

CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN

RESIDENTIAL DEVELOPMENT AT
HICKEY'S LANE, ASHBOURNE

LANDSCAPE DESIGN REPORT
PLANNING STAGE

21659-2-D01-revB

August 2022

1.0 Context	Page 3
2.0 Landscape Concept	Page 4
3.0 Landscape Concept Proposals	Page 8
4.0 Maintenance & Management	Page 8

1.0 Context

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

1.1 Site Context - Current site analysis

The subject site is situated to the south of Ashbourne Co. Meath. The subject site lies east of the M2 motorway and is 2km from the Meath/Dublin county border. Ashbourne town is less than 20km from the centre of Dublin city making it a commuter town. Ashbourne is home to an industrial estate, a large number of housing estates, sports clubs including GAA, soccer and rugby. The town has a total of 7 schools and numerous shops/cafes etc.

The lands of the subject site are currently agricultural fields with numerous mature tree lined hedgerows, a lot of which are good quality in terms of habitat and biodiversity for the local area. There are some good quality mature trees to the boundary of the site which would be desirable for retention given the positive impact they have through visual connection, focal points, screening and habitat.





The site has a high point of approx. 74.00 and a low point of approx. 66.00. There are a series of ditches along hedge lines which range in depths of 500mm-2m approx.

Existing Site (redline indicates site boundary)



Proposed site concept / existing site overlay



-  Existing fields
-  Secondary roads
-  Main roads
-  Existing hedgerows



1.0 Context

1.2 Planning Context

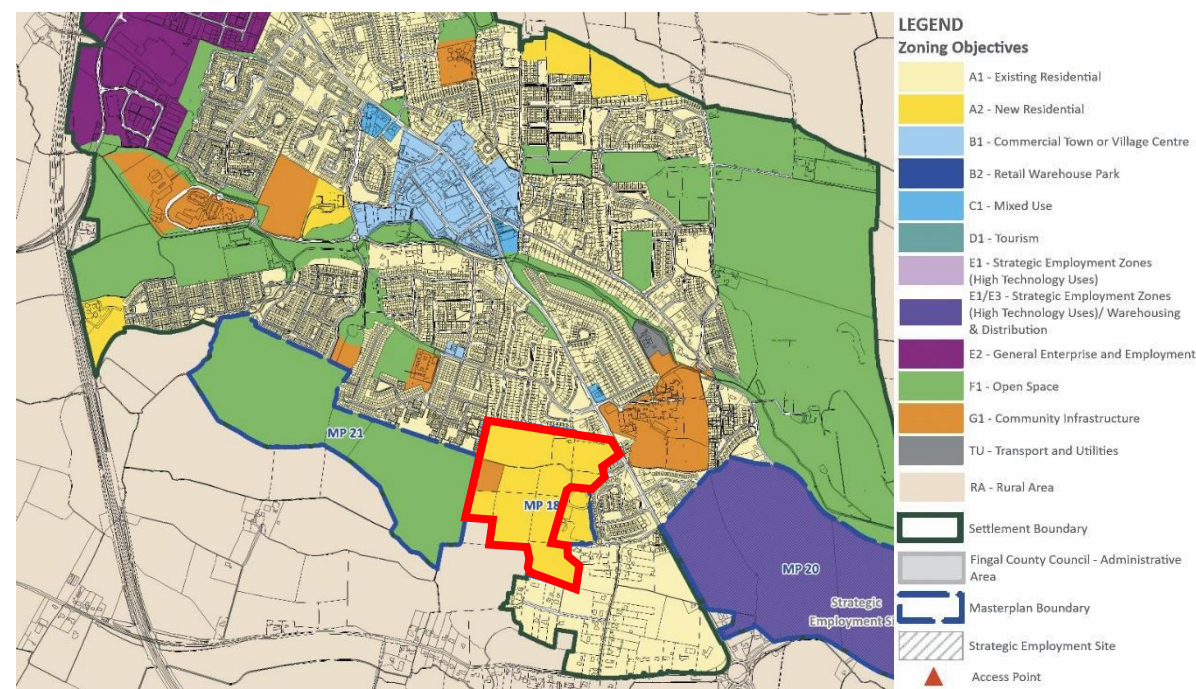
The proposed site is situated in the Meath County Council jurisdiction. The legislative context for development is set out in the Meath County Development Plan 2021-2027.

The vision for Ashbourne as a town set out by the Meath County Development Plan 2021-2027 states, "For Ashbourne to develop as a vibrant, modern and integrated town around a strong employment and service centre, where future growth builds upon the town's expansion and investment to support a sustainable, diverse and attractive settlement."

The planning related landscape policies and objectives that relate to the proposed site are surmised as follows in the written statement of the county development plan and the development strategy for Ashbourne:

- To support and the inclusion of Green Infrastructure within new developments.
- To support and facilitate the completion of the cycling / walking route along the R135 (Dublin Road).
- To support the creation of healthy and sustainable communities that encourages and facilitates walking and cycling (in accordance with the Greater Dublin Area Cycle Network Plan) and general physical activity through the implementation of best practices in urban design that promotes permeability and interconnecting spaces.
- To examine the feasibility of a new junction on the R135 that could serve development lands on Hickeys Lane.
- To support the utilisation of sustainable principles in the design, planning and development of residential schemes throughout the town.
- To implement and ensure compliance with the Public Realm Plan for Ashbourne which provides for a themed strategy for the provision of street furniture, planting, traffic and parking, lighting, building colours, (local and tourist) signage and surface materials etc. within the town.
- To support the creation of attractive residential developments with a range of housing options and appropriate provision of functional public and private open space that is consistent with the standards and principles set out in the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas and the associated Urban Design Manual – A Best Practice Guide, DEHLG (2009) and any subsequent Guidelines.
- To position lighting columns 5 metres from the fully grown crown of trees or within 7m of a light column.
- To facilitate and consider consolidated and compact developments where they provide attractive settings, a suitable mix of housing and supporting amenities that facilitate a high quality of living and working environments.
- To encourage the creation of a sense of place. "It is important that a sense of place is created in the local environment that strengthens the connection between people and the place they live and work. This will improve the interaction people have with local amenities, create a local identity, thereby assisting in building a community.
- To promote the protection and enhancement of the designated landscape characters of County Meath.
- To encourage retention of existing trees and hedgerows and mitigation of trees and hedgerows removed, and to promote the use of native planting species.
- To promote for improved biodiversity, including within urban areas.
- To promote good amenity and recreational facilities in new developments.
- To promote the including of good children's play facilities.
- To protect and enhance the local heritage.

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE



Meath County Council Development Plan Land Zoning Map

National Guidance:

The following are the relevant sections of the *Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, December 2020*, which relate to landscape and external amenity spaces.

External Communal Amenity Spaces:

- Provision of well designed external communal amenity space for the use of the residents. Minimum areas for communal amenity spaces are as follows:
 - Studio Unit 4m²/unit
 - 1 Bedroom Unit 5m²/unit
 - 2 Bedroomed Unit (3 people) 6m²/unit
 - 2 Bedroomed Unit (4 people) 7m²/unit
 - 3 bedroomed Unit 9m²/unit

Children's Play facilities are to be provided:

- within the private open space associated with individual apartments;
- small play spaces (about 85 – 100 sq. metres) for the specific needs of toddlers and children up to the age of six, with suitable play equipment, seating for parents/guardians, and within sight of the apartment building, in a scheme that includes 25 or more units with two or more bedrooms; and
- play areas (200–400 sq. metres) for older children and young teenagers, in a scheme that includes 100 or more apartments with two or more bedrooms.

Cycling:

- Location – cycle storage facilities should be directly accessible from the public road or from a shared private area that gives direct access to the public road.
- Quantity – a general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided per unit. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units.

2.0 Landscape Concept

2.1 Concept Strategy

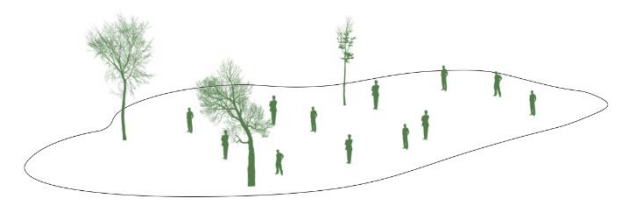


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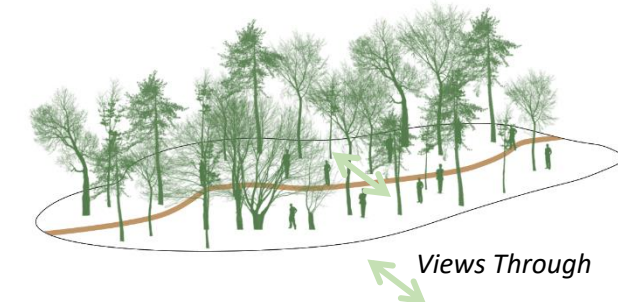
The landscape concept for the linear park is brought upon the idea of combined **openness & enclosure** of a natural landscape/ parkland setting. Working in harmony to create an ever-changing linear park which acts as a green spine to the overall scheme that offers break out areas for a multiple of different recreational uses. These would include large open areas of grass for kick-about spaces; play areas for all aged groups dotted throughout the open spaces to ensure good proximity for the entire development; plaza spaces to offer gathering and outdoor seating positioned to maximize sunny positions; good circulation of paths for walking, cycling, dog walking and running. The linear park will create areas for native and natural planting to enhance local biodiversity.

