

# **Green Infrastructure Landscape Strategy**

**Castletreasure Housing Development  
Cairn Homes Properties LTD**

**Quality information**

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B	22/02/2019	For ABP	R. Loughnane	J.Crean	Graduate Landscape Architect
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D	11/04/2019	Ecology Chapter Update	R. Loughnane	C. O'Donnell	Graduate Landscape Architect

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# Contents

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Section 1 > **Executive Summary and Existing Site Conditions..... 4**

Section 2 > **Site Analysis.....9**

Section 3 > **Site Assessment.....14**

Section 4 > **Concept Approach.....15**

Section 5 > **Site Evaluation.....16**

Section 6 > **Green Infrastructure Strategy..... 17**

Section 7 > **Landscape Typologies..... 20**

Section 8 > **Landscape Networks.....27**

Section 9 > **Site Components.....29**

Section 10 > **Appendices .....37**

# Castletreasure > Executive Summary

## OVERVIEW

Castletreasure is a mixed residential development that presented an opportunity to develop a much needed site of significance and scale within Douglas. The site's principle constraint is the existing topography. The design team have developed the masterplan with an intent to mitigate the impact of built development within the context of this site. This is achieved through the introduction of a series of linear parks and green spaces that soften the development forming high quality public realm spaces containing a high amenity value. This provides amenity value and transforms the site into a new neighbourhood that is connected through its landscape strategy.

As a result the unique selling point of this scheme are the green walls which compliment the visual integration, while providing a biodiversity value and a aesthetically pleasing visual components. Furthermore the green wall strategy enables connectivity between the primary open space character areas.

## KEY HIGHLIGHTS

The key highlights within the development of the space are;

- The retention and supplementing of existing vegetation.
- The retention and protection of the existing Douglas & Moneygurney river courses.
- The development of green walls.
- A variety of landscape walks and trails.
- Parklets inclusive of play opportunities.

The proposed open spaces are designed as to resemble the existing vegetative fabric of the site, Linear parks are framed around existing hedgerows in order to enhance the opportunity for biodiversity to thrive within the area. Both watercourses, to the east and west of the locality, form the spine of the parkland that border the development. These high value amenity spaces contain trails and walks that weave through the woodland and wildflower meadows offering contrast to the urban grain that exists within typical residential developments.



Figure 1a, Proposed Photomontage

# Castletreasure > Landscape Framework Plan



Figure 1b , Landscape Framework Plan

# Executive Summary > Green Infrastructure Strategy

The green infrastructure concept involves the planning, management and engineering of green spaces in order to provide specific benefits to society. It is a network of green spaces, habitats and ecosystems within a defined geographic area and comprises of wild, semi natural and developed environments. This process is applied by the design team in order to help nature meet the built development in a more sensitive manner.

The proposal seeks to create a positive receiving environment and access in conveyance of water surface run off, which creates a better sense of place and a more aesthetically pleasing landscape. The retention of existing vegetation helps to manage run off from adverse weather conditions towards both river's.

Designing green space and public realm with a sufficient green infrastructure strategy that works well during all seasons of the year can provide valuable community recreational space as well as important environmental infrastructure. The design provides sports pitches, squares, courtyards, playgrounds, green corridors and woodlands which are all popular types of open spaces. These will also contribute to development targets for open space as they are designed to be multifunctional in their use.

## MULTI FUNCTIONALITY

This particular strategy is designed to include a range of natural processes for managing and enhancing the habitat protection and biodiversity of the site. The inclusion of a range of vegetation within the multiple open spaces support local biodiversity and aims to develop ecological corridors also.

In order to enhance the ecology of the area a variation of planting will be used, ranging from woodland planting to more common garden varieties. Consideration has been given to species and maintenance requirements of existing habitats through the inclusion of native and pollinator friendly non-native planting.

The overall landscape will benefit aesthetically from the Green Infrastructure strategy and in doing so, the access to open space, resilient material selection and high quality public realm will contribute to the character of the proposed development.

<http://www.irishlandscapeinstitute.com/wp-content/uploads/2012/08/GreenInfrastructure.pdf>

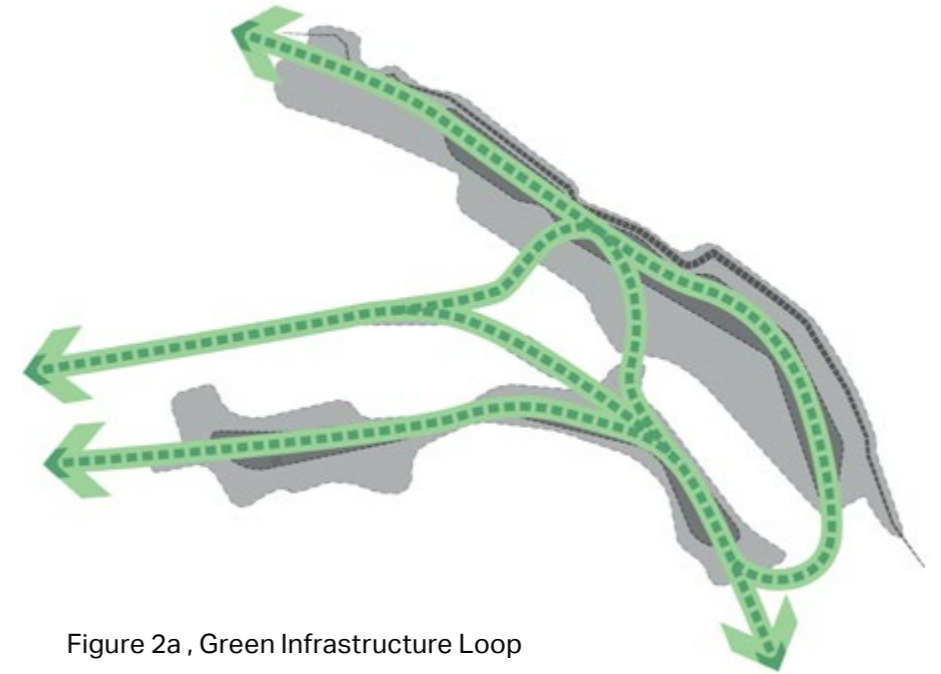
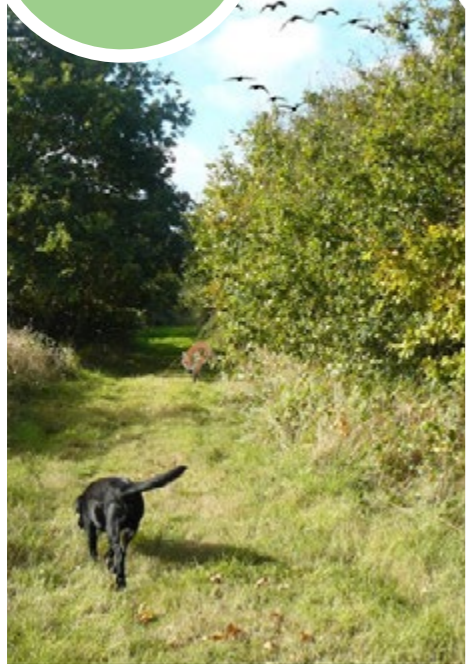


