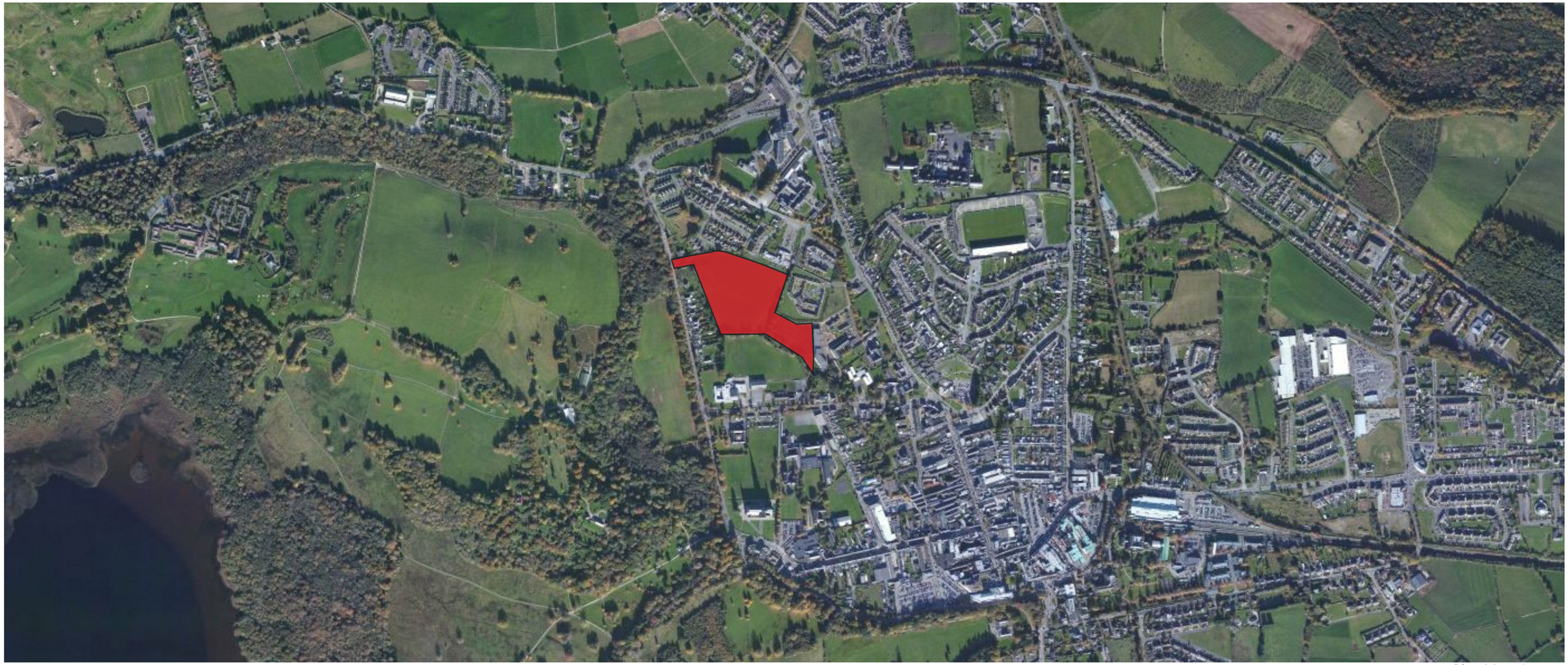

Bing Maps Image

RESIDENTIAL DEVELOPMENT AT PORT ROAD
KILLLARNEY, CO. KERRY

LANDSCAPE DESIGN REPORT

Document Number: 6620_RP05

Date: 02/05/2024

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CONTENTS

CONTENTS AMENDMENT RECORD

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Prepared	Checked
00	0	RP05	08/05/2021	EG	GD
01	1	RP05	02/05/2024	CD	GD

INTRODUCTION

PORT ROAD RESIDENTIAL DEVELOPMENT

This Landscape Design Report accompanies the Housing Application for the proposed residential scheme located at Port Road, Killlarney, Co. Kerry. The report has been compiled by Brady Shipman Martin.

The proposed development follows the Killlarney Town Development Plan 2022-28 as contained in Vol 2 of the Killlarney County Development Plan 2022-2028.

The proposed site design follows the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024), and the provisions of the Urban Design Manual-A Best Practice Guide, DoEHLG Urban Design Manual, Design Manual for Urban Roads and Streets (2013).

The overriding design intention is to create an inclusive and coherent new community based on best practice urban planning principles, giving residents a sense of place, ownership and identity.

The report outlines the existing landscape context for the site, the proposed development strategy including connectivity, open space treatment and proposed landscape design for the scheme in line with an appraisal of the existing landscape context, thereby informing appropriate design solutions, which respond to the characteristics and constraints of the receiving environment.

The landscape design package is comprised of;

Drawing no	Title
6620-100	Tree Survey and Protection Details
6620-RP04	Tree Survey Report
6620-300	Landscape Plan
6620-301	Boundary Treatments
6620-302	Boundary Sections
6620-303	Play Areas
6620-304	Offsite Planting
6620-RP05	Landscape Appraisal and Design Report
6620-RP06	Photomontages

A Large-scale Residential Development (LRD) Meeting was held 1st November 2023 in accordance with the prescribed procedure for the LRD. The table below summarises the landscape related points for the Letter of Opinion issued by Kerry County Council as recorded at the LRD Meeting and the design response included in the material of this submission.

RESPONSE TO LETTER OF OPINION:

Letter of Opinion Comment	Summary of Design Response
Eoin Kelliher, Executive Planner and Ecologist: (f) EK advised that if landscaping forms part of ecological mitigation then there should be engagement between the ecological and landscape teams to ensure the success of same	From the outset of the landscape design development for the proposed development there has been engagement with the ecological consultant as part of an integrated design to retain, protect and enhance potential biodiversity and ecological assets. This includes selection of appropriate plant species and extents of planting on site. A separate plan (Drg No. 6620/304 – Offsite Planting) has been included in the submission and in Appendix 6 of this report reflecting the off site bat mitigation measures agreed through consultation with Kerry County Council and National Parks & Wildlife Service.
Roisin Butler, Area Planner: (b) The planning application must be in accordance with planning policy and include climate action/ connectivity/ compact growth.	The integrated design proposal for the development will provide a landscape that provides multiple benefits at the same time that include responding to climate change. This is set out under Landscape Strategy the which include the use of nature based solutions for surface water drainage, specification of planting resilient to the effects of climate change, maximising cohesive green space and the permeable surface areas across the site.
Ciaran Ryan, Housing Estates Unit: (b) KCC will not take in charge timber fencing facing onto public areas.	The only location timber post and rail fencing was specified was at the boundary with the Millwood Estate. This has been amended to recycled plastic post and rail, which will have a similar appearance, but with significantly less maintenance requirements.
(d) Developer should consult with KCC Risk Controller if playground equipment is proposed to be provided in open space areas.	The Play Areas shown on Drg. No. 6620/303 and described in section Play Spaces & Incidental Play Network of this report are designed to accommodate the indicated types of equipment typically specified in public play areas by County Councils in Ireland. This includes the recommended safety zones around equipment and the recycled rubber safety surface. Should the Council deem this necessary the specific equipment to be installed can be agreed with the KCC Risk Controller by condition.
Damien Ginty: Post meeting notes from Michael Connelly, County Archaeologist: (a) A 20m buffer zone to be preserved around the recorded monument Ke066 066 listed un the Record of Monuments & Places as a possible barrow/unclassified barrow.	In addition to the architectural layout change to respond to this requirement, the Landscape Plan (Drg No. 6620/300) has been amended to ensure there are no large specimen trees or other features proposed within the buffer zone of the recorded monument. Proposed screen planting at the western boundary of the site is specified as mixed native whips/transplants to mitigate potential disturbance to below ground archaeological features.

CONTEXT

SURROUNDING CONTEXT & CONNECTIONS

The proposed site is located off Port Road, north west of Killlarney town, c.1km from the town centre. Killlarney is identified as a 'Key Town' within Kerry County Development Plan 2022-28. Functioning as a key destination, economically active supporting surrounding area, located on a multi modal transportation corridor.

Kerry County Development Plan 2022-28, Volume 2, *"Town Development Plans"* describes Killlarney as a growing town with a population of 14,504 people and a growth allocation of 1,630 people. The town is in need of 1,277 residential dwellings. The proposed development site is Zoned R1 New Proposed Residential in the County Development Plan.

Killlarney town provides a wide range of employment opportunities including several hospitals and care centres directly surrounding the site. The town centre is approximately ten minutes walking distance from the site. The bus and train station is approximately fifteen minutes' walk.

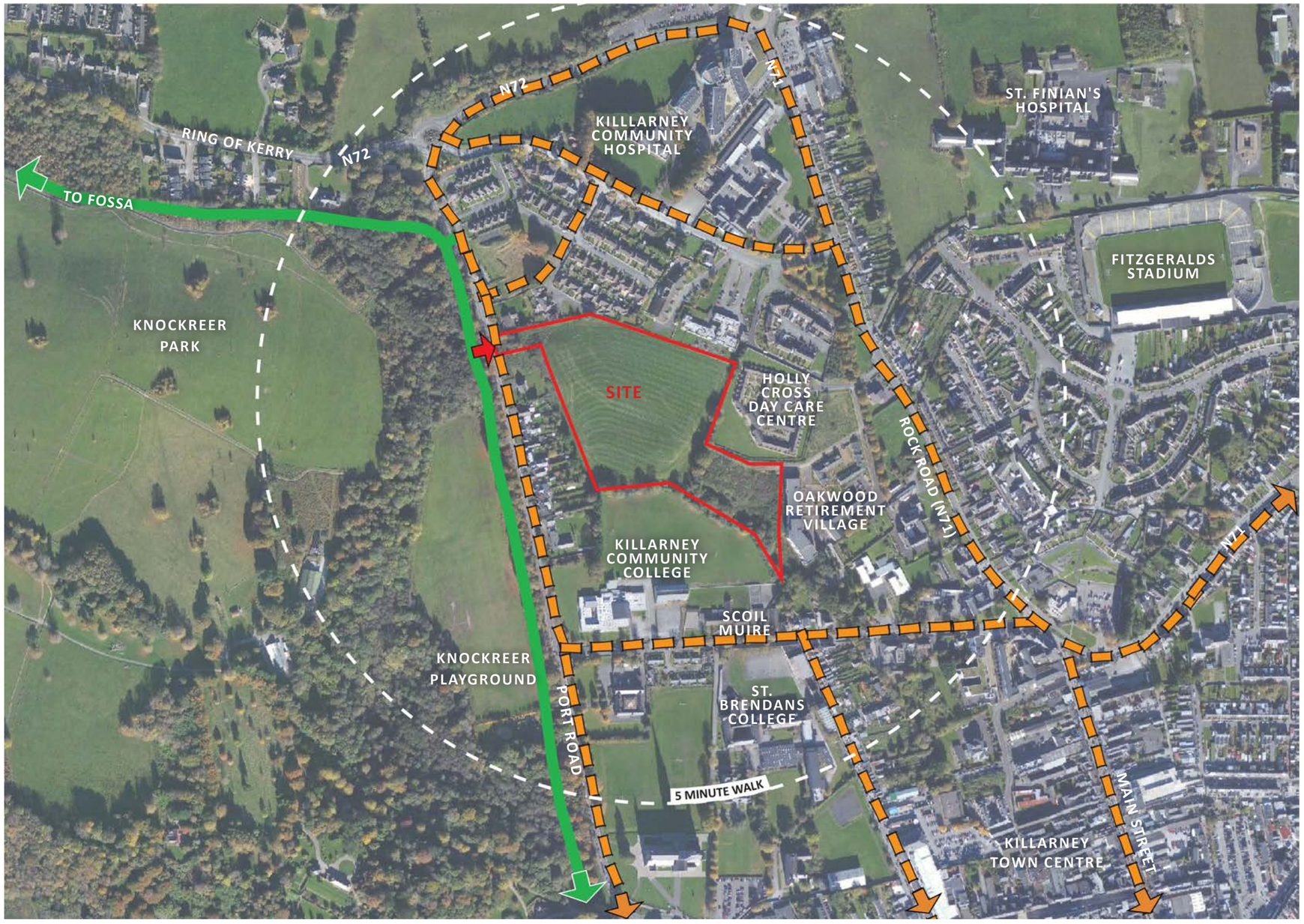
CONTEXT

RECEIVING ENVIRONMENT

The development site is a greenfield site located on the north western fringe of Killlarney town development. It is surrounded by residential and care centres along its northern and eastern boundaries. It has educational facilities such as the Community college and Scoil Mhuire located south of the site. Listed NIAH cottage buildings are located along the western boundary of the site. The primary access to the site is from Port road which lies between protected residential cottages and Knockreer park which is part of Killlarney National Park.