The development will include for good quality tree planting to enhance the existing tree coverage when combined with the mature trees retained. Careful consideration of street tree planting will be considered along streets and 'Homezones' to ensure their longevity.

Openness



Enclosure



2.0 Landscape Concept

2.2 Landscape Concept Aims and Objective



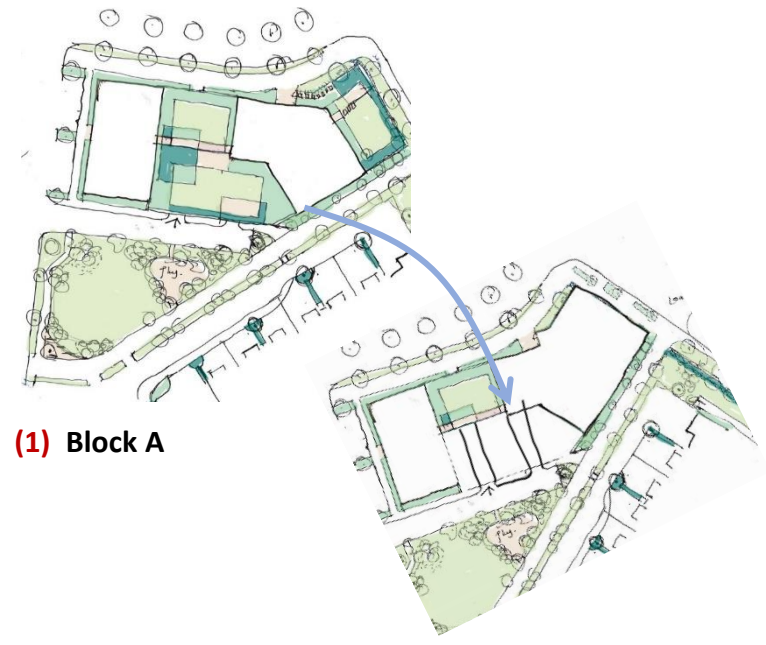
RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE



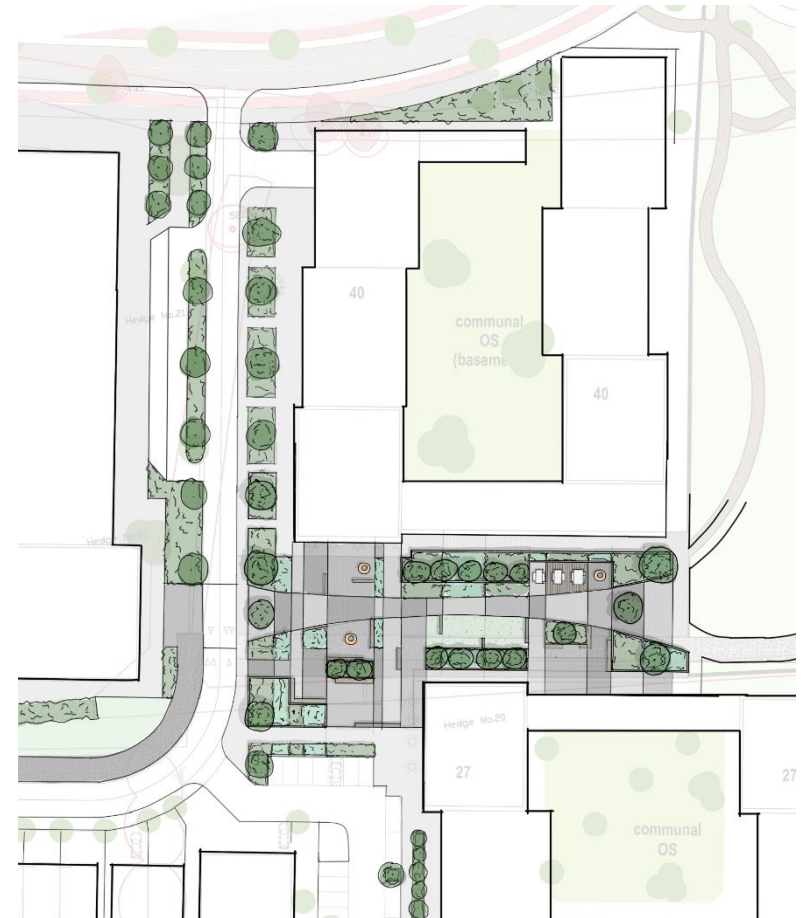
Aims and Objectives

- To create a landscape design for the development that softens and integrates with the surrounding urban and peri-urban setting.
- To create opportunities for usable active and passive recreational spaces for all users.
- To provide usable communal amenity spaces for apartment developments.
- To incorporate good pedestrian and cycling permeability and use throughout the whole site.
- To create a playgrounds strategy following natural play principles that addresses the county development plan objectives and ensure all equipment will be durable and long lasting.
- To retain existing hedgerows and trees where ever possible and in accordance with BS 5837.
- Replace lost wildlife corridors with a new green infrastructure network.
- To ensure tree planting will be fully coordinated with street lighting, lamppost distances from trees maintained at 7m.
- To ensure landscape proposals will be full coordinated with all underground services.
- To ensure landscape proposals will be carefully coordinated with the drainage/ SuDS strategy to ensure a seamless blend and to include for as much surface attenuation as possible.

2.3 Concept Sketch Proposals



(1) Block A



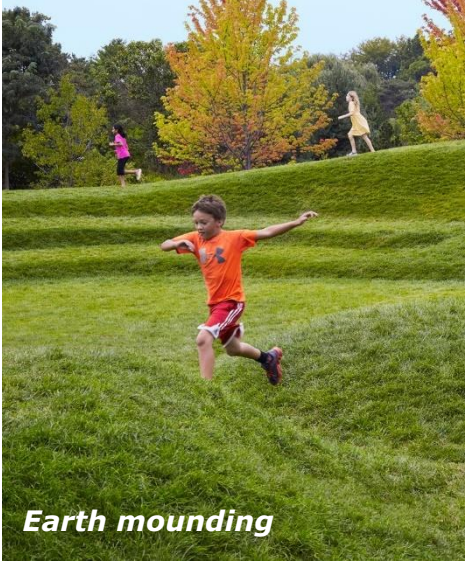
(2) Community centre and plaza

Linear park

2.0 Landscape Concept

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

2.4 Landscape Concept - Precedent of Landscape Character and Materials



Earth mounding



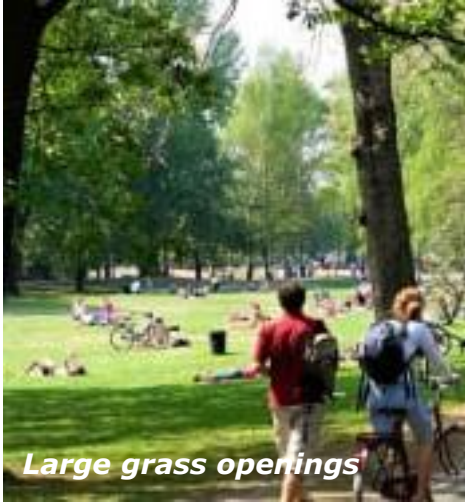
Enclosed plaza space



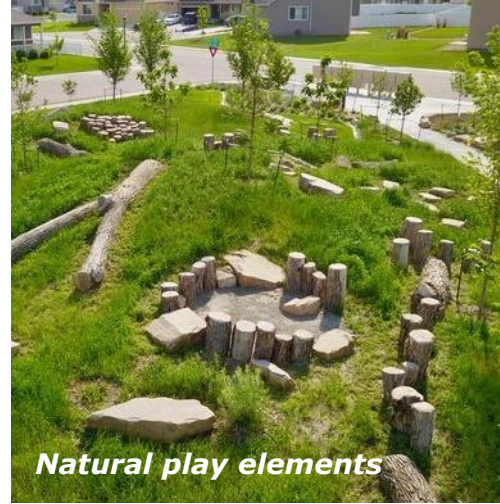
Openings with natural planting



Enclosed woodland paths



Large grass openings



Natural play elements



Plaza space



Open natural planting



Natural play elements



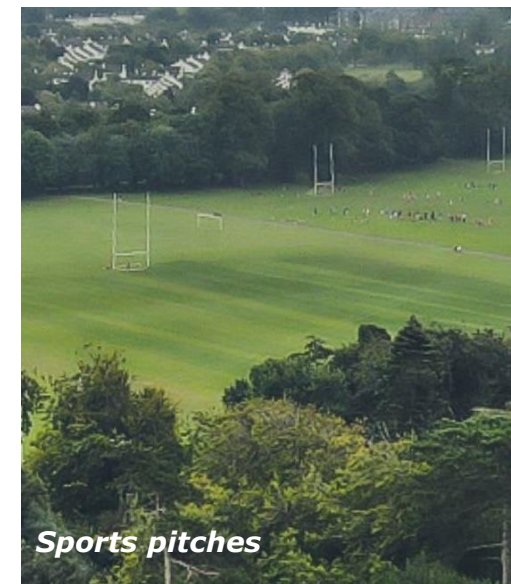
Soft approach to level change



Gathering & seating spaces



Open space



Sports pitches

3.0 Landscape Proposals

3.1 Green Infrastructure

The Green Infrastructure plan for this development will draw upon that set out by Meath County Council's County Development plan. Key policies and objectives which relate to the site, include:

