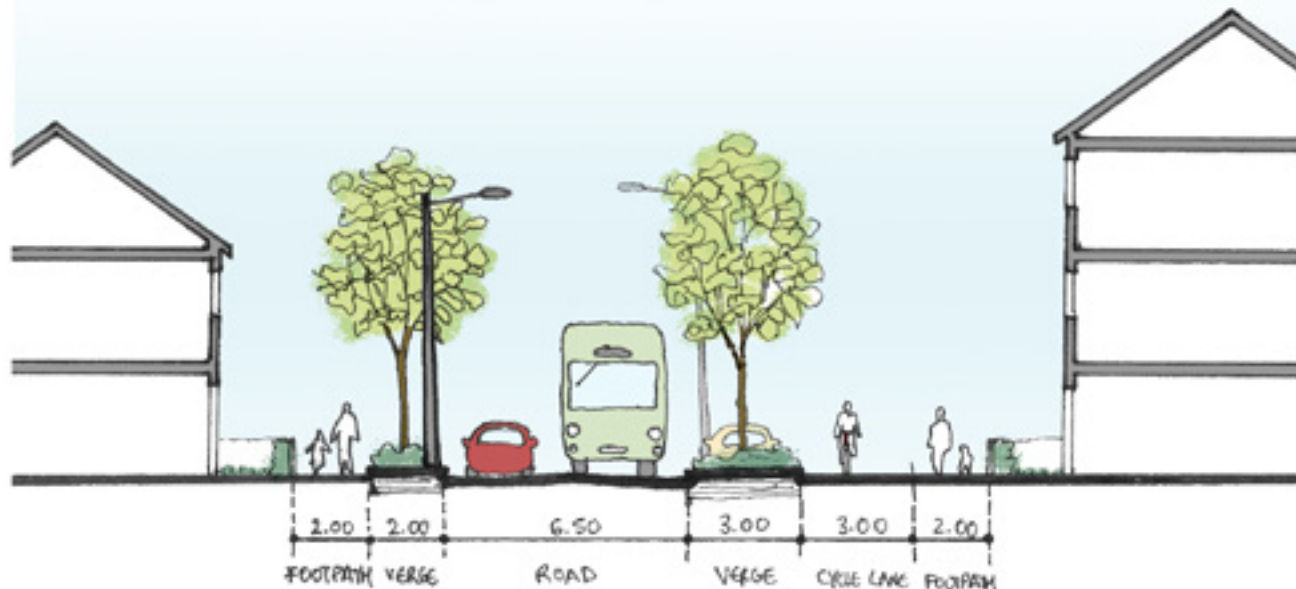
MAIN STREET

- Potential for increased scale development in accordance with the parameters plans.
- Carriageway width of 6.5m to accommodate bus route with minimum 2m footways on both sides and 2-3m footway /cycleway to one side where applicable.
- Potential to reduce carriageway to 5.5m where bus not required.
- Defined landscaped verge to at least 1 side where not adjacent to retained landscape feature or area or area of public open space.
- Formal boundary treatments including low walls, railings and timber post and rail
- Parking for dwellings to be on plot, visitor parking only on street

Illustrative Plan



Section



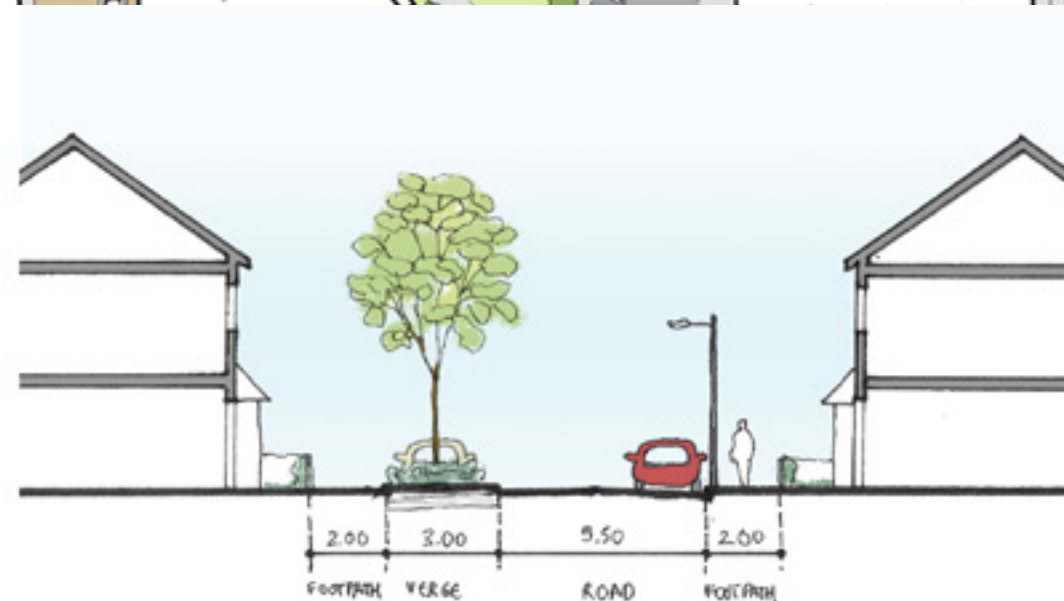
SECONDARY GREEN STREET

- Varied scale development depending on character area and in accordance with the parameters plans
- General carriageway width of 4.8m -5.5 with 1- 2m safe zone to either side
- Increased carriageway width of 6.5 with 1- 2m safe zone to either side to accommodate Bus Route where applicable.
- Shared surface street principles, with priority to pedestrians
- Defined landscaped verge to at least 1 side where not adjacent to retained landscape feature or area or area of public open space.
- Integration of landscape into the street to help define place and movement
- A combination of on plot and on street Parking
- Formal boundary treatments formed either by landscaping or low post and rail boundaries.

