



BARRATT
HOMES

Llewellyn Road, Swansea

Design And Access Statement

April 2021

 theurbanists

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01 INTRODUCTION



01 INTRODUCTION

LEGISLATIVE BACKGROUND

This Design and Access Statement has been prepared to accompany the application for full planning permission for the proposed development of 180 homes on land off Llewellyn Road in Penllergaer, Swansea. The statement has regard to the Welsh Government guidance 'Design and Access Statements in Wales - Why, What and How' (April 2017) in terms of content and structure.

A Design and Access Statement (DAS) is required to accompany the planning application in accordance with the requirements as set out in the Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016.

The 2012 Order (as amended) now states that:

"(4) A design and access statement must—

- (a) explain the design principles and concepts that have been applied to the development;
- (b) demonstrate the steps taken to appraise the context of the development and how the design of the development takes that context into account;
- (c) explain the policy or approach adopted as to access, and how policies relating to access in the development plan have been taken into account; and
- (d) explain how any specific issues which might affect access to the development have been addressed." (Art.7)

This DAS has appropriate regard to the guidance.

ABOUT THIS DOCUMENT

This Design & Access Statement has been prepared by The Urbanists on behalf of Barratt Homes. It describes the background to the project and summarises the extensive design process and considerations that have been taken into account in developing the proposal ensuring a strong sense of character and place whilst also positively contributing towards community and nature.

This document has been informed by a number of supporting studies which examine the site and its context.. It draws from the following related documents:

- Planning Statement by Barratt Homes South Wales Ltd;
- Pre-Application Consultation Report by Barratt Homes South Wales Ltd (to be prepared following PAC);
- Transport Assessment by Vectos;
- Travel Plan by Vectos;
- Preliminary Ecology Assessment by Acer Ecology;
- Bat Activity Survey Report by Acer Ecology;
- Reptile Survey Report by EDP Ecology (in progress);
- Dormouse Survey Report by EDP Ecology (in progress);
- Drainage Strategy by Phoenix;
- Archaeological Desk-Based Assessment by ADAS;
- Tree Survey by Treescene;
- Arboricultural Impact Assessment by Treescene;
- Tree Retention and Removal Plan by Treescene;
- Tree Protection Plan by Treescene;
- Landscape and Visual Assessment by RPS;
- Noise Assessment by Hunter Acoustics;
- Energy Assessment by Darren Evans Ltd;
- Geotechnical and Geo-environmental Report (including Coal Mining Risk Assessment) by Terra Firma;
- Welsh Language Impact Assessment and Action Plan by Barratt Homes South Wales

It includes the following Sections:

Section 1: Introduction - The Introduction explains the legislative background information relevant to this document and summarises the proposed development.

Section 2: Development Context - The Context Appraisal illustrates the wider setting of the development in terms of planning policy, transport and movement, access to amenities, its landscape setting as well as the built form and urban fabric in the surrounding areas.

Section 3: Site Analysis - The site appraisal gives an overview of the site's specific constraints and opportunities in relation to the proposed development.

Section 4: Concept/Vision - This section explains the key considerations and guiding principles that have informed the development proposal whilst setting out the vision for the development.

Section 5: Design Solution - This section illustrates the proposed development layout including proposed materials, boundaries, street hierarchy and landscaping.

Section 6: Conclusion

INTRODUCTION 01



01 INTRODUCTION

SUMMARY OF PROPOSALS

LOCATION:

Pennlgeraer, Swansea

SITE AREA:

6.1ha

TYPE OF APPLICATION:

Full Planning Application

PROPOSED USE:

Residential

QUANTUM OF DEVELOPMENT:

180 homes with extensive public open space

The proposals deliver 180 high quality dwellings at an appropriate mix, including detached, semi-detached, terraced and townhouse style properties. The proposed houses are set within plots which provide in-curtilage parking and generously sized gardens, and the layout sits comfortably within the overall built form of the area. The properties are at scale and density appropriate to the character and appearance of the surrounding residential development.

Vehicular access is proposed from Llewellyn Road at the southern boundary of the site. Pedestrian and cycle access is also proposed to be taken from Llewellyn Road at the new site access, with the opportunity for an additional pedestrian link to be located further to the west along the southern boundary of the site with the possibility of connecting to Talbot Road in the future. Ensuring that pedestrian connectivity is achieved forms a key part of the proposals, with a network of pedestrian footpaths are proposed to run throughout the site and to ensure interconnectivity through the site.

Areas of open space are proposed throughout the site, including a gateway public space with LEAP at the site entrance as well as an informal linear open space with a play trail along the site boundaries. These will provide benefits to future and existing residents in the vicinity, and will be linked by footpaths and cycleways.

Retention of the existing tree stock with complementary new planting will enable the development to successfully integrate with the local surroundings. Enhancements to the existing boundary hedgerows along the northern and southern boundary of the site are proposed, which will include new native hedges and trees and will ensure that the amenity of future and existing residents is protected.

A number of ecological enhancements are also proposed, including the enrichment of existing planting on site with new native hedges and trees, a seeded wild flower area and attenuation areas in the southern part of the site.



View at entrance to the development



02 DEVELOPMENT
CONTEXT



NATIONAL PLANNING POLICY CONTEXT

Wellbeing of Future Generations (Wales) Act 2015

The Well-being of Future Generations Act requires public bodies in Wales to consider the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

The Act puts in place seven well being goals, and makes it clear the listed public bodies must work to achieve all of the goals, not just one or two. These are illustrated opposite.

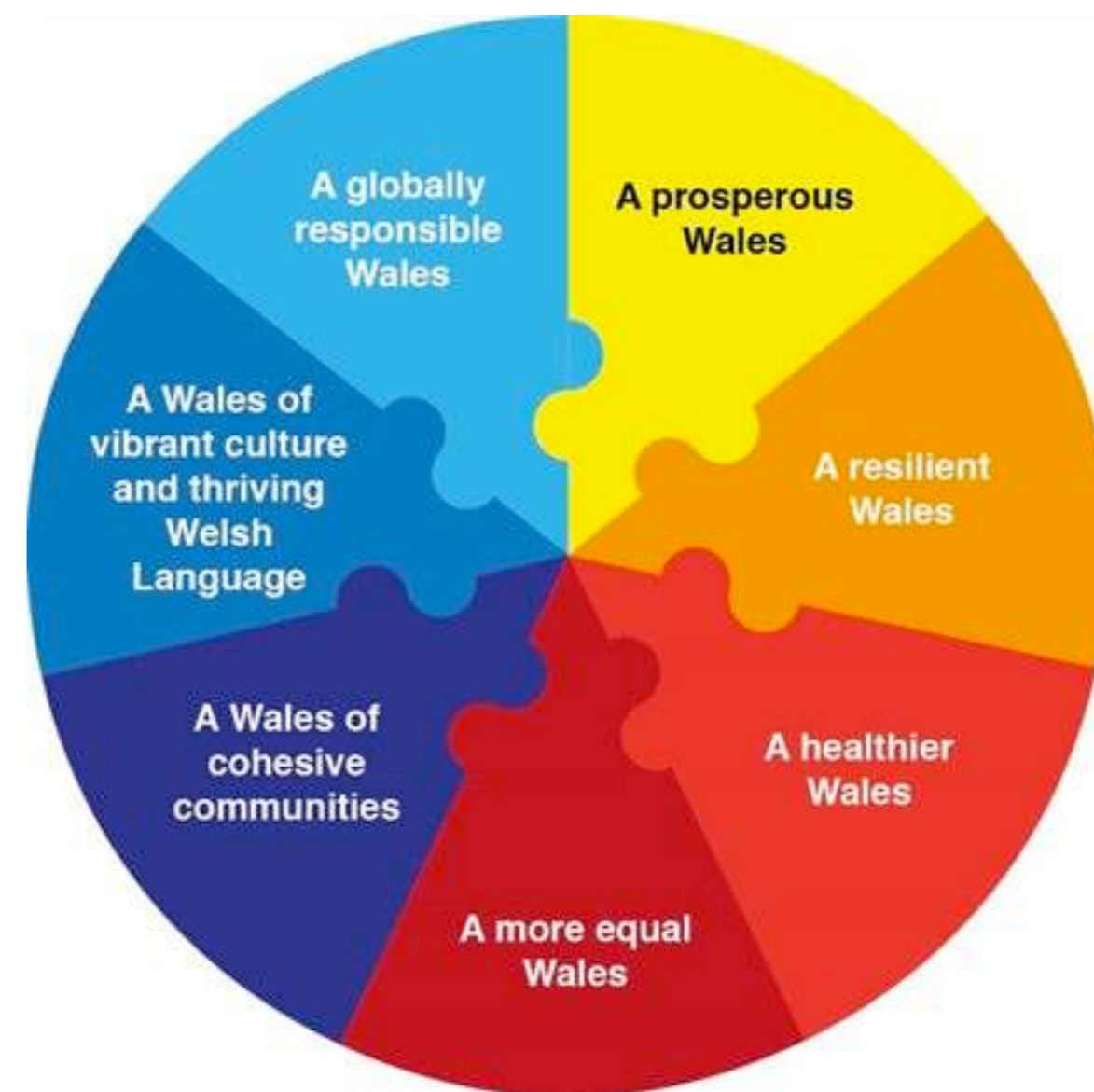
Planning Policy Wales Ed.11 (2021)

Planning Policy Wales (PPW) is the Welsh Government's land use planning policy for Wales. It establishes placemaking as the key approach to deliver sustainable development and deliver the requirements of the Well-being of Future Generations (Wales) Act.

Placemaking is defined by PPW as an "inclusive process, involving all of those with a professional or personal interest in the built and natural environment, which focuses on developing plans, making decisions and delivering developments which contribute to the creation and enhancement of sustainable places" (par. 2.6)

PPW sets National Sustainable Placemaking Outcomes, including creating and sustaining communities; growing our economy in a sustainable manner; making the best use of resources; maximising environmental protection and limiting environmental impact; and, facilitating accessible and healthy environments. It states that to achieve these outcomes the planning system must work in an integrated way to maximise contribution to well-being and provide communities with good quality/well designed homes, infrastructure and facilities. The objectives of good design are categorised into five key aspects as set out in the image opposite

PPW also recognises that we are in a climate emergency and that the planning system must perform a key role in tackling the emergency and the transition to a low carbon economy.

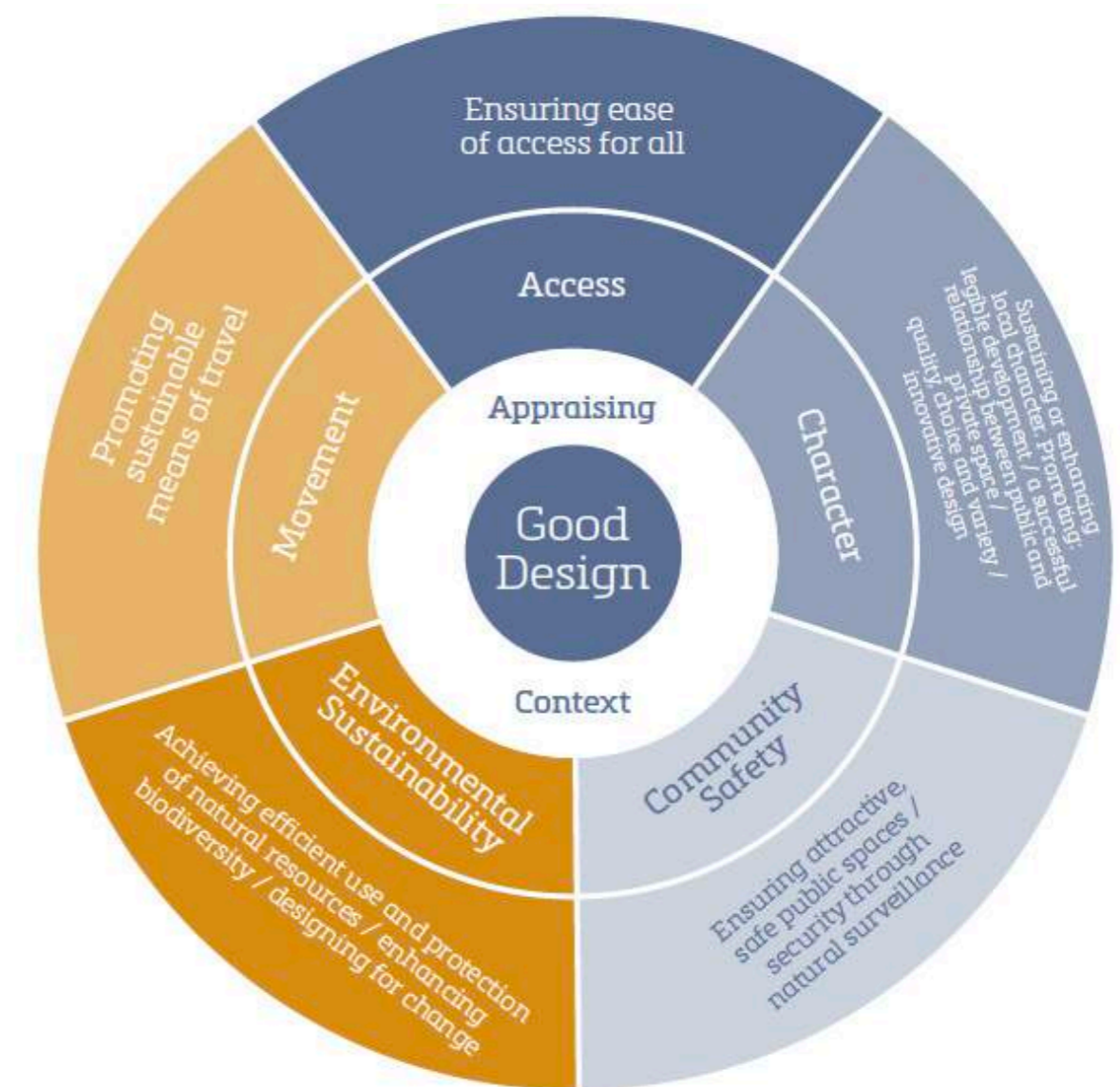


Technical Advice Note (TAN) 5: Nature Conservation and Planning - The TAN provides advice on how the planning system should contribute to the protection and enhancement of biodiversity and geological conservation. Key principles of positive planning for nature conservation include: integration of nature conservation into all planning decisions looking for development to deliver social, economic and environmental objectives together over time; development to provide a net benefit for biodiversity conservation with no significant loss of habitats or population of species local or nationally; ensure that development does not damage or restrict access to ecological sites and features; and plan to accommodate and reduce the effects of climate change.