- To support and the inclusion of Green Infrastructure (GI) within new developments.
- To support and facilitate the completion of the cycling / walking route along the R135 (Dublin Road).
- To support the creation of healthy and sustainable communities that encourages and facilitates walking and cycling (in accordance with the Greater Dublin Area Cycle Network Plan) and general physical activity through the implementation of best practices in urban design that promotes permeability and interconnecting spaces.
- To encourage retention of existing trees and hedgerows and mitigation of tree and hedgerow removed, and to promote the use of native planting species.
- To promote for improved biodiversity, including within urban areas. To promote good amenity and recreational facilities in new developments.

The scheme will:

- Utilise the network of paths, roads and open spaces to create landscaped (GI) corridors.
- To design these corridors so as effective corridors for pedestrians, cyclists and wildlife.
- Corridors have been located to link up all open spaces within the proposed development and connect to the wider green and blue infrastructure network across the adjoining established development, town and its wider rural land to enable healthy and sustainable communities.
- The proposals will seek to retain and enhance existing natural features across the site, wherever possible, including an established row of mature trees and ditch through the central neighbourhood park.
- All planting will be selected that is supportive of the All Ireland and Pollinator Plan.



RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE



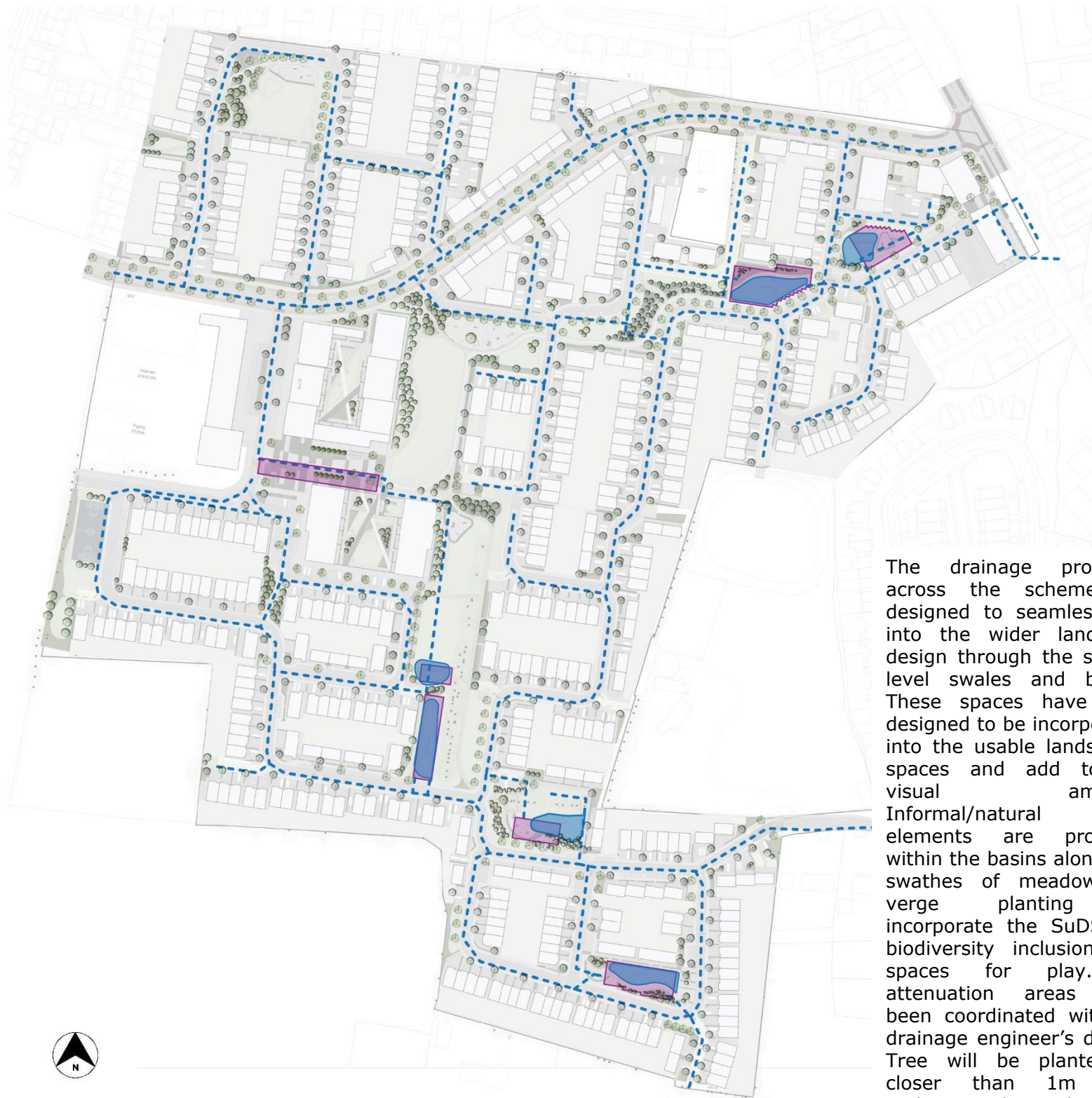
GREEN INFRASTRUCTURE LEGEND

- ← - - - → Existing Dublin Road
- ↔ Proposed Principal Green Link
- Proposed Secondary Green Link
- ⋯ Existing Vegetation To Be Retained
- - - Existing Vegetation To Be Removed
- - - - - Tree Lines
- Existing Open Space (Off Site)
- Proposed Open Space




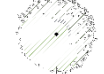
3.0 Landscape Proposals

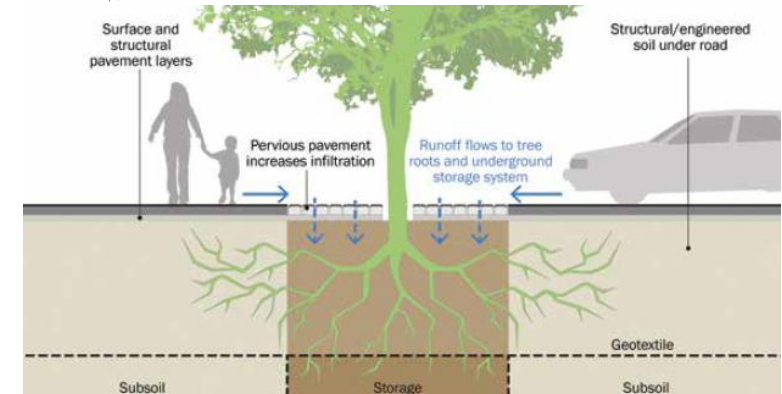
3.2 SuDS

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE



SuDS LEGEND

-  Drainage Pipes (see engineers' drawings for full drainage proposals)
-  Underground Attenuation Tank
-  Surface Attenuation Basin
-  Street trees



Street tree pits incorporated into SuDS system, (fig. *The SuDS Manual, CIRIA, 2015*)

The drainage proposals across the scheme are designed to seamlessly fit into the wider landscape design through the surface level swales and basins. These spaces have been designed to be incorporated into the usable landscaped spaces and add to the visual amenity. Informal/natural play elements are proposed within the basins along with swathes of meadow and verge planting to incorporate the SuDS and biodiversity inclusion as spaces for play. All attenuation areas have been coordinated with the drainage engineer's design. Tree will be planted no closer than 1m from underground tanks and pipes.







3.0 Landscape Proposals

3.3 Vegetation Retained

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VEGETATION RETAINED LEGEND

-  Existing Hedgerows Retained (1880 Im)
-  Existing Trees / group of trees retained and managed (116No.)
-  Existing Hedgerows Removed (1859 Im)
-  Existing Trees Removed (69No.)

Retention of the existing mature tree cover & hedgerows is a crucial part of the overall concept to the landscape scheme. Retention of as many hedgerows and trees as possible allows the wider green infrastructure links to be retained, keeping the sites corridors for habitat and biodiversity. The retention strategy coupled with the proposal will combine to enhance the local biodiversity of the site while also enhancing the wider network of surrounding corridors and links.