Killlarney National Park was designated as a Biosphere Reserve in 1981 by (UNESCO) part of a world network of natural areas and now forms part of the newly designated Kerry Biosphere. Knockreer House is the education centre for the national park.

See Appendix 2 for more information on the receiving environment of the site.



LEGEND

- Site Boundary
- Existing Pedestrian and Cycle Route
- Fossa Greenway
- Proposed Vehicular Access

CONTEXT

SITE CHARACTERISTICS

The overall site is approximately 5.2 hectares in size.

A barrow has been highlighted as a national monument (KE066-066) on the south western edge of the site. An archaeological dig was undertaken with no evidence of this found. Please refer to the corresponding archaeological impact assessment report for further reference on this. A 15m buffer has been retained around this area for protection.

A badger sett has also been identified within the cluster of specimen oak trees that divides the eastern and western portion of the site.

A folly stream outlines the southern boundary of the site and lies in front of varying mature specimen trees located along the southern neighbouring lands.

ESB lines run centrally through the western field of the site into the community school grounds.

The site provides multiple direct connections to the surrounding areas. To the west in Killlarney National Park lies a cycleway, knockreer playground and multiple trials available immediately adjacent to the proposed development site.

LEGEND

- Site Boundary
- Existing Overhead Power LInes
- The Folly Stream
- Barrow to be retained
- Badger Sett to be Protected
- Mature Trees
- Hedgerows
- Wet Meadow area
- Japanese Knotweed area

SITE ANALYSIS

KEY LANDSCAPE CHARACTERISTICS

- Attractive open green field.
- Steep Topography
- Mature Woodland around southern and north western site perimeter.
- Panoramic views of the Mangerton Mountains and St Marys Cathedral.
- Urban Setting in Killlarney town.
- Killlarney National Park is across the road from the site.

Axonometric View at the Site

Attractive Views at the Mountains and St. Mary's Cathedral from the Site

Existing Vegetation on Site

Panoramic Views from the Site at the Mountains and St. Mary's Cathedral

Steep Topography

Stone Walls

SITE ANALYSIS

SITE VISIBILITY

The site is elevated with a southern aspect with levels ranging from 37 to 26 m (OD). There are views out of the site from the elevated areas in the northern portion of the larger land parcel. These include views the distinctive landmarks of St Marys Cathedral, the Mangerton Mountain and the woodland fringe of Knockreer Park to the south and southwest.

There are local views from within parts of the site to neighbouring properties, mainly where screening on boundary is weak. This results in intervisibility at parts of the northern and western portion of the larger land parcel. There is intervisibility locally between the smaller land parcel in the southeast and the nursing home building to the east and potential for views from the parcel to the wider landscape setting to the south.

The site is set within an urban context with development on all sides, which restricts its visibility from the surrounding area. A landscape and visual appraisal of the site is included in Appendix 2 of this document where six views as follows are assessed for visual impacts of the site during and post construction:

1. View from north of Port Road looking east.
2. View from middle of Port Road at Killlarney Community College looking northeast.
3. View south of Port Road beside St Marys Cathedral looking north to the development.
4. View from the middle of New Road looking north opposite Muire na Mainistreach
5. View from Cheshire nursing home southwest towards development site
6. View at Millwood estate looking south towards development

Document reference 6620-RP06-Photomontges includes photomontages of the existing and proposed views from each of these locations.

LEGEND

- View Photo Locations
- Local intervisibility between site and neighbouring areas
- Views out to wider landscape setting

SITE ANALYSIS

VIEWS AND VISTAS

Images were taken on site on 22/06/2021

VIEW ON PORT ROAD AND FUTURE ENTRANCE TO THE SITE

VIEW ON THE NORTH BOUNDARY - EXISITNG MILLWOOD RESIDENTIAL HOUSES

VIEW ON EASTERN BOUNDARY - TOWARD KILLARNEY COMMUNITY HOSPITAL

VIEW ON THE NORTH-WEST BOUNDARY TOWARDS PRIVATE PROPERTY

VIEW ON THE WEST BOUNDARY - TOWARDS PORT COTTAGES REAR GARDENS

VIEW ON THE NORTH-EAST BOUNDARY- TOWARDS HOLLY CROSS DAY CARE CENTRE

VIEW ON THE EAST-SOUTH SITE BOUNDARY - TOWARDS OAKWOOD RETIREMENT VILLAGE BUILDING

PANORAMIC VIEW FROM THE NORTH OF SITE TO THE SOUTH AT THE MOUNTAINS AND ST. MARY'S CATHEDRAL

SITE ANALYSIS

EXISTING VEGETATION

A pocket of mature specimen Oak trees divide this large sloped field parcel into two areas – a western and eastern field. A badger sett is located in this cluster of mature Oak trees.

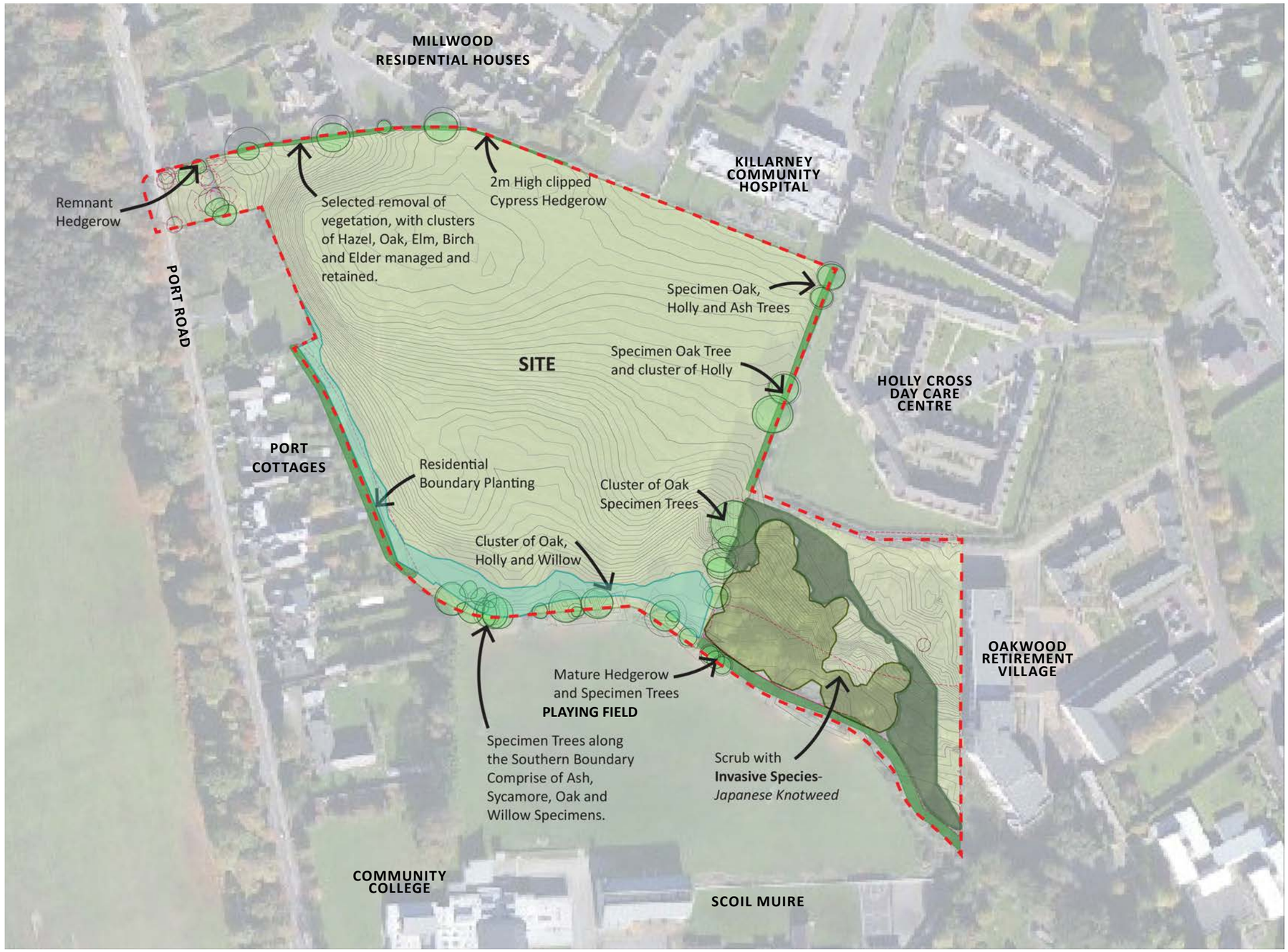
The southern boundary of site is outlined by mature specimen trees most of which are located outside of the site boundary on the neighboring schools lands. A stream/creak runs along the southern boundary with pockets of wetland biodiversity forming inside the site from this.

A mix of trees and scrub to the rear of residential gardens form a substantial landscape along the western boundary. Good quality specimen tree planting occur at the entrance to the site and will be retained where feasible. A mixed fragmented hedgerow forms along the northern field boundaries of both fields and the eastern boundary of the western field. Specimen tree planting occurs along this hedgerow on the eastern boundary of the western field. The eastern boundary of the eastern field is visually open and is in contrast to the rest of the site. Oakwood Retirement Village is located east of this open boundary and visually dominant in the field.

The western field of the site is visually enclosed by surrounding planting in contrast to the visually open eastern boundary of the eastern field.

The central northern boundary of the western field is the highest point of the site sloping south varying gradient of slope, becoming steeper as it travels further south. The site is free draining with a stream running along the southern boundary.

Please refer to the tree and hedgerow survey report 6620-RP01 and drawing 6620-100.



LEGEND

- Site Boundary
- Existing Trees and Root Protection Area
- Tree to be removed due to development
- Existing Hedgerow to be retained
- Scrub/Hedge Planting to be removed
- Invasive Scrub Planting
- Wet Meadow area

SITE ANALYSIS

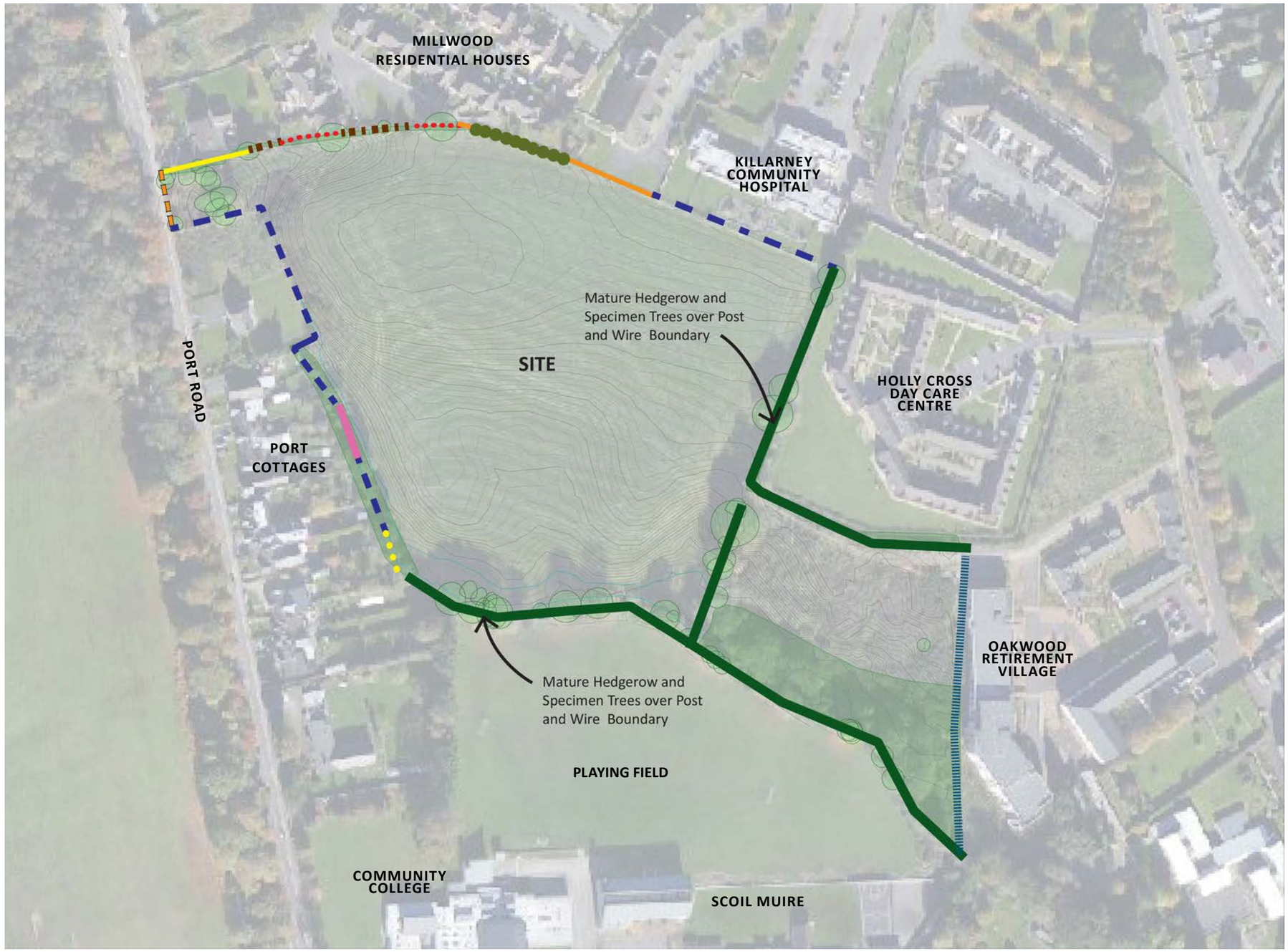
EXISTING BOUNDARIES

The development site is visually enclosed from the surrounding area. A low stub stone wall c. 300mm high is located at the entrance of the site responding the boundary treatments found along Port Road. A remnant historical hedgerow with specimen trees frame the entrance to the site.