Technical Advice Note 12, Design (2016)

The revised Technical Advice Notes (TAN) aims to equip all those that are involved in the design of development with advice on how sustainability, through good design, may be facilitated through the planning system. It sets out the core design principles that any development proposal must follow to help create a sustainable environment and exhibit a high level of design quality. These are structured via five the following key objectives of good design:

- Access - Ensuring ease of access for all;
- Character - Sustaining of enhancing local character; promoting legible development; promoting a successful relationship between public and private space; promoting quality, choice and variety; and promoting innovative design;
- Community Safety - Ensuring attractive, safe public spaces and security through natural surveillance;
- Environmental Sustainability - Achieving efficient use and protection of natural resources and enhancing biodiversity; and,
- Movement - Promoting sustainable means of travel.



LOCAL DESIGN POLICY CONTEXT

SWANSEA LDP 2010-2025 - PS2 PLACEMAKING AND PLACE MANAGEMENT

The LDP sets Placemaking at the heart of the planning agenda and design proposals, and includes key principles and best practice guidance for proposed development to ensure all new development contributes positively to the sense of place in an area and provides a sustainable and enjoyable environment for residents, visitors, occupants and future generations. The policy sets out key themes that contribute to good placemaking and explains the importance of good design for delivering sustainable places as set out in the Wellbeing of Future Generations (Wales) Act 2015.

- **Strategic and Spatial Choices:** A vision for good design and a development that is sustainable, fits with its context and makes the most of the existing features of the site.
- **Active and Social Places:** A development that encourages active travel, provides opportunities for people to meet and socialise, promotes local community and creates places to play and enjoy nature.
- **Distinctive and Natural Places:** A development that builds on existing landscape assets, integrates them into the proposals and enhances the landscape setting for wildlife, bio-diversity and green infrastructure through incorporating sustainable urban drainage
- **Productive and Enterprising Places:** A development that is viable in the economic context, provides service infrastructure and promotes a sustainable lifestyle including recycling.

As set out in the policy, the proposed development should:

- Have regard to important elements of local heritage, culture, landscape, townscape, views and vistas;
The proposal takes into account the long views towards the south-west as well as local views into the site; it takes cues from the existing context in relation to materials, scale and built form and aims to integrate the existing landscape features into the development.
- Ensure neighbourhoods benefit from an appropriate diversity of land uses, community facilities and mix of densities that in combination are capable of sustaining vibrancy;
The site is proposed for residential only, but will include play facilities to provide opportunity for recreation.
- Create or enhance opportunities for Active Travel and greater use of public transport;
The proposal incorporates a cycle route as well as an extensive network of pedestrian routes that link to the context where possible.
- Integrate effectively with the County's network of multifunctional open spaces and enhance the County's Green Infrastructure network;
The proposal provides public open space that include formal play as well as informal recreation and retains existing Green Infrastructure where possible whilst enhancing and reinforcing existing hedgerow planting.

- Enhance public realm quality, incorporating public art where appropriate;
The proposal create a high quality public realm and incorporate a landscape strategy with planting, hard and soft landscaping to create an attractive environment that fits with the setting of the site.
- Provide for a hierarchy of interconnected streets and spaces;
The proposals have been developed around a robust network of streets, spaces and routes catering for pedestrians and vehicles to create a well-connected layout.
- Ensure active frontages onto streets and spaces to provide natural surveillance and character;
The proposal has been developed in line with traditional perimeter block parameters with dwellings overlooking the streets and incorporates corner-turning properties at key junctions.
- Provide an accessible environment for all;
The proposals have been developed to ensure an inclusive layout and access for all.
- Provide appropriate parking and circulation areas for cars, cycles, motor bikes and service vehicles;
The proposal provides adequate parking for the proposed units and creates a permeable layout that caters for all vehicles and access requirements.
- Deliver new, and/or enhance existing, connections to essential social infrastructure and community facilities;
The proposal provides pedestrian links that connect the site to its context and therefore the wider facilities within the area.
- Maximise opportunities for sustainable construction, resource efficiency and contributions towards increased renewable or low carbon energy generation;
The proposals will be constructed in line with current building regulation requirements.
- Avoid the loss of land and/or premises that should be retained for its existing use or as an area of open space;
The proposal is allocated for housing in the LDP and therefore the proposed use and development of the land is deemed appropriate.
- Avoid unacceptable juxtaposition and/or conflict between residential and non-residential uses;
The proposal only provides residential uses so no conflicts are foreseen.
- Ensure no significant adverse impact on natural heritage and built heritage assets;
There are no significant heritage assets on or within the proximity of the site.
- Ensure resilience is not undermined and does not result in significant risk to human health, well-being or quality of life;
The proposal aims to create a sustainable place to live and incorporate Sustainable urban drainage systems to minimise adverse impact on the environment.

PLACES TO LIVE (ADOPTED JANUARY 2014)

The proposals have been developed with due regard to the the Places to Live residential design guidance adopted by Swansea Council. This key piece of guidance sets out the aspirations of the council ensuring that all residential developments are of a high quality, attractive and sustainable. This is guided by four strategic themes:

- **Putting people first:** good design in 'everyday' places that ensure safe and lasting communities
- **Sense of place:** created by capitalising in the opportunities presented by the local context and ensuring well designed streets and spaces.
- **Creating sustainable places:** establishing diverse communities, ensuring active travel and connectivity is at the forefront of any development proposal and creating spaces that encourage a healthy lifestyle.
- **Improving quality:** the design guide sets out the council's aspirations when it comes to quality in residential environments. This covers strategic and detailed issues.

The guide provides a well-structured reference for the design process from general to detailed design considerations, which has helped to shape the proposals as follows:

A. Neighbourhoods:

The proposals aim to integrate the proposed development with the surrounding context and extend the existing settlement at Penllergaer in a natural way. The site and context analysis provides an overview of local amenities and how the proposed development can connect to its surroundings in a meaningful way to create a walkable neighbourhood by providing a legible network of streets and pedestrian routes and encouraging walking and cycling.

B. Density and Mixed Uses:

The proposals are considered as an extension of the existing settlement at Penllergaer, and the proposed density reflects the local character of the surrounding area. The site therefore does not support a wider range of uses or provision of public transport. The development does however provide for a range of housing provision and tenure types and includes affordable homes. Affordable homes are seamlessly integrated into the development.

C: Natural Heritage:

The proposals take careful consideration of the existing landscape features such as hedgerows, trees and green infrastructure as identified in the site analysis. The proposed landscape strategy aims to retain these and integrate them into the proposed layout in order to maximise the benefits of the site's landscape setting and create opportunities for the enhancement of habitat and wildlife corridors. The proposed public open space is located centrally to provide convenient access for all.

D: Making Connections:

The proposals create a well-connected, legible layout with a clear hierarchy of streets and spaces that provides for pedestrian and vehicular access and links the proposed development to its surrounding context. The proposals also include for access to potential future development.

E: Public Spaces:

The proposals provide a network of attractive, usable, safe and well-overlooked public spaces that provide opportunities for play and recreation within the site. The proposals include a focal green space that is multifunctional and acts as a gateway to the development. The proposed Trim Trail offers an opportunity for varied and informal play that is accessible and contributes to the sense of place. Sustainable urban drainage systems have been an integral part of the design process with bio-retention and attenuation areas provided within the site.

F: Streets and Places:

The proposals identify a clear street hierarchy which aims to create people-friendly, pedestrian-focused spaces that are not dominated by vehicular traffic and reinforce the character of the proposed key spaces in conjunction with the proposed materials palette, landscaping and boundary treatments.

G: Inclusive Places:

The site provides challenges to create a fully inclusive design due to its topography. The proposed gradients and access routes are compliant with Building Regulations Part M and promote safe and convenient access for all.

H: Buildings:

The proposal creates an environment of human scale that is based on perimeter block principles and takes cues from the existing context in relation to scale, massing, form and materials. A townscape diagram explains the approach to how these aspects come together to form a coherent streetscape that provides interest and visual contrast in key spaces. Particular consideration has been given to local views along streets and focal points within the development as well as the use of corner turning properties to ensure an active frontage towards the public realm.

I: Community Safety:

The proposals create well-overlooked streets and public spaces by orienting dwellings to face the streets using a perimeter block layout approach.

J: Privacy and Amenity:

The proposals provide amenity space for each dwelling in line with policy and guidance whilst ensuring privacy and overlooking issues are addressed. A clear distinction between public and private spaces is achieved through the use of boundary treatment and hard/soft landscaping, and refuse and cycle storage are integrated into the layout from the outset. Brick walls are used as high quality boundary treatment between the rear gardens and public realm.

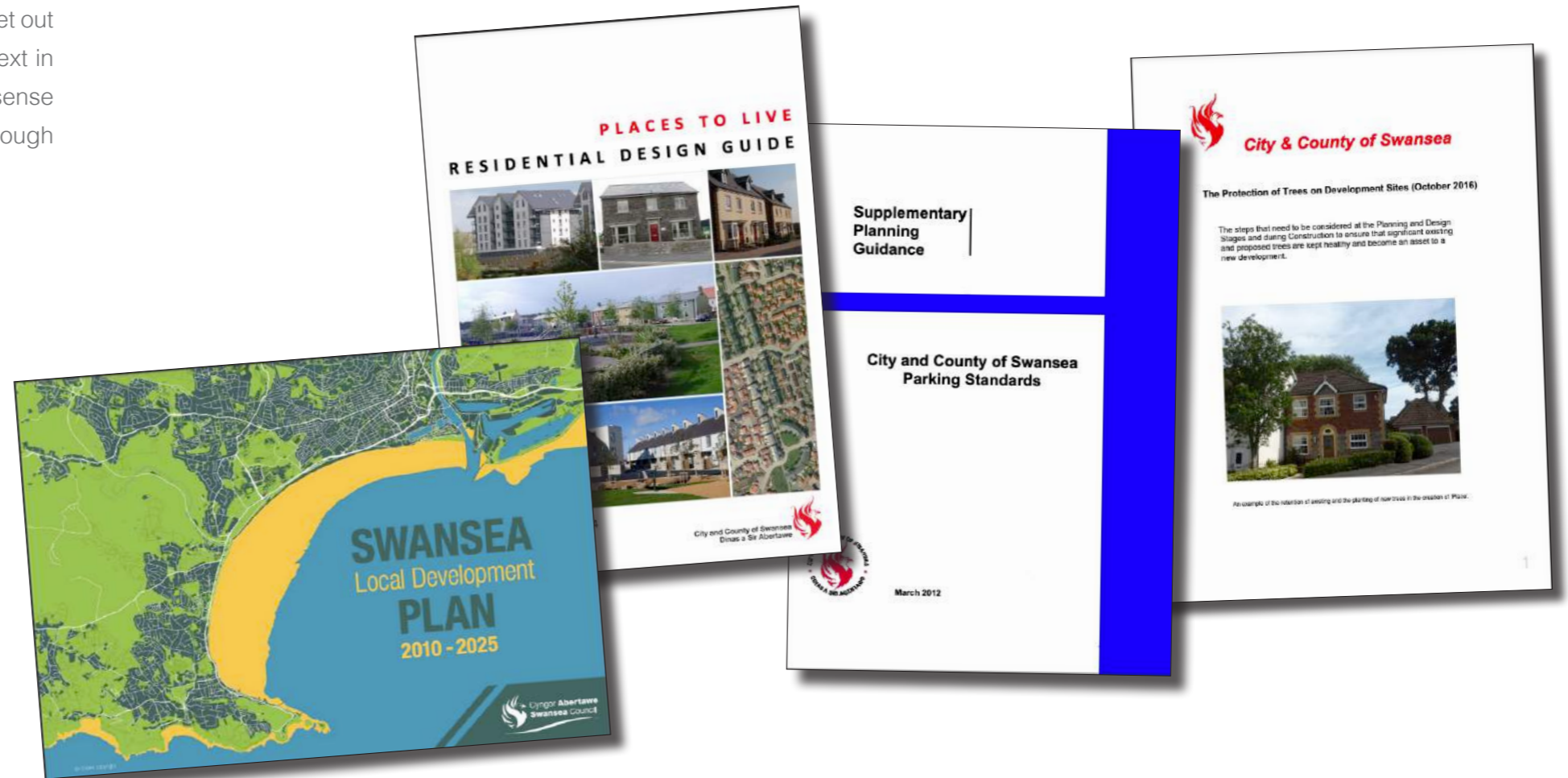
K: Accommodate Parking:

Adequate parking is provided with a mixture of on-plot and on-street parking including visitor parking. Parking spaces, garages and cycle spaces are designed to guidance requirements and convenient to access for residents and visitors.