3.4 Landscape Masterplan



- LEGEND**
- SOFT LANDSCAPE**
- Back garden Grass area (Private Amenity)
 - Amenity Grass area (Open Space)
 - Meadow planting
 - Hedge planting
 - Shrubs - Medium & Low height
 - Native Under-storey Shrubs
 - Existing Trees to be retained
 - Existing Hedgerow to be retained
 - Open space Tree planting
 - Street Tree planting
- HARD LANDSCAPE**
- Landform
 - Concrete Footpath
 - Asphalt - Buff Coloured to Parks and Open Spaces
 - Permeable Parking Pavement & Driveways
 - Play Area - Rubber Safety Surface
 - 4m Shared Pedestrian and Cycleway - Asphalt
 - Hardwood Timber Deck in Apartment Communal Amenity Courtyards
 - Pavers To Plaza & Open Space - Dark/Light Grey
 - Pavers To Courtyards - Buff/ Dark and Light Grey
 - Muga
 - Raised Planter With Timber Edge Seating
 - Low wall (400mm high) with estate railing (600mm high)
 - Ring Seat/ Bench/ Picnic Table
 - Play Equipment & Bolders
 - Table Tennis
 - Bin Stores To Front Gardens

See drawing 21659-3-100



3.0 Landscape Proposals

3.6 Community Centre and Plaza Area



See drawing 21659-2-103

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

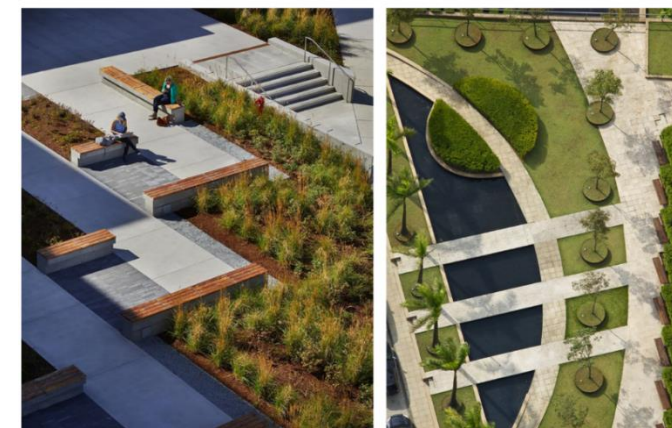


View of proposed central play area and cycle path

Community centre & Plaza

External community centre and plaza space will be provided:

- Seating areas
- Gathering spaces
- High-quality paved footpaths
- Soft landscaping
- Small lawned areas
- Retail/café frontage



3.7 Apartment Communal Amenity Space Typical Example (Block A)



Block A - North East area

External communal amenity spaces within apartment development will provide:

- Seating areas
- Gathering spaces
- Sheltered areas
- Play areas
- Soft landscaping
- Small lawned kickabout spaces

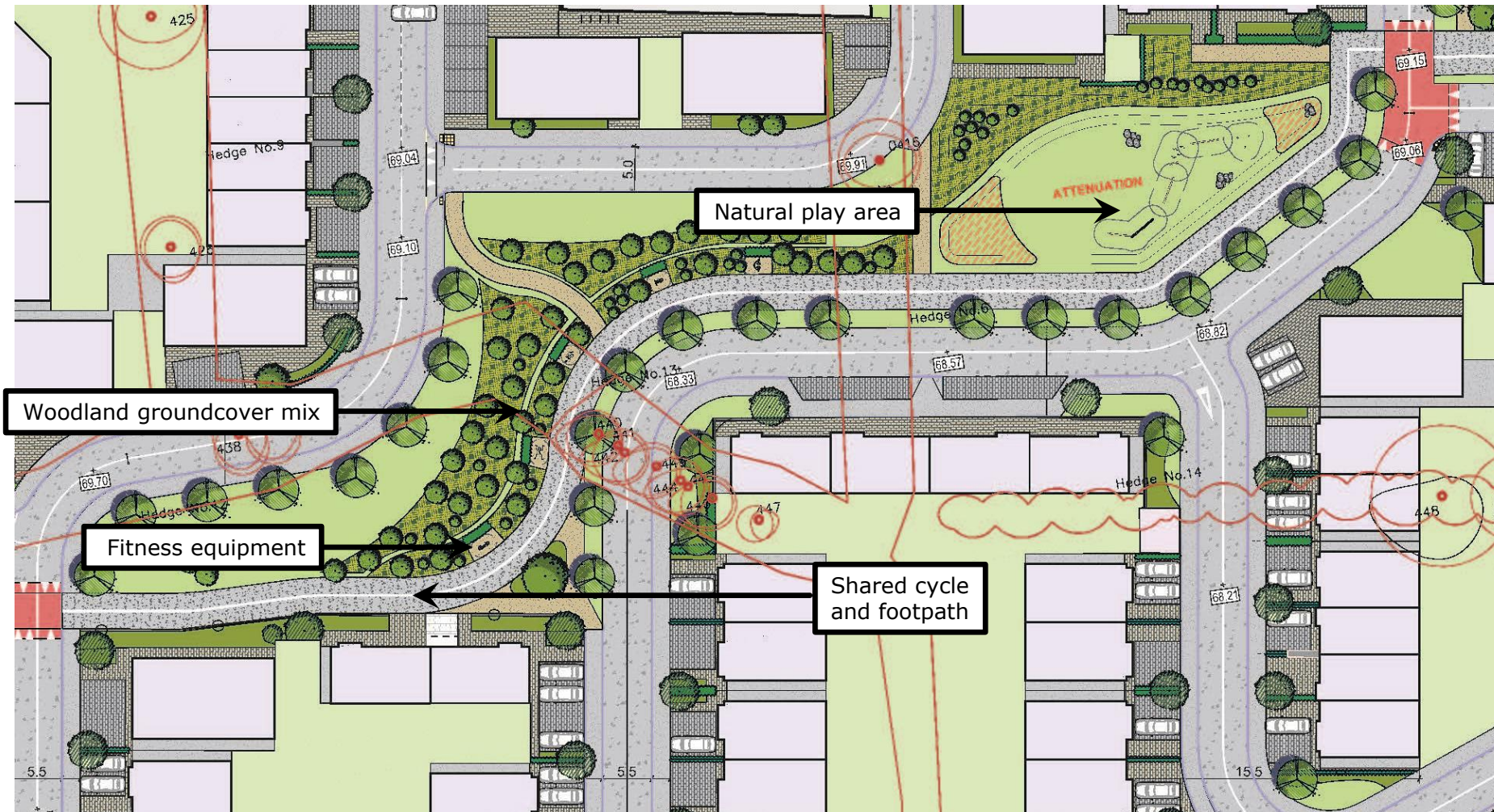
Communal gated amenity spaces will provide for the residents use only. It will be attractive to look at from above and will in the space, and have a gardenesque feel to them, appropriate for the domestic setting.



View of proposed entrance to development

See drawing 21659-2-102

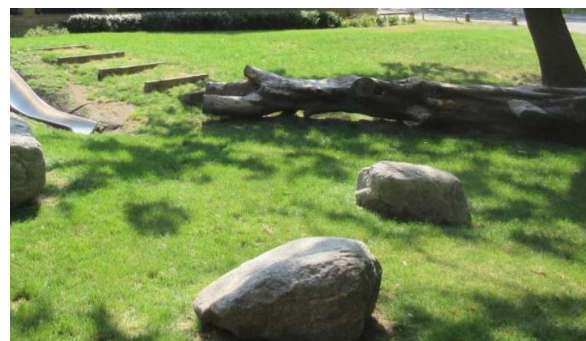
3.8 Linear open space – fitness trail



- The linear section of open space to the northern end will provide:
- Shared cycle & footpath
 - Fitness trail
 - Planted feature mounds
 - Woodland style ground cover planting
 - Small scattered trees to create enclosure

This section of open space will provide an attractive setting for play / walking / running / cycling/ skating / external exercise equipment. The attenuation basin will be incorporated into a natural play area.

See drawing 21659-2-102



3.0 Landscape Proposals

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

3.9 Open space – Permeability

Incorporating lines of mature trees is an integral part to the overall scheme. The retention of key tree lines creates a mature setting and retains the existing habitat and green infrastructure links to the wider areas. To ensure there is good permeability throughout the open spaces, trees retained within them will be pruned and tidied at the base. New tree planting, the location of paths and overlooking of buildings have been integrated to create a cohesive feel and ensure safe open spaces through passive surveillance.