A diverse mix of boundary treatments outline the northern boundaries of the site. Travelling east to west they comprise a blockwork wall and palisade fence defining the boundary of a singular dwelling off Port Road. Millwood estate and dwellings have a variety of fencing defining them. A blockwork wall and a concrete post/wire mesh fence define the boundary between the site, Cheshire Nursing Home and Killlarney hospital.

A remnant historic hedgerow runs along the central northern boundary of the site and along the north eastern boundary, which is visually open with a paladin fence approximately 2.4m defining it.

A stream bed runs along the southern boundary of the site and lies in front of a variety of mature specimen trees. The boundary between the residential gardens along the west of the site is inconsistent with concrete post and rail, concrete post and panel and concrete post /wire & mesh fencing. Scrub and hedgerow planting along this boundary add to the definition of the division between the site and the adjacent land.



LEGEND

- Entrance Stone Wall (Approx 300m High)
- Blockwork Wall and Palisade Fence
- Timber Post and Wire Fence 1.2m high
- Hedgerow (2m High)
- Blockwork Wall (1.4m High)
- Concrete Post & Chainlink Fence (1.5mHigh)
- Post and Wire (1.2m within Hedgerow)
- Concrete Post and Rail
- Concrete Post and Panel
- Metal Post and Metal Fence 1.6m high

Refer to Tree and Hedgerow Survey-Figure 6620-1

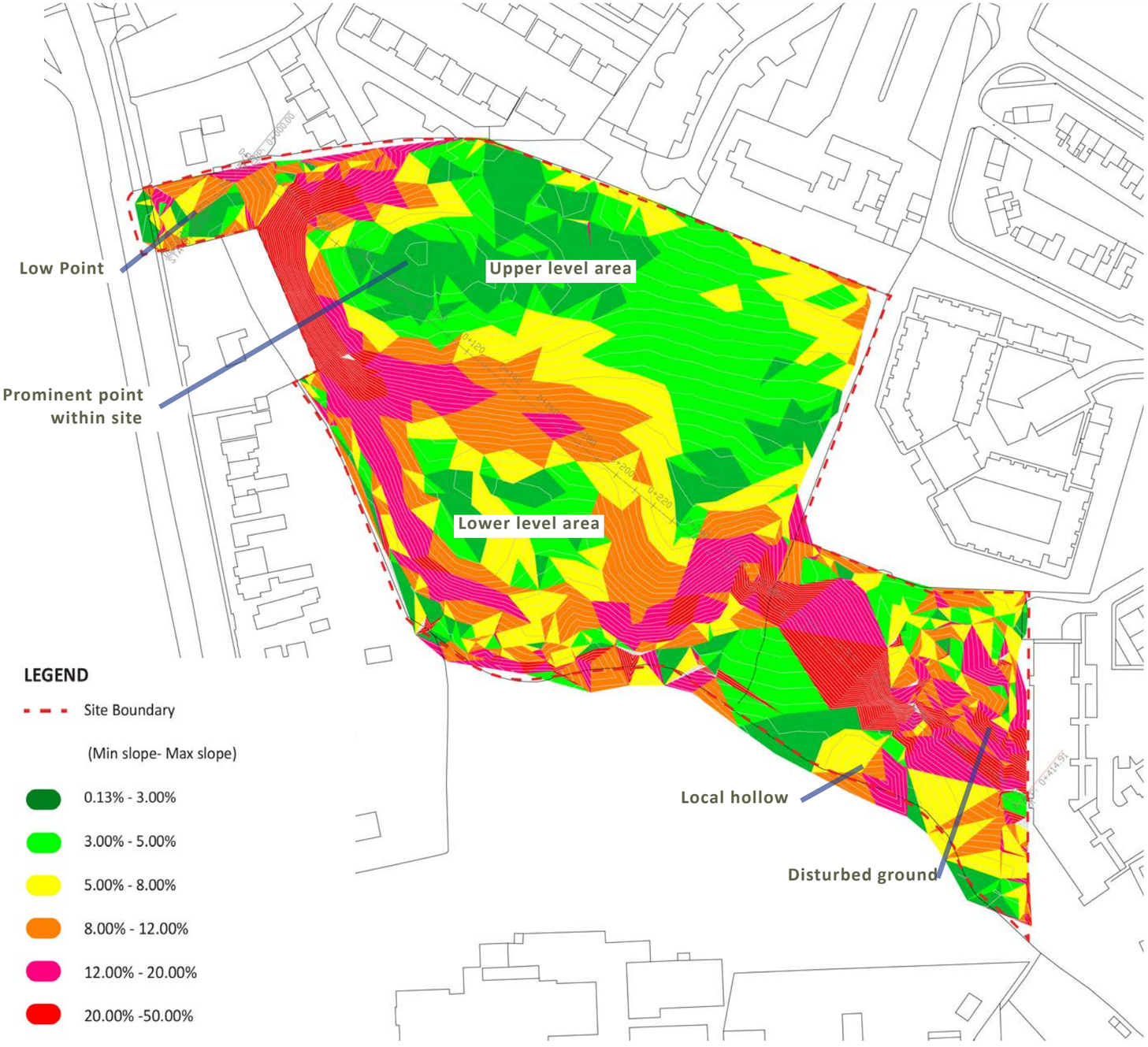
SITE ANALYSIS

TOPOGRAPHY ANALYSIS

The site is characterised by a combination of open level areas and locally steep slopes. At the main entrance to the site from Port Road, the land falls gently into the site to a low point at the group of ash and elm trees. The northern edge to this area is characterised by a steep slope, typically between 12% - 20%. The land rises steeply from this local low point eastward up into the to the larger land parcel of the site, passing a locally prominent high point within the site with steep slopes to the north and west sides of 20%-50%.

This larger land parcel of the site is characterised by an open, relatively level, area with gradients typically between 0.13% and 5% that extends as far as the eastern boundary. A steep slope of gradients between 8-12% and 12-20% weaves across the large land parcel from northwest to southeast. This creates a smaller lower area to the south of the field that has gradients typically between 3%-8%. A steeper slope typically at 12-20% and 20-50% runs along the western edge of the larger field, wrapping around the southern edge before crossing into the smaller land parcel to the southeast of the site.

The smaller land parcel is characterised by an undulating topography in the eastern half reflecting the various areas of fill and disturbed ground in that part of the site. The western half of this parcel has more consistent gradients, with the northern position typically 12%-50% and the southern portion typically 0.13% to 5%. There is a localised hollow in the ground at the southern boundary of this smaller land parcel.



SITE ANALYSIS

KEY DESIGN DRIVERS

The following key drivers of the design response have been identified from the appraisal of the site and its context.

1. Retain and protect significant existing vegetation including trees and hedgerows as part of landscape structure.

2. Retain and protect existing badger sett on site.

3. Retain and protect the existing archaeological feature (barrow) as part of the landscape.

4. Retain and protect existing damp meadow character and planting as part of landscape and placemaking. The development design should manage surface water run off to achieve greenfield run off rate.

5. Reinforce weak boundaries with intervisibility with local neighbours.

6. Remediate existing Japanese knotweed without removal off site.

7. The distinctive site topography comprising steep slopes and undulation requires a development design response that incorporates this characteristic and minimises the volume of material removed from site.

8. Create distinctive place identity for the respective development parcels through a combination of spatial design, landscape and built form.

9. Provide a continuous multifunctional green corridor that incorporates access and movement for people and nature within and off the site and protects and enhances existing landscape features including trees, hedgerows and the Folly Stream.

10. Incorporate access and movement linkages through the site that provide opportunities to connect with adjacent green infrastructure, neighbourhoods and community assets to support sustainable lifestyles and modes of transport locally.

11. Utilise the opportunity for visual connections to wider landscape setting and landmarks beyond the site to add value and distinctive character to the development.

LANDSCAPE STRATEGY

LANDSCAPE CONCEPT PLAN

The proposed residential scheme contains 224 units comprised of two storey houses, duplex and apartment buildings providing a mix of 1, 2, 3 and 4 bedroom homes with associated ancillary works including crèche building, vehicular access, parking, footpaths, drainage, services, landscaping and site boundary works.

The proposed development will follow the DoEHLG Urban Design Manual, Design Manual for Urban Roads and Streets (2013). The design of the landscape end external environment also follows the most up to date best practice approaches to green infrastructure.

The site development strategy is outlined in the Planning & Design Statement by HW Planning and the supporting architecture design statement and engineering design statement by Deady Gahan Architects and MHL & Associates respectively. The landscape design proposals have also been coordinated with the findings of the ecological statement prepared by MWP.

The overriding design intention is to create an inclusive and coherent new community based on best practice urban planning and landscape design principles, giving residents a sense of place, ownership and identity. The design concept responds to the site's character and the key drivers identified in the baseline analysis:

- Retain and protect good quality trees on site.
- Retain and frame the panoramic views from the site of Managerton Mountain and St Mary's Church Steeple.
- Break up external views of development with proposed screen planting where feasible.
- Provide recreation space for the benefit of the new and existing community that allows for playgrounds, trails and enhanced biodiversity.
- Create a clearly legible place, with a hierarchy of streets and space, creating a sense of arrival and a distinctive neighbourhood in its urban context.
- Ensure that all open space has a purpose with multiple functions responding to the needs of people and the environment.
- Create quality public and semi-private open spaces that provide a strong neighbourhood identity
- New housing to overlook open spaces to ensure passive surveillance of amenity areas

Enable linkages to surrounding neighbourhoods, communities and green infrastructure assets, including the proposed pedestrian/cycle improvements on Port Road.

LANDSCAPE STRATEGY

ACCESS AND MOVEMENT NETWORK

The access and movement framework is an essential part of supporting the sustainable lifestyle of future residents and integrating the development into the local context to help increase sustainable living in neighbouring development also.

The aim is to create an environment that reduces the influence of vehicles as much as possible. The primary access serving the site is from Port Road in the northwest corner. The main access route passes through the core of the development, from the northwest to the southeast, with a Local Street carriageway width of 5m in accordance with section 4.4.1 Design Manual for Urban Roads and Streets. The main access route will be punctuated by raised tables at junctions with adjacent streets, uncontrolled crossings and street trees as additional measures to influence positive driver behaviour and create a safe environment for pedestrians and cyclists.

A shared footpath/cycleway will run along the main access route, connecting to development parcels and green infrastructure. An additional dedicated shared footpath/cycleway will run along the green landscape corridor around the western and southern side of the scheme. This footpath/cycle network will provide pedestrian and cycle connectivity to all parts of the development. These footpath/cycle routes will be 3m wide and designed and constructed to TII Standards publication DN-GEO-03047.

The proposed access network will also provide pedestrian connectivity with the existing areas of Millwood and St. Margaret's Road and facilitate potential future linkages to the school and town centre south of the site and Killlarney Community Hospital land to the north of the site. In providing this active travel permeability, the proposed development supports the potential delivery of car free linkages between the neighbourhoods to the north, green infrastructure and recreational assets to the west and the community infrastructure of local schools, hospitals, town centre and national bus and rail transport connections.

Shared surface streets will provide pedestrian friendly spaces for most of the homes in the scheme. These streets will be defined by a flush finish carriageway, no wider than 4.8m, in a contrasting colour finish to the main access route. Street trees and richly planted bioswale features will also characterise these streets and tighter radii at junctions and defined gateways will support the perception of pedestrian priority in these spaces in accordance with Design Manual for Urban Roads and Streets.