02 DEVELOPMENT CONTEXT

L: Quality and Character:

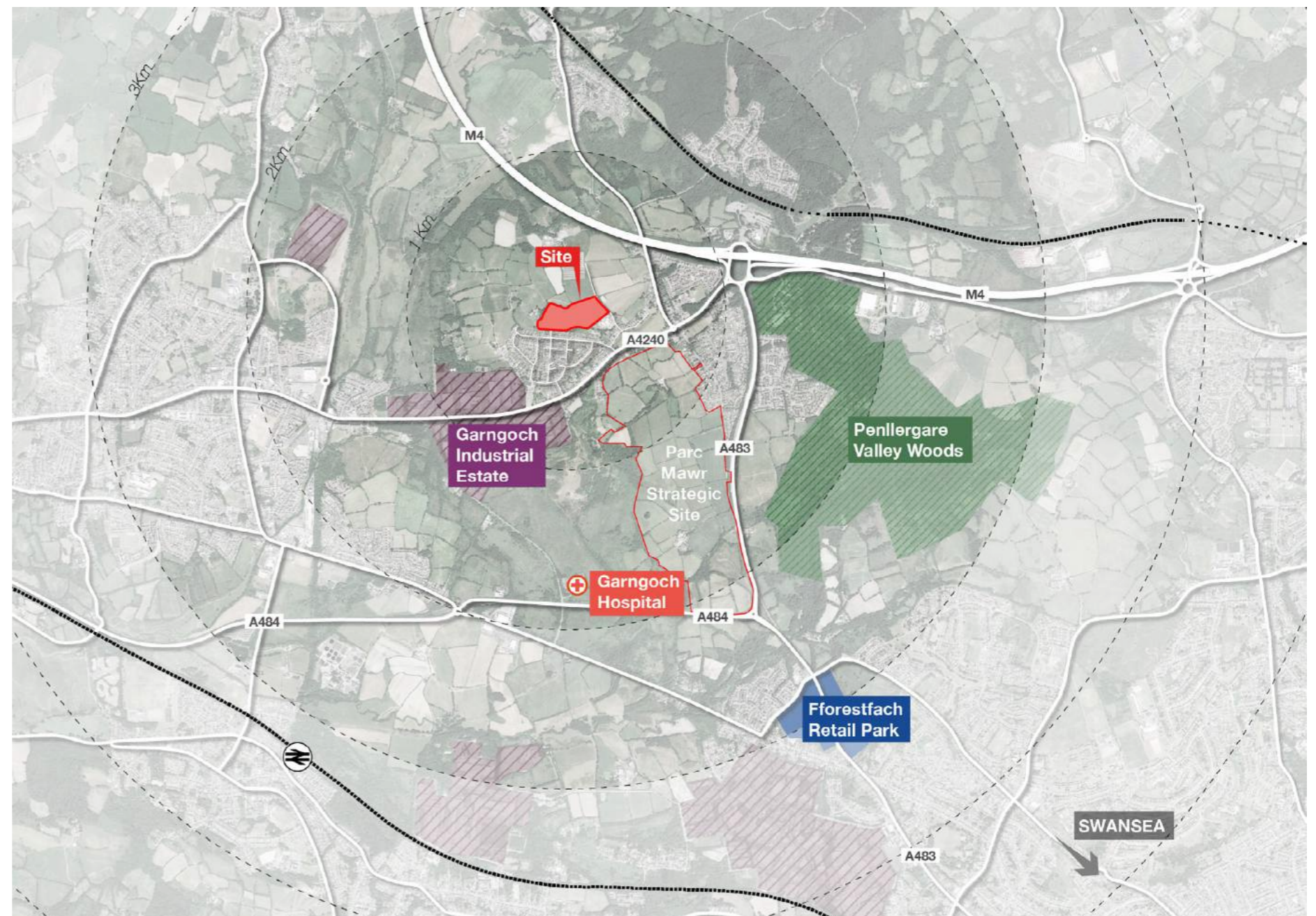
There is no strong precedent for character in the local area as set out in the context analysis. The proposals take cues from the context in terms of materials like brick and render, but strive to create a sense of place and coherent appearance within the development through considerate detailing and use of materials.



SITE CONTEXT - REGIONAL

The village of Penllergaer is a community in the City and County of Swansea, South Wales. It is located 4.5 miles North West from Swansea city centre, 1 mile east of Gorseinon and 1 mile west of Llangyfelach. The community had a population of 2,868 recorded during the 2011 census.

The site located in North Penllergaer is well connected by transport links, being located close to junction 47 of the M4 and linked to the immediate area via the A4240 and A483. It is also well served by public transport with extensive bus routes in close proximity. As Swansea is a major populated centre it benefits from being located close to a wide range of services and facilities.



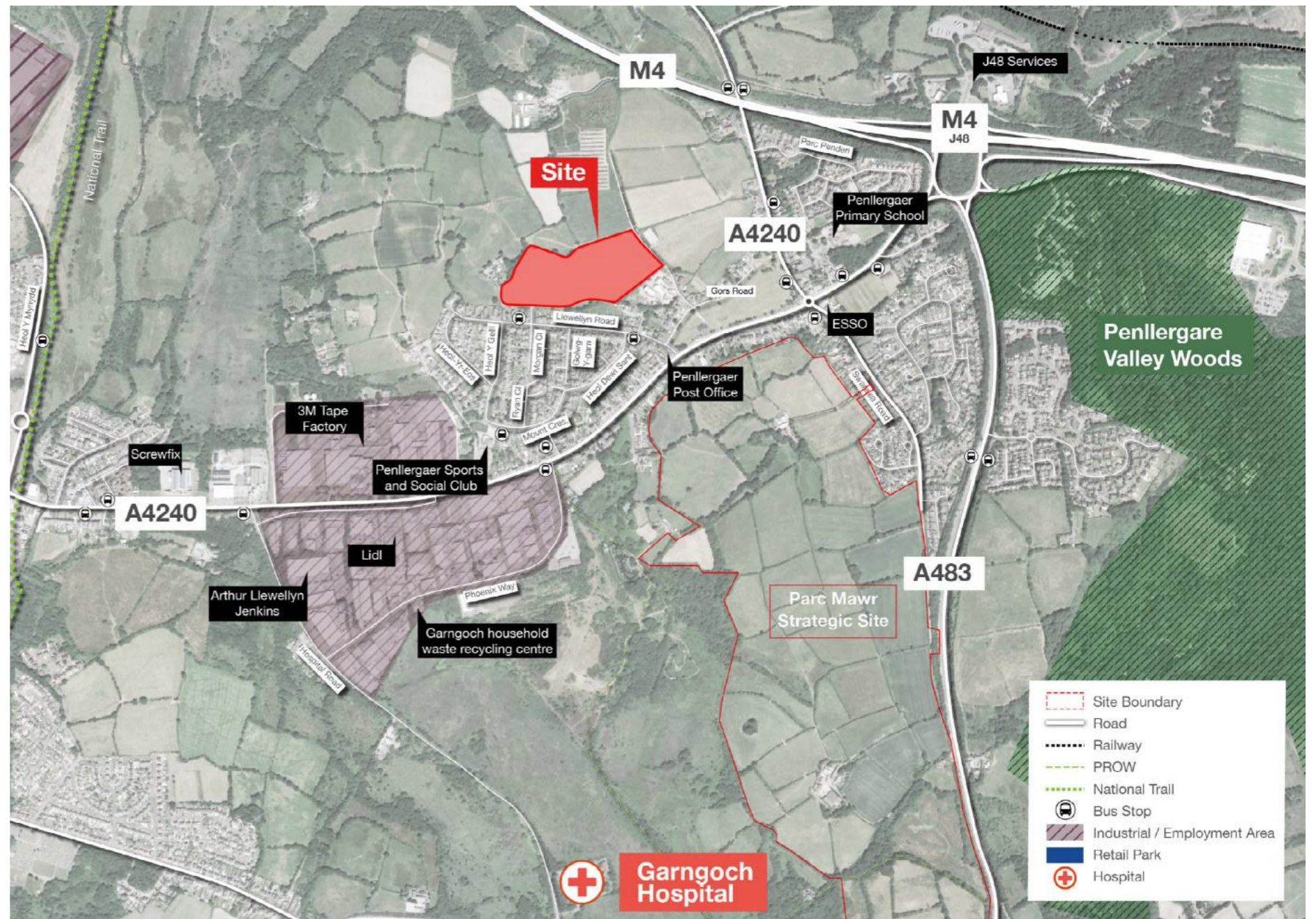
02 DEVELOPMENT CONTEXT

SITE CONTEXT - LOCAL

As shown in the immediate context plan, the site is located on the North-western border of the community of Penllergaer. The site abuts a residential area to its south while the surrounding area to its north and west is semi-rural, with rolling agricultural land. The site sits between Gorseinon to the West and Llangyfelach to the East and benefits from panoramic views to the west extending to the Gower coastline.

Cycle paths and PROW concentrate to the south and west of the site with a national trail running south approximately 1 kilometre to the site's western boundary. The site is located near to local amenities such as Penllergaer primary school, a post office branch and Penllergaer sports and social club and is in close proximity to more extensive amenities in the form of Garngoch Industrial estate and Fforestfach Retail Park, to its south and south east respectively.

The site is also located near to the Parc Mawr strategic development site which includes proposals for a new school, local centre and care facility. These will be within a walking distance of less than a kilometre or approximately 8-10 minutes.



PROW AND CYCLE ROUTES

The site lies within proximity of Penllergaer Forest and Penllergare Valley Woods, a relatively large area of woodland which is designated as a Site of Importance for Nature Conservation (SINC 117). The amenities as part of the forest include hiking trails, walking routes, waterfalls, bridges, parking and a volunteer-run cafe shop.

In the immediate vicinity of the site, there are a number of Public Rights of Way (PRoW) that link to a number of heritage and natural features, although there are no PRoW which directly cross the site.



Map of Penllergare Valley Woods



02 DEVELOPMENT CONTEXT

HISTORICAL CONTEXT

The village of Penllergaer was founded in the early 19th century and served as an important crossway between Neath (to the east), the estuary (west), Swansea (south) and Pontardulais (west and north).

The village was marked at the beginning of the 19th century by the Old Inn on one side and by a few scattered thatched cottages. During this time the hamlet was known as Cors Einon. The wider area included a few farms and the small but important mills at Melin Llan, Parc-bach, Lliw Bridge and Cadle.

After coal mining began on an industrial scale in the area in the mid 19th century (1843 onwards) the emerging township became known as Lower Cors Einon and eventually dropped 'Lower'.

The newly built railway station there was called Gorseinon. To differentiate between the two places – the village at the top of the hill became synonymous with the Dillwyn Llewelyn estate of Penllergare and took its name – acknowledging the Celtic origins, and more correct spelling of, Penllergaer.

From the mid 19th century the settlement has grown in a linear fashion around the two main routes that run through the village, today the A483 and A4240. The development of the M4 in more recent years has restricted further development to the north and Penllergaer Valley wood creates an informal boundary to the east.



Historic Imagery along Swansea Road, Penllergaer

LOCAL CHARACTER

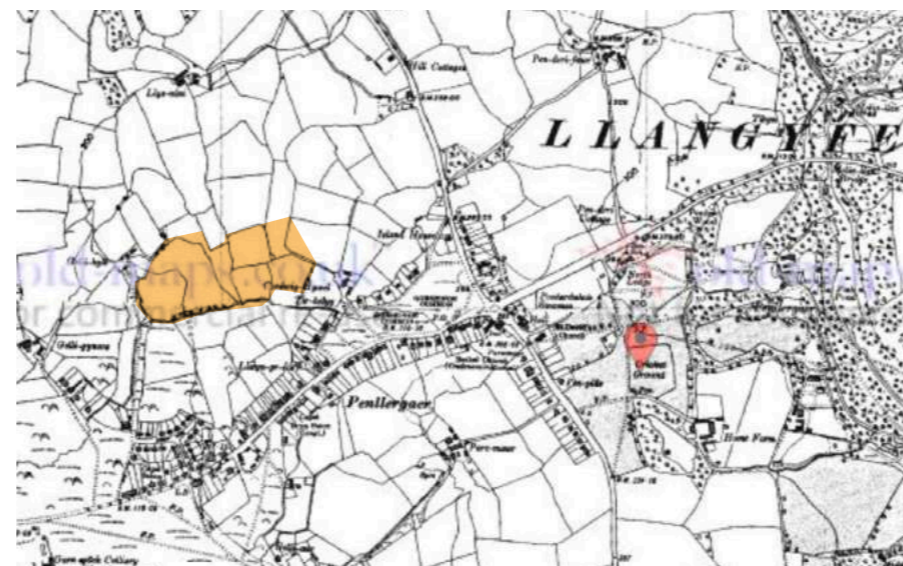
URBAN FORM

Penllergaer developed as a village in the late 19th century with the establishment of the Melin Llan tinplate works near Rhydymaerdy and. The village was originally marked by the Old Inn, St. David's Church and a few scattered cottages, and then developed along what is today the A4240 in the wake of the growing estate at Penllergare and Gorseinon at the crossway between Neath, the estuary, Swansea and Pontarddulais.