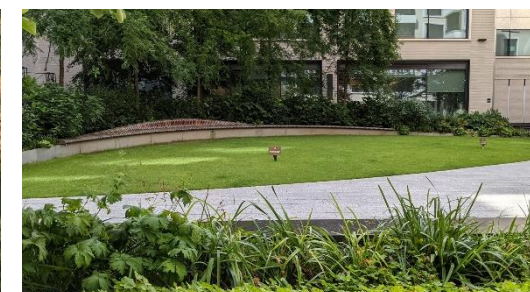
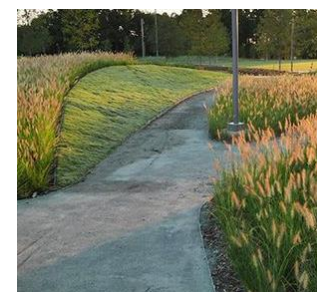
Examples of open views under existing vegetation



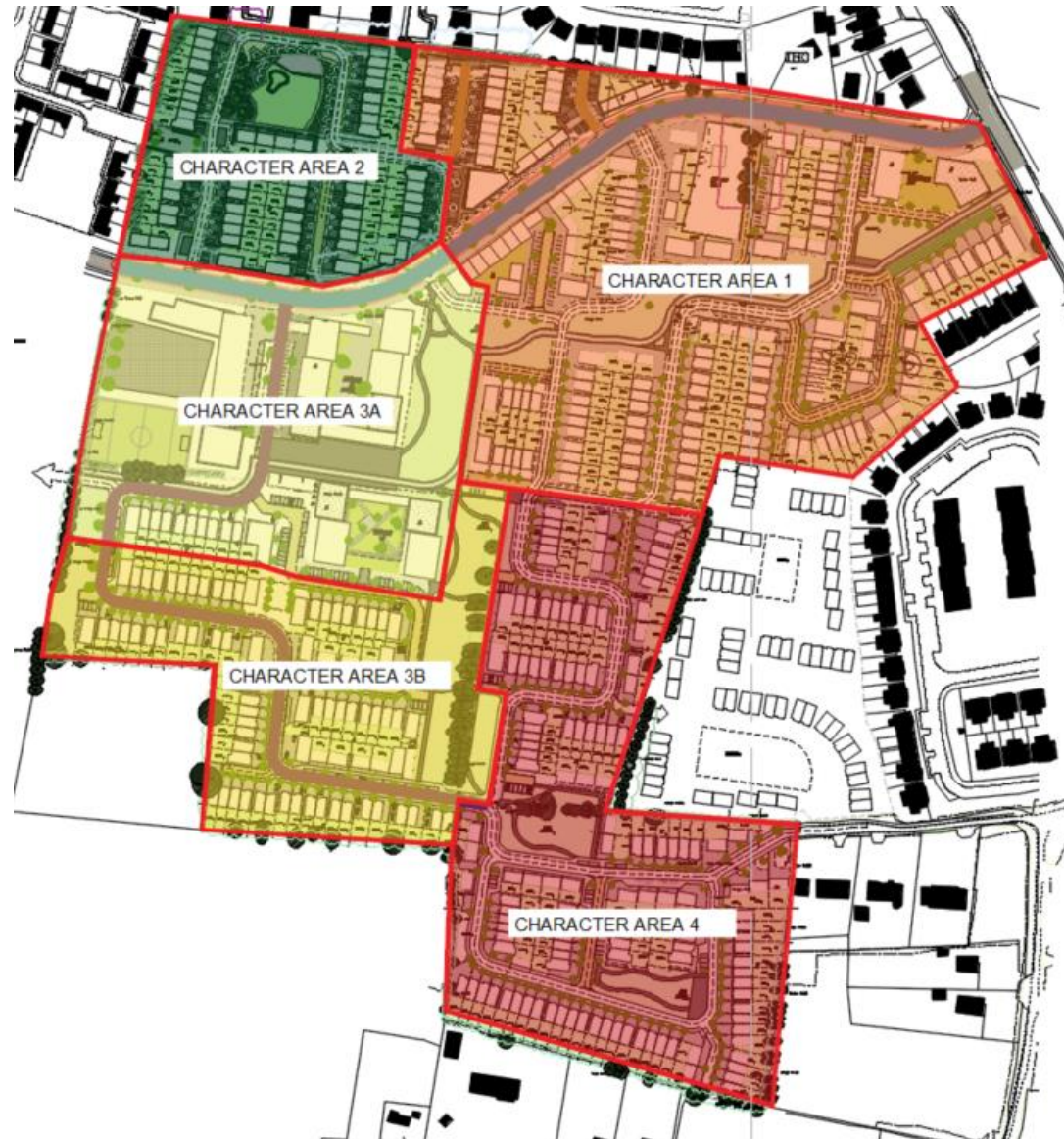
Existing hedgerows that will be opened up



New planting and permeability



3.5 Development Character Areas



The intention for the development is to create a number of character areas that provide a sense of places which the residents can identify with in each area and to assist in wayfinding through the development. Character areas cover for variation in building types, facilities, material finishes, landscape style, tree types and open space recreational facilities. Details of the building character types can be found in the Architects Design Rationale Report. The following outlines the landscape character for each area. Types of trees will be important in setting the landscape character for each area.

Character Areas 1

Orange Softness – setting the stage for the ‘Village’ feel of enclosure and openness and the natural landscape.

Link Road

Primary & Secondary local access

Homezones

Park

Acer platanoides

Acer campestre, Crataegus

Malus

Fagus, Quercus, Alnus, Betula, Populus

Character areas 2

Rich green within the square. Giving a sense of structure urbanism but with a naturalistic twist.

Link Road

Primary & Secondary local access

Homezones

Park

Tilia tomentosa

Tilia cordata & Tilia henryana

Sorbus

Prunus, Pinus, Alnus, Betula,

Character Area 3

Yellow Parkland. More open than closed creating a setting for the ‘Village Green’ and community centre plaza space. Brightness and openness at the top of the hill.

Link Road

Primary & Secondary local access

Homezones

Park

Tilia tomentosa

Carpinus betulus, Magnolia kobus

Sorbus

Populus, Ulmus, Quercus, Alnus, Betula

Character areas 4

Red and homely along the wandering path.

Primary & Secondary local access

Homezones

Park

Liquidamber, Pyrus c. ‘Chanticleer’

Crataegus ‘Paul Scarlet’,

Acer rubrum, Prunus, Quercus rubra, Pinus,

Alnus, Betula, Populus



Acer platanoides



Tilia tomentosa



Magnolia kobus



Liquidamber

3.0 Landscape Proposals

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

3.10 Movement & Access



MOVEMENT & ACCESS LEGEND

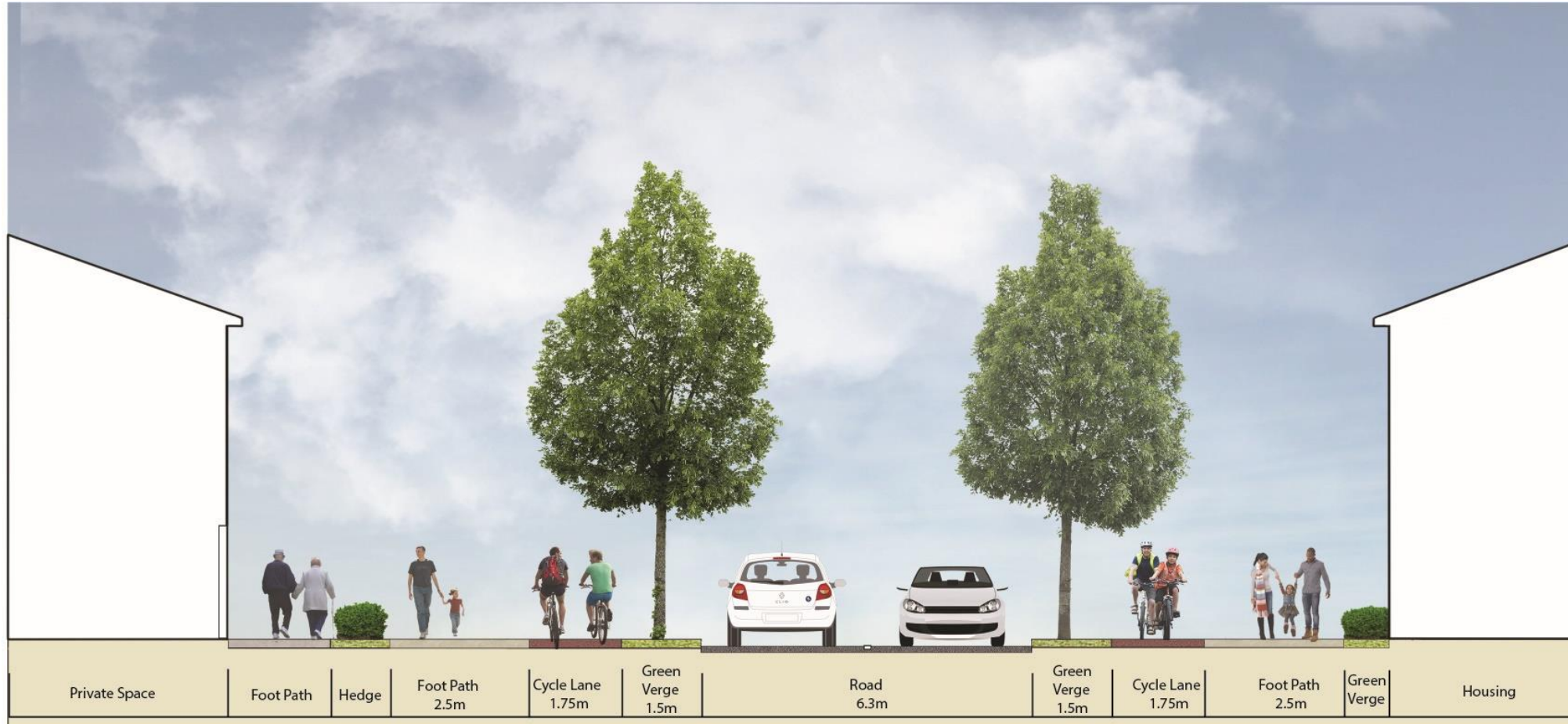
- Existing Dublin Road
- Link street
- Primary local access road
- Secondary local access road
- Homezones
- Primary pedestrian and cycleway
- Secondary pedestrian and cycleway
- Network of green corridors
- Permeability through adjoining lands