Illustrative Plan



Section



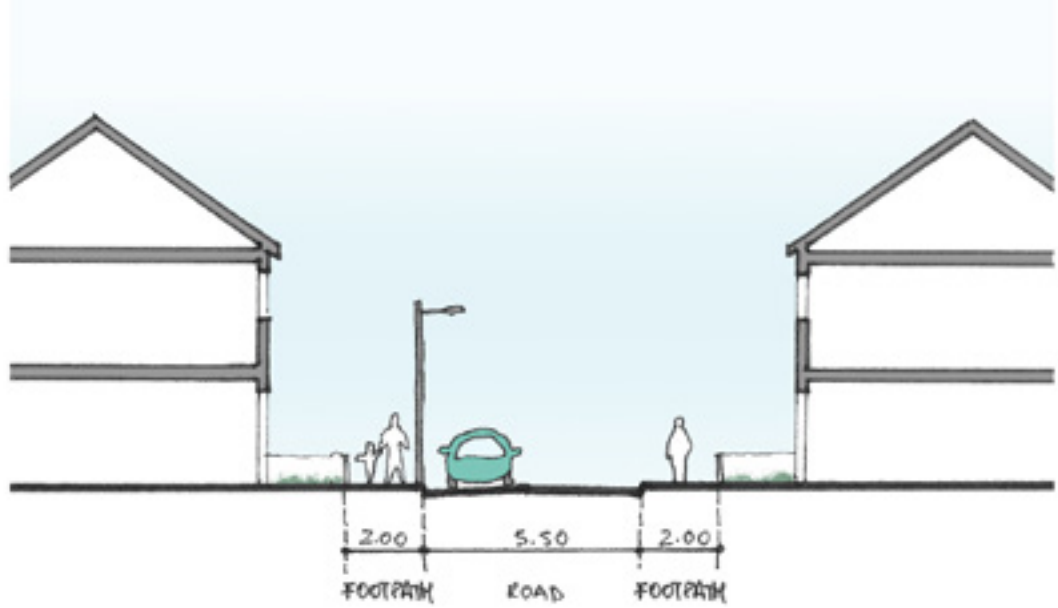
SECONDARY URBAN STREET

- Varied scale development depending on character area and in accordance with the parameters plans
- Carriageway width of 4.8m -5.5 with 1- 2m safe zone to either side
- Shared surface street principles, with priority to pedestrians
- Integration of landscape into the street to help define place and movement
- A combination of on plot and on street Parking
- Formal boundary treatments formed either by landscaping or low post and rail boundaries

Illustrative Plan



Section



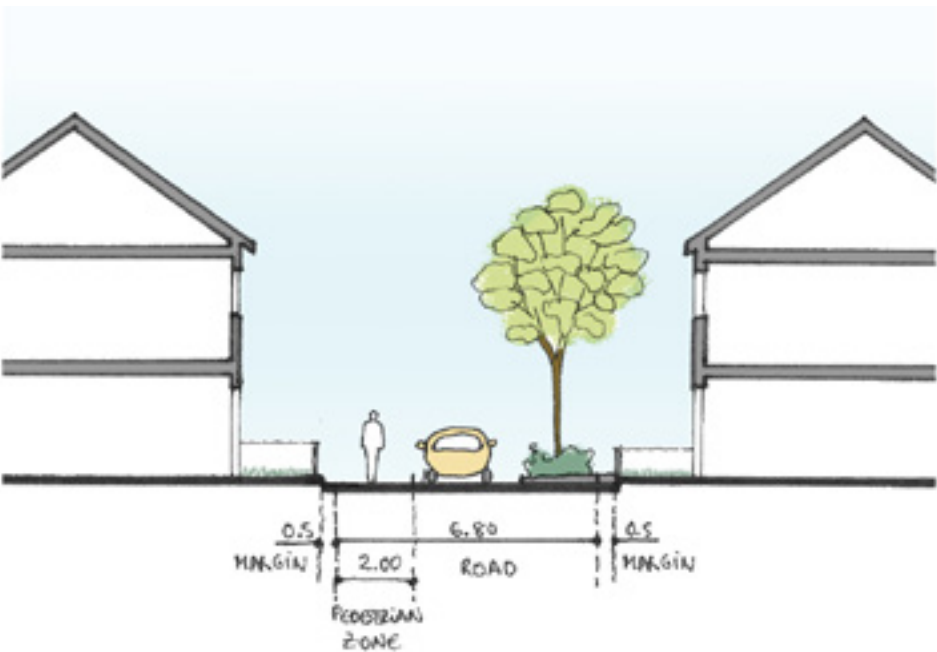
MEWS LANE

- Varied scale development depending on character area and in accordance with the parameters plans
- Carriageway width of up to 4.8m with 2m safe zone to Mews
- localised narrowing widening as necessary to vary road alignment and allow landscaped areas.
- Shared surface street principles, with priority to pedestrians
- Integration of landscape into the street to help define place and movement
- A combination of on plot and on street Parking
- Informal boundary treatments formed either by landscaping or low post and rail boundaries.

Illustrative Plan



Section



6.4 Development Character

The main site is characterised by 4 principle character areas. These are broadly traditional in terms of their architectural language, material palette and detailing, informed by the wider vernacular of the surrounding towns and villages:

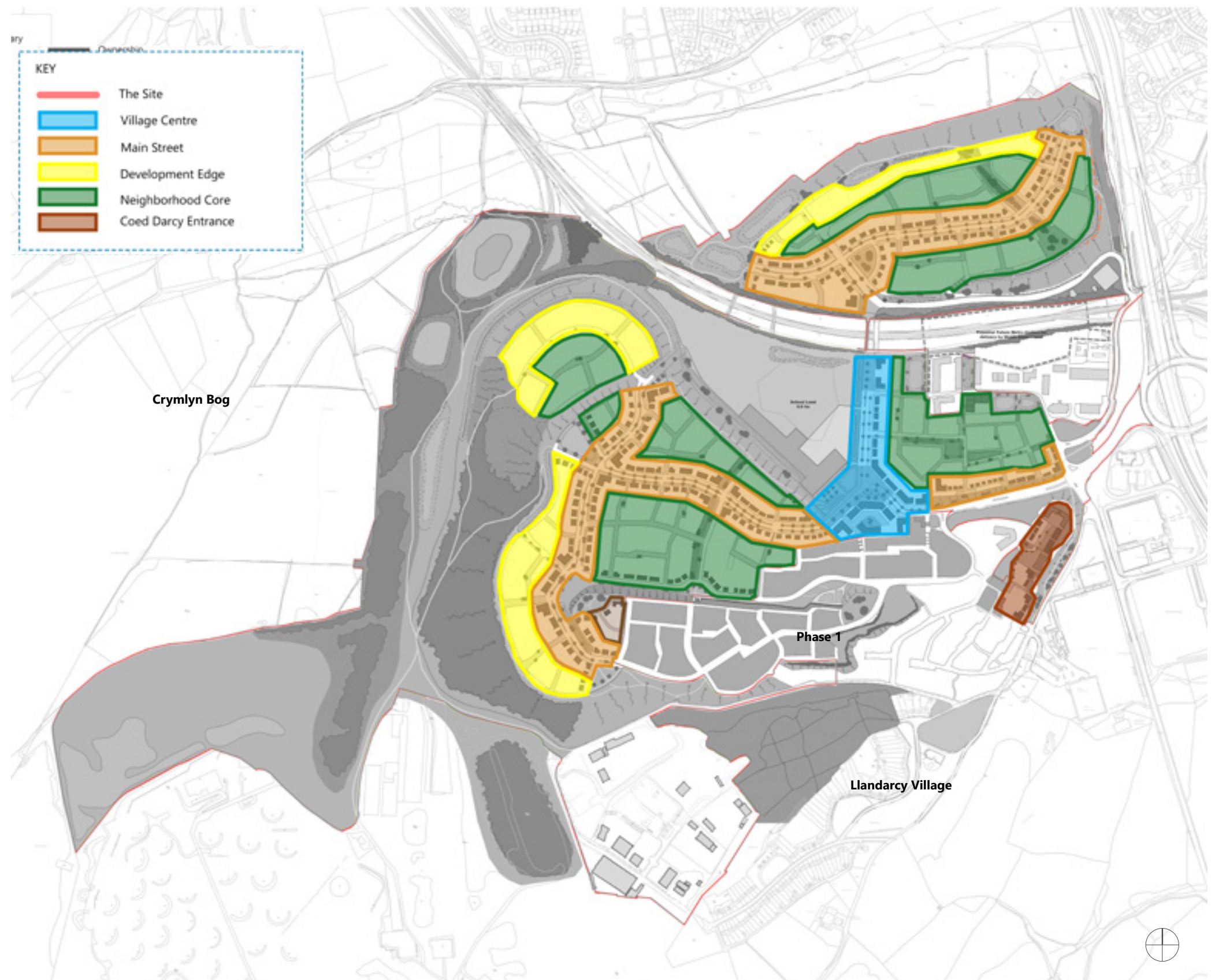
1. Village Centre
2. Main Street
3. Neighbourhood Core
4. Development Edge