Figure 2a , Green Infrastructure Loop



CONNECTIVITY



CONVEYANCE



BIODIVERSITY



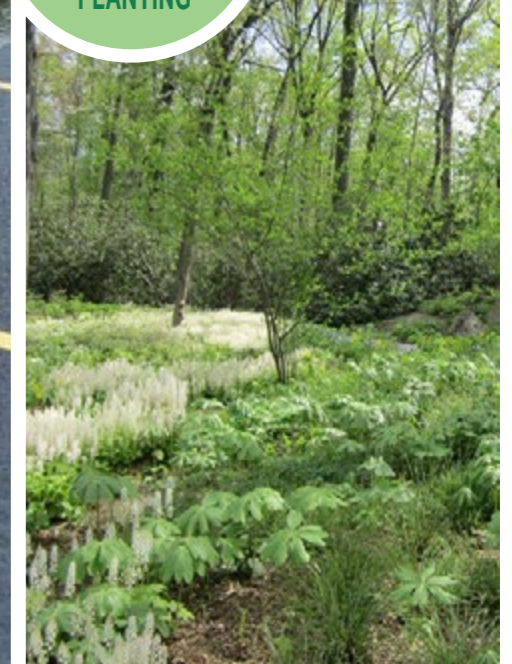
LANDSCAPE STRUCTURES



PERMEABLE PAVING



MIXED CANOPY PLANTING



# Executive Summary > Green Infrastructure Strategy



Figure 2b , Green Infrastructure Strategy

# Analysis > Existing Site Conditions



Figure 3a , Views within the site







# Analysis > Site Constraints



Figure 3b, Existing Site Constraints

# Analysis > Topography

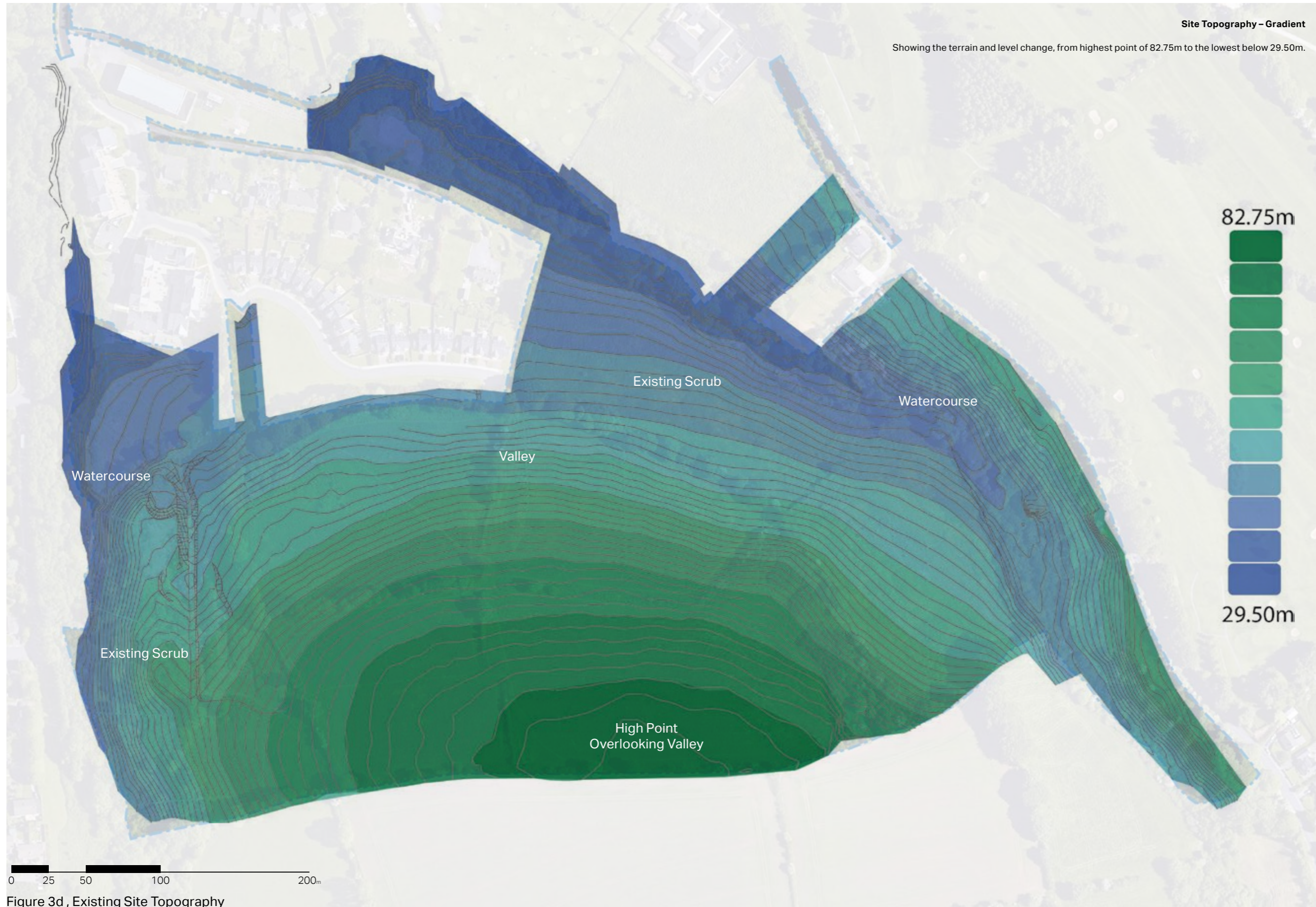


Figure 3d , Existing Site Topography

# Analysis > Existing Ecology Network Character

The existing ecology within castletreasure is an essential consideration for the future design in order to preserve and enhance the biodiversity within the site.

The most important ecological receptors present regarding green infrastructure include Douglas and Moneygurney Streams with associated wet woodland, as well as hedgerows and treelines formerly associated with historically managed agricultural fields. The vegetated and relatively linear nature of such features not only support biodiversity in general but also provides wildlife corridors when connected to ecological receptors in the wider environment. Wildlife corridors provide a necessary and essential role for the movement of biodiversity to fulfill their various ecological needs and support species richness.

Both semi-natural watercourses are currently of biodiversity value in a local context, where the Moneygurney Stream is also of county importance as it is known to support brown trout in its upper reaches as well as an urban population downstream. The wet woodland present along the riparian zone of both watercourses is of county importance as it has a relatively high degree of naturalness combined with a Tree Preservation Order (TPO: 1 of 1984) assigned to the wet woodland of Douglas Stream.

Hedgerows present are of higher local value due to their overall semi-natural state and biodiversity value in a local context. While some existing hedgerow sections are structurally poor, there is an opportunity for the proposed landscaping strategy to improve on this existing situation through new/supplementary native hedgerow planting. Treelines present are of higher local value due to their overall degree of naturalness and biodiversity in a local context. The importance of hedgerows and trees here is acknowledged through Objective SE-R-06 of the current Ballincollig Carrigaline Municipal District Local Area Plan that asks to 'retain existing trees and hedgerows within the overall development of the site'.

The green infrastructure landscape strategy here acknowledges the importance of maintaining, protecting and enhancing wildlife corridors at the site through;

1. The retention and protection of Douglas and Moneygurney Streams and associated wet woodland, with new and supplementary native woodland planting that will offset losses of existing wet woodland and allow a net gain of native woodland.
2. The retention and protection of hedgerows/treelines, with new and supplementary native hedgerow planting to compensate for losses of existing hedgerows/treelines that will result in a net gain of native hedgerow.
3. Use of native and non-native pollinator friendly planting mixes, including new wildflower meadow and grass/clover areas.

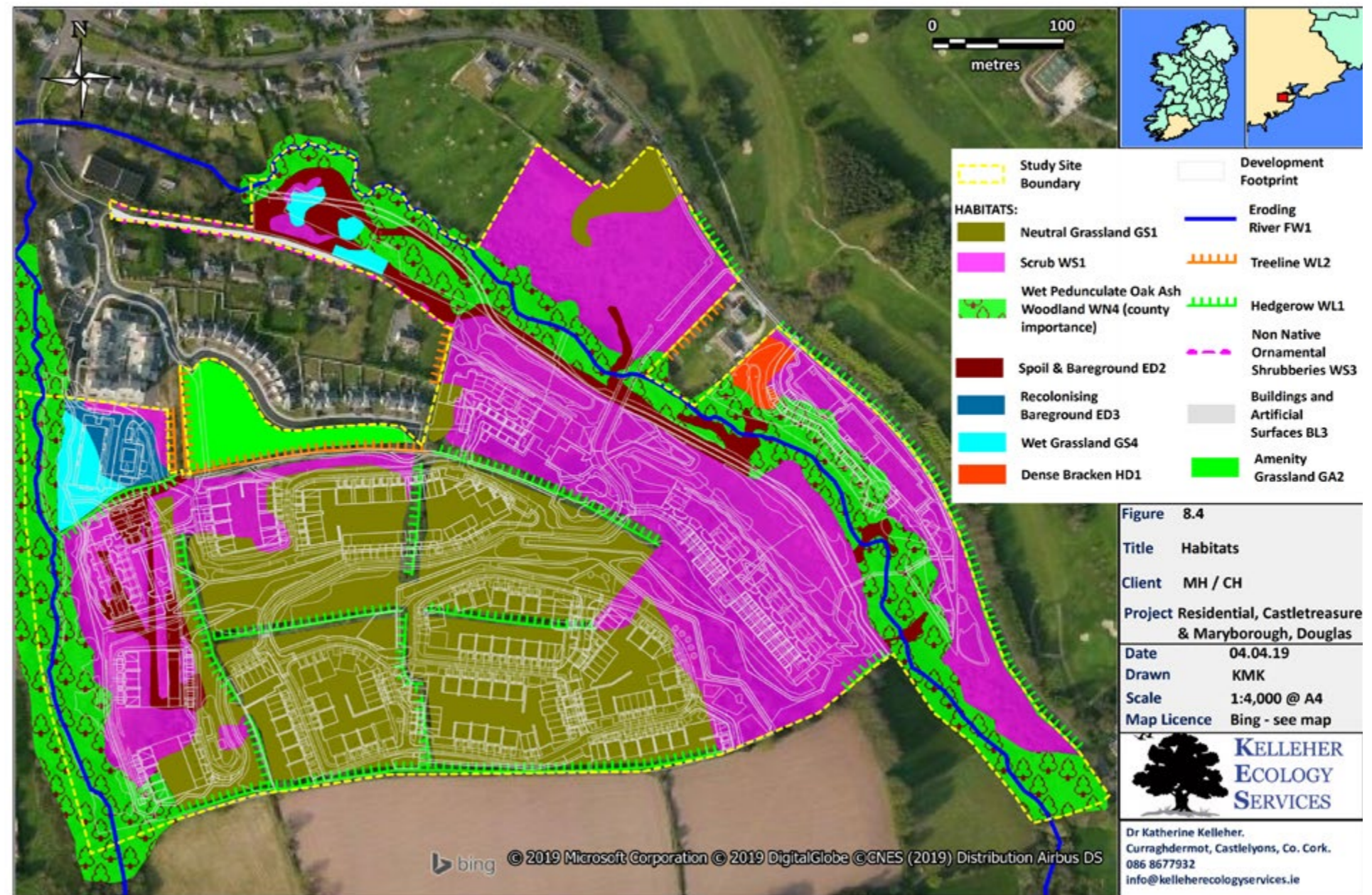


Figure 4a. Existing Habitat Ecology: Kelleher Ecology Services

# Analysis > Tree Protection Zones & Root Protection Areas



Figure 4b, Tree Protection Order and Root Protection Zones

## Assessment > Planning Context

The receiving site is identified as residential under the 2017 Ballincollig Carrigaline LAP as parcel SE-R-06 in the south environs of Cork City. It is positioned on the periphery of existing residential built up areas and the existing Douglas Golf course and a strategic land reserve to the south which is currently agricultural land.

In conjunction with the county development plan the team have targeted a number of policies which the scheme will focus on promoting from the outset of the scheme and to integrate within the scheme specific to landscape as follows:

HOU 3-1: Sustainable Residential Communities

HOU 3-2: Urban Design

SC 1-1: Social and Community Infrastructure Provision

TM 2-1: Walking

TM 2-2: Cycling

HE 2-5: Trees and Woodlands

GI 6-1: Landscape

GI 6-2: Draft Landscape Strategy

GI 6-3: Draft Landscape Strategy and Local Area Plans

GI 8-1: Prominent and Strategic Metropolitan Greenbelt Areas requiring Special Protection

Further detail on how the landscape design contributes to the surrounding context in conjunction with the above will be detailed in the landscape typologies later in the report. This outcome has also taken into consideration guidance in the form of Cork County Council's 'Design Guide for Residential Estate Development' 2011. National guidance has also been considered, including the Urban Design Manual and the Design for Manual for Urban Roads and Streets.

### SE-R-06

Development of this site is to include the following;

Medium A density residential development to cater for a variety of house types and sizes.

3 Ha of additional open space over and above what is normally required in housing areas. This Open space should include a fully landscaped and useable public park

Retain the existing trees and hedgerows within the overall development of the site.

A site for a primary school that could be accessed from the R609 and developed by the Department of Education in the short term.

The timing and provision of appropriate drinking water and waste water disposal services for the development including where necessary the upgrading of off-site infrastructure.

Provision of a cycleway

Consideration will need to be given to the provision of a primary school within this site at the detailed planning application stage.