LANDSCAPE STRATEGY

OPEN SPACE FRAMEWORK

The proposed development provides an integrated design response between the built form and the external spaces. This creates a framework of multifunctional open space to deliver range of benefits to support a good quality of life for new residents and the existing community.

Active and passive communal spaces are distributed across the proposed development. A central space incorporating a natural play area and a green open space is contained by the proposed two storey semi-detached and terraced homes area of the development. A naturalistic area of the existing landscape in the vicinity of the barrow site also provides an area of recreational space with incidental play features on the northern end. An area of open space is located at the northern side of the development adjacent to the proposed creche car park. Characterised by trees and native herbaceous species and grassland, it accommodates an amenity footpath link to the adjacent green space in Millwood. Communal space is situated within the proposed duplex development, which link to the public open space defined by the duplex blocks, providing a series of gardens with seasonal planting, seating and incidental play. A communal open space is also provided within the apartment complex, with lawn area, outdoor seating and a rich variety of planting. All of these spaces are well overlooked by the proposed development and easily accessible to all. In total there is 7,160sq.m of usable public open space evenly distributed across the site. There is 1,820 sq.m of communal space provided for the apartment complex and duplex development. Both the usable public open space and communal area provision exceed the Kerry County Council Development Plan open space objectives.

In addition to the exceedance of the open space provision objectives in planning policy, there are contiguous landscape areas at the entrance to the site, around the western, southern and eastern boundary in pockets between buildings totalling 9,694 sq.m, which provide green infrastructure benefits for residents and the neighbouring communities. These include habitat and biodiversity gain through the variety of native herbaceous plants and trees. These areas are co-located with the proposed footpaths/cycleways and offer contact with nature and encourage people to get outdoors to walk or cycle, both of which support mental and physical health and wellbeing. These areas are well overlooked by development and the routes that pass through them are vehicle free. This path network will also connect to the large nearby green infrastructure assets of Knockreer Park and the National Park.

The proposed streets are also designed to be pedestrian friendly environments, which incorporate street trees and areas of planting to support the quality of the proposed development and the use of the streets as connecting spaces that link to the other parts of the open space framework.

The design approach puts the emphasis on delivering quality in all the proposed external environment both aesthetically and in how they can be used inclusively and provide a broad range of benefits to people. Good quality open space is available on the doorstep of every resident, which is in keeping with the Urban Design Manual (2009) guidance and the open space policies of Kerry County Council Development Plan 2022-2028 and the latest research on the value of green infrastructure.

LANDSCAPE STRATEGY

SUSTAINABLE DRAINAGE FRAMEWORK

The proposed landscape will play a key role in helping to achieve green field runoff rates on the development. The good permeable ground conditions will be used through a variety of sustainable drainage methods to combine technical drainage solutions with green infrastructure and placemaking.

Impermeable hard surface area will be reduced across the scheme through minimising carriageway widths. All surface car parking will be composed of permeable grasscrete material, which allows surface water to percolate through and visually reinforces the reduced influence of vehicles in the scheme. The construction of these areas will include material that cleans surface water as it percolates through.

A network of bioswales will be incorporated into streets and open spaces across the scheme. Surface water will be diverted into these features where it will percolate at a reduced rate into the ground. The bioswales will include planting that draws on the water at the same time as adding secondary enclosure to streets, supporting biodiversity and adding colour, seasonality and character to the different parts of the development. The bioswale features will include overflow pipes that will take excess water away to buried storage tanks in extreme weather events. This will protect properties and ensure water is only released into local discharge points when conditions are appropriate.

The development layout creates contiguous greenspaces, particularly at the centre and around the western and southern edge, that provide larger permeable surface area. The retention of existing trees supported by additional tree, hedgerow and shrub planting in these areas will increase evapotranspiration rates.

Green roofs will be incorporated into the proposed apartment blocks which will intercept and slow the surface water run off rate at source. Soakaways will be incorporated in the gardens of the individual dwelling houses to contribute to take advantage of the permeability of the site.

LANDSCAPE STRATEGY

The Port Road design will implement sustainable design strategies and celebrate green space. Trees will be incorporated into streets and open spaces. Where appropriate, these trees will be complimented by low level planting beds to include hedge planting, herbaceous perennials and shrubs.

As part of the sustainable surface water management strategy a SUDS Arbor System is proposed beneath the surface of all new street trees and planting beds. Tree planting in paved areas will require tree pits, with root barriers and pavement construction that is supported without putting load onto the rootzone below. The construction specification for tree planting pits will incorporate these measures to ensure the best possible environment for street trees to be protected and flourish.

The tree species proposed for streets have been selected for their suitability in built environments. Their characteristics include the ability to tollerate a wider range of temperatures, air pollutants, periods of drought as well as wet weather. Their form is typically regular in shape and size and includes columnar trees for tighter spaces. The street trees also provide a range of beautiful vibrant autumn colours and some with gorgeous budding flowers in the spring.

LANDSCAPE STRATEGY

PLAY SPACES & INCIDENTAL PLAY NETWORK

The access framework provides safe pedestrian and cycle connections to the Knockreer Playground as the main destination playground in the area.

Play for children of all ages will be an important feature of the landscape in the proposed development, taking advantage of the accessibility of the site for the benefit of new residents and the existing neighbouring communities. Play areas and features will be provided across the site at several locations to support this function.

The main on-site play area will be in the central green space, a highly accessible location for children from the shared streets and footpath/cycleway network. This play area will be characterised by natural play features with low mounds containing the equipment and adding to the playscape. The play area will open out onto the central green space that offers informal recreational space. The incorporation of a section of the shared footpath/cycleway within the central green space provides a safe car free cycle space for children, supplementing the play use of this space overall.

Smaller incidental play locations are also proposed across the site. These will typically include between one and three natural play elements depending on their location. Three incidental play areas will be located along the route of the shared footpath/ cycleway. These will be aimed primarily at younger children, offering opportunities for play whilst they move along the shared footpath/cycle route. There is one smaller play feature area proposed within the space contained by the duplex homes in the southern part of the site, which will enhance the appeal of this space for children and families.

The approach to the design of the external environment aims to create a landscape that is interesting, safe and accessible. The access and movement network, approach to street design and the landscape treatment of the place overall will encourage play, getting out doors and leading healthy qaulity of life.

LANDSCAPE STRATEGY

NATURE PLAY REFERENCE IMAGES













INCIDENTAL PLAY

DESTINATION PLAY

LANDSCAPE STRATEGY

LANDSCAPE CHARACTER AREAS

The landscape strategy for the Port Road development is an integrated design response to address the specific issues and opportunities of this site and its context. The landscape strategy for the proposed development treats the external environment as an opportunity to create spaces that do more than one job at the same time to deliver a multifunctional and integrated response.

The landscape strategy does this by identifying the specific functions in each part of the site. These functions are determined by the most important issues and opportunities in that part of the site, which are a combination of the existing characteristics or features and the proposed development need and uses.

The key functions that each area should perform are set out succinctly. These set the design principles that shape the proposed landscape response. How each landscape area will deliver the appropriate response is then summarised with an annotated extract of the Landscape Plan.

LEGEND

- Site Boundary
- Existing Trees and Vegetation
- 1 The Green Gate
- 2 The Village Green
- 3 The Green Link
- 4 The Green Spine
- 5 The Garden Court
- 6 The Terrace Garden
- 7 The Treed Streets

This approach ensures that:

- The existing valuable characteristics of the site are retained, protected and, where appropriate, enhanced by the landscape proposals in each area in keeping with Urban Design Manual criterion 01.
- Opportunities for existing connections and linkages are incorporated, including those that may be opened in the future to increase the use of active travel options by people locally in keeping with Urban Design Manual criterion 02.
- There is no 'left over space' on the site. All external space has a purpose and value that, collectively, maximises the benefits for people and their environment now, and for the future. Land is used in a highly efficient way in keeping with best practice guidance including Urban Design Manual criterion 05.
- Each area has a defined character which reinforces hierarchy of space, legibility and distinctiveness in accordance with Urban Design Manual criteria 6 and 7.
- The needs of people are prioritised with inclusive access routes and spaces, which are also well overlooked and safe in accordance with Urban Design Manual criteria 3 and 8 and the latest research on the value of access to nature for mental and physical health and wellbeing.
- Landscape incorporates measures that is adaptable, resilient and responds to the effects of climate change both in its physical design and in supporting people to adopt sustainable patterns of day to day living as promoted by Urban Design Manual criterion 09.
- That carparking is not only communal in keeping with Urban Design Manual criterion 11, but through consideration of the design of materials and landscape, it becomes part of the distinctiveness of the place, maintains the primacy of people in streets and supports the delivery of key environmental functions at the same time.

LANDSCAPE STRATEGY

THE GREEN GATE

This area is located at the main entrance to the site from Port Road and includes the land between the close neighbours to the north and south of the development site. It is currently a low laying relatively narrow space with some well-established trees, a number of which are in poor condition.

Functions:

The key functions that this landscape area should perform are:

- Provide a safe main access to the development from Port Road.
- Set the tone for the character of the place.
- Provide a suitable setting for the proposed creche.
- Contribute to sustainable surface water drainage strategy for the development.
- Retain and protect existing trees of arboricultural value where possible.
- Manage the relationship of the development with neighbours.
- Provide active travel connectivity in, out and through the development.
- Support biodiversity.

Design Response:

- The Green Gate will be a soft predominantly green and inviting approach into the site, marking a transition from a busy road into a tranquil place with its own identity.
- It will be characterised by a sympathetic, high quality and attractive entrance character at Port Road, comprised of stone walls finished in natural stone curving into the site with clipped hedge behind them.
- The access street will climb up into the development with semi mature trees planted to both sides with new mixed native hedgerow planting providing good screening at the boundaries with neighbours.
- Naturalistic bioswale features will be located within the landscape to both sides incorporating an interesting mix of native planting that add visual and seasonal interest. This planting together with the existing and new trees will enhance biodiversity and connectivity.
- The sense of transition from Port Road into the development will be supported by having a carriageway width of 5.0m with shared footpath cycleway to the south side. A raised crossing point on the main access route will link the shared footpath/cycleway to serve the creche, whilst reducing traffic speed into the development.
- The combination of the landscape elements that characterise The Green Gate will help reduce traffic speed, support the sustainable drainage strategy and deliver the sense of transition from Port Road into a new place with its own character and identity.

1. Proposed natural stone wall with piers and clipped beech hedge behind to mark entrance
2. Asphalt carriageway to main access at 5.0m wide in accordance with DMURS guidance for Local Streets
3. Proposed incidental natural play features in rubber safety surface
4. Asphalt finish to shared footpath/cycleway along one side to maximise effect of soft landscape on the character of the entrance
5. Proposed mixed native hedgerow along boundary with mixed native tree planting to provide screening to adjacent property
6. Proposed bioswale with naturalistic planting of native species and trees to provide sustainable surface water drainage, enhance biodiversity and support soft landscape character of the main approach into the development.
7. Raised table at uncontrolled crossing for pedestrians and cyclists
8. Proposed enclosed outdoor play area as part of creche
9. Bioretention features incorporated into southern boundary of creche play area.
10. Main door to creche framed by bioretention planting
11. Natural aggregate wearing course with buff coloured binder to car park
12. Porous 'grasscrete' paving finish to car parking spaces as part of SuDS.
13. Proposed mixed native hedgerow and tree planting and ground cover planting together with retained trees along existing boundary fence.
14. Existing trees to be removed for access and due to condition and susceptibility to disease.

15. Proposed asphalt footpath with clipped yew hedge and anthracite grey railing along frontage with proposed properties overlooking the street
16. Proposed asphalt footpath link into Millwood to provide permeability and connectivity across neighbourhoods
17. Proposed imprinted asphalt raised table at junction.
18. Soft landscape boundary treatment to Millwood greenspace comprised of proposed mixed native hedge with existing vegetation and trees retained in front.

LANDSCAPE STRATEGY

THE VILLAGE GREEN

The Village Green is a trainular space enclosed by proposed development on each side. It is currently an open grassland of an open character on an elevated and level part of the site.

Functions:

The key functions that this landscape area should perform are:

- Provide a central landscape to support the identity of this development as a place in its own right.
- Provide multifunctional, accessible and usable open space for all.
- Provide the main play area for the proposed development.
- Contribute to the delivery of the sustainable surface water drainage strategy.
- Form part of the on site mitigation strategy for Japanese Knotweed.
- Provide active travel connectivity trough the scheme.