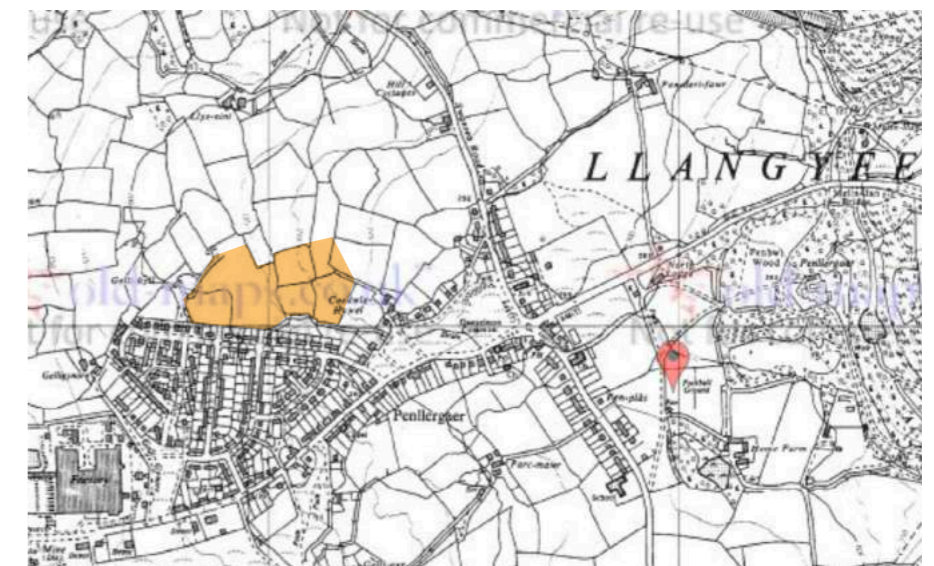
From the 1960s, there were periods of growth to the north of the A4240 and the crossroads with the A48. These developments are typical for their times, principally consisting of estates of semi-detached and detached dwellings laid out on streets featuring dead ends and poor legibility and wayfinding. The relationship between properties and the street is fairly poor in places with rear gardens backing onto public realm and focal points.

The site sits at the northern edge of the settlement boundary, directly adjacent to a 1960s estate, and forms a natural extension of the existing village.

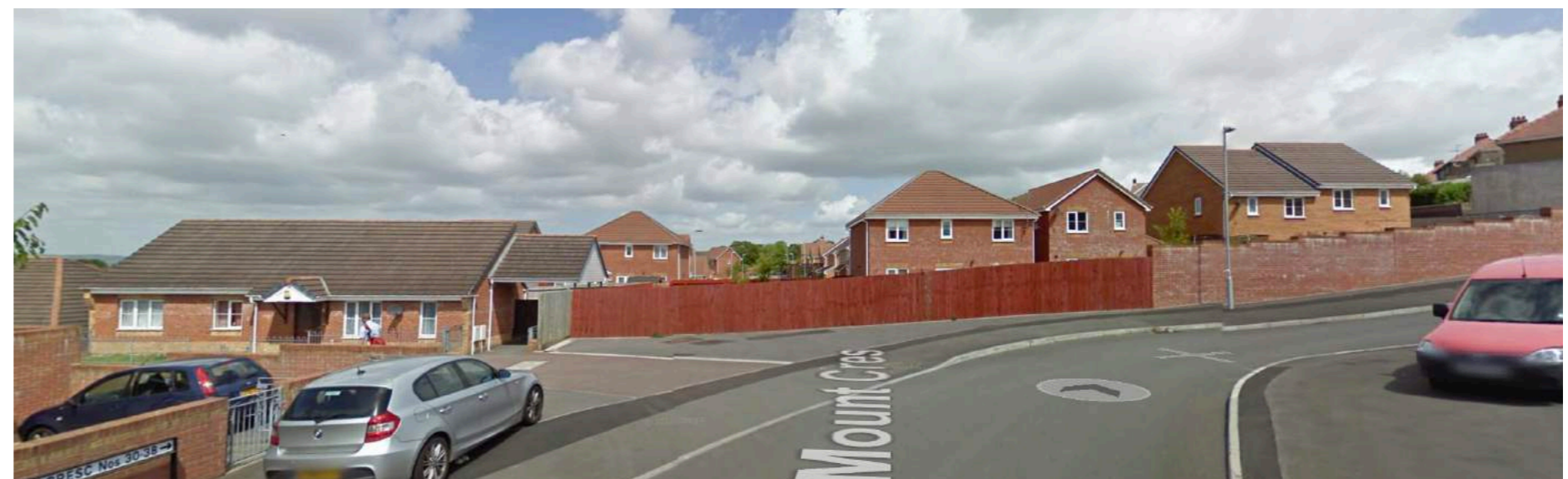
The existing context is varied in its character and urban form due to the development and redevelopment over a number of decades.



Historical Map, 1951



Historical Map, 1964



Properties turning their back on focal point in the public realm

LOCAL CHARACTER

BUILDING / PLOT FORM

Plot sizes and built form vary within the village. The older development along the A4240 tends to be small in scale but characterful as detached or semi-detached properties but with adequate front and rear amenity space. Where plot sizes don't allow for parking to the side of the property, front gardens along this road are most often converted to accommodate parking on plot.

The area from the 1930s along Dilwyn Rd, the southern side of Mt. Crescent and Hoel Dewi Sant shows typical semi-detached, 2-storey properties with hipped roofs and large front gardens forming a relatively strong street frontage. The 1960s development that extended this context to the north-east along the northern side of Mt Crescent and around Heol-Y-Gelli, Llewellyn Rd, Morgan and Ryan Close comprises mostly semi-detached and detached properties of rather uncoherent built form, structure and materiality. This type of development is of lower density and features 2-storey buildings as well as single storey bungalows. Sense of enclosure is moderate, with on-plot parking to the side and front of the properties as well as the occasional parking court and on-street parking.

The existing properties immediately to the south of the site consist primarily of detached and semi-detached dwellings located further from the driveway with parking to the front.



1 - Historic development along the A4240 with small detached and semi-detached properties in stone and render.



2 - 1930s development with typical semi-detached large properties featuring hipped roofs and chimneys in a mixture of pebble dash, brick and white/off-white render; generous front gardens often used for parking to the front of the property

DETAILS AND MATERIAL

Development within Penllergaer demonstrates the change in building material over the years. Traditional buildings were built from clay bricks and stone, which is still visible in the older properties along the A4240 with stone lintels, cills and cornerstones. Roofs were pitched with grey or brown plain tiles.

Twentieth century development has been less consistent with a mix of red and buff brick, light coloured render and pebble dash. Roofs are a mixture of hipped forms or eaves-facing gables with tiles in brown or red. The earlier 1930s dwellings often feature a single chimney on hipped roof construction, whereas the later 1960s/19070s development is kept more simple with the occasional use of gable fronts. White UPVC windows and doors are a common feature in the surrounding context.

Overall, the built context of the surrounding area is inconsistent in terms of built form and materiality with few defining features that would create a sense of place and character for the area.

BOUNDARY ENCLOSURES

Boundaries to front gardens are most commonly defined by low concrete, stone or brick walls, some with metal railings and hedgerows behind.



Inconsistent built form and materiality - Properties along the southern site boundaries



03 SITE ANALYSIS



03 SITE ANALYSIS

Site Boundary

Viewpoint

Low Hi Site Topography



SITE DESCRIPTION - OVERVIEW

The site is situated in the west/north-west of the village of Penllergaer, outside of Gorseinon, and covers approximately 6.1 hectares of farmland. The two fields that make up the site are bounded on the north, east, and west sides by hedgerows with intermittent trees. A low hedge bisects the site, with a couple of small gaps and several mature trees. A ditch/small watercourse runs along portions the of the southern edge of the fields with surrounding scrub vegetation and intermittent mature trees. Another ditch runs along the western side of the dividing hedgerow. The south of the site backs onto the closed-board fenced rear gardens of homes along Llewellyn Road. Many of these properties to the south of the eastern field sit elevated above the development land.

There are great views to the west with the 3M water tower, areas of Gorseinon, and hills beyond. Further views of distant hillsides can be seen from the more elevated positions of the eastern part of the site looking north. A telephone mast and associated equipment/perimeter fencing is situated in the north-eastern corner of the site. Views out to the East are screened by a row of trees.

The location of the following viewpoints shown can be seen on the plan opposite;

Viewpoint Location Plan 

EXISTING SITE FEATURES



Viewpoint 1 - A group of mature trees within boundary hedgerow helps to screen adjacent properties to the west of the site. A telegraph line runs north-west to south-east through this field.



Viewpoint 2 - Looking north/north-east, the hedgerow bounds the Northern edge of the site, with some sections with less vegetation coverage. The dividing hedge between the two fields that make up the development site is also visible. A few intermittent mature trees sit within the hedgerows.



Viewpoint 3 - View looking south/south-west shows green hills beyond the immediate residential boundary of Penllergaer. 3M tower also visible. Prevalence of rushes growing in the grassland show the site's existing wet ground conditions.



Viewpoint 4 - View looking along the eastern site boundary to the north towards the existing Telecom mast with the existing boundary hedgerow to the right.

03 SITE ANALYSIS



Viewpoint 5 - The 3M water tower is a key landmark visible from the site to the south-west, with views of Gorseinon to the south-west and west. Existing residential properties run along the south edge, with vegetative screening varying from minimal to fairly dense.



Viewpoint 6 - This photo shows the existing hedgerow running north-south that bisects the site's two fields, and has been maintained to a low height. Mature trees in the hedgerow show the site's exposed nature, with the wind manipulating the form of the tree over time.



Viewpoint 7 - A large tree of good quality sits just within the southern site boundary.



Viewpoint 8 - Access Lane to the existing Farm to the South-West of the Site with the site boundary to the right-hand side.



Viewpoint 9 - View into the site from Llewellyn Road along the farm access to the South-Western site boundary.



Viewpoint 10 - View onto the poor boundary towards the existing dwellings to the South-Eastern site boundary which includes an existing drainage ditch, shrubbery and sparse hedgerow.



Viewpoint 11 - View onto the existing telecom pole in the North-Western site corner with agricultural fields beyond.

03 SITE ANALYSIS

TOPOGRAPHY

The topography of the site generally falls to the south and south-west. The highest point on the site is situated in the north-east corner, with the lowest in the south-western corner of the site.

The middle part of the site is the steepest at a gradient of approximately 1:10 going east to west.



EXISTING ACCESS AND MOVEMENT

The site has easy access to strategic routes in the area, notably the A4240 and A48. There is an existing farm access to the eastern part of the site along the southern boundary which needs to be retained in the proposals. There is also a private lane bordering the site to the south-west which provides access to the farm to the west of the site. Further farm lanes providing access to the adjacent farmland are located around the northern and eastern boundary.



View of the existing field access to the south of the site



03 SITE ANALYSIS

ECOLOGY / LANDSCAPE

A Preliminary Ecological Appraisal undertaken by Acer Ecology in November 2020 highlighted important ecological attributes of the development site, nearby areas of ecological importance and mitigation measures to integrate into the design. Vegetation within the development site provides resources for bats, dormice and reptiles and has been considered in the design proposals.

Species-rich hedgerows, of which there are a few, are identified as part of Swansea's Local Biodiversity Action Plan as priority habitats. Hedgerows are to be retained as far as possible and enhanced with native species to maintain green corridors for local wildlife around the perimeter and bisecting the development. The formation of a dark corridor will provide a commuting and foraging route for bats through the site.

The site falls within a designated B-Line, which is part of a network of connected habitats of ecological importance for maintaining viable pollinator populations. There are opportunities to improve the ecological connections for pollinators through the use of wildflower meadows.



EXISTING VEGETATION

Much of the sizeable existing vegetation on the site runs around the site boundary, with a hedgerow bisecting the fields in a north-south direction. Key aspects for consideration in the design has been outlined below:

- ① Group of mature trees within hedgerow are of great character and help to enclose the site. These will be retained and the hedgerow enhanced.
- ② Existing species-rich hedgerow provides a solid northern boundary to the development; retain.
- ③ Low hedgerow with intermittent mature trees and is an important north-south connection for wildlife. Gaps will need to be formed for access through the development, with compensatory planting made elsewhere. This is to be retained and enhanced with additional native species and tree planting to reinforce an ecological route.
- ④ Hedge along part of southern boundary is relatively weak and provides little screening of adjacent housing. Hedge to be reinforced with native species and tree planting to provide screening.
- ⑤ Category A tree by proposed site entrance to be retained as a local landmark feature and ecological resource.



03 SITE ANALYSIS

CONSTRAINTS AND OPPORTUNITIES

The following points are the main constraints and opportunities that have been identified for the site, based on the assessment of the site and its context:

CONSTRAINTS	OPPORTUNITIES
<ul style="list-style-type: none"> Existing landscape features, hedgerows and trees to be retained where possible; Vehicular link to potential future development on allocated land to the West of the site to be allowed for; Farm access at south-western site boundary to be retained; Steep topography falling from the high point in the North-Eastern corner of the site down to the South-West; Lowest parts of the site dictate the position of attenuation basins and sustainable urban drainage features; Existing properties along the southern site boundary pose an opportunity to integrate the development into the existing context, but sufficient back-to-back distances are to be kept; Telecom mast in the North-Eastern corner of the site; 	<ul style="list-style-type: none"> Create the site access at existing field access off Llewellyn Road which provides a central access point to both parcels of the site; Maximising the opportunity that the existing green infrastructure offers by integrating features such as the hedgerow bisecting the site in Public Open Space and creating a gateway space at the site entrance that is focused on green infrastructure; Opportunity to provide views to the open countryside to the North of the site and create a transition from the agricultural fields at the development edge. Long view into the site from the farm access to the south of the site.

- ① Central site access via Mount Crescent linking the two parts of the site
- ② Potential to create a focal space at the site entrance
- ③ Existing mature hedgerow with mature trees bisecting the site to be retained and enhanced
- ④ Existing hedgerows and trees at site boundaries to be retained and enhanced where possible
- ⑤ Topography falling from the highpoint in the East down towards the South-West of the site
- ⑥ Views out towards the open countryside - potential for outwards facing development
- ⑦ Shared boundary with existing properties offers opportunity to integrate the development but also requires sufficient back-to-back distances
- ⑧ Farm Access to be retained via Talbot Road. This offers long views into the development and requires careful boundary treatment
- ⑨ Further land allocated for development
- ⑩ Requirement to allow for future access into land allocated for development
- ⑪ Existing Farm Access to be retained
- ⑫ Poor boundary interface towards existing farm buildings
- ⑬ Telecom Mast





04 DESIGN
CONCEPT / VISION



“Create a vibrant and attractive neighbourhood with a distinct sense of place as an integrated addition to Penllergaer village.”