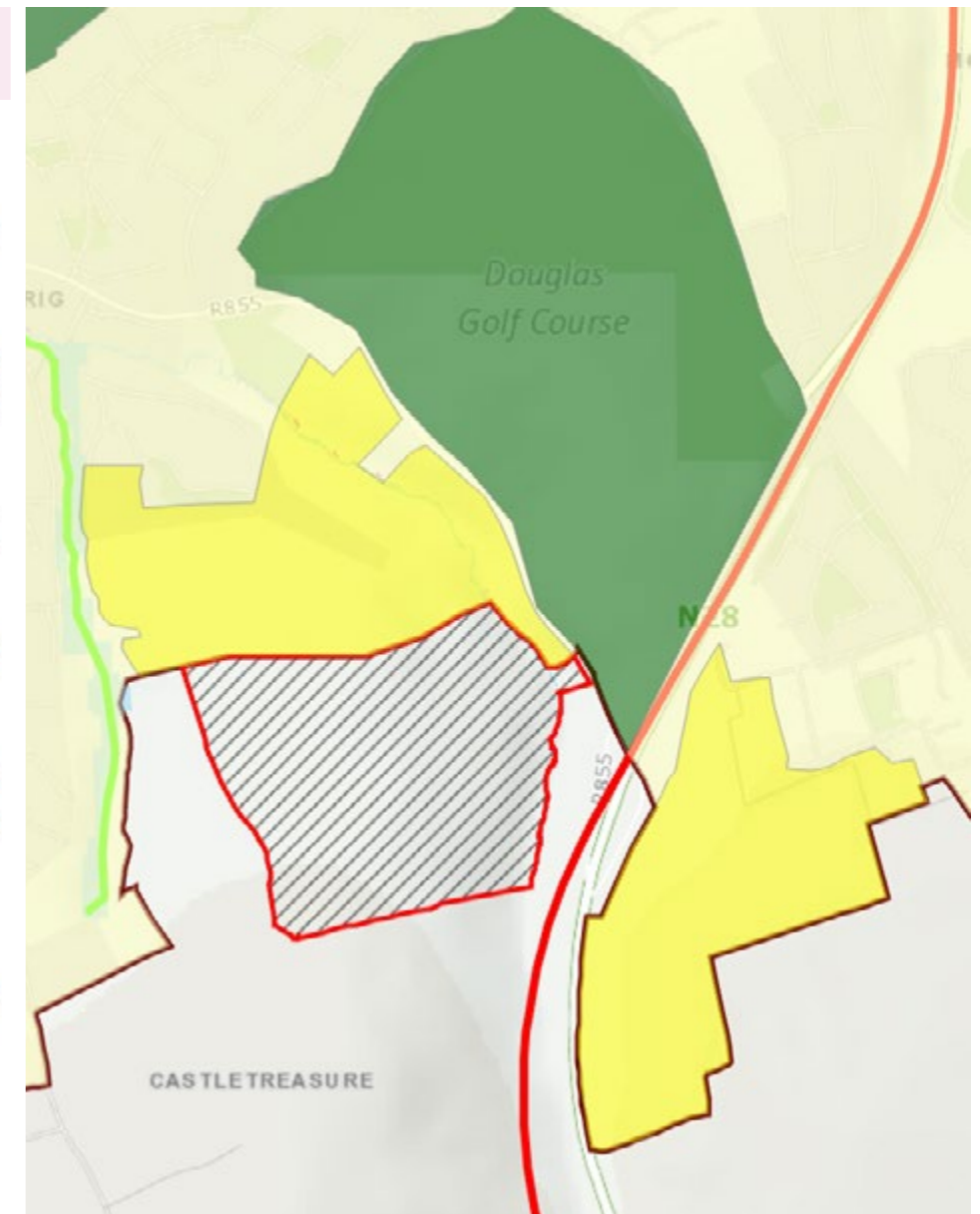


Figure 5a , Cork County Development Plan

# Approach > Concept Approach

This site currently comprises of six definable fields, framed by the hedgerows and existing trees. We propose to divide the site into three character types; hilltop, hillside and valley reflective of the existing topography and aspect within the site envelope. It is these character areas that vary in elevation significantly across the site that form the foundation of the landscape approach. It is our intent to extrude the disparity between these areas through the introduction of vegetated retaining walls. These structures have enabled the site plan to set the framework for larger active open spaces and areas of social congregation within the scheme. Concurrent to this the team have focused on supplementing the existing hedgerow corridors, rich in biodiversity with amenity trails for all end users in the proposed community.

The first character area, hilltop, has an open aspect and vistas towards the city and to the undulating agricultural landscape to the south. The second character the hillside, wrap around the northern side of the hilltop by extruded retaining landforms, this too will often be bathed in sun over the summer period but would be sheltered by the surrounding trees. Large sections of existing hedgerow will be retained in this character space to supplement the overall receiving space

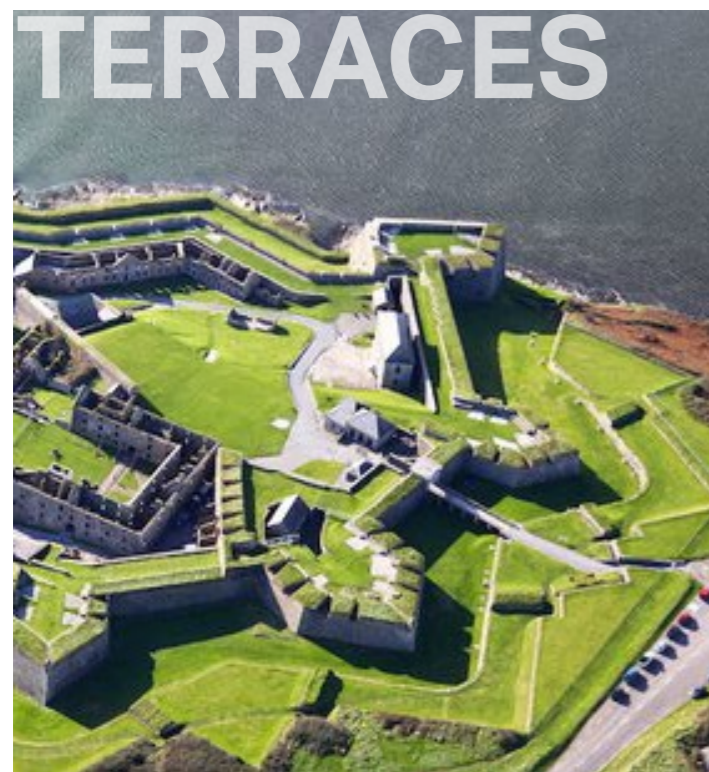
And the third character is the valley; this forms the longest stretch along the eastern edge of the site, with the greatest variation in habitats such as woodland, meadow and a river corridor. The proposed greenway will provide links into Douglas village and adjoining communities.



Figure 5b, Site Opportunities



Figure 5c, Character Areas



# Evaluation > Site Constraints & Usage Of Space

The total open space makes up 53% of the proposed site, Within this space 36% (4.2Ha) of it has been considered as usable open space with the remaining 7.2Ha being accounted for through woodland planting, streetscapes and services.