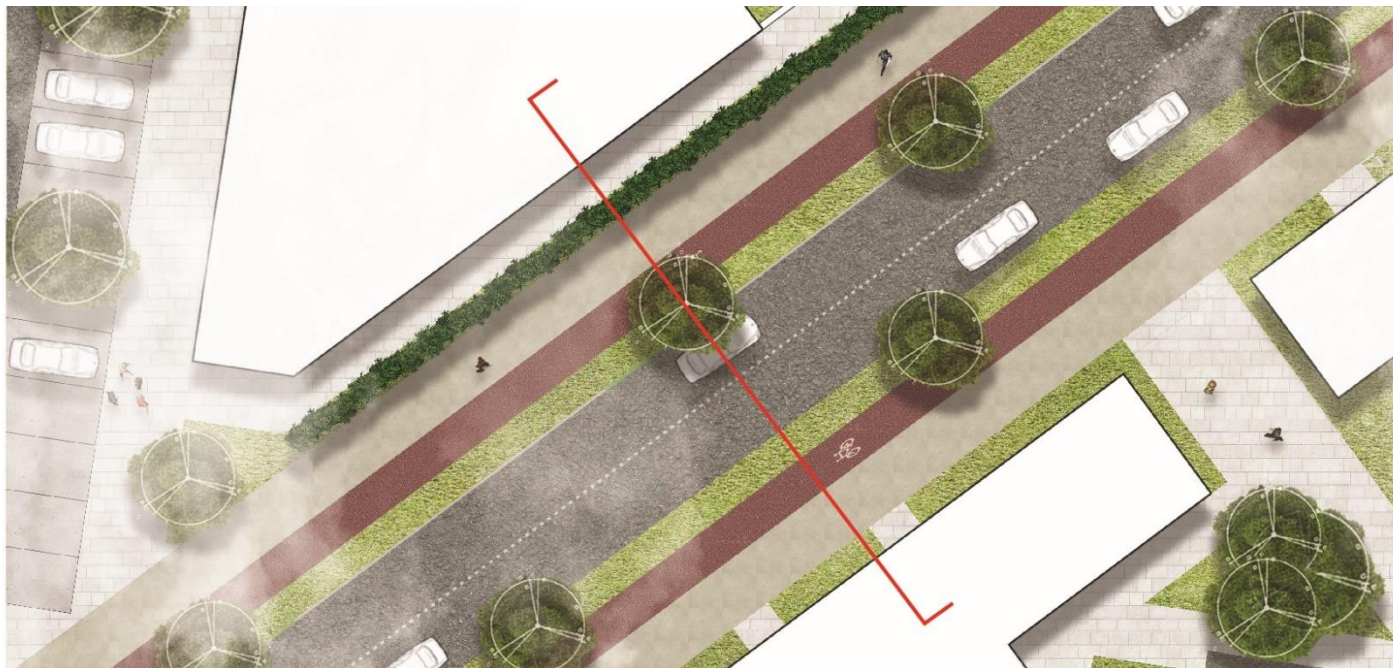
3.0 Landscape Proposals

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

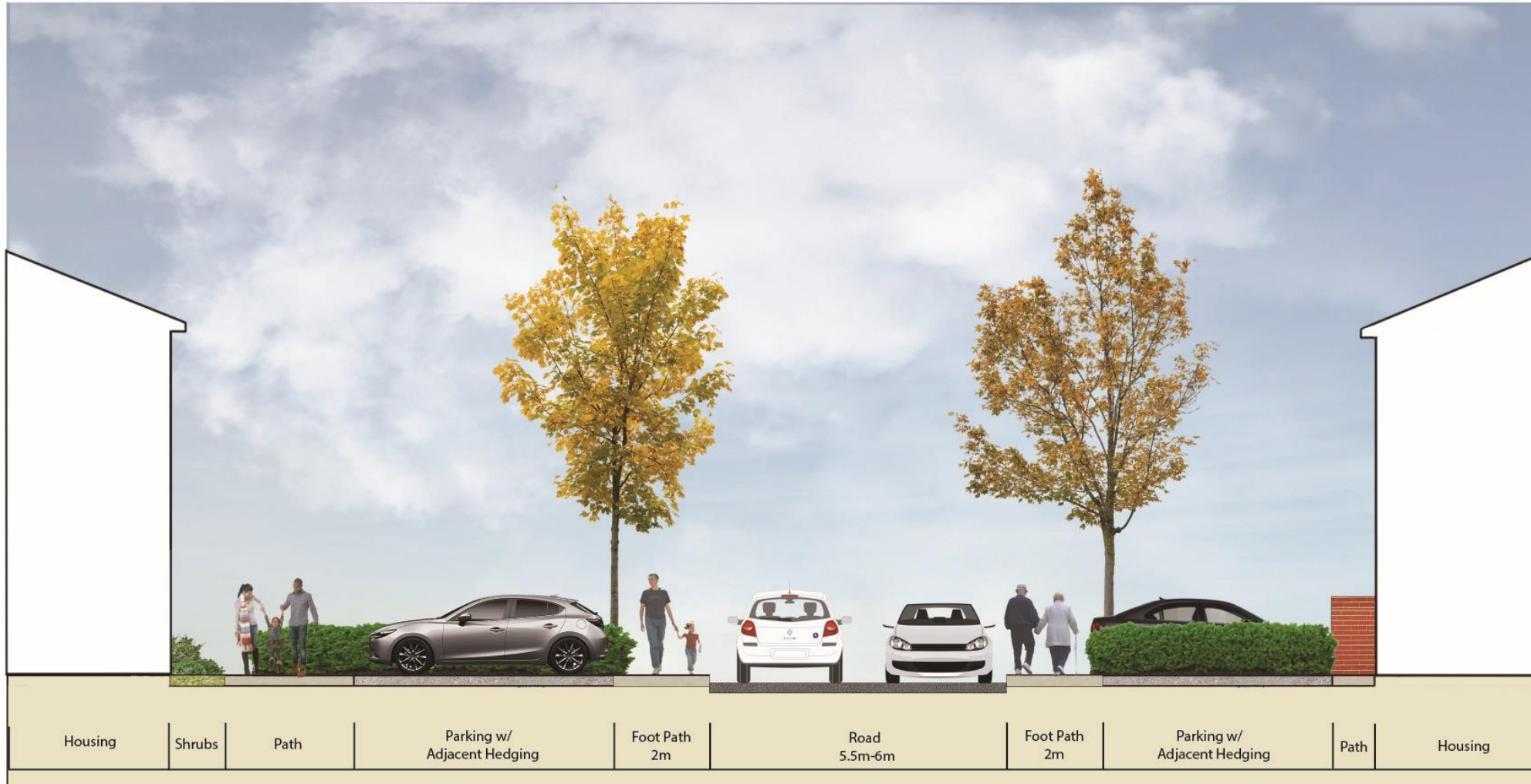
3.11 Streetscape Character – Link street & Local Access road



Character of the street and scale of its hierarchy to be defined through the use of Semi-mature Silver Lime trees and Norway Maple trees.