04 DESIGN CONCEPT / VISION

DEVELOPMENT PRINCIPLES

The design has been based on the following principles as set out in the Placemaking Wales Charter:



PEOPLE AND COMMUNITY

The local community is engaged in the development and design proposals as part of the statutory pre-application process.



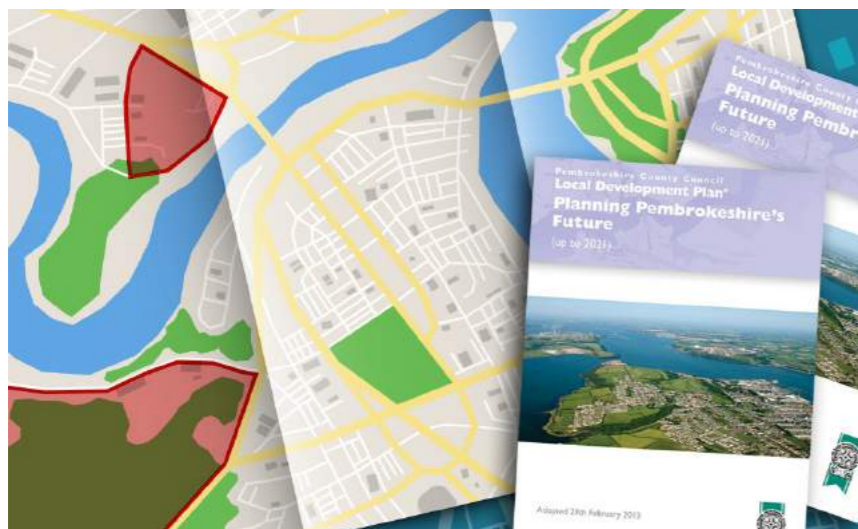
MOVEMENT

The development prioritises walking, cycling and public transport by providing a network of pedestrian routes and cycle paths that integrate it with its surrounding context.



PUBLIC REALM

The development creates well-defined, safe and welcoming streets through a distinct street hierarchy and sense of enclosure. Ensuring properties overlook streets and public open spaces with active frontages and corner turning buildings.



LOCATION

The development is situated in a sustainable location. The site is allocated for residential development in the LDP, together with the land to the west of the site, for a total of 250 dwellings.



MIX OF USES

The primary use of the development is residential as the site and location do not justify the provision of other use classes, but play and recreation are integrated informally within the public open space.



IDENTITY

The development values and respects the positive distinctive quality and identity of the site by retaining existing features of the landscape and integrating them positively into the development.

04 DESIGN CONCEPT / VISION

DEVELOPMENT CONCEPT

Accessibility and integration with the surrounding context are at the heart of the proposals and have played important roles in the formation of the development concept and the detailed layout. The site's attractive landscape setting and character has shaped the concept masterplan and formed the basis of a responsive development that complements the existing context and responds sensitively to the site's landscape setting.

The illustrative design concept takes into account the existing access off Llewellyn Road and creates a key gateway space in the form of public open space with attenuation and play at the entrance of the site. Secondary and tertiary routes provide access to the development parcels and create a permeable layout that is based on principles of legibility and ease of movement.

Key nodes and the gateway space are highlighted on the adjacent plan. Within these locations, there will be 'uplift' in terms of enhanced boundaries, different material treatment and increased building height where appropriate. This will signify the importance of these spaces within the overall development and help to enhance legibility and identity.

Existing mature vegetation around the perimeter and within the site have been retained as part of the proposals and used to create a landscape-led setting with attractive open spaces and pedestrian links. Strong natural surveillance is proposed where possible to encourage connectivity through the site to the wider landscape.

Attenuation is located at the lowest part of the site along the southern boundary and incorporated into the development as usable landscape and amenity features. Sustainable urban drainage systems are incorporated into the streetscene with bio-retention verges along the primary and secondary routes.

By backing onto existing dwellings along the southern boundary line, the proposed development seamlessly integrates in its context and creates a natural extension to Penllergaer.

The development also takes into account potential future development of the remainder of the allocated land to the West of the site by allowing for future access. Landowner access to the Farm to the South-East of the site has been retained and integrated into the development in a positive way.

- ① Access off Llewellyn Road
- ② Key public open space at site entrance incorporating existing landscape features and LEAP
- ③ Attenuation and SuDS features at lowest part of the site
- ④ Primary Route connecting both parcels of the site
- ⑤ Secondary Routes forming loops to create a permeable layout
- ⑥ Private drives and informal edge towards the open countryside and open spaces
- ⑦ Existing Trees/hedgerows retained
- ⑧ SuDS incorporated into the streetscape as green verges on primary and secondary routes
- ⑨ Connect and integrate into existing context by backing onto existing dwellings along southern boundary
- ⑩ Landscape corridor at site periphery with pedestrian links and play trail to ensure accessibility and ease of movement
- ⑪ Future link to remainder of the land allocated for residential development provided
- ⑫ Landowner access retained
- ⑬ Cycle route linking both parts of the site and into the surroundings
- ⑭ Key nodal points within the layout
- ⑮ Key views within the site



Development Concept Plan

04 DESIGN CONCEPT / VISION

ACCESS AND MOVEMENT

The street hierarchy is an important element of the proposals that defines the character of the development.

The main site access point from Llewellyn Road to the South leads to the gateway space as focal point within the development. The access then forms the primary spine route in East-West direction linking the two parts of the site together. This primary route is proposed to have a more formal character with bio-retention verges on either side of the carriageway and footpaths.

Secondary routes linking back to the main road form loops around the two parcels of the site and ensure ease of movement and connectivity throughout the layout. A bio-retention verge is proposed at the lower side of the secondary route for sustainable urban drainage.

Tertiary routes feature on-street parking in small focal spaces with grass-crete and paving as well as rain gardens. Private drives at the development edges and towards the public open spaces create a more informal and soft development edge.

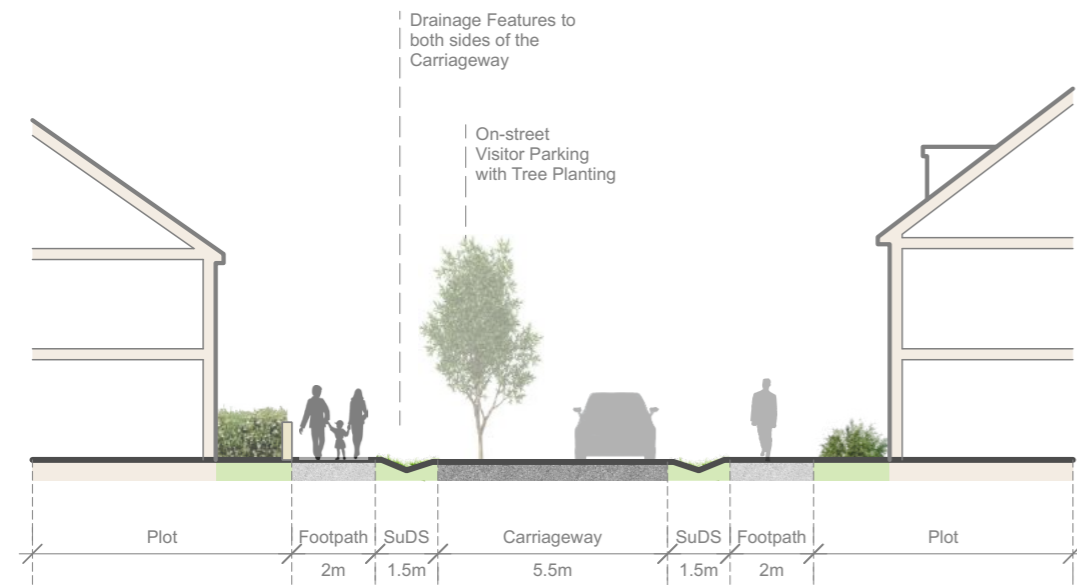
Links to the allocated site to the West of the site for future development as well as the landowners access to the East have been allowed for.

- Site Boundary
- Land Allocated for Future Development
- Primary Route
- Secondary Route
- Tertiary Linking Route
- Private Drive

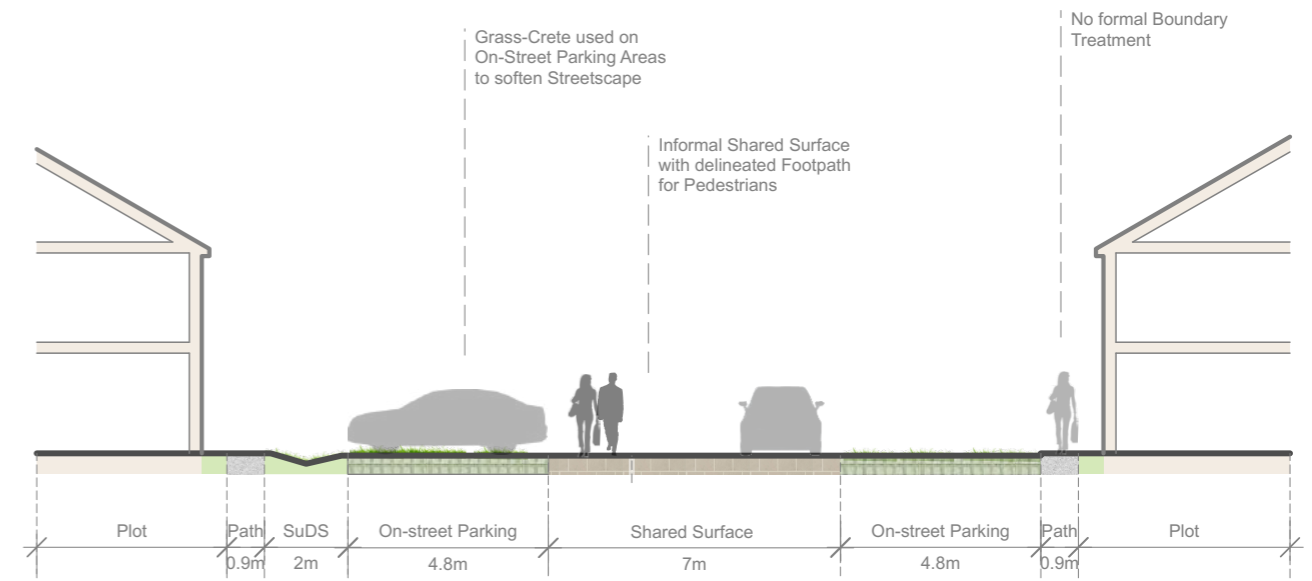


Street Hierarchy Plan

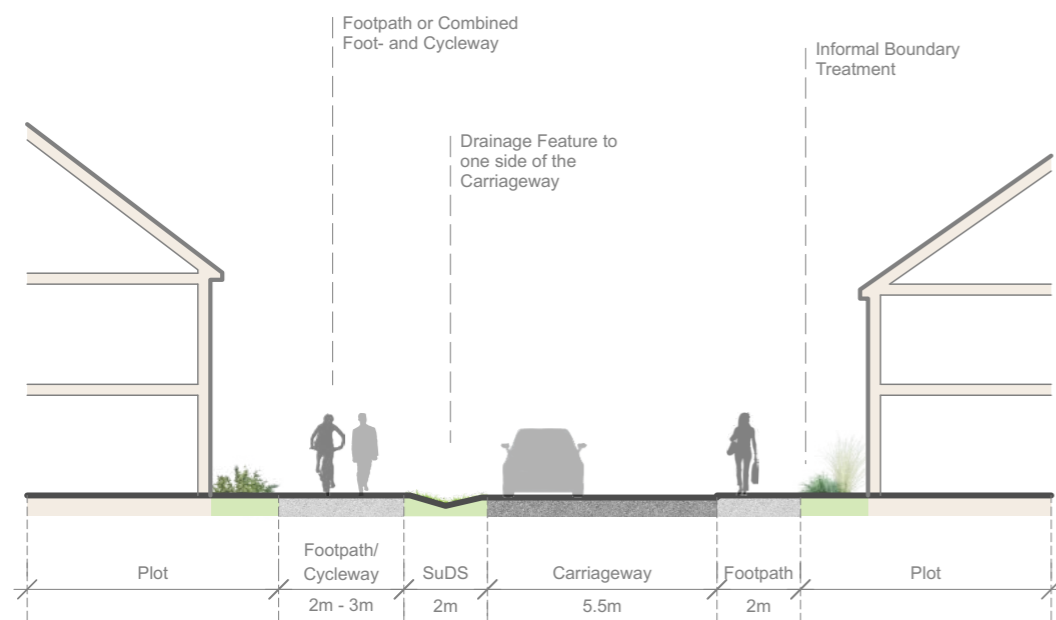
DESIGN CONCEPT / VISION 04



PRIMARY ROUTE



TERTIARY/LINKING ROUTE



SECONDARY ROUTE



PRIVATE DRIVE

04 DESIGN CONCEPT / VISION

TOWNSCAPE AND URBAN DESIGN

The main focal space of the development is public open space at the site entrance featuring attenuation area, play and retained landscape features. This area has been given careful consideration in regards to elevational treatment with the use of 2.5-storey buildings, gable ends and corner turning properties, materials and boundary treatment. The proposals also consider the careful treatment of proposed properties at secondary nodal points at the key junctions of the primary and secondary routes as well as at key corners and terminating long views.

Generally, the development features a more playful and less enclosed edge towards the open spaces, with the proposed boundary and material treatment of key properties in line with softer approach to the landscape.

Taking into account the variety and poor quality of the surrounding context, this development tries to achieve a unifying feel through consistent material treatment, but accentuation and careful treatment at key urban design focal points have been used to create interest in the street scene and provide a high quality environment.