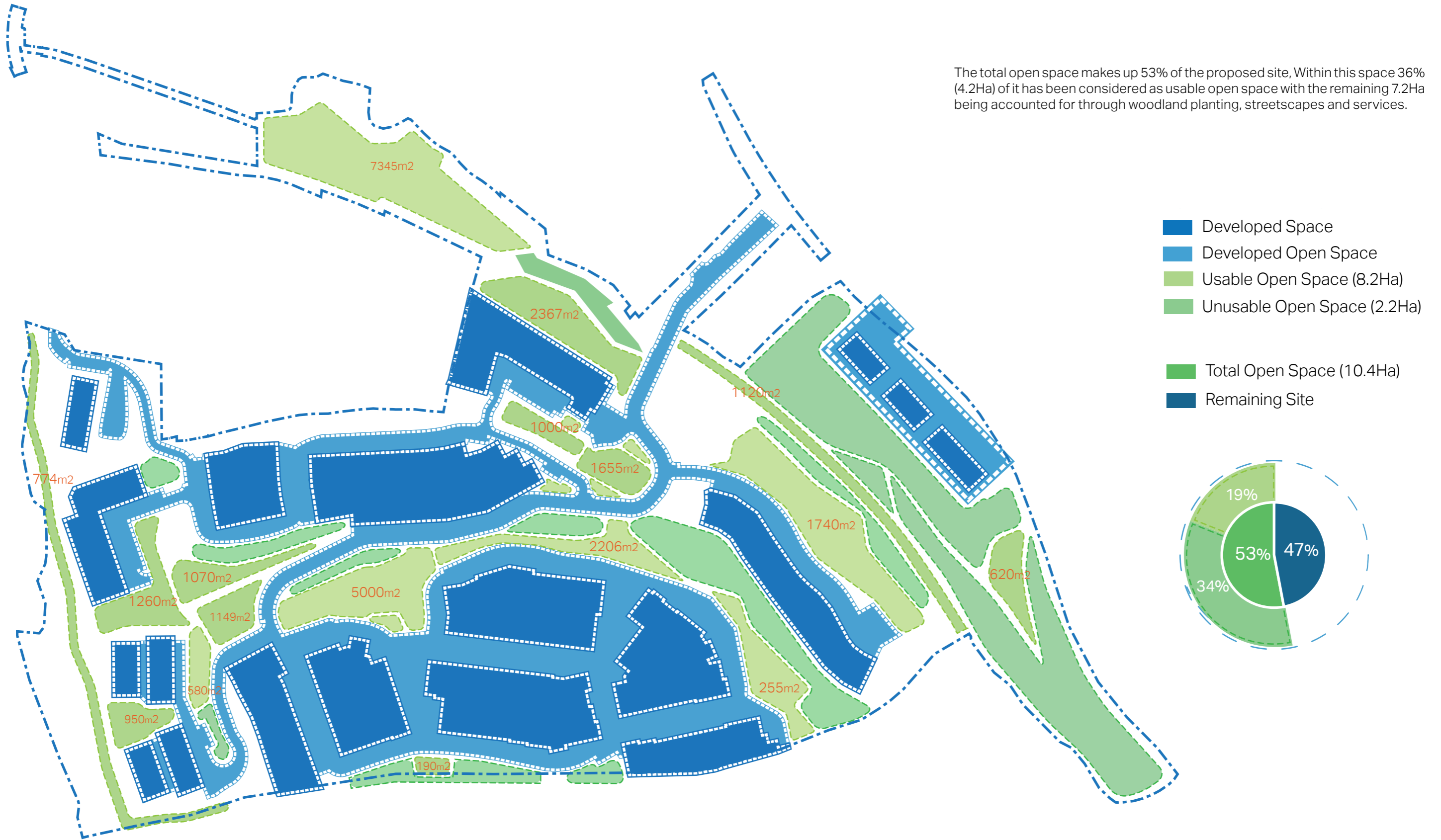
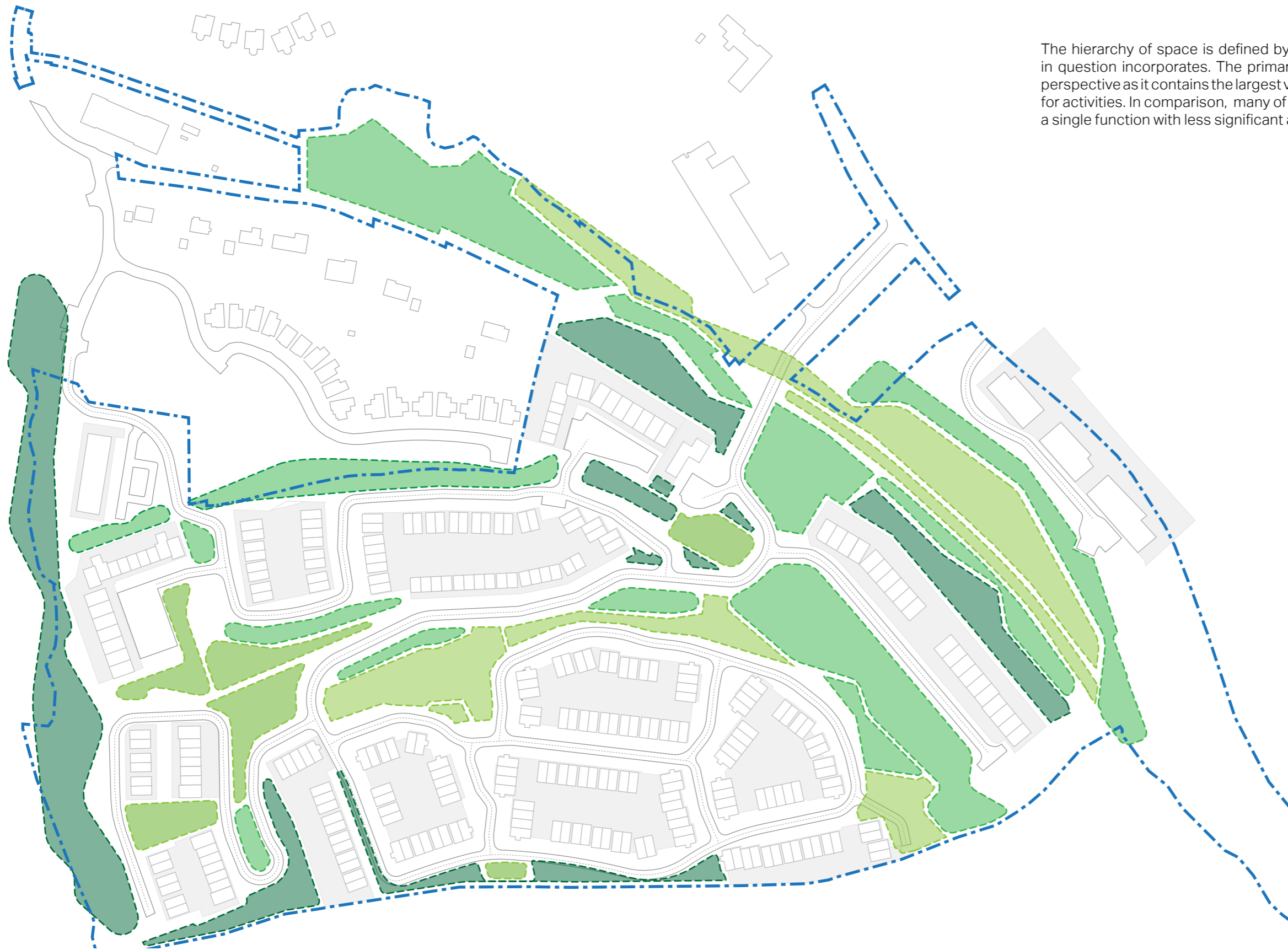


Figure 6a, Landscape Structure



# Green Infrastructure Strategy > **Open Space Hierarchy**



The hierarchy of space is defined by the number of functions that the space in question incorporates. The primary open space is determined by a user's perspective as it contains the largest variety of functions, including the provision for activities. In comparison, many of the tertiary spaces within the site contain a single function with less significant activities for the residents.

- Primary Space
- Secondary Space
- Tertiary Space

Figure 6b , Open Space Hierarchy

# Green Infrastructure Strategy > Landscape Structure as a Framework for Development



Figure 6c, Landscape Structure

# Green Infrastructure Strategy > **Vegetative Typologies**



Figure 6d , Vegetative Typologies

# Green Infrastructure Strategy > Landscape Typologies

A variety of landscape typologies are incorporated within the design across the development site, each offering a distinct character, purpose and program. These character areas function as part of a site-wide landscape architectural framework, ensuring suitable screening, visual and aesthetic interest, recreation and movement across all of the development.



0 25 50 100 200m

Figure 6g, Proposed Landscape Typologies

# Landscape Typologies > Village Park

## Castle Terrace Linear park

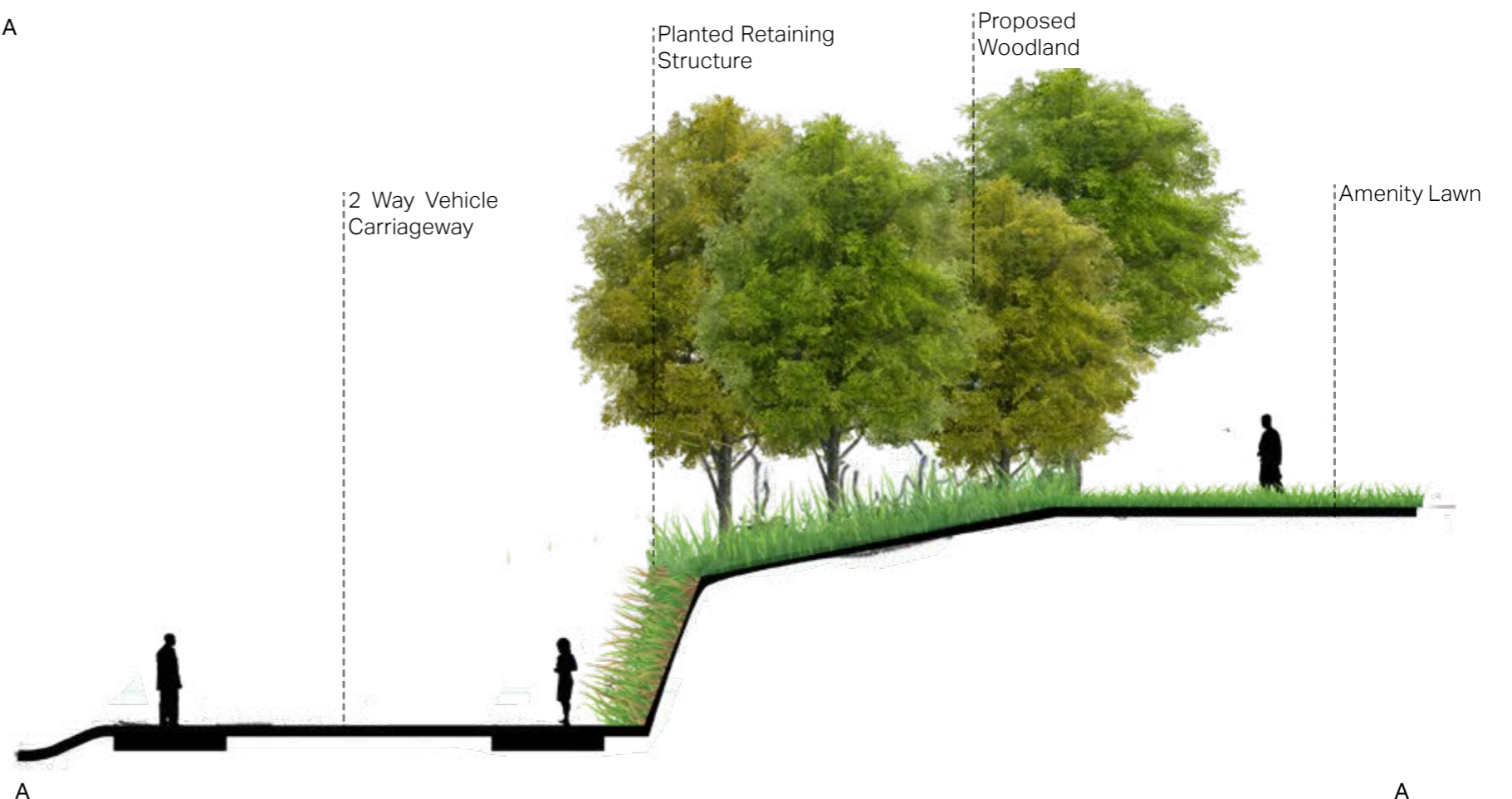


We propose to divide the site into three character types; hilltop, hillside and valley reflective of the existing topography and aspect within the site envelope. Within this breakdown, the design comprises of five definable open space structures, incorporating the County Development Plan Objective GI 6-1 which is to ensure that a pro active view of the development is undertaken while maintaining respect for the existing environment in line with the principle of sustainability.

The first character is the Castle Terrace Linear park, this park sits in the centre of the site and acts as a gateway and axis in order connect the remainder of the site, while also containing a diverse, parkland consisting of amenity lawn, mixed canopy planting, woodlands and a number of play areas.

The key feature within this space are the landscape structures that form the retaining elements within the terraced park, these planted walls add to the biodiversity while also being an aesthetically pleasing form of site engineering.