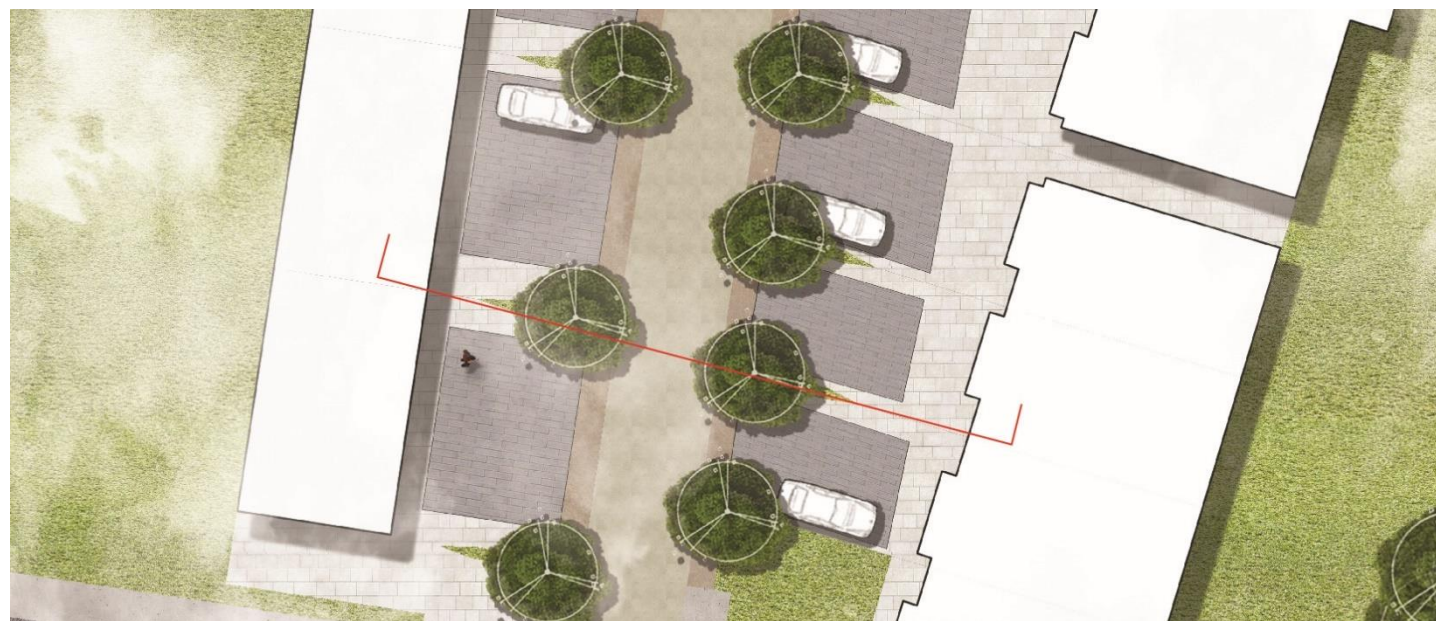
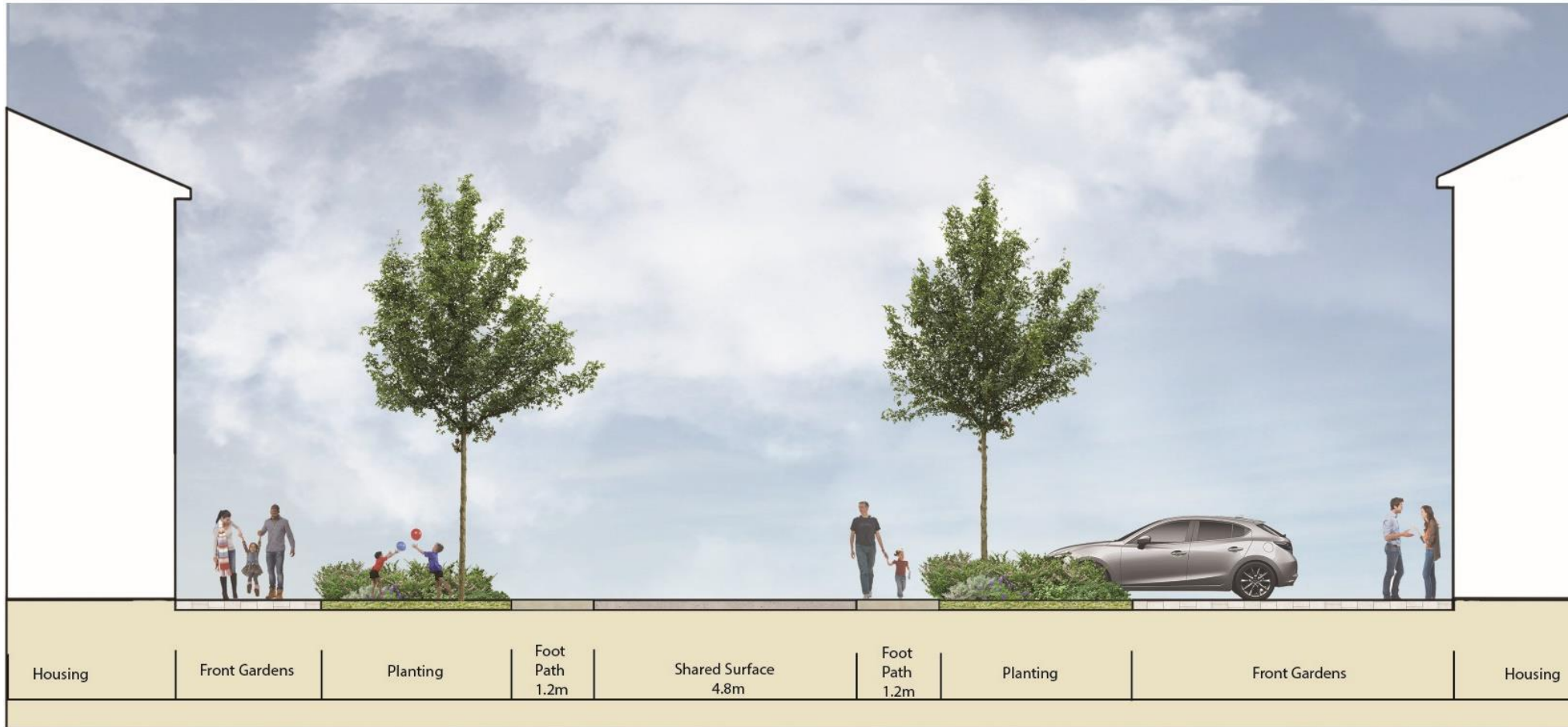


3.11 Streetscape Character – Secondary Local Access



Character of the street and scale of it as a secondary access road to be defined through the use of such trees as Magnolia trees.

3.11 Streetscape Character – Homezones



Character of the street and scale of it as a local 'Homezone' street to be defined through the use of small trees such as Ornamental Crab trees (with berries not fruit)

3.12 Open Space Quantum



- Public Open Space – 26,812m²
- Apartment Communal Amenity Space – 2512m²
- Plaza Public Open Space – 2,100m²

Total Net Site Area: 18.6ha
(Less Hickeys lane and school site)

Public Open Space (including plaza): 28,912m²
(15.5% overall site)

(1) The Open space to the northwest corner of the site forms a neighbourhood square which contains an open lawn area for lounging/kick about space, an equipped and secure play area, a mini wooded planted area to the west with informal paths. **(2)** This open space forms the start of a linear connection of open spaces changing in character as you move along. This portion will follow the concept of 'enclosure' offering a fitness trail along the shared bicycle and footpath route and woodland style planting with small mounds in a linear fashion. **(3)** After the enclosed fitness trail section, you open onto a large central 'village green' with a larger play area, large open grassed area and different styles of planting framing views. **(4)** This next section is all about the retained mature tree line to the east of the open space, and wide, open grassed areas. Trees are retained as a focal point and leading the eyes down the linear park. **(5)** The next parcel down offers another retained tree line running east-west along with some informal play area and lawn space in a slightly sunken area. **(6)** The open space to the west of the site is home to a MUGA, with potential future links from this space to the lands west and with the reserved future school site to the north, the MUGA can offer a great communal facility.

Apartment communal open space quantum is in line with the Design Standards for New Apartments, 2018 guidelines.



CGI focusing on the proposed public open space

3.0 Landscape Proposals

3.13 Play Strategy

Play is how children learn about themselves and the world we live in and has been described as 'The work of the child' by Mary Montessori.

Currently the nearest larger playground for older kids is Ashbourne playground on Castle St which is approx. 1km north of the site. There are many playing pitches and sports/recreational clubs situated within 1-2km of the site including, GAA club/Rugby club/ soccer club/ golf course and many schools with pitches and fields.

In accordance with the development plan, it is proposed to introduce play areas throughout the development. These will consist of one large play area and MUGA for all ages in the central neighbourhood park and a series of small incidental play areas, or 'Play Lots', within the local parks and along the linear park for younger age groups. The location and strategy for the play spaces has been determined following 'The Ready, Steady, Go' and 'Laps, Leaps and Neaps' guidelines. To ensure longevity of the play equipment and low maintenance, incidental play / natural play equipment will be used. The larger playground will have more active play equipment for age groups up to 12 years.

The large play area will be min. 500m² and the play lots will vary from 50-100m² depending on the location. Play areas will be located so they are well overlooked but not so close to properties where noise could become a nuisance.