Each character area is further defined through the street hierarchy with the opportunity for additional refinements in architectural language and detailing:

- a. Secondary Green Street
- b. Secondary Urban Street
- c. Mews Street
- d. Private drive

A fifth character area is defined opposite. The Coed Darcy Entrance character is slightly detached from the main site, however forms an important frontage to the entrance to the site. Located within this is the locally listed William Knox house, which will define the architectural appearance and materials.

The following pages set out the key principles in terms of built form and urban grain for each area. Details of material palette and Architectural language will be set out in a second part of the DAS which is to be developed and informed by a series of community engagement events with residents from Phase 1 as well as the Local Authority planning department.



6.5 Site Character

As set out in section 5.3, the site benefits from a range of existing characters. The following section demonstrates how these areas have influenced and been retained within the masterplan and informed the proposed character of the site.

It is these existing characters, layered with the Development Character zones which will give the site its overall character. Each Development character will look and feel different in the various Site Character areas, as they will be defined by their setting incorporating the different topographical and landscape opportunities.

Both Character plans should be read in conjunction with the GI parameter plan, which has been developed to enhance the site Characteristics where appropriate, adding a further layer of detail and variation.

The Response to the existing site character areas is as follows:

1. Gateway

A largely unaltered highways dominated gateway to the site.

2. Existing Llandarcy Development

Character dominated by principally existing development form and its relationship with William Knox House.

3. Urban Centre

Character dominated by the open generally flat nature of the site and northern and southern existing development. An opportunity to implement a new internally focus development form with a series of small green POS as development focal points and development forms to respond to highways access, school and village core adjacent character areas.

4A. Central Education Site

The creation of a new educational site central to the develop with playing field and open space capitalise on open views to hillsides to the north and west. Good pedestrian and cycle link opportunities to the northern, western, southern and eastern development parcels. A green cycle corridor to the south would link to the wider Green Recreational routes.

4B. Central Village Core

A pivotal character area as a central 'village centre' linking access, school and existing southern residential area, capitalising on existing site level change with local views focused on the village square and school site as a social focus of the community.

4C. Central Residential Site

The existing derelict site provides the opportunity to create a new character dominated by the development form and green street structure linking to adjacent development areas and with a focus on the cliff and rock faces to the south, with interpretive opportunities to explain the history and ecology of the site. A one sided green street will enhance this focus and provide a recreational corridor link to the wider Green Infrastructure asset of the site.

4D. North Central Residential Site

A distinct small parcel of development bounded by green cycle corridor to the south, school site to the east, railway to the north and links to the wider GI recreational asset to the west. A more contained and intimate development parcel

5. Western Enclave

A district parcel of development capitalising on the sense of contained enclosure with a close relationship to the woodland to the south and slopes which visually detach the area from the Central site. A new landscape structure to the east and north west will improve the spatial containment of this area with recreational green space focused on the southern links developed to the wider site and new access routes through the wooded scarp.

6. High Southern Views

A lower density development area responding to the unique highpoint character of the site, pivoting between rock faces and the end of the cliff face green corridor, the containment of the wooded scarp and with distant south and south western views toward Swansea Bay and Swansea City, dominating the character. Expanded Public Open Space allows recreational access to enjoy the panoramic views and links to wider green recreational assets.

7. Wooded Scarp

A dense wooded scarp with improved management of habitat benefit and improved recreational access by formal and informal path linking adjacent character areas.

8. Landscape Edge

The south western lower lying semi-vegetated southern derelict site providing the main focus of ecological mitigation and enhancement and improved recreational access to this major open space resource.

9. Existing Industrial

Existing low grade Industrial unit area. A longer term strategy of improvement and enhancement as available redevelopment opportunities allow. The location close to the residential development provides the opportunity for more sustainable access from home to work.

10. Northern Reservoir

The development structure responds to the topography with central green street proving some unity between the northern and southern slopes character area, with side street form capitalising on northern views and access to the northern green public Open space as a key characteristic of this area. The rolling topography from western to northern aspect with views towards the mix of residential and vegetated hillside beyond will remain a strong topographic character to development and open space.

11. Northern Open Railway

Southern facing with rolling topography from southern to eastern views capitalised along the southern development edge, with local streets and green recreational routes linking to the northern Reservoir character area and green open space.



6.6 Character Areas

Village Centre

KEY VISION PRINCIPLES:

- Creation of a main square at the heart of the site, framed by the new school and navigating the level change formed by the existing embankment
- Creation of an interesting piece of open space
- Potential for a mix of uses including a shops and a cafe/restaurant supporting the principles of the “15 minute neighbourhood”.
- Integrate and enhance the existing Phase 1
- Integrate health and wellbeing into the built environment through meeting places, increased connectivity and biophilic principles.
- Consider carefully the relationship between topography and pedestrian/cycle movement across the site
- Create different character areas and Neighbourhoods that still feel part of a coherent whole.

Illustrative Plan - Village Centre



Design Principles

Applicable Street Types	Main Street Bus route
Mix of Uses	Residential Commerical A3 & Leisure Through School
Building Typology	2.5- 5 storey
Building Frontage	Strong consistent building line Active uses to ground floor Built form contains square
Landscape Character	Urban High quality hard landscaping Structural planting and large street trees
Topography	Level change across Main Square Interface with level change to existing phase 1
Public Open Space provision	Main Square, principal civic space Community pitches with school site
Heritage	Integrates and retains level change from refinery works into the design of the Main Square



Main Street

KEY VISION PRINCIPLES:

- Creation of a network or urban 'greenways' that connect the main square out to formal open space areas framing key long views and connecting the site to the natural greenway.
- Using the existing 'Site Character Areas' to integrate the existing landscape, biodiversity and historic features.
- Integrate and enhance the existing Phase 1
- Integrate health and wellbeing into the built environment through meeting places, increased connectivity and biophilic principles.
- Consider carefully the relationship between topography and pedestrian/cycle movement across the site
- Create different character areas and Neighbourhoods that still feel part of a coherent whole.
- Use the topography to create distinctive places and landmarks
- Establish a well-connected place that is inclusive & accessible to all

Illustrative Plan - Main Street



Design Principles

Applicable Street Types	Main Street Bus route subject to location Off Road Cycle Route
Mix of Uses	Residential
Building Typology	2- 4 storey Short runs of terraces and semi detached townhouses 4 storey at key locations around open spaces
Building Frontage	Strong consistent building line within building groupings Slightly undulating road alignment Max 3m front gardens
Landscape Character	Green Urban Roadside Swales and landscaped verges Large street trees at regular intervals Hedgerows to front gardens
Topography	Dependant on location. Generally level running East West Rising North to South Limit use of terraces across rising levels
Public Open Space provision	LAPS/LEAPS subject to location
Heritage	N/A