Section A - A



# DIVERSE PARKLAND

# Landscape Typologies > Dughghlaise Valley

## Dughghlaise Valley Nature Park

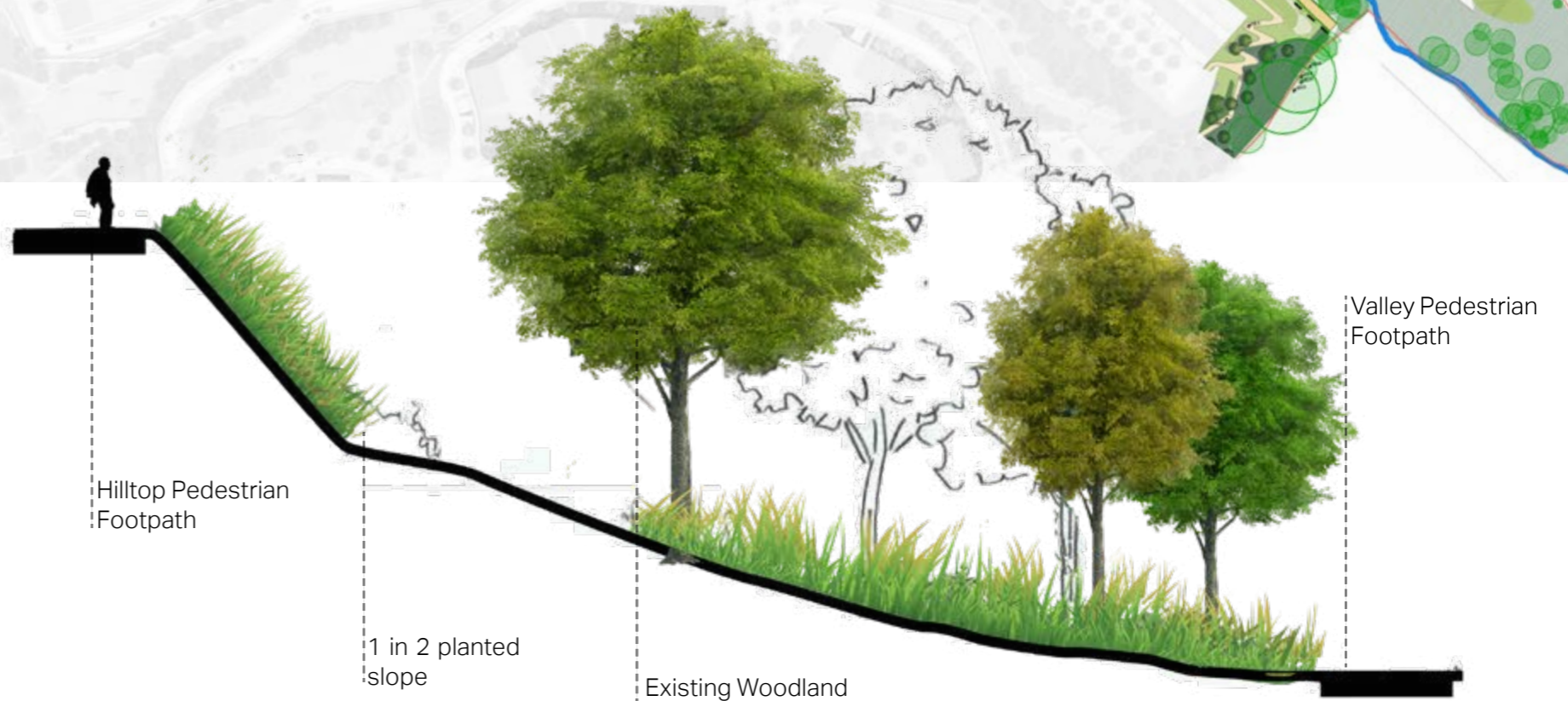


The second character area is the Valley park, this forms the longest stretch of open space along the eastern edge of the site, with the greatest variation in habitats such as woodland, meadow and a river corridor. In terms of conveyance the Valley park uses these elements to add to the biodiversity of the site, maintaining and adding to capability to deal with the storm water run off and drainage issues that may be brought by the new character of the site.

The proposed greenway will provide links into Douglas village and the adjoining communities which will improve walking and cycling as per objective TM 2-1 and TM 2-2 in the county development plan. The Irish Water wayleave is retained as a variety of grassland passive species leaving vast areas of aesthetically high quality amenity space, and an opportunity for fauna to take advantage of the connectivity provided.



Section B - B



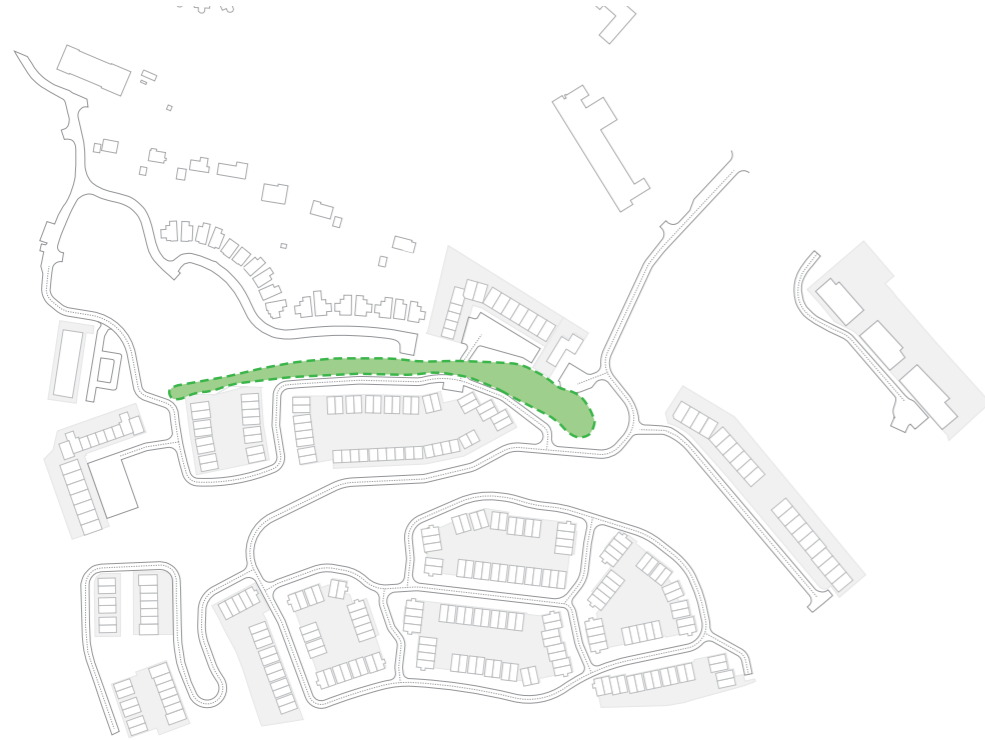
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B



# Landscape Typologies > Hedgerow Trail

## Hedgerow Trail Linear Park

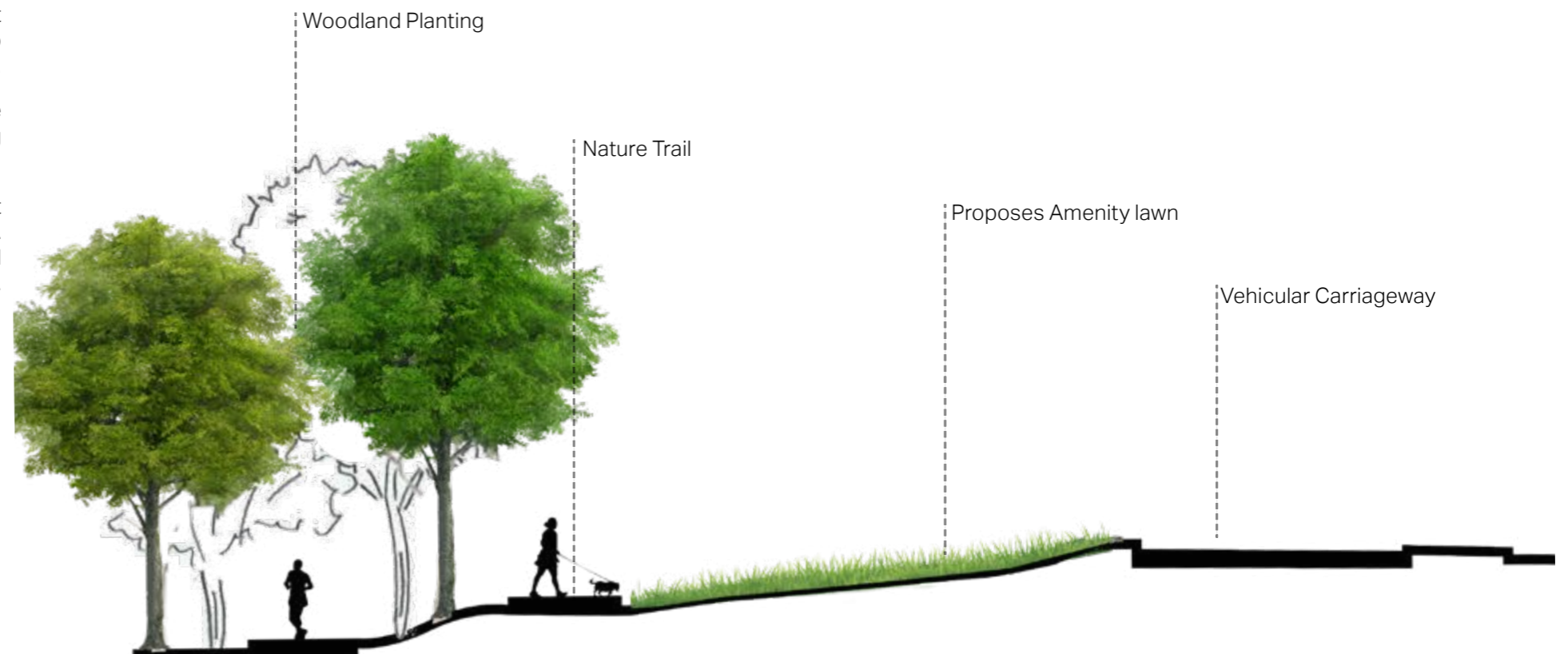


The third character area is a linear hedgerow trail that runs to the north of the terrace park. Although open amenity space is sparse within this area, an activity trail forms the length of the space surrounded by a range of mixed canopy planting that act in accordance with objective HE 2-5 of the Cork County Development Plan in relation to the protection of mature trees/groups of trees. The space also provides connectivity for the biodiversity of the site due to its off road character.

This space uses an off road route to enable an alternative pedestrian trail. The proposed space will contain a series of break out spaces along its route leading towards a primary focus area, the play area in close proximity to the crèche.

The trail is designed to promote physical fitness training within these break out spaces containing obstacles such as stepping posts, chin-up and climbing bars. It is envisaged that the trail will be inclusive to people of all levels of fitness and ability which the most challenging aspect being the existing natural topography.