Townscape Plan

LANDSCAPE AND GREEN INFRASTRUCTURE











The desire for the green infrastructure design is to create a sustainable landscape that responds to the needs of future residents as well as the surrounding environment and ecosystem.

Swansea's Local Development Plan highlights the ecological diversity of the wider area - the development seeks to create an interconnected set of public open space and recreation routes that enhances local biodiversity and improve the quality of life for residents by living in a more natural environment.

The proposals aim to integrate biodiverse sustainable drainage solutions which manage surface run-off water around the site and fit naturally within the street scene and public open space to reduce flood risk. Existing trees and hedgerows are retained and enhanced as far as possible to maintain and reinforce existing wildlife corridors in a green perimeter and dividing line through the site.

A soft material palette is to be developed that complements the street hierarchy to aid way-finding and create more distinct spaces. Plant species selection will take some inspiration from surrounding natural environment and areas of nature conservation.

Both formal and informal play opportunities that encourage children to interact with nature are included in the design concept with the formal LEAP proposed at the site entrance and a play trail along the northern site boundaries.

-  Site Boundary
-  Land Allocated for Future Development
-  Key Public Open Space
-  Provision of Play
-  Trees and Hedgerows retained
-  Pedestrian/Cycle Links
-  SuDS Feature
-  Attenuation Area
-  Green Edge around Development
-  Existing Trees



Landscape Strategy Plan



05 DESIGN SOLUTION



ACCOMMODATION SCHEDULE

	Housetype	No of Beds	Total
Open Market	Kenley	2	48
	Ellerton	3	30
	Moresby	3	2
	Kingsville	4	22
	Ennerdale	3	11
	Chester	4	19
	Hesketh	4	7
	Alderney	4	11
	Radleigh	4	16
	Andover	3	5
			171
Affordable	Larch	3	1
	Alder	1	4
	Olive	2	3
	Beech	3	1
			9
	TOTAL		180

PROPOSED MASTERPLAN

The proposed development layout builds on the development concept and key design principles to achieve a permeable and cohesive development that sits well within the existing context and provides an attractive place to live.

The following pages identify how key spaces, namely the entrance gateway and nodal points along the primary route, have been articulated through materials, boundaries and housetype selection. This combination has resulted in uplift which helps to enhance the character and legibility of the development.

- ① Access off Llewellyn Road
- ② Key public open space at site entrance incorporating existing landscape features, attenuation and LEAP
- ③ Primary Route connecting both parcels of the site with bio-retention and visitor parking
- ④ Secondary Routes forming loops to create a permeable layout
- ⑤ Existing Trees/hedgerows retained
- ⑥ Landscape corridor at site periphery with pedestrian links and play trail to ensure accessibility and ease of movement
- ⑦ Future link to remainder of the land allocated for residential development provided
- ⑧ Landowner access retained
- ⑨ Shared use path forming direction connection from eastern parcel of development to Llewellyn Road

DESIGN SOLUTION 05



- 2.5 storey property
- Existing tree
- Existing hedgerow
- - - Proposed tree
- Private access gate
- Publicly accessible space
- Bio-swale drainage feature
- Attenuation drainage feature
- Block paved area - shared surface feature
- Grasscrete parking
- LEAP
- * Affordable property

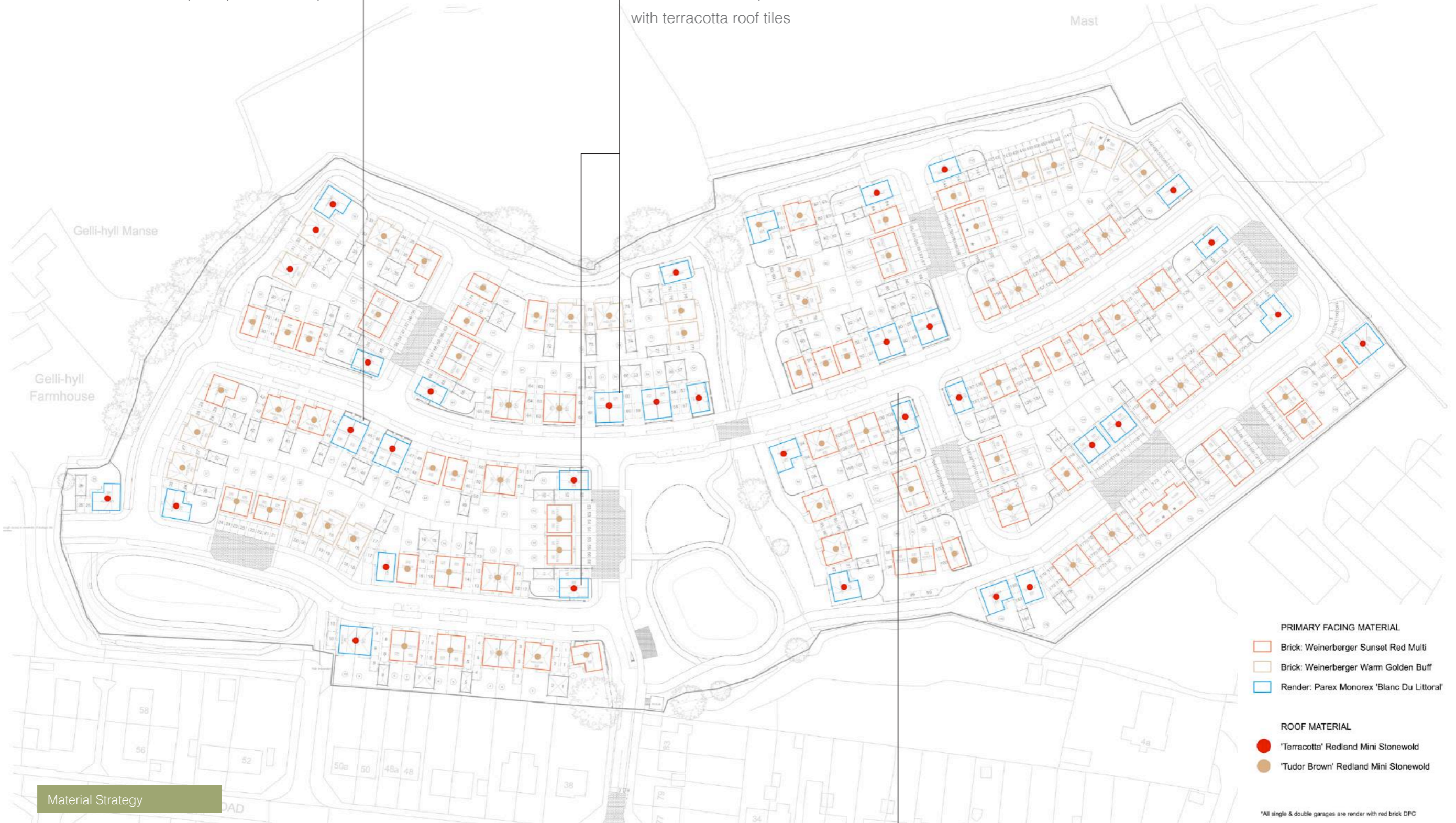
Development Layout

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05 DESIGN SOLUTION

Approach to materials same as gateway space to signify townscape importance of space

Uplift area: 2.5 storey feature properties are accentuated with the incorporation of render and differentiation with terracotta roof tiles



Material Strategy

Approach to materials same as gateway space to signify townscape importance of space

MATERIAL FINISHES STRATEGY AND CHARACTER

The proposed material palette takes cues from the existing context with a simple palette of red and buff brick with detailing in blue engineering brick and brown roof tiles in a traditional architectural style.

The proposed materials and finishes reflect the townscape strategy and street hierarchy and place emphasis on key nodal points, corners and public spaces.

At the key nodal points, vistas and corners such as the gateway space at the entrance of the site, feature properties are emphasised through the use of off-white render and terracotta-coloured roof tiles, adding variety to the street scene and creating visual interest.



05 DESIGN SOLUTION



BOUNDARY TREATMENT STRATEGY

The boundary strategy takes into account the materials finishes, street hierarchy and intended townscape hierarchy, and responds to the site and its setting in a positive way.

Red brick walls with piers and detailing in staffordshire blue are used where rear gardens interface with the public realm to create a high quality, attractive environment with private and public clearly demarcated. Within back gardens, a 1.8m high timber fence creates the required privacy between individual gardens.

Along the primary route, a more formal approach incorporates access steps with low brick walls, ball top railings and brick piers, creating a clear boundary between public and private whilst adding interest to the street scene.

Towards the public open space and green areas at the site periphery, a more soft and informal approach to boundary treatment includes shrub and flower planting and open grassed areas as well as a timber knee rail fence. Hoop top railings are proposed around the central LEAP.



1.8m brick walls with detailing in staffordshire blue for rear garden boundaries facing the public realm.



Ball-top railing to create a positive frontage around key nodal points.



Timber knee rail fence is proposed as separation between private and public spaces towards the public open space.



Hoop-top railing with planting at corners towards the open space.

05 DESIGN SOLUTION

PROPOSED STREET SCENE



Corner turning property

Feature property in prominent location

Specimen tree in town-scape location

Well overlooked POS at heart of the development

Path around edge of attenuation area

The adjacent street elevations show the proposed character of the development and give an indication of how the proposed materials, boundaries and landscape features come together, contributing to the overall feel of the development and reinforcing the proposed street hierarchy.

DESIGN SOLUTION 05



Street Scene A-A



05 DESIGN SOLUTION

Where gardens are adjacent to public realm, a brick wall forms the primary boundary treatment

Trees incorporated into the streetscape as build outs around on-street visitor parking bay

2.5 Storey corner turning feature properties at key nodal points frame the street view; emphasis reflected by material and boundary treatment

Greening in front of brick wall boundaries where possible to soften streetscape



Street Scene B-B

Parking is accommodated to the side of each plot

Roofline and stepped built form following the topography

Key gateway space and vista into the site is framed by 2.5-storey buildings with render and terracotta roof tiles

Soft boundary treatment with railing and planting

Existing hedgerow and trees bisecting the site in a north-south orientation are overlooked by nearby properties



Street Scene C-C

DRAINAGE STRATEGY

The Drainage Strategy by Phoenix Engineers confirms that infiltration rates are poor at the site due to high clay content and conveyance channels are not suitable due to the steep nature of the site. This has informed the proposed surface water drainage strategy.

SuDS has been thoroughly considered for the site and discussed in detail with the local authority at pre-application stage. To allow sufficient treatment of the surface water, a combination of permeable paving, bio-retention areas and rain gardens with an underdrain will be utilised.

Due to the location of the ditches along the site boundaries, the surface water can be discharged at a restricted rate. Attenuation will be via an open basin within each of the surface water catchment areas, with one basin being located to the south west of the site, and the second positioned to the south near the site access and within the POS. This forms part of the entrance gateway space.

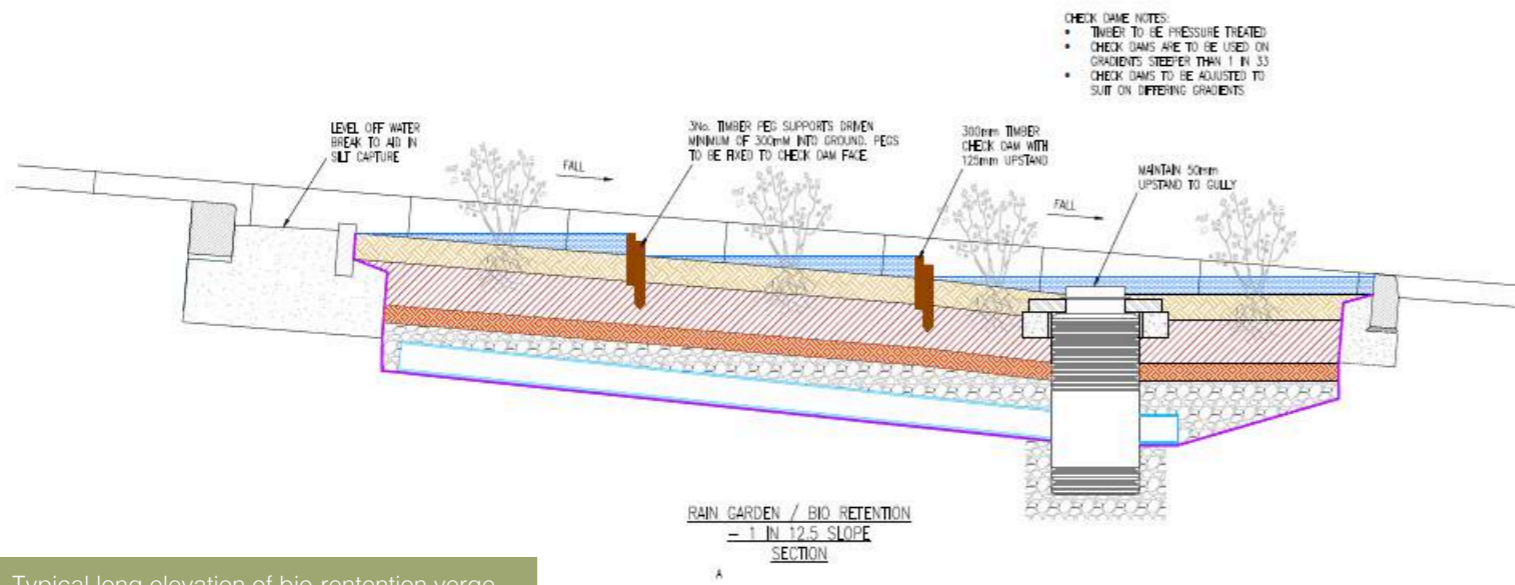
The attenuation has been designed for up to and including the 1 in 100-year storm event with 30% increase in rainfall intensity to allow for climate change.