Neighbourhood Core

KEY VISION PRINCIPLES:

- Developing a series of buildings connected by public streets with consideration of the topography across the site
- Using the existing 'Site Character Areas' to integrate the existing landscape, biodiversity and historic features.
- Integrate health and wellbeing into the built environment through meeting places, increased connectivity and biophilic principles.
- Create different character areas and Neighbourhoods that still feel part of a coherent whole.
- Establish a place that is distinctive & authentic
- Create clear and attractive pedestrian and cycling routes
- Create streets designed as places for people more than for cars
- Provide different types of public spaces that work for all ages

Illustrative Plan - Neighbourhood Core



Design Principles

Applicable Street Types	Secondary Green Street Secondary Urban Street Bus route subject to location Greenway pedestrian/ cycleway routes
Mix of Uses	Residential
Building Typology	2- 3 storey Short runs of terraces semi detached and det-ached
Building Frontage	Building line more varied progressing down street hierarchy Variable road alignment Variable front garden depth
Landscape Character	Green suburban Roadside Swales and landscaped verges subject to street type street trees at irregular intervals mix of boundary conditions
Topography	Dependant on location. Generally level running East West, significant level changes North to south with stepped access routes
Public Open Space provision	LAPS/LEAPS subject to location
Heritage	N/A



Development Edge

KEY VISION PRINCIPLES:

- Maximising access to and management of the sites varied landscape features, both those natural - woodlands, rock escarpments and man-made as a result of the refinery works - terraced retention features and reservoirs
- Using the existing 'Site Character Areas' to integrate the existing landscape, biodiversity and historic features.
- Integrate health and wellbeing into the built environment through meeting places, increased connectivity and biophilic principles.
- Create different character areas and Neighbourhoods that still feel part of a coherent whole.
- Establish a place that is distinctive & authentic
- Create clear and attractive pedestrian and cycling routes
- Create streets designed as places for people more than for cars

Illustrative Plan - Development Edge



Design Principles

Applicable Street Types	Secondary Green Street Mews Lane Greenway pedestrian/ cycleway routes
Mix of Uses	Residential
Building Typology	2- 2.5 storey Semi detached and detached
Building Frontage	Building line more varied Variable road alignment Variable front garden depth
Landscape Character	Rural edge - varied boundary condition Fronting woodland, rock escarpments and wildflower meadows Swales and landscaped verges with street trees at irregular intervals mix of boundary conditions
Topography	Dependant on location. adjacent to steep embankments with far reaching views
Public Open Space provision	LAPS/LEAPS Provides access to natural greenway routes at perimeter
Heritage	N/A

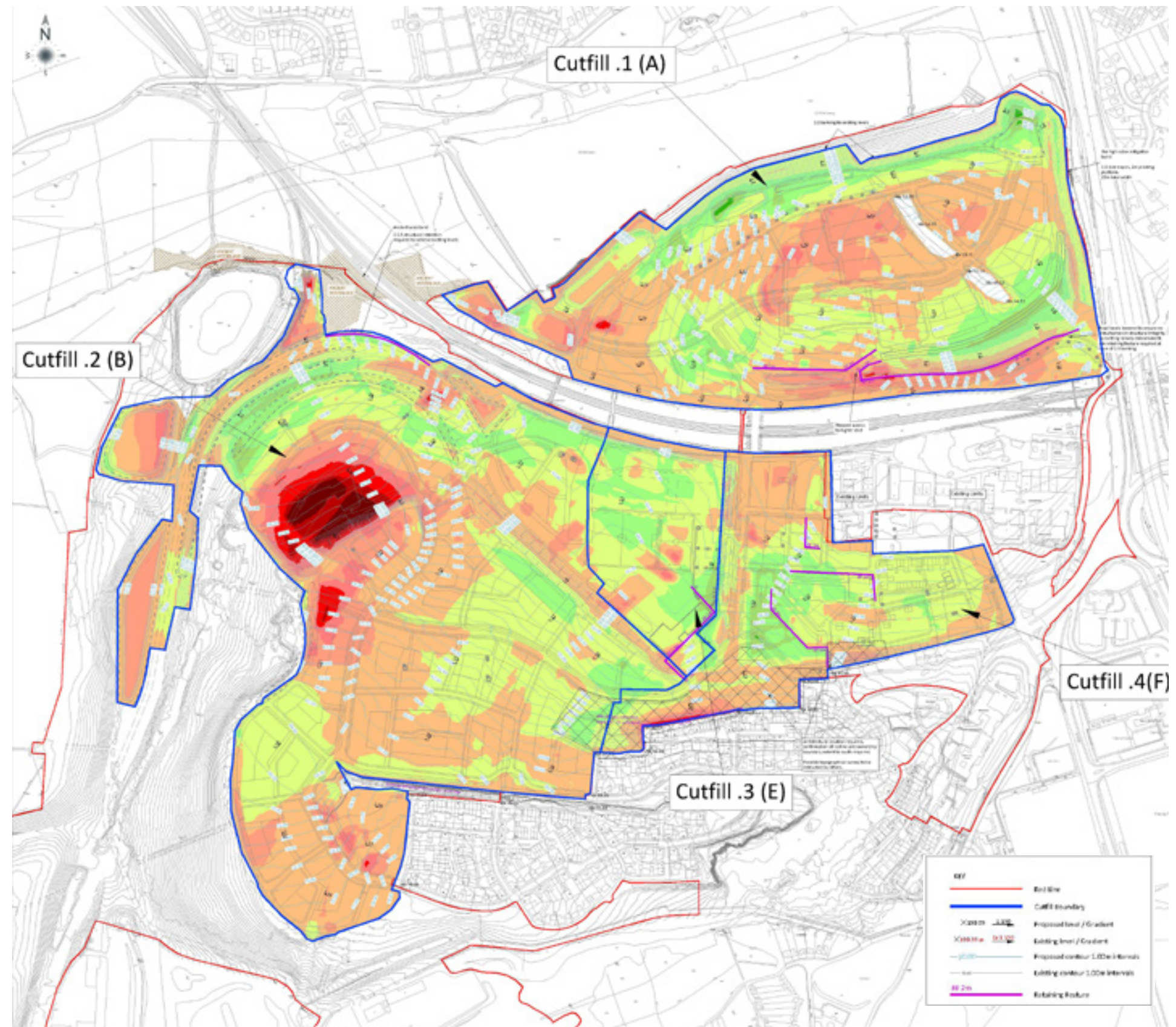


6.7 Indicative Levels / Strategic Land Form

Significant consideration has been given to the approach to the topography at Coed Darcy and what the strategic land form needs to become to enable development and support the masterplan vision. Key considerations include:

1. Interface with the existing phase 1 development, including stepped connecting pedestrian routes
2. The existing exposed Rock escarpment and retaining structures
3. The extent of cut and fill that could provide additional development area, particularly in areas where rock is close to the surface in the Western part of the site
4. The retention of key tree groups and other ecology considerations
5. The retention of the embankment and level change in the area adjacent to the school and the proposed main square which is formed as a result of the historic use of the site.
6. The need to provide pedestrian and cycle routes that support active travel aspirations at an acceptable gradient including for those residents with mobility issues.
7. The drainage strategy for SAB

Cut and Fill Table			
Band	Depth From	Depth To	Colour
1	-15.00	-10.00	Dark Red
2	-10.00	-8.00	Red
3	-8.00	-6.00	Red-Orange
4	-6.00	-4.00	Orange
5	-4.00	-2.00	Light Orange
6	-2.00	0.00	Yellow-Orange
7	0.00	2.00	Yellow
8	2.00	4.00	Light Green
9	4.00	6.00	Green
10	6.00	8.00	Dark Green



6.8 Sustainability

The new homes at Coed Darcy will follow a fabric first approach to sustainable construction, demonstrating that improvements in insulation specification, a reduction in thermal bridging and unwanted air leakage paths, together with further passive design measures will ensure that energy demand and consequent CO2 emissions are minimised. A range of potentially appropriate low carbon energy technologies are being assessed for feasibility in delivering a reduction in energy demand in line with planning policy requirements. In compliance with planning policy, the site has taken into consideration a number of wider sustainability issues, including mitigation of climate change, biodiversity, sustainable urban drainage and sustainable travel as well as providing a mix of uses on site to allow existing and new residents to live in a community based around the principles of the “15 minute neighbourhood”

Mitigating the Effects of Climate Change

The impacts of construction materials range from the depletion of natural resources to the greenhouse gas emissions and water use associated with their manufacture and installation. Within the development choices will be made in order to reduce the consumption of primary resources and use materials with fewer negative impacts on the environment, including but not limited to the following:

- Use fewer resources and less energy through designing buildings more efficiently,
- Specify and select materials and products that strike a responsible balance between social, economic and environmental factors.
- Improve environmental, economic and social sustainability of construction products by recognising and encouraging the selection of products with responsible sourcing certification.
- Wherever possible materials will be diverted from landfill through re-use, recycling, return to supplier or recycling.
- In addition to promoting the use of public transport, cycling is being encouraged through improvements to active travel and leisure cycle routes

Energy Strategy

Arup has undertaken an energy strategy using the energy hierarchy for Coed Darcy. Once the demands for the development had been determined and the team considered the improvements that could be made to building fabric, we took a two stage approach, firstly considering the technologies for relevance to the development, and then undertaking optimisation modelling using Arup's suite of whole systems energy modelling tools to determine the energy strategy.

The optimisation modelling assessed which of the shortlisted technologies gave the lowest carbon, lowest cost solution for two scenarios:

- 2025 – excluded hydrogen-based technologies, included photovoltaics (PV), air source heat pumps (ASHPs), ground source heat pumps (GSHPs), hydrogen ready gas boilers, batteries, grid connected electricity and gas, resistance heating.
- 2050 – included all technologies and a reduced grid carbon intensity to reflect a 2050 decarbonisation prediction.

As a result the energy strategy recommend for Coed Darcy is:

1. Set targets on building carbon emissions and energy demands – Set the development aspirations for energy demand and carbon emissions for each building typology. This should include carbon targets for 2025 and 2050 which align to Welsh Government and local council policy.
2. Maximise passive design measures – Maximise the impact of passive design measures such as building layout and orientation, as detailed in Appendix B.
3. Take a fabric first approach - The development should have high performing building fabric and align to 2025 standards as detailed in Table 5.
4. Maximise GSHPs – Incorporate the use of GSHPs wherever feasible, using ASHPs where this is not possible.
5. Maximise roof mounted PV – Incorporate PV on viable south facing roofs.
6. Encourage use of EVs - consider in home battery storage.

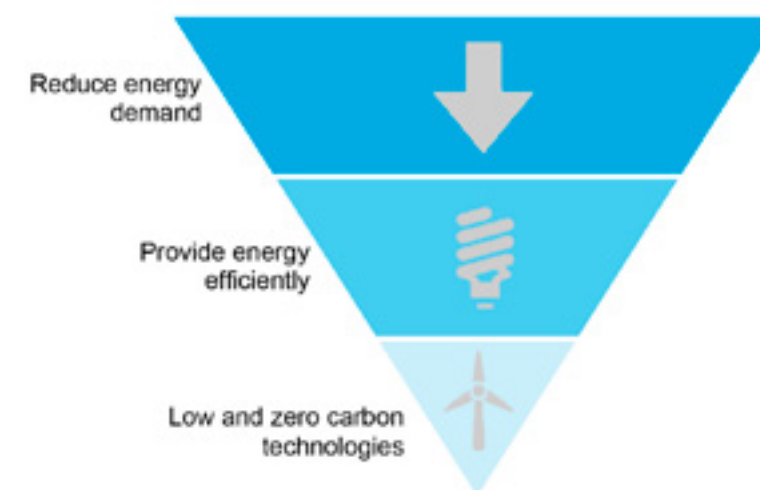


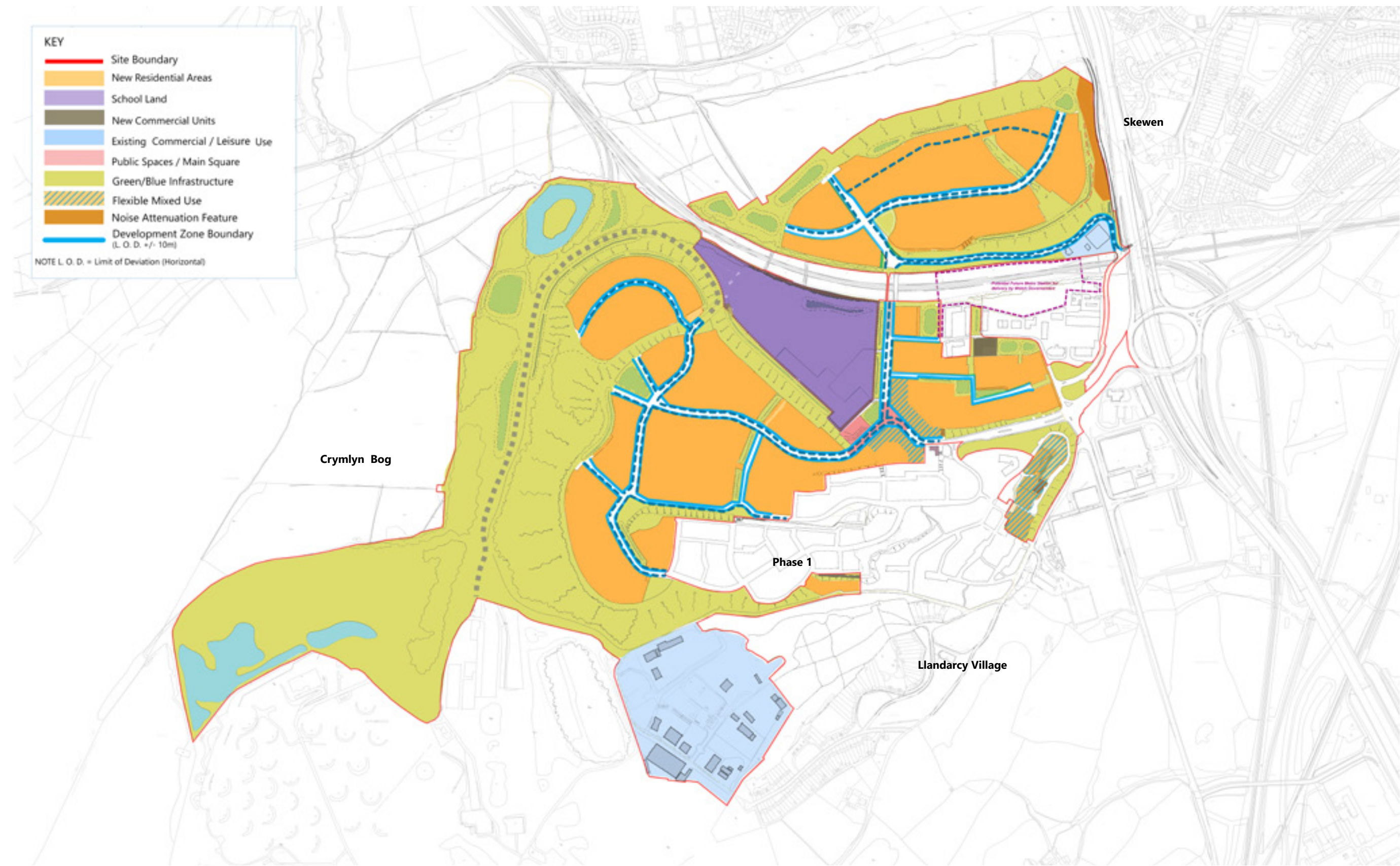
Figure 1 - Energy hierarchy
The basis of Coed Darcy's energy strategy