### Section C



# Landscape Typologies > Parklets

## Parklets Recreational and Family



The fourth typology are the multiple play areas that are positioned throughout the site, the location of these spaces are chosen by their proximity to the houses based on walking distance's from the appropriate park. The play area's accommodate each age group using a mix of play equipment and surface finishes, ranging from a child's springer to a half basketball court for teens.

The parklets are split into spaces of primary play equipment and spaces containing play opportunities. The latter being areas of more informal, natural play in smaller pockets distributed around the site.

As per objective SC 1-1 of the County Cork Development Plan there is a requirement for the provision of social and community facilities which meet the current and future needs of the entire population, these parklets help to achieve this purpose.



Section D





# Landscape Typologies > Homezones

## Homezones Shared Surfaces

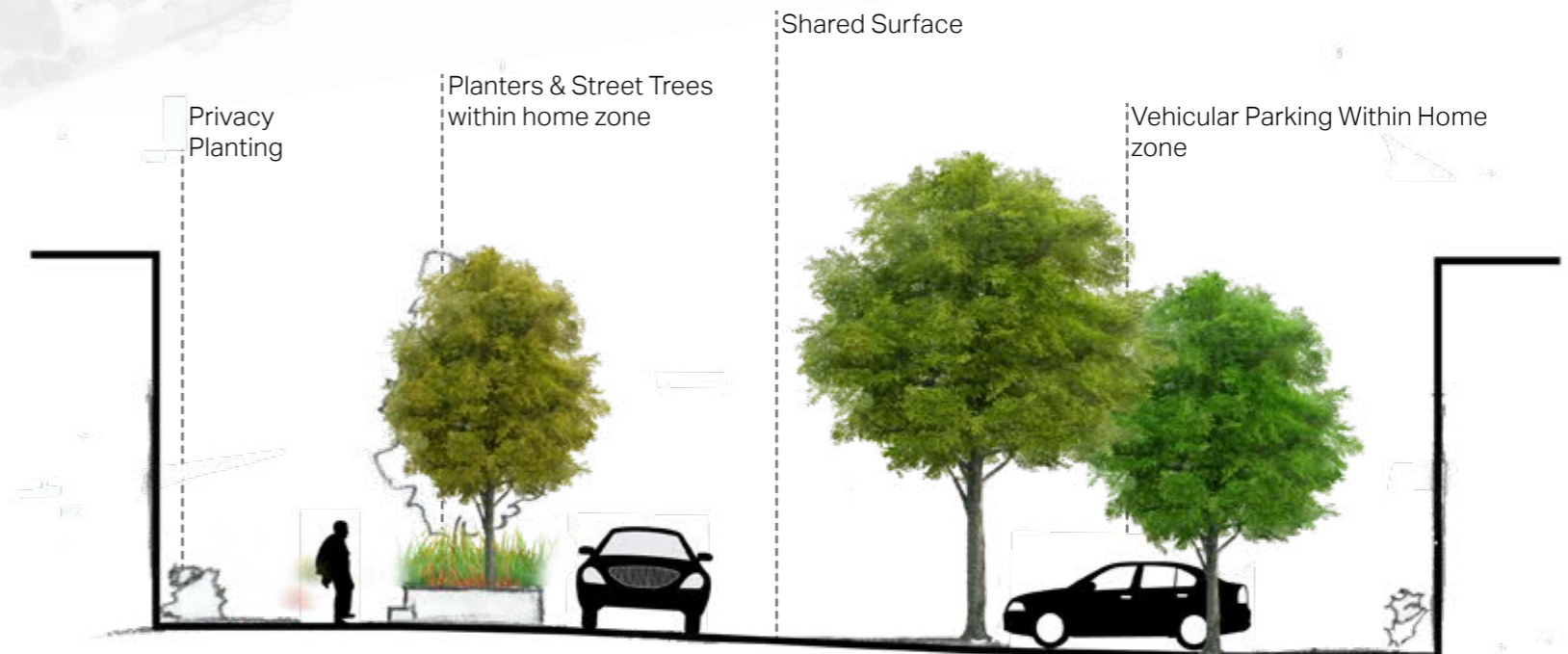


This typology is the home zones within the streetscapes of the developments, these zones are designed to reduce traffic speeds and contain shared surfaces aligned around the clusters of residential properties across the site. As per objective HOU 3-2 of the Cork County Development Plan we have taken account of the Design Manual for Urban Roads and Streets with regard to creating a sustainable residential community.

These pedestrian friendly spaces will be primarily hardscape incorporating permeable paving and the use of shrub planting and street tree's which in themselves form landscape structures while also adding to the biodiversity and aesthetic within the typology. These vertical elements also contribute to slowing down vehicles, especially those passing through the home zones. The carriageway within the home zones will be coloured asphalt containing bands of paving at gateways and crossing points.



Section E



# Landscape Typologies > Streetscapes

## Streetscapes Private Parking



The streetscapes within Castletreasure are designed to offer private parking outside home's with a focus on pedestrian safety. In line with County Development Plan Objective TM 2-2, it focus's on improving the streetscape environment for pedestrians, cyclists and those with special mobility needs while seeking to provide facilities which enhance safety and convince. In addition, this design will also keep in line with County Development Plan Objective TM 2-1. The design facilitates and encourages safe walking routes that also connect to wider pedestrian and cycling routes, making the site more permeable on foot. We have worked to achieve this using Design Manual for Urban Roads and Streets as guidance.

The parking areas will be defined using a pre cast permeable block paving as a finish of high aesthetic quality.



Section F  
2 way Vehicular Carriageway  
25m 50m



STREETSCAPE

# Landscape Networks > Amenity / Recreation Provision

**Gross Area** 21.9 ha  
**Number of Units** 472  
**Zoning** SE-R-06  
**Movement Type** Pedestrian / Cycle

## Greenway

Extending green infrastructure provision into Douglas Village



## Fitness

Community provision for all ages and abilities



## Play

Children Focused trail to promote active play



The creation of a responsive landscape featuring the suitable amenity and recreation provision will increase visual screening and add biodiversity value to the existing green finger along the site boundary.

Based on the number of units the team have a target of 79 points based on 472No of Units. It is acknowledged that 30% (23.5 points) will be accommodated on site.

The proposed development will feature a number of recreation and amenity opportunities as outlined in the following pages. Some of these features are not included within the council's points table. As such the team have sought to create an overview of these and assigned a value to non-standard items included along with the recreation and amenity strategy policy appendix. It is considered that if a 'Grassed Playing Pitch' equates to 42 points and in accordance with the Recreational and Amenity Policy is 0.8 hectares in size, this equates to 1 point per 190 sqm.

5 minute Cycle / 15 Minute walk to Douglas

Proposed Greenway		Proposed Fitness Trail	
Length	6191/m	Length	12001/m
Width	4m	Width	2.5m
Overall Area	2477m <sup>2</sup>	Overall Area	3000m <sup>2</sup>
Points value	13	Points Value	15
Proposed Local Play Areas:		Proposed Neighbourhood Play Areas:	
No:	2	No:	5
Overall Area	2068m <sup>2</sup>	Overall Area	2498m <sup>2</sup>
Points Value	6	Points Value:	5
Proposed Half Court		Proposed Play Trail	
Length	14m	Length	14001/m
Width	17m	Width	2m
Overall Area	238m <sup>2</sup>	Overall Area	2800m <sup>2</sup>
Points Value	29	Points Value	14
<b>Total Points:</b>	<b>82</b>		

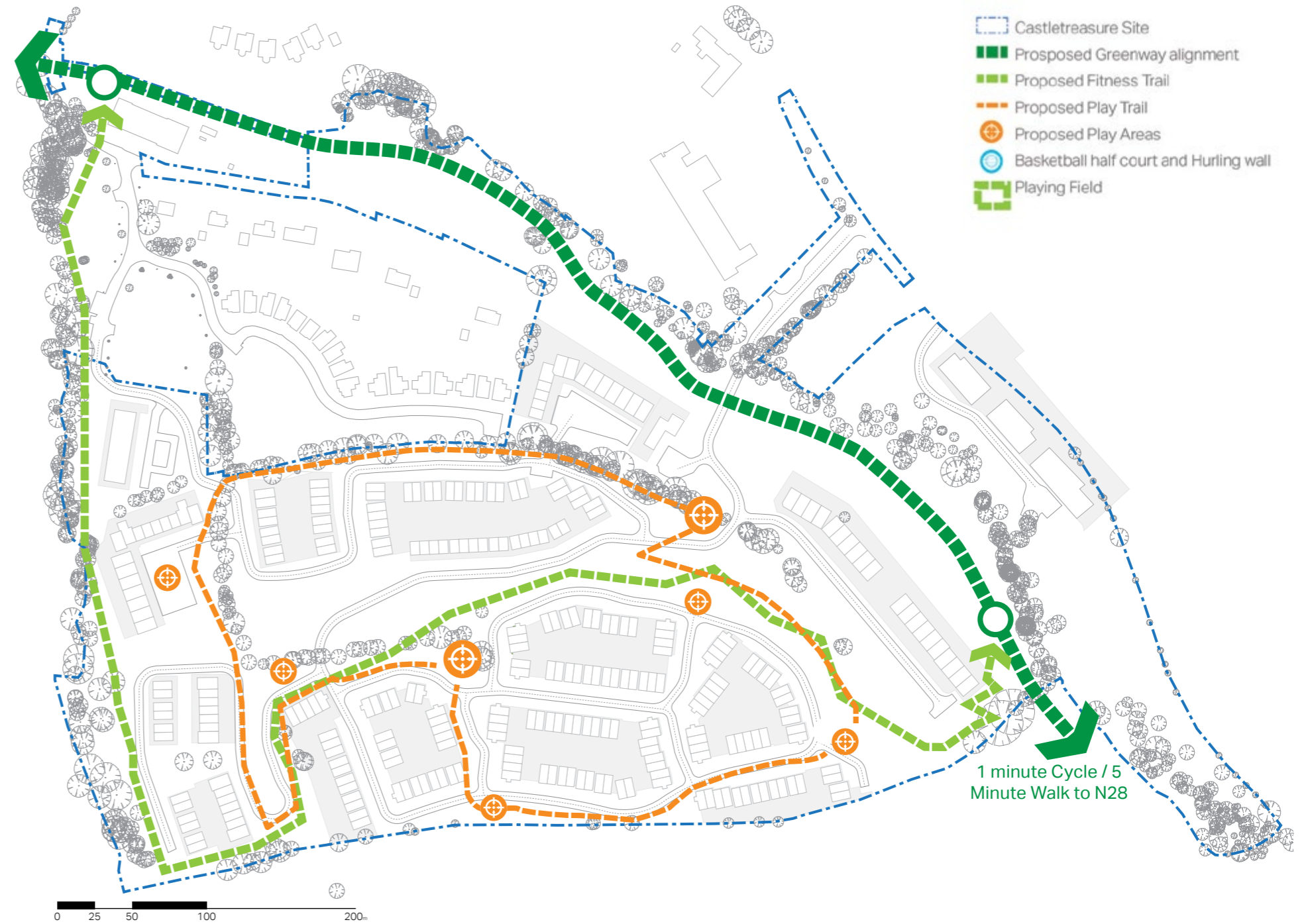


Figure 7a, Castletreasure Site Network

# Landscape Networks > Greenway

Area	Points Value	Interface / Access	Movement Type
619l/m	13	Ballybrack Valley Greenway and proposed N28 junction	Cyclist & Pedestrian
4m width			
2477m			

In conjunction with the Cork Cycle Network plan the receiving context environment has been assessed at a strategic scale for opportunities to improve connectivity across Cork. The site envelope falls within the Ballybrack Valley Greenway which links Douglas village centre via a proposed Greenway.