Design Response:

- The Village Green will be an open space that creates a sense of arrival shortly after entering the site from Port Road. This will establish an identity for the development as a distinctive place set in the context of the surrounding built environment.
- Proposed dwellings will provide active frontage and overlook the Village Green from all sides, providing passive surveillance that will ensure it is a safe space for all to enjoy. Situated on the higher plateau of the site, The Village Green is in a prime location to offer a multifunctional space for play, drainage, access and environmental mitigation.
- It is a playful space, offering high quality natural play features in the north east portion. The play area will be defined by low landscape mounds planted with semi-mature trees. Rubber surface will be laid within the play area for safety and ease of maintenance. The location offers safe, level access into the play area from the shared surface streets to the north and east and opens out onto the central green area. The accessibility and proximity of the green space and play area supports inclusive use by people of all ages and abilities in the proposed scheme and neighbouring communities.
- Bioswales with a rich mix of herbaceous perennial plants and specimen trees will characterise the space. A linear bioswale will run along the west side, providing separation to the main access street and manage surface water from the carriageway. Short deck bridges constructed of durable, rot proof and UV stable recycled plastic will punctuate this bioswale to provide pedestrian access to the central green area. Bioswales will be situated between the play area and the shared street to north of the central greenspace. These will capture surface water runoff from the street with the planting blending the play area into the Village Green. A naturalistic bioswale at the southern end of the green will provide additional surface water drainage capacity. This will be planted with native herbaceous species and multi-stem trees with the outer fringe seeded with wildflower seed mix that will be under low intensity management. The bioswales will combine sustainable surface water drainage with supporting biodiversity in line with the All Ireland Pollinator Plan and a strong attractive visual identity to the new place.
- The play area opens onto a green space which will be laid to lawn to provide informal and passive recreation. The openness at the centre of the Village Green will enable the views out to the highly distinctive and scenic mountain landscape to the south to be appreciated. This area will also be the location for the burial of Japanese Knotweed to be removed from the land in the south east of the site in accordance with the invasive species mitigation strategy.
- A section of the shared footpath/ cycleway network finished in compacted gravel will run through the Village Green along the western side. This will offer off street cycling for children as well as connectivity through the development.
- The layout and landscape treatment of the Village Green will incorporate planting and materials that are easy to manage and maintain. The design and layout will supporting the distinctiveness of place through the hard and soft landscape and draw on visual connections with nearby landmarks and the wider landscape setting.

1. Proposed imprinted asphalt at junctions.
2. Proposed natural stone rumble strip at edges to raised tables and gateways to streets.
3. Asphalt carriageway to main access at 5.0m wide in accordance with DMURS guidance for Local Streets.
4. Proposed recycled plastic deck crossings on bioswale.
5. Proposed recreational green area as part of Village Green and location for burial of Japanese Knotweed as part of invasive species mitigation strategy.
6. Proposed low mounds with tree planting as part of play area landscape.
7. Proposed play area (270m.sq) with natural play equipment with rubber safety surface.

8. Proposed shared surface Local Street with 4.8m carriageway finished in natural aggregate wearing course with buff colour binder.
9. Proposed bioswales with seasonal herbaceous planting and trees to provide sustainable surface water drainage, enhance biodiversity and support distinctive placemaking and sense of arrival at The Village Green.
10. Proposed single species tree planting along each side of green supporting identity of each residential edge.
11. Proposed naturalistic bioswale with mixed native planting and trees and species rich grassland fringe as part of SuDS and to enhance biodiversity.
12. Proposed section of shared footpath/cycleway within green space finished on compacted gravel to support landscape character and provide a permeable surface.
13. Proposed Porous 'grasscrete' paving finish to car parking spaces and carriageway set back area as part of SuDS.
14. Proposed linear bioswale feature as part of SuDS and defining the western edge of the proposed green space along the main access street.
15. Proposed parking bay bioswale features along street to incorporate street tree planting, support SuDS, soften car parking and add distinctiveness to the streets and space.
16. Proposed silver-grey square edge concrete block paving to curtilage of new homes overlooking the Village Green.

LANDSCAPE STRATEGY

THE GREEN LINK

The Green Link is a contiguous corridor of landscape that extends around the west, south and east sides of the site. It is currently characterised along the west and south portions by some steeper landform, existing trees on the boundaries and native wet meadow grassland and herbaceous species in the lower laying areas. The east side is characterised by undulating landform covered in dense scrub.

Functions:

The key functions that this landscape area should respond to are:

- Protect and enhance the existing wet meadow character
- Protect and retain existing valuable trees
- Retain and enhance the screening of the boundary with existing neighbours
- Protect and enhance biodiversity and habitat connectivity
- Provide sustainable linkage and amenity through the development for the benefit of residents and surrounding communities
- Support the sustainable surface water drainage strategy
- Protect cultural heritage

Design Response:

- The Green Link will be a multifunctional landscape corridor that provides opportunities for strategic connections for people and nature, whilst simultaneously protecting the existing distinctive landscape characteristics and screening the proposed development from its neighbours.
- A shared footpath/cycle route will be overlooked by proposed dwellings to provide a safe, fully vehicle free link along the edge of the proposed built development from the north at the main access route around the south and up the east side of the development. New residents will be able to access this path along its extents, providing safe connectivity to the creche, the main site entrance and the active travel improvements proposed along Port Road.
- This route also allows for potential future connections to adjacent facilities and linkages beyond the site, including the Killlarney Community Collage to the south and east towards Rock Road to link with the town centre, train and bus stations.
- The Green Link landscape will be characterised by the retained wet meadow comprised of native grassland species with distinctive patches of willow, yellow flag iris and meadowsweet, which will retain ecological habitat. The section of proposed footpath/cycle route that passes through the lower laying area of this landscape will be elevated above it on a deck comprised of recycled plastic with a continuous balustrade. The rot proof and UV stable material of the deck will minimise impact on the land through this area and allow pedestrians and cyclists to ‘float’ over this natural landscape.
- The Green Link will be enhanced by extensive new mixed native deciduous and coniferous semi mature tree planting along the western, southern and eastern boundaries with adjacent land and properties. These new trees, planted at between 5-5.5m tall, will merge with the existing established trees along the western and southern boundary to form a continuous and effective screen to adjacent properties from the earliest construction stages.
- A new boundary with adjacent properties on the west side comprised of a 2m high concrete post and an anthracite grey steel infill panel fence will form a continuous visual screen. This will be placed within the development boundary, with the concrete post system avoiding interference with the roots of existing trees or shrubs within the land of adjacent properties. The Green Link extending up the eastern boundary will be characterised by a continuous line of mixed native semi-mature trees with understory planting in front of the retained 2.4m tall paladin fence. The shared footpath/cycle link will separated from the apartment access carriageway by an avenue of cherry trees to complete a rich, seasonal treed route that also softens and screens the proposed development along the eastern side.
- The diversity of the existing wet meadow planting is retained as a dominant characteristic, with the new shared pedestrian/cycle path flowing through and over it, maximising connection with nature whilst minimising impact. The site of the existing barrow is retained and protected in the existing grassland landscape. The open green area will be enhanced with species rich grassland to include wildflower species along the edge of the new development.
- In northern section of the Green Link will incorporate a bioswale along the length of the shared surface street, separating the street from the shared footpath/cycle link. This will intercept surface water, whilst providing a rich and attractive planted feature.
- The Green Link is characterised by Incidental play features set along the route of the shared footpath/cycle route. Comprised of 2 to 3 natural play features in three locations, these will enhance the experience for children using the path and offer opportunities for art, interpretation and learning about nature and cultural heritage.

1. Western boundary with proposed mixed native screen planting and native trees planted at 6-7m height to form a green screen from the earliest stages of development. (See Drawing No. 6620-302, Boundary Sections – Sections 2 and 3 for details).
2. Proposed stone gabion retaining structure to edge of shared footpath/cycleway with metal estate railing to top.
3. Proposed shared footpath/cycleway finished in asphalt.
4. Proposed linear bioswale feature with mixed herbaceous and seasonal planting, to add distinctiveness to the street, support SuDS and separate carriageway from shared path.
5. Existing vegetation in properties along western boundary to be protected and retained.
6. Proposed boundary within development site to be planted with mixed native screen planting and semi-mature trees
7. Proposed wetland meadow to tie in with existing retained wetland meadow area.
8. Proposed porous ‘grasscrete’ finish to car parking areas as part of SuDS strategy.
9. Proposed parking bay bioswales along the street, to add visual distinctiveness, incorporate street trees and to soften the appearance of car parking.
10. Proposed incidental play area with natural play features to add amenity to the shared path.
11. Existing wet meadow planting to be retained and protected.

12. Existing archaeological site (barrow) to be retained and protected within the existing landscape.
13. Existing trees to be retained and protected along the southern boundary
14. Potential future pedestrian links to increase connectivity between neighbourhoods, links to amenities and community assets and support sustainable active travel options for new and existing residents.
15. Proposed pumping station set within car parking area constructed in accordance with Irish Water requirements to Engineer's specifications.
16. Proposed covered cycle storage adjacent to path linking new residents to the shared footpath/ cycleway.
17. Proposed mixed native tree planting with shrub understorey along eastern boundary with nursing home, providing a green screen and habitat connectivity.
18. Proposed transition in shared footpath/cycleway surface to recycled plastic deck with matching balustrade system to elevate path over the retained wet meadow landscape and minimise impact.
19. Proposed shared footpath cycleway separated from carriageway by an avenue of cherry trees as a distinctive feature of this part of The Green Link. (See Drawing No. 6620-302, Boundary Sections – Sections 9 for details).

LANDSCAPE STRATEGY

THE GREEN SPINE

The Green Spine runs along the boundary of the northern part of the site with the land to the east before passing through the proposed development site to meet the Green Link on the southern edge. It is characterised by an established mixed native hedgerow with mature trees, including four 'Category B' and one 'Category A' specimens. An active badger sett is located close to a large oak tree within the hedgebank at the southern end.

Functions:

The key functions that this landscape area should respond to are:

- Retain and protect existing hedgerow and trees
- Define a strong boundary with good screening to neighbouring land to the east
- Provide screening and containment to the south east portion of the site
- Support the structure and legibility of the site
- Protect existing biodiversity and habitat
- Facilitate access to the south eastern parcel of development
- Contribute to open space provision

Design Response:

- The existing mixed native hedge and mature trees are a dominant characteristic of the Green Spine and this area is identified specifically to ensure they and the species that they support are protected. At the northern end, the rear gardens of the new homes will be defined by a 2m high railing finished in anthracite grey colour. Set within the development boundary, this boundary treatment will allow the existing hedgerow to be retained and a visible part of the garden landscape of the new homes, whilst providing a protective physical barrier. In locations where gardens extend into the rootzone of existing trees, the boundaries between gardens will be constructed of concrete post and metal infill panel. This and the proposed railing construction systems will minimise impact on the roots of existing trees and hedgerow planting.
- The centre of the Green Spine marks a transition from the proposed houses and duplex typology into the south eastern parcel proposed for apartments. A small space will be created, enclosed by the existing hedge, an end terrace house and duplex block. A raised table will define a change from the main access route treatment to a shared surface as it passes through the space. A bioswale and new tree planting on the north side of the space will combine with the exiting mature trees on the south side to form a gateway into the apartment quarter. A no dig geocell method will be applied in the construction of the access as it passes over part of the rootzone of the existing tree.
- A green corridor will extend down both sides of the retained hedgebank separating the proposed development parcels. A footpath along the built edge of the corridor to the west will provide a link to the Terrace Garden and the Green Link. The characteristics of this part of the site are driven by protection of the hedgerow, trees and habitat and it will be characterised by species rich grassland on the west side and native shrub planting and amenity grass in the east side. Thick mixed native hedge planting with hawthorn as the dominant species will be planted immediately to both sides of the centre of the existing hedge. This will provide seclusion and protection to the badger sett being retained in situ. The combination of the proposed grassland, hedge and shrub planting proposed in this location will support connectivity for nature along the Green Spine linking to foraging along the Green Link and adjacent land along the southern edge of the site.
- The set back to both sides of the southern end of the green spine gives the physical space required to retain the existing trees. It also allows these distinctive features of the site to be appreciated and enhance the setting and identity of the proposed development.