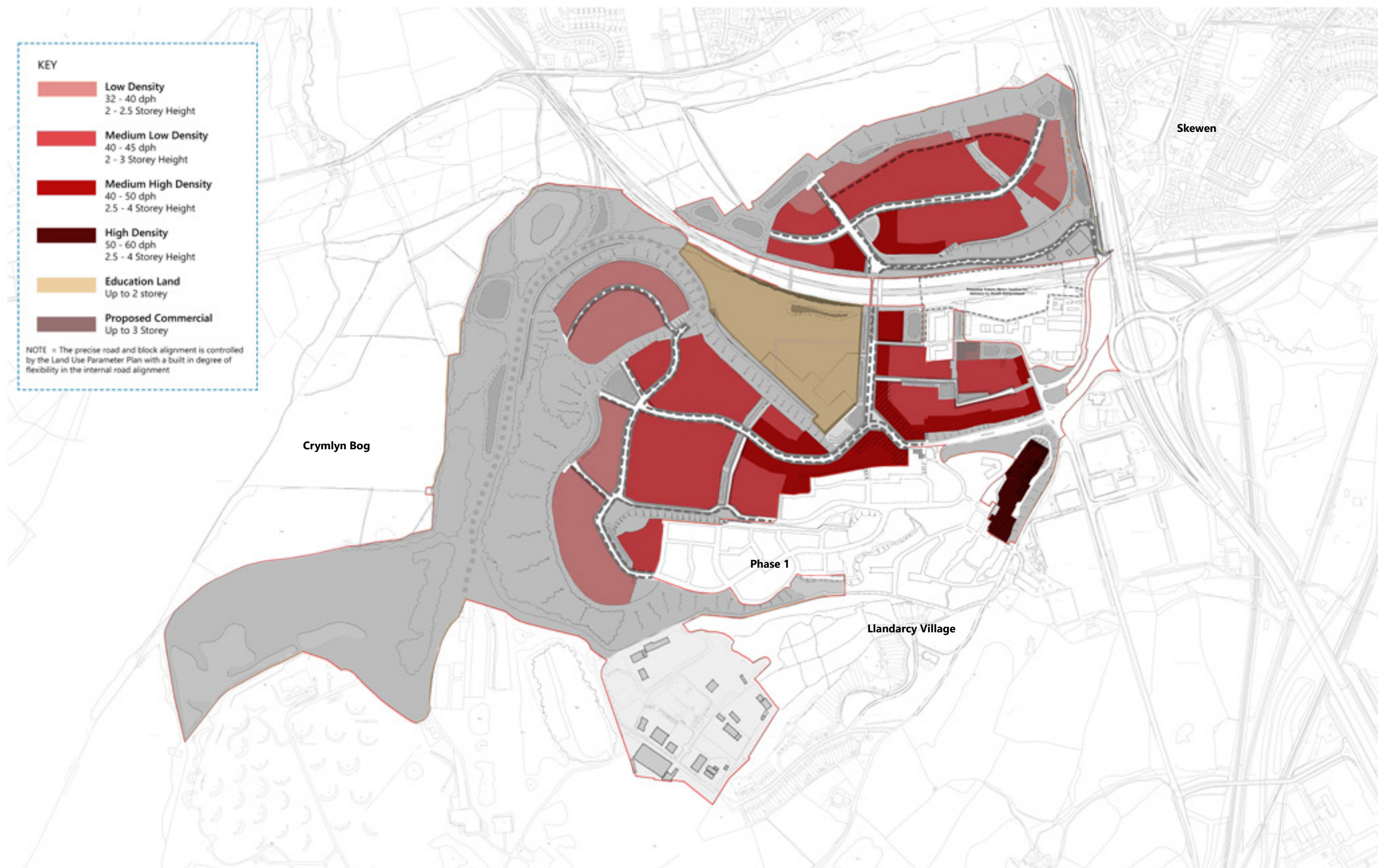


Parameter Plans

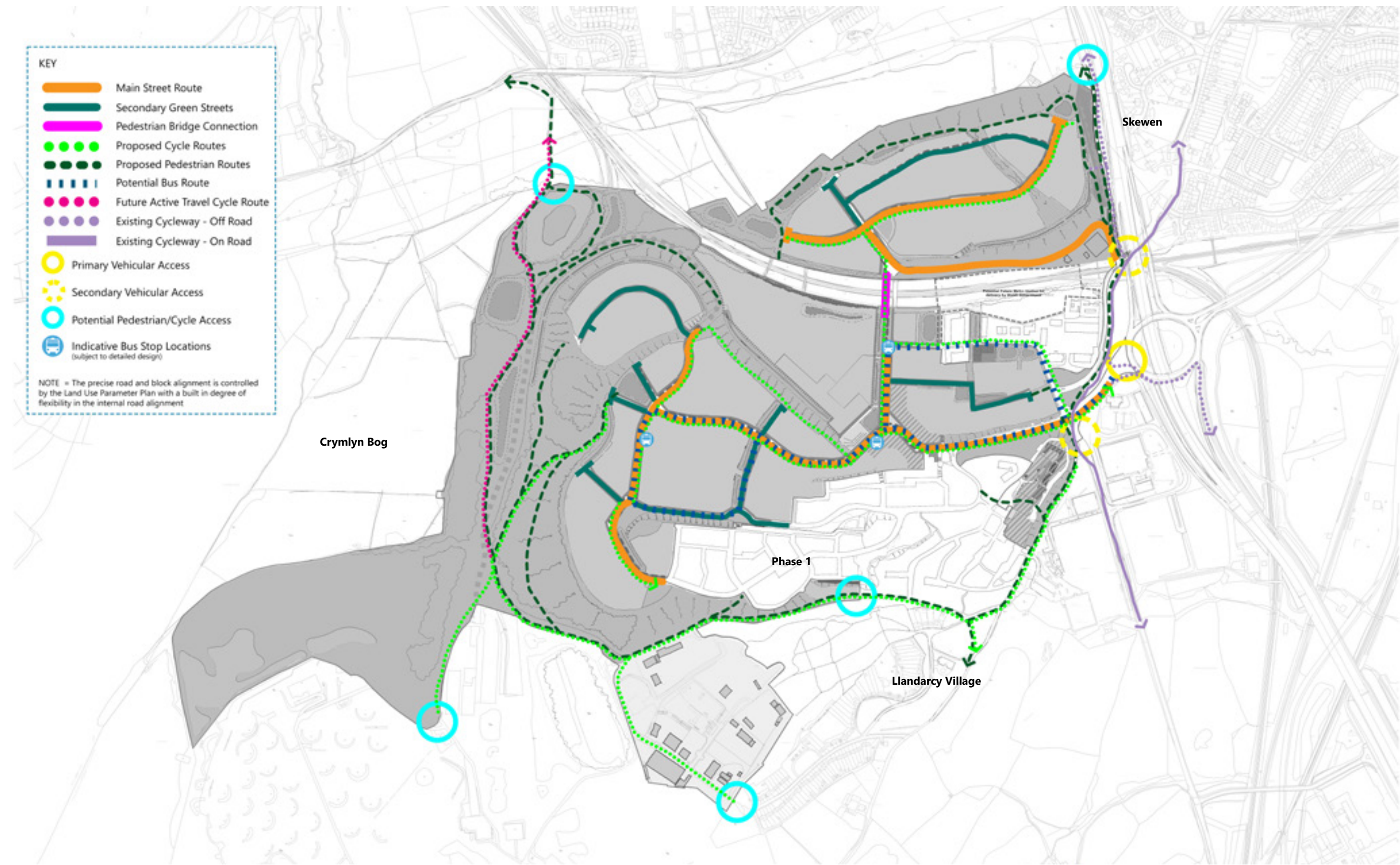
7.1 Land Use



7.2 Scale

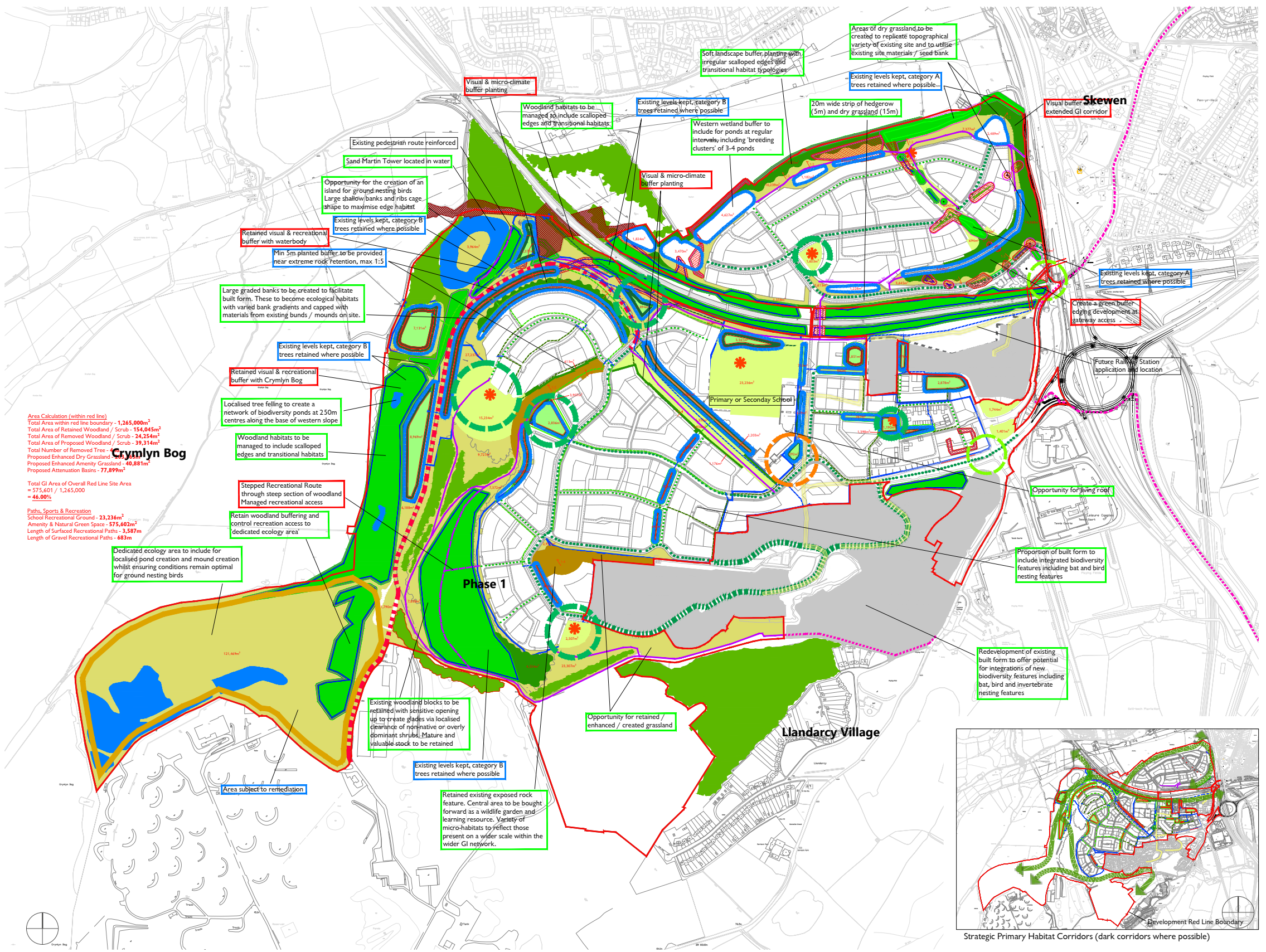


7.3 Movement



7.4 Green Infrastructure

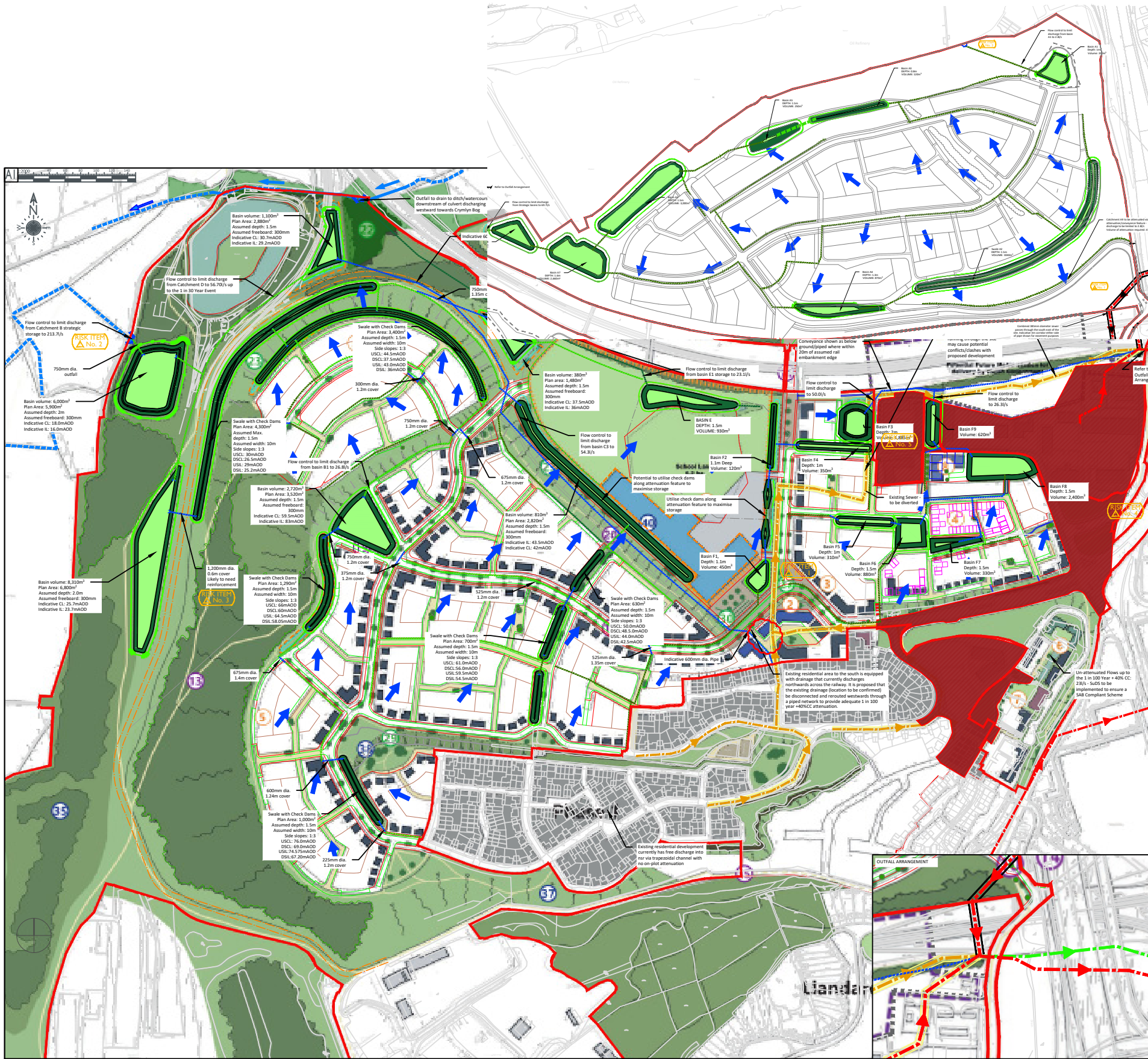
- Existing Development
- Parameter Development Plan
- Existing Scrub Vegetation Retained and Managed (ecological mitigation and enhancement)
- Category A Existing Woodland / Trees
- Category B Existing Woodland / Trees
- Category C Existing Woodland / Trees
- Removed Woodland / Trees
- Ancient Woodland
- Dry Grassland (ecological mitigation and enhancement)
- Amenity / Recreational Grass Area Including Meadow and Flowering Lawn Mixes (amenity and recreation)
- Existing exposed rock feature (ecological mitigation and enhancement)
- Primary GI Street
- Existing Primary Street within existing development
- Secondary GI Street
- Primary GI Recreational Corridors Pedestrian and Cycle route (recreational & travel)
- Woodland GI Recreational Corridors Gravel pedestrian route (recreational)
- Active Travel Route Off Site
- Potential Future Road Extension Interim gravel recreational route
- Landscape Gateway
- Parks / Formal Recreational Space (public realm enhancement)
- GI Community Core (central square & park)
- Lapwing Mitigation Area (ecological mitigation and enhancement)
- Invertebrate Habitat (ecological mitigation and enhancement)
- Opportunity for Attenuation Basins (ecological and drainage mitigation and enhancement)
- Proposed Woodland and Scrub (landscape mitigation and enhancement)