The features of SuDS have been designed to be multi-functional, and will enable enhanced green infrastructure and amenity space, provide habitats and wildlife corridors, and will contribute to health and wellbeing through providing important green space. The combined approach to blue and green infrastructure is summarised in further detail over the next few pages.

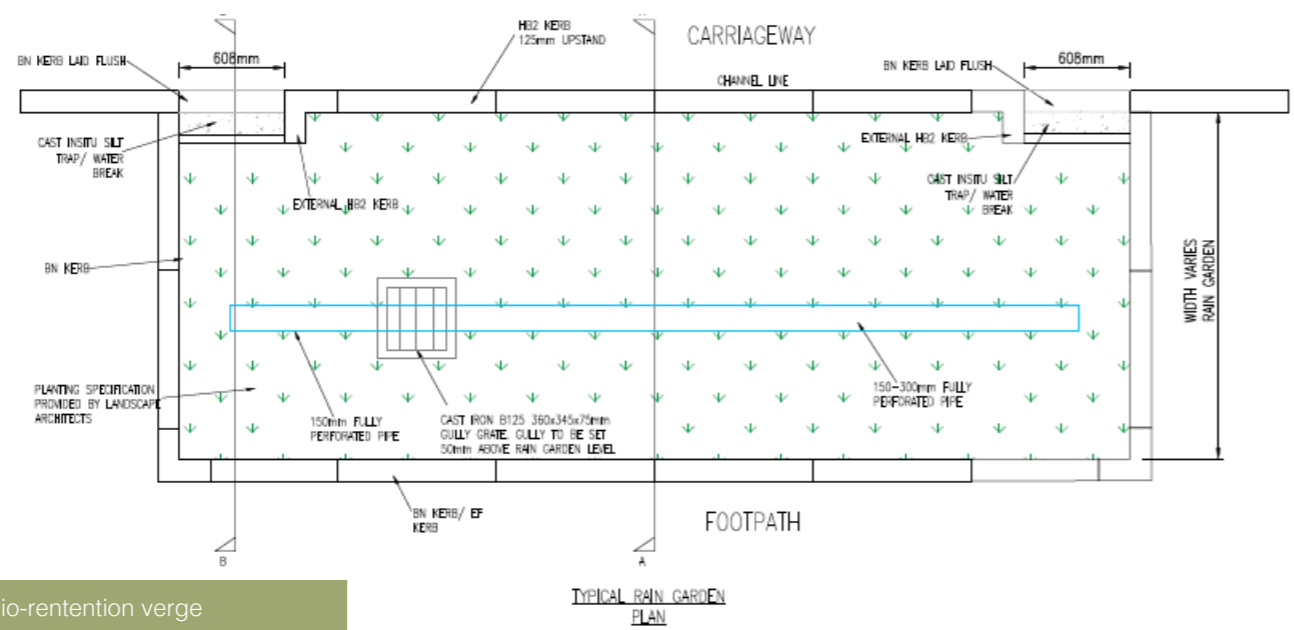
The base and banks of these drainage features will be seeded with their own meadow mixture that will suit the different conditions. The wildflowers will create a long season of interest through the summer months and be a valuable resource for insects and other wildlife that feed on them such as bats and birds. Paths around both of the basins allow residents to have a positive interaction with the basins with seating opportunities to appreciate the natural environment.

SuDS also supports development resilience to climate change, reducing the risk of localised surface water flooding. The scheme is also subject to legislation with regards sustainable surface water management and subject to SAB (Strategic Approval Body) approval via the local authority. An application has been submitted and is awaiting validation.

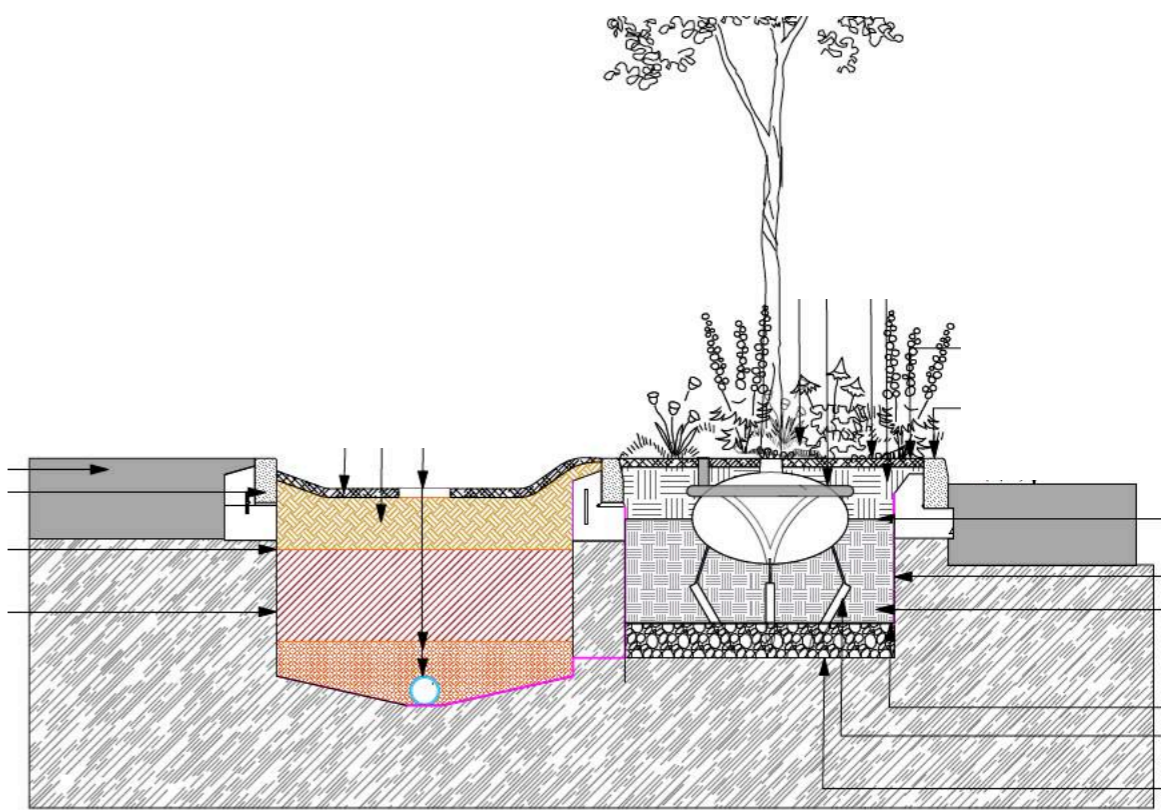
In terms of foul drainage, the site foul flows are to be drained via a gravity system that is intended to be offered to Dwr Cymru Welsh Water (DCWW) under a S104 application. The final point of connection will fall under a requisition to which DCWW has been instructed. The discharge of the foul water is subject to Surface Water removal under the remit of the Memorandum of Understanding (MoU) for which the investigations are underway.



Typical long elevation of bio-retention verge



Typical plan of bio-retention verge



Typical cross section of retention adjacent to highway tree planting

Pre-application discussions have identified that planting trees within bio-retention verges is not possible. The cross section below illustrates our approach to ensuring street trees are accompanied within the principal streets. The trees are placed in a separate planting bed in the form of raised built outs into the street, these then have additional benefits such as informal traffic calming.

GREEN & BLUE INFRASTRUCTURE STRATEGY

The proposed strategy takes into account the findings of the site analysis and builds upon the proposed development concept to create an attractive, connected and rich landscape setting for the new homes. General design principles of the proposed landscape strategies are based on best-practice guidance and a sensitive approach to the existing green infrastructure on the site:

- Hedgerows are retained as far as possible and enhanced with native species to maintain green corridors for local wildlife around the perimeter and through the middle of the development.
- Proposed tree planting has an emphasis on natives and species selected for both for their ecological value and amenity value for future residents. Feature trees in key locations create landmarks for the development and terminate key views.
- Planting within bio retention areas has been designed to increase biodiversity as well as sustainably manage run-off water. The attenuation basins are proposed to be seeded with a couple of meadow mixtures with to create biodiverse and attractive, yet functional drainage features.

Along with the formal LEAP area, a recreation route takes future residents on a circular route around the development and provides natural and informal play opportunities that encourage interaction with nature.

Front garden planting reflects the street hierarchy and uses natural elements from the surrounding environment to inform planting, such as the use of purple moor grass and heathers.

Street trees on primary and secondary routes are accommodated within landscape build out areas. These are multifunctional in that:

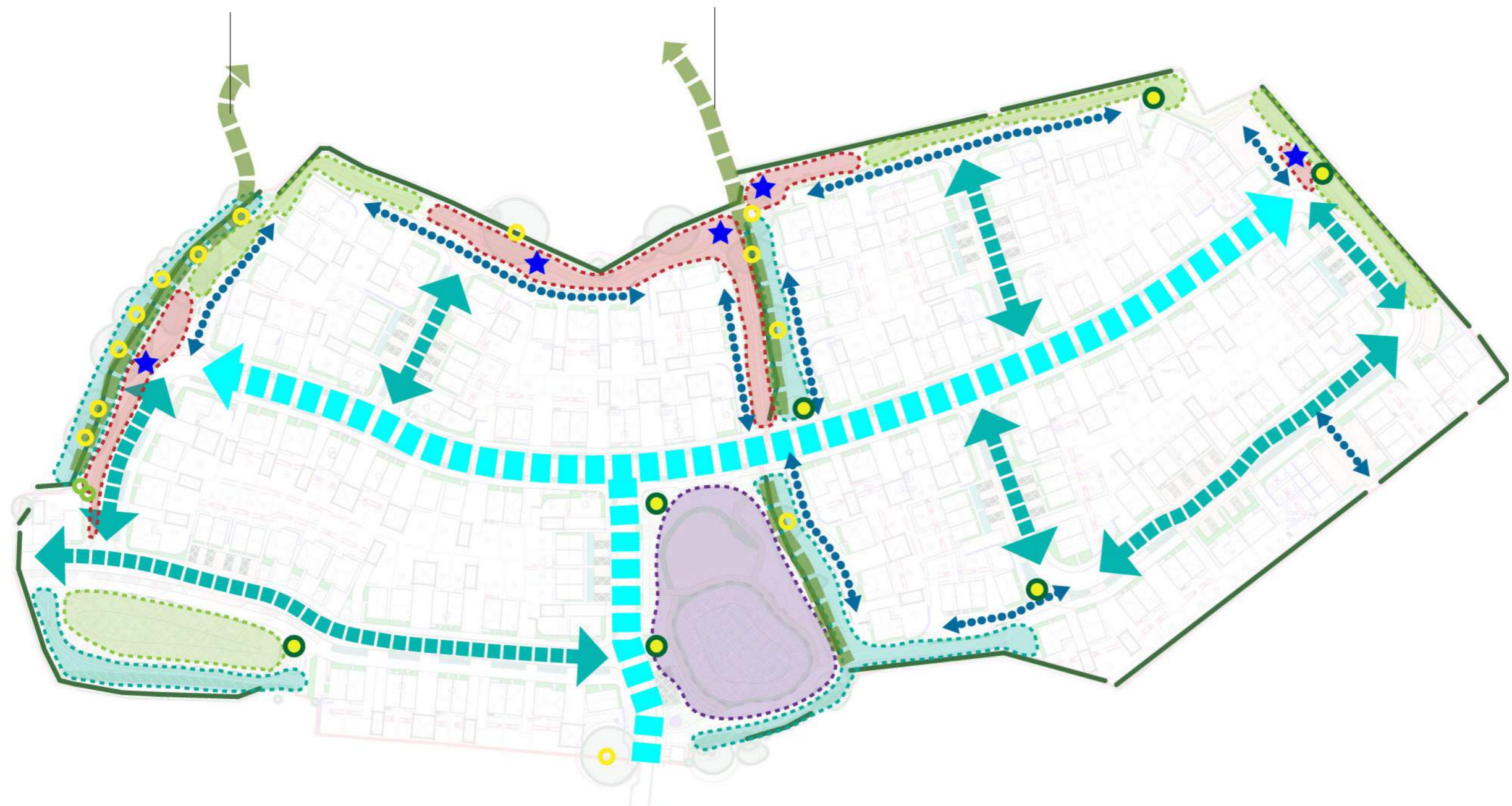
- They provide opportunities for street tree planting in the street
- They perform a natural traffic calming function
- They enclose or border on-street visitor parking bays
- On primary streets, they are consistently placed in front of a pair of Chester housetypes. This adds formality and structure to the streetscape.

The broad green infrastructure strategy is structured into the following character areas corresponding to the street hierarchy and proposed open spaces:

- **Primary Route:**
This area is focused on the core East-West route through the development.
- **Secondary and Tertiary Routes:**
This area represents the secondary and connecting tertiary routes within the development.
- **Private Drives:**
This covers private drives fronting public open space and the development boundaries.
- **Central Public Open Space:**
The open space at the site entrance that includes the LEAP, attenuation basin and retained existing hedgerow and trees.
- **Southern Open Space with bio-retention basin:**
The open space at the south-western corner of the site that accommodates the bio-retention and attenuation area.
- **Trim Trail / Recreation Route:**
The green area along the northern, eastern and western boundaries for the site that forms a continuous recreation route with interspersed informal play equipment.

Connectivity to wider landscape

Connectivity to wider landscape



Key

- Amenity Space
- Biodiverse Natural Planting
- Natural Grassland / "Wild"
- Amenity Space
- Townscape Tree
- Existing Townscape Tree
- Retained Existing Hedgerow
- ★ Play Intervention
- Primary Street - double bio-retention
- Secondary/Tertiary Street - single bio-retention
- Private drives
- Ecology Rich Corridor

05 DESIGN SOLUTION

PROPOSED LANDSCAPE MASTERPLAN

The adjacent plan shows the proposed planting scheme in detail including on-plot planting, boundary treatment and opens space.