Photo: Existing badger sett to be retained and protected in accordance with ecological best practoce and professional advice

1. Existing trees and hedgerow to be retained and protected during construction in accordance with industry best practice.
2. Proposed boundary to inside of hedgerow comprised of powder coated anthracite grey railing to minimise impact on vegetation and maintain green appearance of the boundary. (See Drawing No. 6620-301, Boundary Treatment Plan, Type B4 for details).
3. Existing Killlarney Nursing Home building.
4. Existing high value trees with root protection zones in private gardens to be protected during construction and with garden boundaries constructed to avoid damage to roots in accordance with Drawing No. 6620-301, Boundary Treatment Plan, Type B2.
5. Proposed bioswale with native species planting and trees as feature at the end of the street and the shared surface area.
6. Proposed shared footpath/cycleway in asphalt finish linking through shared space.
7. Proposed shared surface carriageway in natural aggregate finish with buff coloured binder.
8. Existing Category C oak tree to be removed to enable access. No dig geocell construction to be implemented to protect root zone of larger Category B tree to be retained.
9. Existing badger sett to be retained and protected.
10. Proposed mixed native hedge planting, with hawthorn dominant, to be planted to both sides of exiting hedgerow to protect badger sett from disturbance.
11. Green corridor offsets to development at both sides of the existing hedge and trees to be retained.
12. Proposed incidental play area to add amenity in a natural landscape.
13. Existing wetland landscape to be retained and protected.

Photo: View looking south along the existing hedgerow with mature trees towards the low laying wetland area at the southern end of The Green Spine.

LANDSCAPE STRATEGY

THE TREED STREETS

Streets need to do more that provide access and parking. The Treed Streets will be multifunctional spaces that will be an essential element in defining the character, identity, legibility and quality of the proposed development.

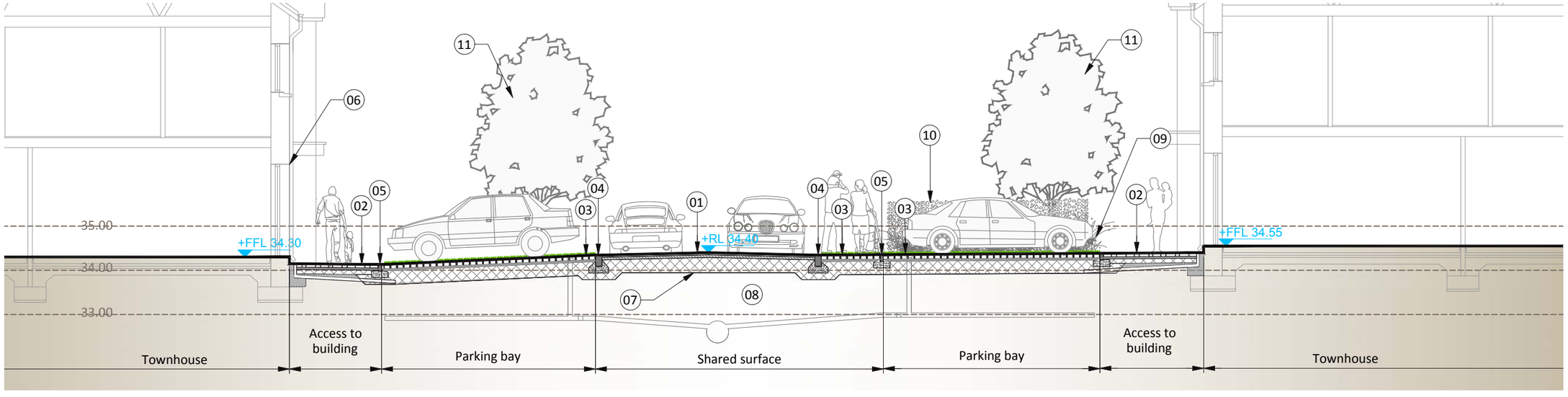
Functions:

The multiple functions that proposed streets will perform are:

- Provide a safe and attractive environment for pedestrians and cyclists
- Provide access for people to their homes, the main green spaces and the wider access and movement network.
- Provide space for on street car parking
- Accommodate deliveries and waste collection.
- Provide routes for services and utilities
- Contribute to sustainable surface water drainage
- Provide space for greening as part of climate resilience and improved microclimate within the development.
- Support the legibility of the development through design and materials
- Support the character and identity of the proposed development as a distinctive place.

Design Response:

- The main access street will be defined by the character areas through which it passes. This will ensure the landscape characteristics of the The Green Gate, The Village Green and The Green Link are the dominant feature of those spaces. The Treed Streets have specific characteristics that are proposed to ensure the technical requirements of streets that are developed on both sides provide a safe, attractive environment that prioritises the needs of people over vehicles. Several design features will be incorporated to achieve this.
- Semi-mature tree species that are appropriate for use in a street and built environment will be planted in strategic locations along these streets. The form and species of tree will be selected for each street to provide a strong visual identity to support legibility of the scheme. The street trees will provide secondary enclosure and will be planted predominantly in bioswales which will also be a distinctive characteristic of the Treed Streets. The bioswales in the Treed Streets will take two forms. Linear bioswales alongside the carriageway where there is no parking will provide strong landscape features with herbaceous planting, grasses and flowering perennials. Parking bay bioswales will be placed between sets of on-street parking spaces. These will be characterised by a specimen tree with rich understory of herbaceous, seasonal planting with a low clipped hedge along one side which, together with the other planting, will soften the parking in the view along the streets.
- The hard landscape components will be a key characteristic of the Treed Streets and are designed to reinforce street hierarchy and the pedestrian friendly nature of these spaces. Gateway points into Treed Streets will be defined by raised tables at junctions with rumble strips comprised of natural stone sets laid in rows up to a minimum 2m width laid at thresholds. Wherever possible, gateways of shared streets will be defined by a specimen tree planted to both sides.
- The Treed Streets will be characterised by a shared surface finish to the carriageway of 4.8m width in a natural aggregate with buff coloured binder. The parking



PROPOSED HARDSCAPE:

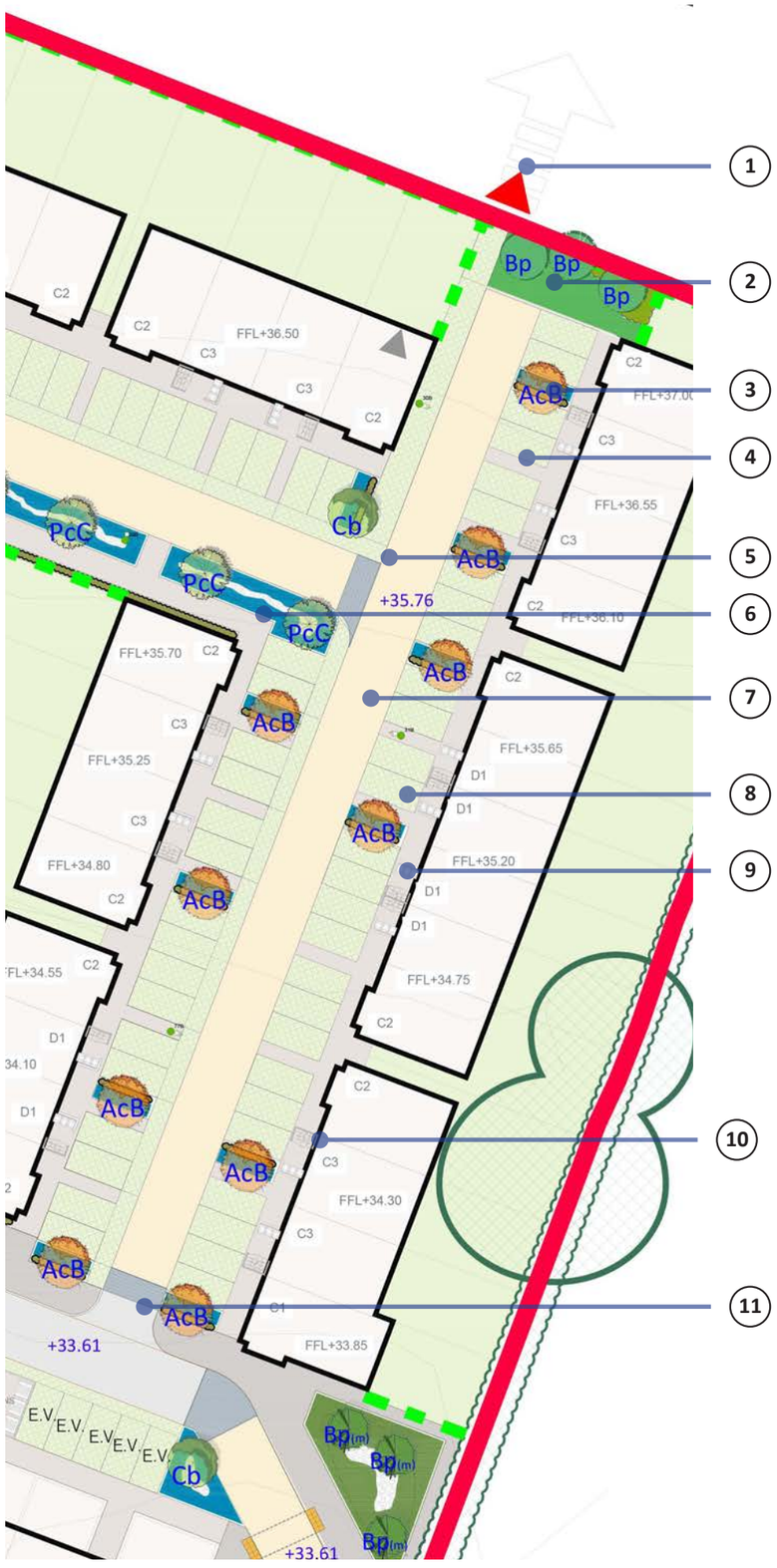
1. Buff coloured bitumen macadam road to shared surface
2. Concrete paving blocks, laid in stretcher bond random pattern, to footpaths adjacent to building
3. Permeable pre-cast concrete paving block 600 x 400 x 100mm to parking spaces and shared street footpath. Backfilled with high quality topsoil and seeded with high wear tolerance grass seed mix.
4. Countryside kerb 225x145x900mm laid flush to edge of concrete permeable paving
5. Country edge flat top 900x75x150. Granite aggregate finish or equivalent. Laid flush with adjacent concrete permeable grid units
6. Rainwater down pipe on front elevation of house draining into bio-retention feature.
7. Geotexile layer, Terram 1000 or equivalent approved
8. Site fill material to engineer's specifications.

PROPOSED SOFTSCAPE:

9. Bioretention planting species selected to be tolerant of periods of surface water inundation and drought.
10. Proposed clipped hedge defining curtilage at front of property
11. Semi-mature specimen tree planting. Species selected to be tolerant of short periods of water inundation as well as periods of drought.

bays along these streets will be finished in grasscrete paving. This durable material will perform two key functions. It will reduce the impermeable surface area of the streets significantly for the long term making an important contribution to the sustainable drainage strategy for the site. The porous voids seeded with a hard wearing grass seed will support a visible greening of the streets, which will reinforce the perception of the priority of people over vehicles. Street corners will be designed with tighter radii as an additional feature to ensure low vehicle speeds.

- Access paths up to the frontages of properties will be provided between parking bays and set out to coordinate with the locations of front doors. These paths will be finished in square edged silver grey concrete block paving to match the paving along the curtilage of dwellings and access paths across the scheme. In streets with terraced houses, these access paths are coordinated to provide access to the bin stores at the front elevation of the properties.
- Services and utilities will be laid centrally in the street for ease of access and ensure that tree planting opportunities are maximised and they grow to a mature size.
- The proposed hard and soft landscape components in The Treed Streets, will create multifunctional spaces that respond to the technical and environmental demands of these streets in a way that also supports character and identity. The design approach and measures proposed follow best practice guidance including Urban Design Manual, DMURS and industry guidance on green infrastructure for built environments.



1. Proposed potential future pedestrian link into adjacent land.
2. Proposed mixed native trees, shrubs and groundcover planting providing a green vista to the end of the street
3. Proposed Semi-mature trees of a regular shape and habit providing secondary enclosure to the street, planted in bioswale features with rich mix of herbaceous and flowering species and a clipped hedge parallel to cars down one side. Softens the appearance of cars along the street, supports greening, biodiversity and distinctiveness of place.
4. Proposed access paths to frontages of new homes from the shared Local Street finished in silver-grey squared edged concrete block paving.
5. Proposed tighter radii at junctions in accordance with DMURS best practice guidance to maintain slower traffic speeds.
6. Proposed linear bioswale feature along street providing strong greening and visual qualities.
7. Proposed shared surface street with 4.8m wide carriageway as per DMURS guidance, finished in natural aggregate wearing course with buff coloured aggregate binder.
8. Proposed ‘grasscrete’ porous surface finish to all car parking areas as part of SuDS strategy, reinforcement of pedestrian friendly environment and distinctive place identity.
9. Proposed paths along frontages of new homes finished in silver-grey squared edged concrete block paving.
10. Proposed bin store at frontages of terraced houses. Access paths, parking, bioswales and street tree locations coordinated to ensure ease of access to bins.
11. Proposed gateway into shared street to be defined by a natural stone rumble strip, tighter radii at the junction, a change in surface material and semi-mature trees planted at both sides with a clipped hedge underneath.