- Soft Landscape Visual Buffer to Development Edge (landscape mitigation and enhancement)
- Proposed Open Mosaic Habitat (ecological mitigation and enhancement)
- Indicative Pond Management Corridor (ecological mitigation and enhancement)



7.5 Drainage

KEY

- Existing Watercourse/Drain
- Indicative Surface Water Sewer
- Indicative Surface Water Conveyance Feature (modelled as pipes)
- Indicative Surface Water Conveyance Feature (not modelled)
- Indicative Attenuation Location
- 3m Indicative Maintenance and Access Buffer
- Indicative Earthworks Extent
- Existing DCWW Combined Sewer
- Existing DCWW Foul Sewer
- Existing DCWW Surface Water Sewer
- Proposed Surface Water Flow Route
- Proposed Headwall
- Area Assumed to Remain as Existing
- Site Boundary







Conclusion

8.1 Conclusion

This Design and Access Statement supports the outline application for the next stage of development at Coed Darcy. The document and the development proposals themselves, demonstrate the vision and desire to create a recognisable, legible, desirable place to live and visit. Coed Darcy can become a place with a clear identity in terms of urban design concept and architectural language, and a benchmark for high quality design and placemaking.

The proposals set out by St. Modwen Developments Ltd. and the design team demonstrate how we can provide a high quality, sustainable community with place making at its heart, fulfilling the ambition to:

- Complete the urban village that began with Phase 1.
- Integrate and enhance the existing Phase 1.
- Integrate the existing landscape, biodiversity and historic features into the new place.
- Establish a place that is distinctive & authentic.
- Establish a well-connected place that is inclusive & accessible to all.
- Provide a mix of uses to support the principles of the “15 minute neighbourhood”.
- Provide up to 2000 new sustainable homes.
- Use the topography to create distinctive places and landmarks.
- Integrate health and wellbeing into the build environment through meeting places, increased connectivity and biophilic principles.
- Create clear and attractive pedestrian and cycling routes.
- Create streets designed as places for people more than for cars.
- Provides different types of public spaces that work for all ages.
- Considers carefully the relationship between topography and pedestrian/ cycle movement across the site.
- Create a biodiversity positive environment.
- Creates of different character areas and Neighbourhoods that still feel part of a coherent whole.



The planning application includes an Illustrative Masterplan and suite of parameter plans to guide future development within the outline area. Coed Darcy is envisaged as a truly exemplar development with high standards of design which will fully embrace sustainability and placemaking principles and integrate with the existing community whilst embracing Neath Port Talbot's wider strategic ambitions. It will deliver benefits for the new and existing communities which will extend to future generations, providing and supporting new facilities while meeting a significant proportion of the area's housing needs and making improvements to transport infrastructure.