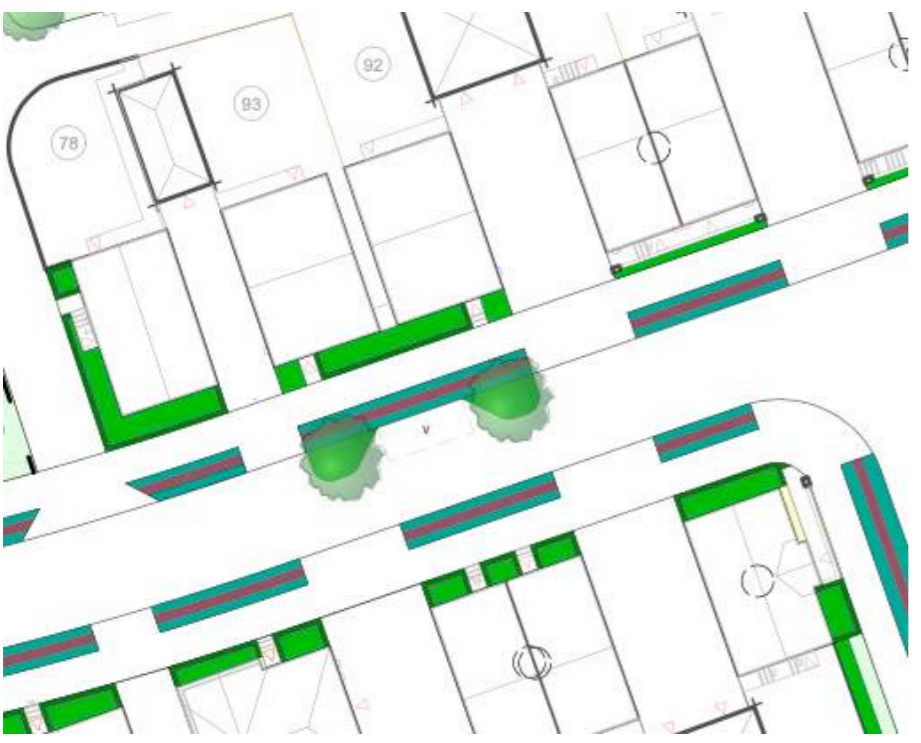


LANDSCAPE CHARACTER AREAS

Primary Routes:

This area is characterised by having bio-retention areas on either side of the highway, and being the core East-West route through the development. Front garden planting consists of low, formal clipped hedges contrasted with ornamental grass and perennial planting behind.

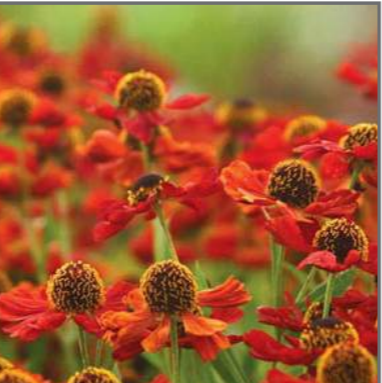
Street trees are incorporated within landscape build out areas, as demonstrated in the previous pages and illustrated below.



Clipped hedges



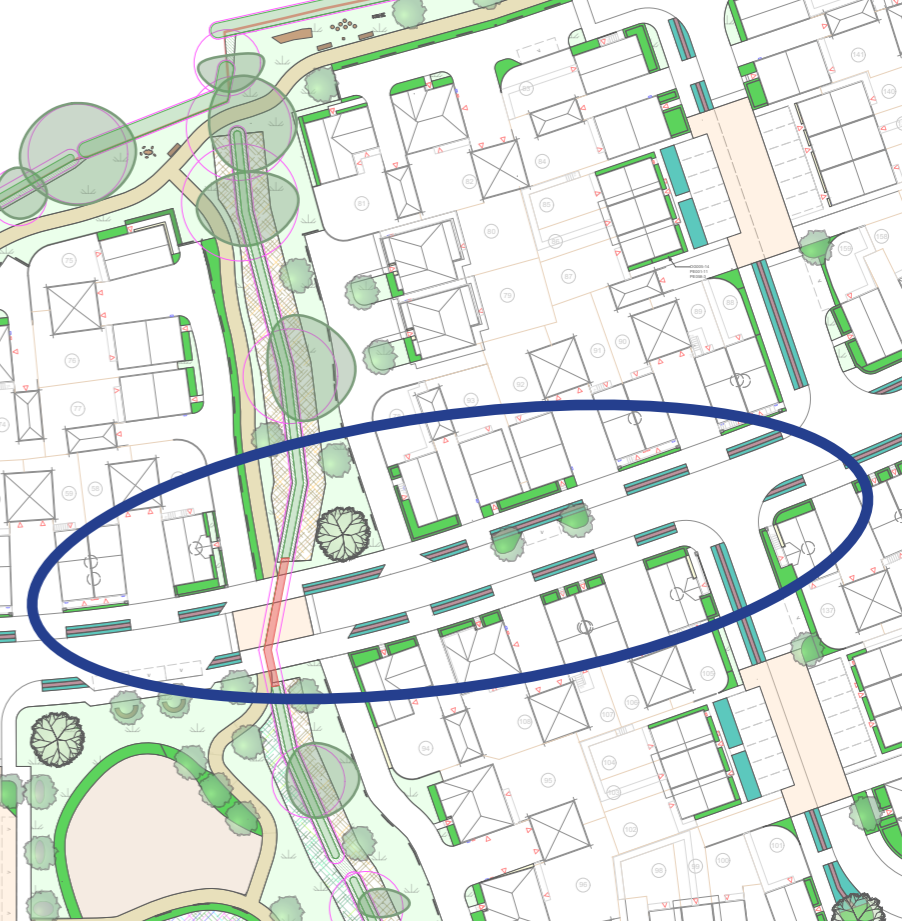
Deschampsia



Helianthus



Mahonia



LANDSCAPE CHARACTER AREAS

Secondary and Tertiary Linking Routes:

The character differs on these streets in that bioretention planting beds are on one side of the street only. Formal clipped hedges are replaced within front gardens by a less formal variety of lilyturfs and heathers backing onto grasses and perennials to provide a softer boundary to the planting. Block paved areas help to break up the streetscape in key locations.



Erica



Liriope



Molinia



Polystichum



Private Drives:

These areas of the development typically front onto the more ecologically-sensitive boundaries of the site. Front garden planting will consist of wildlife-friendly shrub planting to reflect the scrub/hedge perimeter of the site.



Hebe



Hypericum



Skimmia



Sarcococca



LANDSCAPE CHARACTER AREAS

Public Open Space:

The gateway open space in the centre of the site acts as the core amenity space for future residents, as well as performing a vital role in sustainable drainage. The strategy defines the roles for different portions of the space. Areas with a greater focus on biodiversity and ecology are concentrated adjacent to existing hedgerows and flowing towards the site entrance with a swathe of wildflower meadow.

The LEAP will provide exciting formal play opportunities in a natural environment and areas of lawn allow for informal play and relaxation. Timber seating gives residents an opportunity to pause and enjoy the views and nature.

The planting palette will echo the natural edges of the site, with shrub planting mixed in with native grasses and spring-flowering perennials. Bulb planting provides late winter colour and early nectar provision for insects. Trees are positioned to provide vertical green interest, vital shade in the summer and as an ecological resource. Specimen trees terminate key views and will become natural landmarks within the development. Hedgerows identified as species-poor will be enhanced with a native hedgerow mixture.

The formation of green corridor networks is referred to in the Local Development Plan, and the public space design has sought to enhance existing corridors across the site.



Deschampsia



Crocus



Viburnum



Verbena



Crocus



Narcissus



Wildflower meadow



Ilex



Fagus



Sorbus



Betula



Pyrus

Trim Trail/Recreation route:

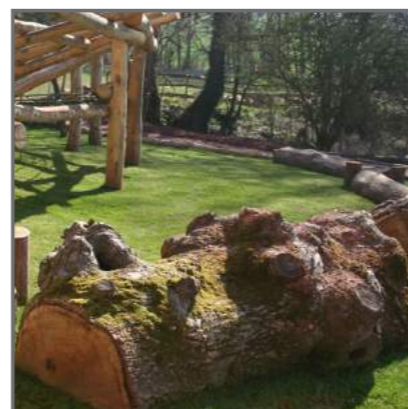
Encircling the edge of the development is an informal recreation route for future residents, much of which skirts adjacent to the natural, green edges of the site. A variety of wildflower mixes will be used to provide a natural boundary between hedgerows and the development, as well as bring biodiversity benefits by boosting plant species diversity across the scheme. A series of informal natural play opportunities for children such as magnifying posts, grass mound and timber play will be interspersed around the perimeter of the site. These features are designed to capture their imagination and learn about the natural environment.



Bug/leaf magnifying posts



Grass mounds



Play log/tree



Timber play animals



LANDSCAPE CHARACTER AREAS

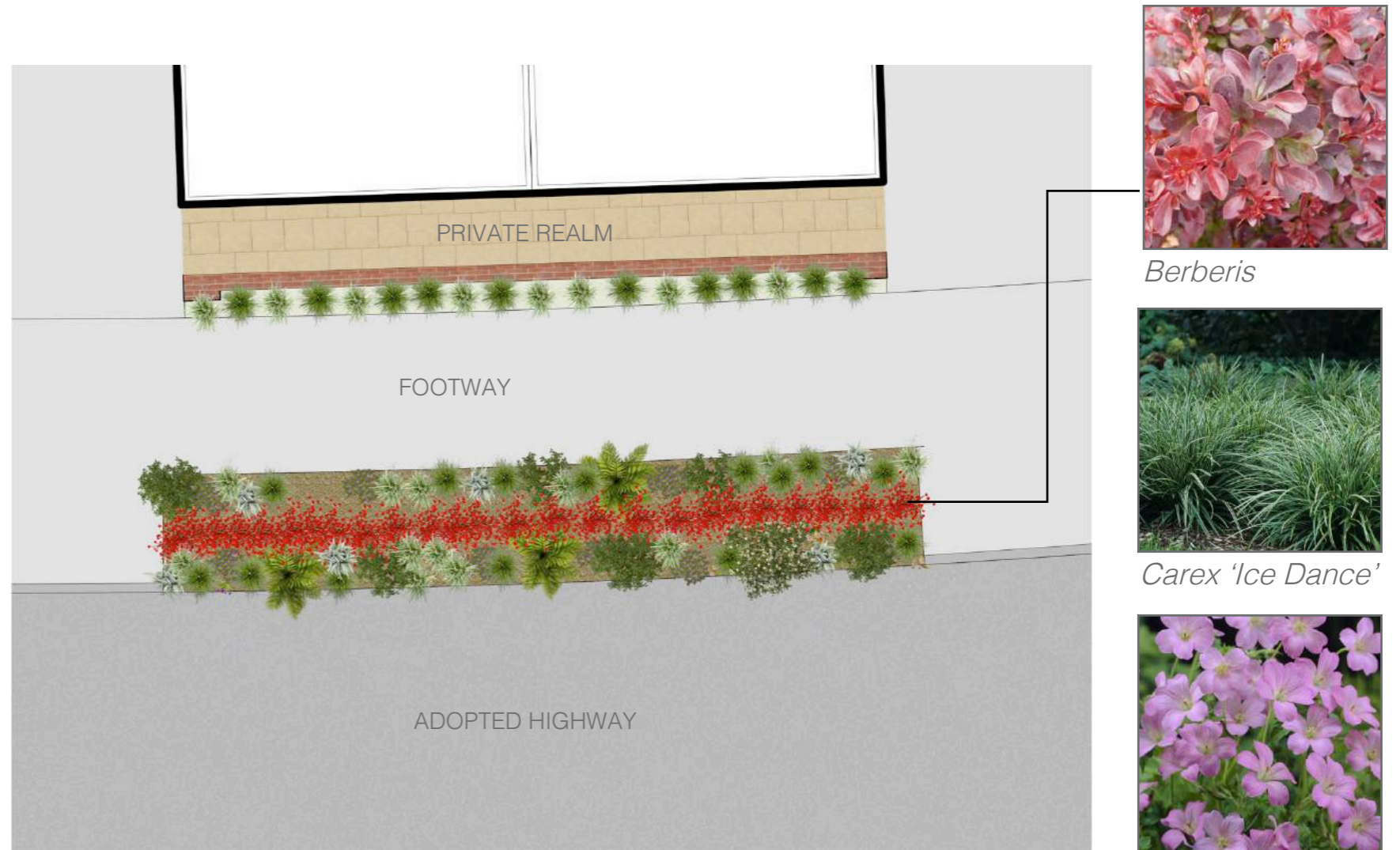
Bio-retention Areas:

These areas will sustainably treat surface run-off water from the carriageway as well as providing a green buffer between vehicle traffic and pedestrians/cyclists. The planting palette within these areas have been selected to meet a number of requirements, principally being:

- Tolerant of both wet and dry conditions
- Have a mature height of 600mm or less to maintain visibility along the residential streets.
- Able to provide a long season of interest both aesthetically for future residents but also in terms of biodiversity.

Down the centre of each bioretention basin will be a row of dwarf shrubs which echo the flow of water through the site (see illustrative plan adjacent).

Further bioretention planting behind some parking bays (on tertiary/ linking streets) are not limited by driver visibility splays, so feature taller ornamental grasses and flowering perennials.



Berberis

Carex 'Ice Dance'

Geranium



Ajuga



Calamagrostis



Carex divulsa



Sanguisorba



Stachys

CONCLUSION

This Design & Access Statement supports the full application for development at Llewellyn Road, Penllergaer. The document explains the design proposals and the rationale and approach taken to create an attractive and integrated extension to Penllergaer. The existing landscape has been integrated with modern and attractive new housing to create a sense of place that is unique to the site.





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