LANDSCAPE STRATEGY

THE TERRACED GARDEN

The Terrace Garden will be located in the space created by the proposed duplex homes in the southern part of the site. It will provide a well enclosed intimate space for residents for passive recreation. The area is currently a locally steep level change on the site between the upper grassland plateau and the lower wet meadow grassland.

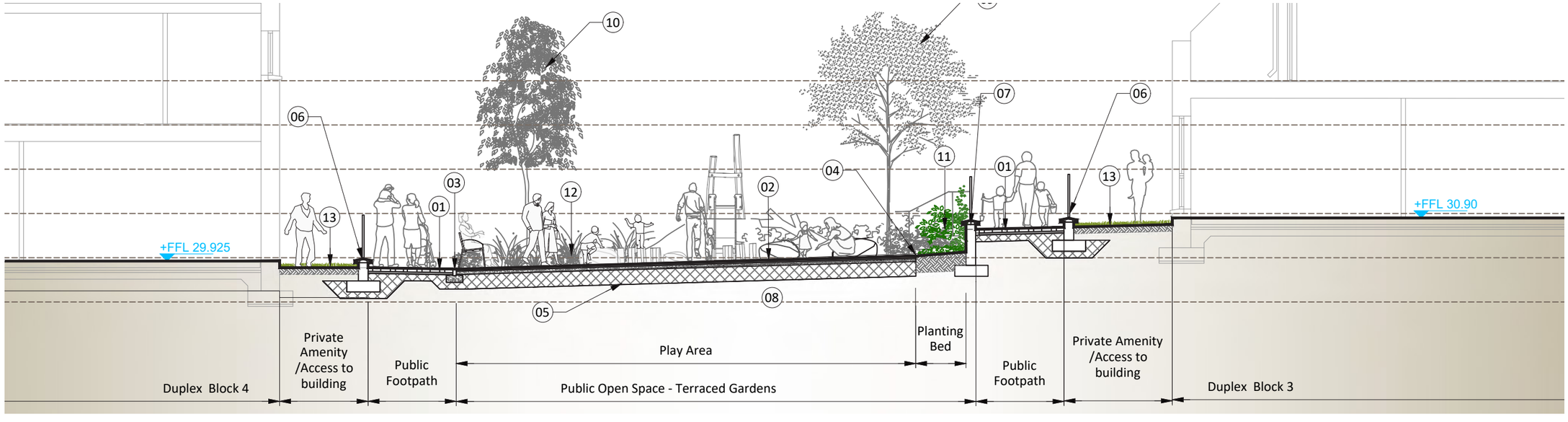
Functions:

The key functions that this landscape area should perform are:

- Provide inclusive access for residents to there homes
- Contribute to the open space provision in the development
- Contribute to the sustainable surface water drainage strategy
- Provide opportunities for play and passive recreation
- Provide permeability and connectivity through the development

Design Response:

- The Terrace Garden will be an intimate space that is strongly defined by the new buildings that enclose it along the northern and southern edge. The new homes will have active frontage along the edges with properties having direct access to this space as a shared garden environment for their use and enjoyment.
- The Terraced Garden will manage the transition from the upper level of the Village Green down to the garden with steps into the space between the duplex blocks on the northern edge. There will also be a ramp access from the upper area of the garden to ensure inclusive access for all.
- This will be a highly permeable and well connected space, with a public footpath link passing through the centre of the garden to connect with the Green Link on the southern edge of the site. Public access will also be provided at the eastern and western ends of the space, with the western end providing access for the infirm or disabled. The connectivity with adjacent landscape and concrete paving finished routes through the garden will support its active use as part of the overall public open space network.
- This will be a playful space, with lawn areas and natural play features and seating set out in a sequence of outdoor 'rooms' for the benefit of residents of all ages. A series of bioswales planted with ornamental herbaceous flowering perennials, grasses and multi-stem trees will add distinctiveness, colour, and seasonal interest to the garden. These features will contribute to the delivery of the sustainable surface water strategy and enhance biodiversity. New trees, including flowering cherry, will also be planted along the edges of the paths to the north and south, providing secondary enclosure and enhancing the sense of intimacy of space.
- The Terraced Garden supports the use of active travel alternatives with the provision of covered bicycle storage at four locations. Set immediately to the edge of the space and access paths, these bicycle stores will be overlooked by the homes and easy to access directly by residents.
- The inclusive access of the Terraced Garden will be supported through the surface finishes. Pedestrian paths will be finished in square edge silver grey concrete blocks providing a safe, contemporary, durable and neat surface. Play feature areas will be finished in appropriate rubber matting for ease of maintenance and safety.



PROPOSED HARDSCAPE:

1. Concrete paving blocks, laid in stretcher bond random pattern, to footpaths adjacent to building
2. Playground safety surfacing: Colour Brown/ Earth tone, 50 -120mm deep recycled shredded rubber surfacing bound with polyurethane binder Jungle Mulch or equivalent to BS 1177 and BS 7188 over screed 75mm of no fines permeable concrete over blinding layer over 805 sub-base. Concrete to IS EN 206:2013 and TII Specification for Road Works 2600
3. Country edge flat top 900x75x150. Granite aggregate finish or equivalent. Laid flush with adjacent concrete permeable grid units
4. Steel edge, corten finish. Supplied with 5 fixing stakes and 2 connector strips. Profile height 150mm, length 3m, thickness 8mm.
5. Geotexile layer, Terram 1000 or equivalent approved
6. 1.2m high low stub wall with railing to private amenity perimeter
7. 1.2m high low stub wall with railing on top of retaining wall, to engineer's detail
8. Site fill material to engineer's specifications.

PROPOSED SOFTSCAPE:

9. Semi-mature ornamental tree planting
10. Semi-mature specimen tree planting. Species selected to be tolerant of short periods of water inundation as well as periods of drought.
11. Pollinator friendly ornamental shrub and perennial planting
12. Bioretention planting species selected to be tolerant of periods of surface water inundation and drought.
13. Low maintenance grass seeding to private amenity areas

1. Proposed inclusive access paths serving new dwellings finished in silvery-grey square edge concrete blocks.
2. Proposed clipped hedge to end of space as separator to carriageway.
3. Proposed typical bioretention features with seasonal herbaceous and flowering plants and trees t o support placemaking, biodiversity, SuDS strategy and to enhance the outdoor ‘garden rooms’.
4. Proposed covered bicycle storage to architect’s specification with clipped hedge planting along the inside to garden.
5. Proposed secure bin store to architect’s specification.
6. Proposed terraced garden comprised of bioswale features, lawns and shrub planting at the main entry point into the Terraced Garden from the north.
7. Proposed north end of access linkage through the Terraced Garden leading through to the Green Link.
8. Proposed lawn areas providing flexible passive recreation space and permeable surface within the Terraced Garden.
9. Proposed steps down to garden area finished in silver-grey concrete blocks with contrasting strip on top of nosing for visually impaired.
10. Proposed ramp constructed in concrete with external finish to match boundary walls to properties with anthracite grey railing to provided access for all to the garden area.
11. Proposed retaining wall along edge of upper path serving residential blocks 1 and 3 to required height with powder coated, anthracite grey coloured railing on top.
12. Proposed seating at edge of path and play area comprised of contemporary sustainably sourced hardwood timber seats fixed to powder coated metal legs.
13. Incidental play area comprised of natural play equipment set in a rubber safety surface.

LANDSCAPE STRATEGY

THE GARDEN COURT

The Garden Court is proposed as a central communal space for the residents of the apartments in the southeastern land parcel. The land is currently characterized by undulating ground comprised of various fill material from the adjacent land to the east. The land generally slopes down from north to south and it is covered in dense scrub vegetation which has colonized the area.

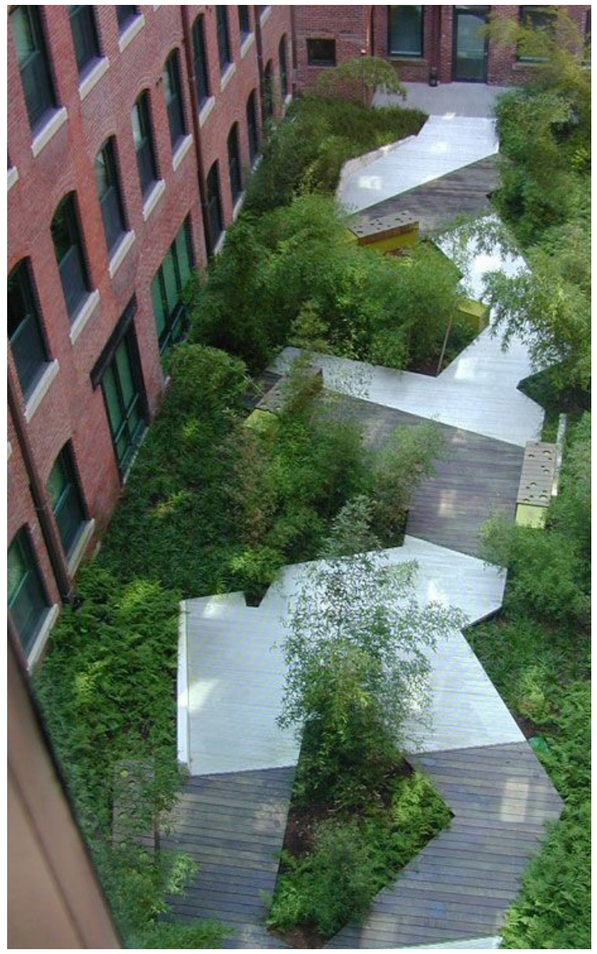
Functions:

The key functions that The Garden Court area should perform are:

- Provide inclusive access to and between the proposed apartment buildings
- Provide and attractive and inclusive communal amenity space for apartment residents
- Support the identity, quality and placemaking of the apartment quarter
- Contribute to the green footprint of the apartment development in this portion of the site

Design Response:

- The Garden Court will be a formal designed landscape laid out in the space created by the apartment buildings that enclose it. The design of the space is influenced by it being set on top of the roof of the underground car park serving the apartments. It will be an intimate space comprised of a paved access path leading into a central space before continuing to a smaller paved seating area on the southern edge.
- The pedestrian access path to the Garden Court will extend south from a raised table in the carriageway of the Treed Street running along the northern edge of the development. Apartment buildings to both sides will frame a view out to the south where the canopy of the existing trees on the southern boundary will be visible with glimpse views of the mountain landscape in the background. The path will be 4m wide and finished in silver grey square edged concrete block paving, which is suitable for use on both conventional path construction and roof decks. There will be a consistent visual appearance in the paving running through the Garden Court. The edge of the path will be planted on both sides with a clipped hedge and the entry point at the raised table will be protected by two removable bollards. The path will be constructed to allow occasional vehicle access for maintenance of the open space and the building elevations.
- On entering the central space, the path network provides inclusive and level access to each of the main entrance lobbies of the apartment blocks and the communal open space. The central part of the Garden Court is characterised by a combination of lawn, feature specimen trees and a rich variety of shrubs, herbaceous and flowering perennial planting. Apartment buildings will provide strong enclosure to the north, west and south sides of the central space and frame the view to the east where the top of the trees along the eastern boundary will be visible above a lawn with a back edge planted in the selected podium planting mix. The podium planting mix is specially selected for its suitability for roof garden sites. It combines select species from other parts of the proposed landscape with species specific to the Garden Court which will retain visual and seasonal associations with the overall development whilst adding a distinctive character to the Garden Court. This planting will wrap around the edges of the Garden Court space to provide a strong and consistent visual display, whilst providing privacy to the ground floor apartments.
- Magnolia, Cherry and Serviceberry are selected as feature trees with ornamental shrub and flowering perennial planting. These trees are selected for the seasonal interest, their relatively modest size and weight and suitability for use in planters constructed as part of the proposed roof deck. The planters constructed for the trees will be finished in brick to match the elevations of the apartment buildings.
- Seating is proposed in two locations within the Garden Court. A planter with feature tree is proposed at the centre of the space and set within the path network linking the apartment buildings. A hardwood timber seat is proposed around the edge of this planter, providing an ideal location for residents to meet and sit outside. A smaller paved area to the south west of the Garden Court is proposed, which will be characterised by an abundant display of the podium planting and cherry trees. A series of hardwood timber topped benches will be set around the edge of the paved area with the podium planting behind them. This provides a tranquil space off the main paths of the Garden Court and offers closer contact with the natural character of the Green Link passing this space to the south.