Recent interventions along this route are shown in the adjacent diagram which is located in close proximity of the site. It is proposed that the river valley within the site envelope will form part of a future greenway to connect to an interurban route on the N28.

In conjunction with the above, the team have set out a potential alignment of the greenway to connect the recently established greenway to the R609 and future residential developments beyond the N28. The proposed links to the existing interfaces have been shown as notional at this stage as they exist beyond the site boundaries however they are focused on providing a continuous route and attainable gradients along the route.

For the purposes of consistency the greenway will be an asphalt finish surface, 4m wide with lighting columns at 30m centres. It will include for a number of links to the development and future school site while be cognisant of the existing Irish water wayleave and extensive woodland vegetation that exists with environs of the alignment. The length of the greenway within the site boundary is estimated to be approximately 620 l/m.

The second landscape typology relates to the existing woodland treatment. As outlined previously the woodland provides a distinct contrast to the new development. While the proposed works will impact the remainder of the existing woodland it is intended to incorporate a purposeful development and management strategy to promote this unique asset within the context of the overall scheme.

A tree assessment has been undertaken and aside from the species identified for removal to accommodate the built form and for health reasons it is intended to retain the remainder in situ. The team have defined the woodland paths to provide a consistent and legible edge for pedestrian access through the space. It is proposed where appropriate to use self-binding gravel with a geogrid base for these routes, alternatively wood-chip with timber edging.

The supplementary woodland species have been developed in close coordination with the ecologist and are proposed in areas where the woodland is sparse and to the new housing edge assisting in nestling them back into the site.

The woodland edge along the plaza and north boundary will include an under-story of planting which will define the edge of the surface finished and taper to a more organic shape further into the woodland. This is included to subtly reinforce limited access to the woodland for pedestrians retaining its function as a refuge for wildlife.



# Site Components > Activity Trails

Length	Points Value	Interface / Access	Movement Type
1200l/m	15	Ballybrack Valley Greenway	Cyclist & Pedestrian
2.5m width			
2600m <sup>2</sup>			
Total length: 1.7km			

## Community provision for all ages and abilities

The proposed fitness trail is a peripheral loop of the development that will link the amenity spaces to the proposed greenway and seek to use a mostly off road route to enable people of all levels to safely use the provision. It is proposed that the trail will be an average width of 3m inclusive of signage and a number of obstacles adjoin the trail. The trail is designed to promote physical fitness training with a number of set down spaces where obstacles such as stepping posts, chin-up and climbing bars. It is envisaged that the trail will be inclusive to people of all levels of fitness and ability which the most challenging aspect being the existing natural topography of the site.



# Site Components > Play Spaces and Trails

Length	Points Value	Interface / Access	Movement Type
1400l/m	14	Crèche, play areas, principal open spaces	Pedestrian
2m width			
2800m <sup>2</sup>			

## Children Focused trail to promote active play

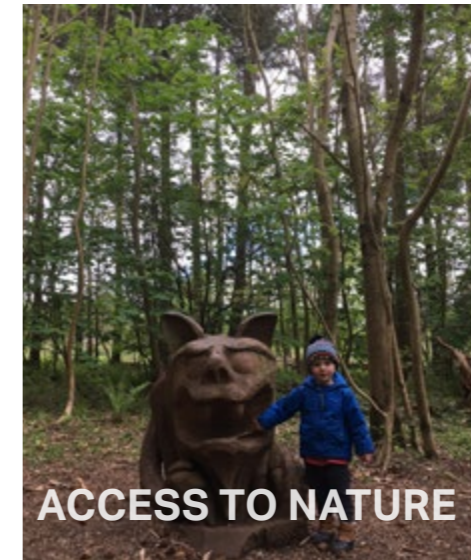
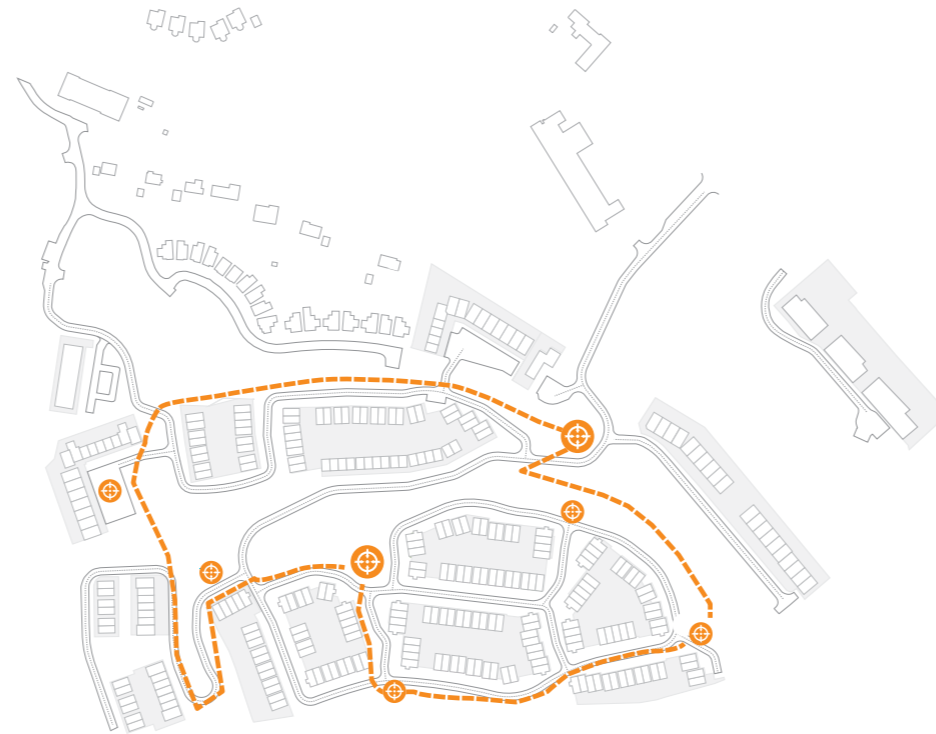
The site assets of undulating topography and extensive mature hedgerow and woodland vegetation are the foundation for an alternative form of recreation for the proposed residential development. Through the use of natural materials, some of which can be reused from the felled trees and site excavation it is proposed to provoke play opportunities and a visual link with the existing surroundings.

The play trail snakes through the site allowing children to decide how they navigate through the space. The non-prescriptive play elements encourage movement with a focus on climbing, balance, coordination and teamwork. As families explore the trail, they encounter play pockets that promote physical activity and fun.

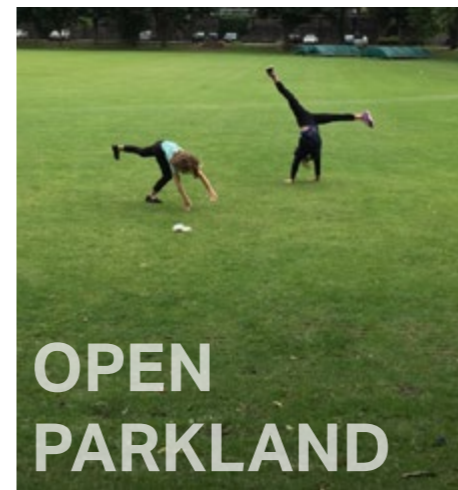
It is proposed that this scheme will create the framework which can evolve as the community establishes in the new development.

Interventions include balancing logs, bridges and stepping stones along proposed walking routes concurrent with alternative climbing steps, ladders and mounds to the step and ramp network within the site.

The play trails are proposed alongside the greenway and within the farm lanes between the existing field boundary hedgerows.



ACCESS TO NATURE



# Site Components > Language Level Change

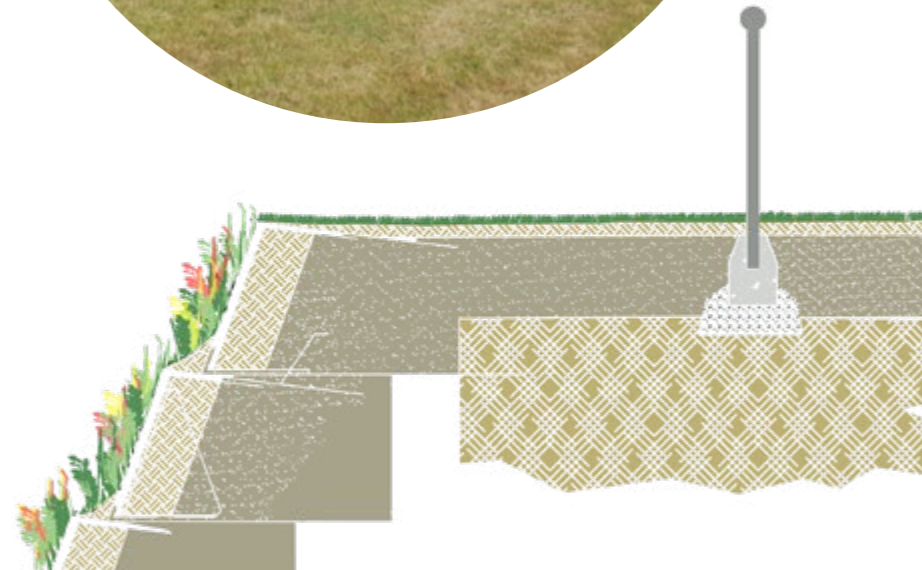
## Retaining Structures Greenwalls & Ha Ha's



As a result of the challenging topography existing on the site, the retaining structures are used to carve out the open spaces and form the terraced landscape within the centre of the site.