1. Proposed shrub and perennial planting (See Drg. No. 6620-300, Landscape Plan, Mix 1) around the exterior elevation of the proposed apartment development to provide privacy to residents and anchor the development into the landscape setting.
2. Proposed clipped hedge planting to provide formal edge to buildings and provide privacy to residents.
3. Proposed entry point into Garden Court to be protected by 2no. steel removable bollards.
4. Proposed imprinted asphalt to raised crossing point.
5. Proposed natural stone rumble strip to both sides of raised crossing point.
6. Proposed shared footpath/cycleway in asphalt surface finish.
7. Proposed main pedestrian paths into and within The Garden Court finished in silver-grey square edged concrete blocks laid in a herring bone pattern.
8. Proposed main doors to apartment block lobby.
9. Proposed raised planter with feature tree and herbaceous perennial understory planting surrounded with a sustainably sourced hardwood seat.
10. Proposed Garden Court planting (See Drg. No. 6620-300, Landscape Plan, Mix 2) around perimeter of space to add rich seasonality, enhance biodiversity, add distinctiveness and provide privacy to ground floor residents.
11. Proposed lawn areas to provide open areas for passive recreation and reduce area of hard surfaces.
12. Proposed retaining wall to edge of garden to architect's specification with anthracite grey railing fixed above. Overall height of structure from finished ground level to be no less than 1.1m high.
13. Proposed ancillary paved garden space enclosed by planting and trees incorporating sustainably sourced hardwood seats fixed to powder coated metal legs fixed to the concrete deck below.
14. Proposed Flex MSE greenwall retaining element with shrub planting in space below The Garden Court to manage transition to The Green Link character area (See Drg. No. 6620-302, Boundary Sections, Section 8).

MATERIALS PALETTE

HARDSCAPE STRATEGY

The Landscape Plan, Drawing No. 6620-300, identifies the material finishes proposed across the development. The materials proposed is determined by a number of key functional and aesthetic criteria. Functionally, the materials will be durable with a proven track record of performance in similar applications. They will also be easy to maintain to reduce cost and protect the environment. The materials will be readily available and easy to replace, if necessary, and ensure a seamless matching appearance. Materials with a high recycled content and that can themselves be recycled will be used as much as possible. Where appropriate, the selected materials will support the delivery of the sustainable surface water drainage strategy. Aesthetically, a refined palette of materials is proposed to ensure consistency in the visual language and quality of the external spaces. Hard landscape finishes will play an important role in unifying the development.

The shared footpath/cycleway network will be finished in asphalt, with a portion of it within the central green space (The Village Green) finished in compacted gravel. A section of the shared footpath/cycleway will be constructed of recycled plastic deck with matching balustrade. This robust, rot proof and UV stable material is also fully recyclable. The same material is proposed for short crossing points over the bioswale at The Village Green.

The paved areas along the curtilage of the proposed homes and paths within the shared gardens of the duplex and apartment development will be comprised of silver-grey concrete paving blocks and kerbs. These will provide a hard wearing attractive light colour finish that complements that range of materials proposed in the built elevations as well as adjacent surface finishes in the streets. The main access street will be finished in asphalt, with imprinted asphalt at raised tables at junctions. Shared surface local streets will be finished in natural aggregate wearing course with a coloured binder as part of defining the distinctive character of these streets and spaces as the secondary access routes in the hierarchy. Rumble strips comprised of natural stone will be laid at gateways to shared surface streets and at junctions as part of traffic calming measures.

With the exception of the apartments, communal on-street car parking is proposed across the development.

Grasscrete paving is proposed in these locations to allow surface water to percolate at a reduced ratecompared to conventional surfaces. The voids will be seeded with a hard wearing grass seed mix, filling the surface between the concrete ribs. The concrete ribs will provide a strong structure with good surface grip in all weather conditions. Where the voids in other porous paving systems fill up with debris over time, reducing their performance, the proposed system will retain its porosity for the long term. The surface of the car parking areas will also have a different, visibly greener, appearance to adjacent carriageway surfaces, which will help to positively influence driver behaviour.

Locally along the shared footpath/cycleway in the western part of the site, a black powder coated estate railing will be installed along the edge of the path where it is elevated above the planted edge. The path will be protected from the local street side by a reinforced barrier finished in round timber. This will give protection to highways standards requrements, with an appropriate natural appearance.

Natural aggregate wearing course with colured binder for carriagways in shared streets

AsphatIt finish to shared footpath/cycleways

Rumble strips at edges to raised tables at junctions and gatways to shared streets

MATERIALS PALETTE

HARD LANDSCAPE

Silver-grey square edge paving to curtilage of homes and paths within communal gardens.

Compacted gravel finish to shared footpath/cycleway within The Village Green.

Porous paving to all on street car parking areas

Imprinted asphalt at raised tables at junctions

Estate style railing proposed to edge of shared footpath cycleway locally at western edge of develpment

Recycled plastic decking and balustrade to sections of shared footpath/cycleway in the Green Link

MATERIALS PALETTE

PLANTING STRATEGY

The general planting strategy throughout the scheme is for significant structure tree planting with 2 metre clear stems to provide a leafy canopy layer, softening the proposed buildings and a base layer of low shrub/ groundcover and hedge planting to create low level seasonal interest and colour softening the hard surfaced areas and car parking. Eye level between the two planting types is kept clear to maintain sight lines throughout the scheme.

Planting

Native and naturalised tree species are to be planted within the public open space to increase opportunities for native wildlife. Low level shrub and groundcover planting will be in single species blocks taken from an overall palette of species throughout the scheme with flowers and fruits attractive to wildlife such as bees and butterflies.

Trees

Street tree planting will consist of species with fastigiate or neat forms suitable to the scale of the streetscape and those which will thrive in a streetscape environment. Street tree planting is located to avoid impacts with street lighting.

Landscape Implementation

Planting on the site will commence with the completion of each stage of the works and as a result the programme is closely tied to construction operations. Ground preparation will precede planting and will include weed clearance and amelioration where necessary. Planting of species will be carried out in the dormant period from November – March, with grass seeding carried out from April – September, this will ensure ample opportunity for planting to establish properly and reduce casualties during the maintenance period.

Intensive landscape aftercare for each area will run for 12 months from the practical completion date using contact herbicides and hand weeding. There will be a period of 12 months defects liability on all planting with plant failures being replaced in the following planting season.

MATERIALS PALETTE

SOFT LANDSCAPE - TREES

The principle objective of the landscape proposals is to provide a high quality public realm, which is accessible, safe and distinctive. Planting and landscape works will be carried out in accordance with BS4428. Trees will be advanced/semi-mature rootballed stock, in accordance with BS 8545.

Street trees will be planted into a minimum of 7cu.m. topsoil, with the use of urban tree soils, root barriers to protect water utilities and topsoil loaded rootcells to increase rooting areas outside the main tree pit area as necessary. Trees will be planted in co-ordination with Water Services (Appendix 4) and Public Lighting (Appendix 5).

Street Tree Planting

Selected species suitable for physical characteristics (scale, form) and adaptive/ compatible to site conditions, micro-climate and whole of life impacts and costs.

Ulmus ‘Columella’

Carpinus ‘Frans fontaine’

Acer ‘Autumn Blaze’

Pyrus calleryana ‘Chanticleer’

Open Space Tree Planting

Malus ‘Evereste’

Prunus avium ‘Plena’

Sorbus aucuparia ‘Sheerwater Seedling’

Betula pendula

Quercus robur

Pinus sylvestris

Ulmnus 'Columella'

Carpinus 'Frans fontaine'

Acer 'Autumn Blaze'

Pyrus ‘Chanticleer’

Malus ‘Evereste’

Sorbus ‘Sheerwater Seedling’

Prunus avium ‘Plena’

Betula pendula

Quercus robur

MATERIALS PALETTE

SCREEN PLANTING

Within parts of the open space and perimeter trees and hedgerows, suitable native meadow will be seeded to increasing site biodiversity and visual interest. This will consist of;

Type 1 – Open Space Amenity Grassland Meadow

This wildflower mixture is of native origin and will increase the biodiversity of the open space on site. It requires just one cut a year and is excellent for insect and bird wildlife.

Type 2 - Shade/semi-shade areas to boundaries

This wildflower mixture is of native origin and will increase the biodiversity of the perimeter wooded/ hedgerows.It requires light shade and will require occasional maintenance to rake the soil open for new seedlings to germinate. Additional bluebell seed can be added.

Hedgerow Planting

Fagus sylvatica

Taxus baccata

Native Hedgerow Planting

Ilex aquilfolium

Prunus spinosa

Crateagus monogyna

Screen Planting

Ilex aquilfolium

Prunus avium

Rosa canina

Prunus spinosa

Crataegus monogyna

Corylus avellana

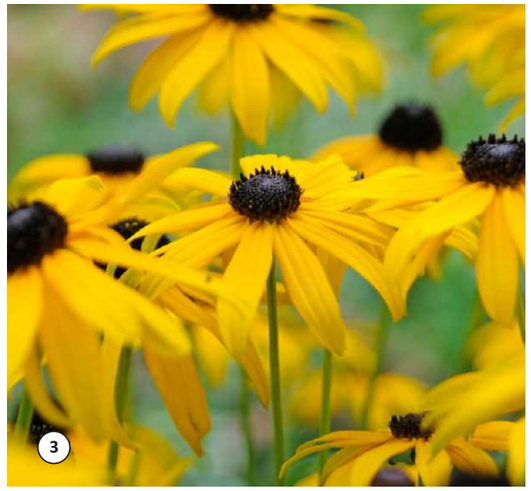
MATERIALS PALETTE

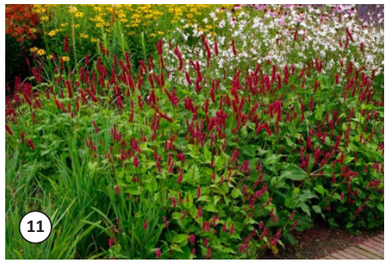
SOFT LANDSCAPE - PLANTING

Low level, low maintenance shrub planting will be used in planting beds containerised with a minimum size of 2 litre pots, with a 75mm well composted fine bark mulch. Species will be of maximum 1m height at maturity to maintain clear sight lines.

Low Level block planting

1. *Salvia nemorosa 'Amethyst'*
2. *Geranium 'Orion'*
3. *Rudbeckia fulgida 'Goldsturm'*
4. *Sedum spectable*
5. *Nepeta 'Greenhills giant'*
6. *Hakonechloa macra*
7. *Stipa tenuisfolium 'Ponytails'*
8. *Anemanthele lessoniana*
9. *Pennisetum alopercurpoides 'Hamlyn'*
10. *Persicaria affinis 'Superba'*
11. *Persicaria amplexicaulis 'Fat Domino'*
12. *Calamagrostis 'Karl Forster'*
13. *Taxus baccata*



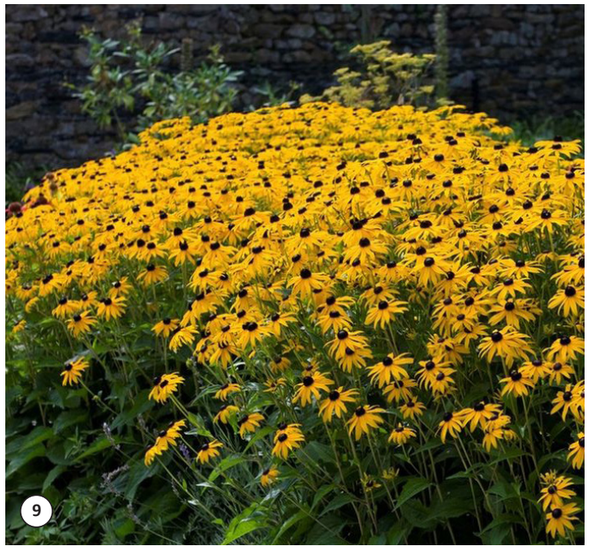


MATERIALS PALETTE

SOFT LANDSCAPE - PLANTING

Shrub & Groundcover planting including:

1. *Choisya ternata ‘Sundance’*
2. *Euonymus fortunei ‘Emerald Gaiety’*
3. *Hypericum x hidcote*
4. *Photinia x fraseri ‘Red robbin’*
5. *Lonicera pileata*
6. *Hydranga serrate ‘Bluebird’*
7. *Rosmarinus officanalis ‘Roseus’*
8. *Euphorbia epithymoides*
9. *Rudbeckia fulgida*
10. *Hedera helix ‘Green Ripple’*
11. *Geranium x johnsonii*
12. *Stipa tennuissima*
13. *Vinca minor ‘Atropurpurea’*
14. *Hebe ‘Pewter Dome’*
15. *Skimma japonica ‘Nymans’*
16. *Salvia nemorosa*
17. *Pennisetum alopecurodies ‘Hamelin'*
18. *Verbena bonariensis*
19. *Hedera Hibernica*

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