Retaining structures within the site are an essential spine that allow for the development to occur surrounding them. Given the steep topography, CastleTreasure will have more retaining structures than the average site, which provides numerous benefits to the receiving environments while also being aesthetically pleasing.

The retaining structures begin to carve out the open spaces and act to form the terraced landscape within the centre of the site, Ha Ha's are created within the open parkland areas to mould the usable open space. These retaining structures themselves are sloped gently, allowing them to be planted with wildflower mixes requiring minimal maintenance and provide a high quality aesthetic value to the site.



## Site Components > Riparian and River Planning

### Douglas & Moneygourney Watercourse



The Shannon Regional Fisheries Board 2011 'Planning for watercourses in the urban environment' sets out a guide to the protection of watercourses through the use of buffer zones, sustainable urban drainage, in-stream rehabilitation and recreational planning which is incorporated in the scheme.

This guideline document outlines an integrated watercourse protection strategy that was developed by the Shannon Regional Fisheries Board through consultation with a wide range of experts within the area. Castletreasure contains two watercourses that can be protected through the implementation of this strategy, while the watercourses can also provide benefits to the well-being of the people living within the development.

During the design of this area it will be important to note that the protection of the two riparian zones in question does not preclude the introduction of the proposed greenway and this strategy strongly advocates the incorporation of amenity walks within the buffer zones, requiring sensitivity within the design within the immediate environment. The outer riparian zones will be implemented within the green infrastructure strategy merging with the proposed village park and the proposed green fingers.



Figure 8b, Moneygourney Stream.



# Site Components > **Material Palette**

Consistency within the site using a small range of materials will create character areas of easily defined spaces.

Within the development there are a number of home zone spaces. These contain shared surfaces aligned around the clusters of residential properties across the site. These pedestrian friendly spaces will be primarily hardscape, but will be further defined with tree and low shrub planting along property boundaries and privacy strips.

Red or silver HRA coloured asphalt, flush pin kerbs and shrub planting will generate a unique character and reinforce these as pedestrian focused, community spaces. Home zone / shared surface areas will be risen to form a neutral level for both cars and pedestrians, each of the character areas has a distinct and appropriate materials palette intended to integrate harmoniously across the site while also defining specific areas. It is recognised that the extensive existing woodland and landscape framework generates a strong character and identity on the site, and landscape components have been chosen to compliment this.

Streetscapes are divided into two main typologies in order to define a hierarchy of streets that lead to the different areas within the site. The primary roadway will be surfaced in asphalt with a conventional up-stand concrete road kerb that leads to the narrower residential streets of the same materiality.

Within the landscape, there will be a wider hardcore path with asphalt in the centre, the soil may be brought across the top to create a soft edge within the parks.

## **In-Situ Concrete Path**

Poured pre cast concrete will be used for pedestrian paths within the neighbourhood streetscapes and other paths.



Figure 9a, 'Cairnhomes.com/new-homes/glenheron'



## **600x300 Pre Cast Concrete Paving Flags**

PCC paver's will be used for pedestrian paths within the homezones streetscapes as a high aesthetic quality finish.



Figure 9b, 'Cairnhomes.com/new-homes/glenheron'

### 200x100 Pre cast Concrete Paver's

PCC paver's will be used within the private parking areas to front houses and to delineate from the asphalt roads.



Fig 9d, 'Cairnhomes.com/new-homes'

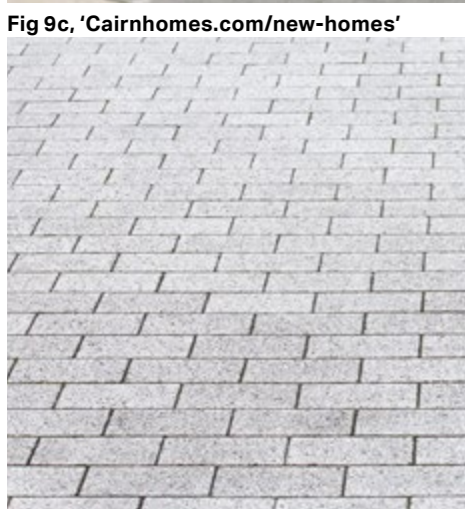


Fig 9c, 'Cairnhomes.com/new-homes'



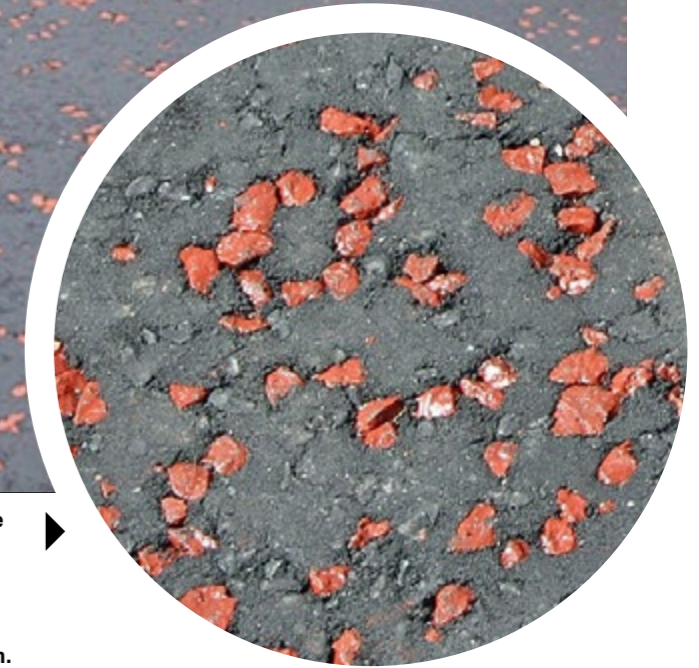
### Porous Asphalt (Permeable)

Porous asphalt will be used for street parking, this form of permeable paving will generate efficient storm water run off through the larger pores within the paving.



### HRA Cold Rolled Chip

Red chipped asphalt will be used for the raised surfaces at junctions and around home zone areas as traffic calming measures.



Red-chipped asphalt will be used for raised surfaces at junctions and home zones

Resin bound paving is used for paths within the landscape for a softer finish.

# Site Components > **Planting Palette**

**Native and non-native wildlife friendly species incorporating five primary planting components, woodland planting mix and under-storey, home zone streetscapes areas, shrub mixes, retaining structure planting, and wildflower area's within the parkland.**

The existing and proposed planting will create a strong framework to contain and enhance the proposed clusters of residential properties. The proposed planting palette comprises of five main components; the woodland planting mix and under-storey, home zone streetscapes areas, shrub mixes, retaining structure planting, and wildflower area's within the parkland. As demonstrated by the swatches adjacent there is minimal site components proposed for the woodland area. The soft-scape selection has been chosen to complement the existing species and enhance the diversity of the woodland.

The site boundaries to the east and west incorporating the watercourses contain woodland that will be retained and reinforced, comprising of a mix of native tree and scrub species, which will reinforce the woodland character, provide visual containment and increase habitat.

Additional areas of the proposed woodland planting will also include some ornamental under-storey and bulb species, to increase the variety of seasonal colour and texture. Rear gardens will be delineated with a combination of hawthorn hedge and woodland planting. Ornamental planting will be used within the home zones and within the internal park-lets to create a colourful and robust planting palette.

The planting species palette will be derived from the ecological advice in an attempt to maximise biodiversity benefits, such as pollinator friendly planting. There may also be opportunities to install bat boxes in some mature trees, subject to ecologist's recommendations.

## **Shrub Mixes** Homezones & Parks

Shrub planting will be used in areas around home zones and play areas where a screen is needed to divide the specific spaces while also adding a positive aesthetic quality.



Figure 10a, **Potentilla**



## **Woodland**

Providing dense visual screening with woodland interest using ground-cover and hedge elements, while retaining existing trees of high value to the development.

**Semi-permeable tree canopies provide a robust screen above eye-level, allowing for good views outwards from the Development.**

**Shrub planting within home zones and play area's to increase the diversity of the spaces and break up the apparent abundance of hardscape**



### Wildflower Mixes Parkland's

Wildflower mixes, including pollinator friendly mixes, in some areas will be planted within the open parkland to add a high quality amenity value, it will be used in areas that are too steep for usable activity, they are a form of low maintenance vegetation.



Figure 10b, Wildflower Meadow



### Retaining Structures Wildflower and Bulb mixes

The green EVO retaining structures will be planted with wildflower, shrubs and bulbs adding a high aesthetic quality to a usually unsightly form of sight engineering.



Figure 10c, Evo Green Wall



### Street Trees Homezones & Road Side

The home zones will contain bands street trees and a mix of small planters to reduce the overly apparent presence of hardscape within these areas.



Streetscape planting will offer a soft aspect to the home zones within the development

# Appendices > Planning Deliverables





**AECOM**

**PROJECT**  
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**LEGEND**

- EXISTING AND RETAINED WOODLAND TREE SPECIES
- SHRUB / PERENNIAL MIX
- SEATING
- LAWN OPEN SPACE
- PLAY AREAS
- HOMEZONE SHARED SURFACE
- LAWN PRIVATE SPACE
- PROPOSED PEDESTRIAN PATHS
- RETAINING STRUCTURE
- NATIVE MIX HEDGE
- NATIVE MIX HEDGE
- BULB MIX
- WILDFLOWER MIX
- WAYLEAVE
- HRA WITH RED CHIPS
- WOODLAND SPECIES
- PARKLAND TREES
- STREET TREES
- GARDEN TREES
- SECURITY FENCE

**ISSUE/REVISION**

ISS	DATE	DESCRIPTION
A	23-04-19	ISSUE FOR PLANNING
-	22-03-19	FOR PLANNING (DRAFT)

**PROJECT NUMBER**  
 6057778

**SHEET TITLE**  
 DETAIL AREA PLAN 1/3

**SHEET NUMBER**  
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 Project Management Initials: Designer: MARK HAMMOND Checker: ROSS LOUGHRANE Approver: EDWARD FRAMPTON  
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### PROJECT NUMBER

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-	22-03-19	FOR PLANNING (DRAFT)

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 60577778

**SHEET TITLE**  
 DETAIL AREA PLAN 3/3

**SHEET NUMBER**  
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