The play equipment will be designed to act as instigator of natural play rather than a director of what that play will be and to inspire the imagination. Play spaces will include for interesting and varied topography, fallen logs, boulders, hiding places, trees, grass and soft safety surfaces. The play space will challenge the children to run, jump, roll, climb and balance, while also experiencing a range of emotions such as opportunities to be powerful/powerless, scared/confident, and in/out of control. It will provide the children with a freedom of chose, spontaneity, and an absence of directly imposed rules, encouraging children to set goal-orientation and develop problem solving skills.

The MUGA (Multi-use games areas) ball court will be positioned in the central open spaces, have an all-weather surface and be fenced off.

Furnishings will be similar to what is illustrated in the images displayed. The play area will have a soft safety surface of grass and wood chips. All furnishings and surfaces within the children's play areas will be to ISEN 1176/ISEN 1177 standards and meet the RoSPA, NSC and other appropriate health and safety requirements. Universal access will be applied to the large play area and some of the play lots, where appropriate, to ensure children of all abilities can use them.



PLAY STRATEGY LEGEND

- Pedestrian and Cycleway Link
- Public Open Space
- Toddlers Play Area - 289m²
- Bigger Children Play Area - 1082m²
- Incidental/natural Play Area - 1503m²
- MUGA



RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE



PLAY STRATEGY MAP



3.14 Bike Parking Strategy

An important aspect of the proposed development is its network of paths, roads and open spaces that provide good pedestrian and cyclist infrastructure for recreational and functional purposes, linking the development with the facilities within the town and connecting in with the green infrastructure of the wider area.

Adequate bike parking has been provided for both residents and visitors.

Apartments - resident bike parking will be under cover
 - visitor parking at ground level

Duplex - residents bike parking will be within the curtilage of the duplex units
 - visitor bike parking will be provided within the curtilage of the duplex units, or, where not feasible, on the street in the form of 'Sheffield' stands.

Houses - resident bike parking will be to the rear of the properties
 - visitor parking will be provided, where possible, on the front curtilage of the property, using a ring or bracket attached to the wall. Where this is not possible, visitor parking has been provided on the street in the form of 'Sheffield' stands.

See architects design statement report for a full schedule and quantities of the bike parking provided.



3.15 Boundary Treatment Strategy



BOUNDARY TREATMENTS LEGEND

- Boundary Type 1 - 2m high brick pier with cap and rendered wall in between
- Boundary Type 2 - 400mm high dwarf wall with 600 mm high estate railing
- Boundary Type 3 - 1.8m high fair faced pointed block work wall
- Boundary Type 4 - 1.2m high play area railing
- Boundary Type 5 - 2m Textured concrete panel fence with retained boundary hedges cut back.



Note:
Every second back garden fence to be textured concrete panel.

See drawing 21659-3-105

Note: Every second back garden to be textured concrete panel fence



3.16 Pedestrian access to adjacent sites

For the access routes to adjacent sites, staggered gates have been proposed as a boundary threshold for entering the adjacent housing estates which surround the site. The below drawings illustrate where and how the gates would function.

Reference images:



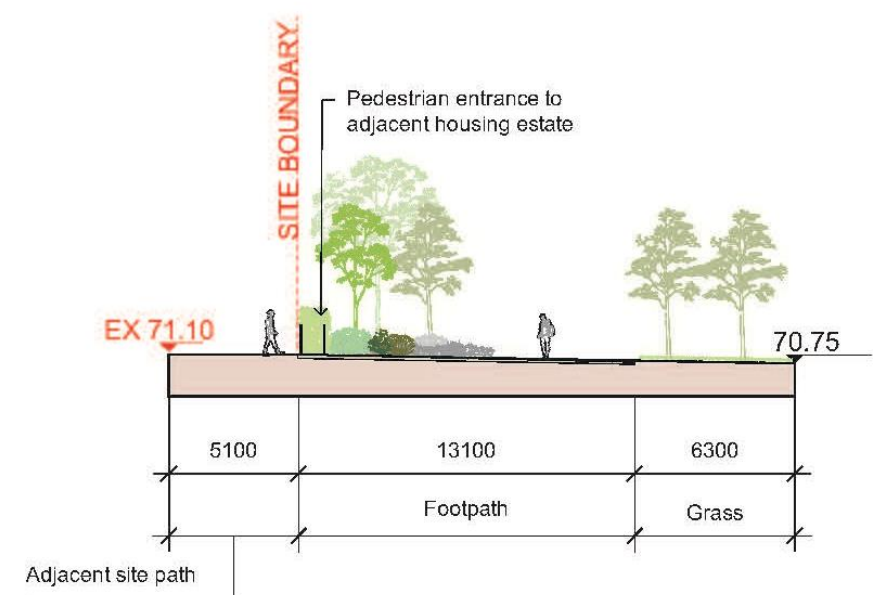
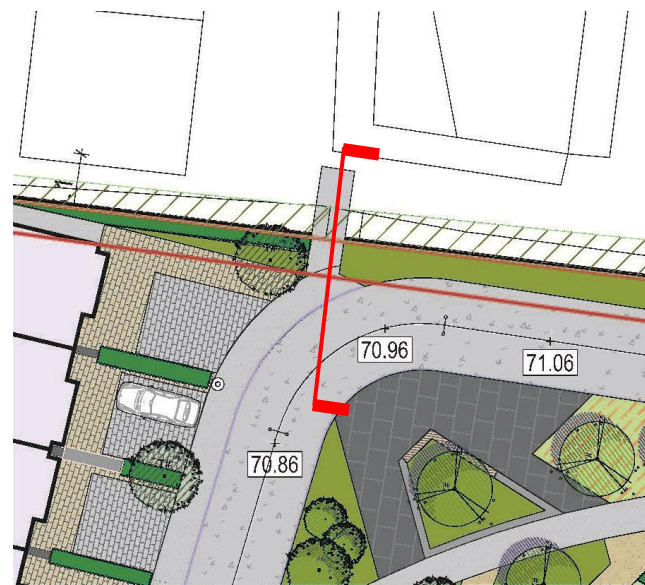
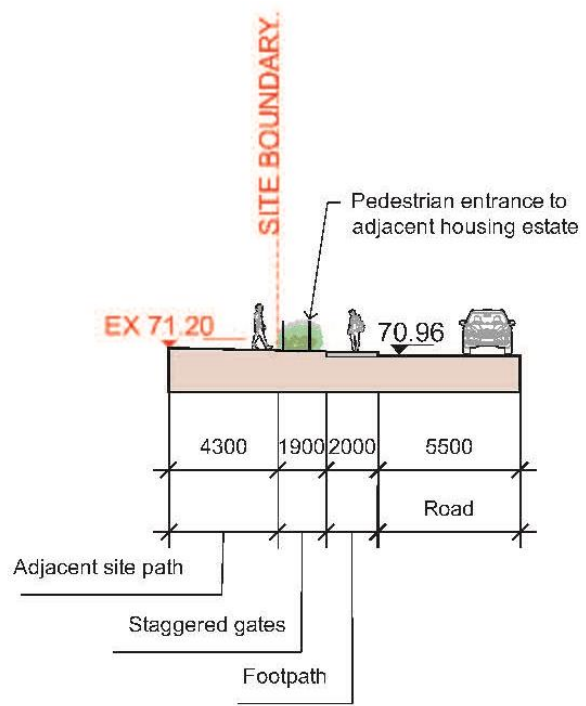
Example 1



Example 2



Example 3



3.0 Landscape Proposals

RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

3.17 Planting Strategy

Planting has been designed to: create seasonal variety, provide screening, retain existing trees and hedgerows where possible, use native plants, wherever possible, use plant species that are good pollinators and contribute towards the local biodiversity, and use plants robust species that are low maintenance.

The proposed application will include for details of planting species, quantities and sizes, along with a typical maintenance and management strategy. Meath County Council's taking-in-charge requirements will be taken into consideration in the planting design for public open spaces.

The planting strategy responds to site pressures and placemaking principles for proposed users. Key factors are to create a strong network of structural planting using trees/woodland and meadow planting with focal trees used to shape views within the low-lying landscape of Meath.

Street Trees will support street hierarchy and have been selected based on a right tree right place philosophy. Trees that function well in highly impermeable surfaces are selected along the Main Distribution Road. Suitable tree planting pits with sufficient subgrade will be used to allow growth without lifting paving. Street trees will be clear stemmed and will reflect each different character area.

Public Realm Trees will consist of medium to large sized trees that suit open spaces will be selected with a range of growing habits including clear stemmed trees, fastigate species and multi-stemmed trees. Clear stemmed trees will be located to create open vistas and permeability. Fastigate species will be sited where space is tight and there is a need to punctuate the landscape. Multi-stem species will be used to create form and structure low to the ground mainly in local parks and around natural play areas to provide partial screening and a more intimate setting. Feature planting will be included at the neighbourhood centre 'Village Plaza' to enhance this central meeting point.

Woodland/Understorey Shrub Planting This woodland and understorey shrub planting aims to provide an element of screening and to reinforce strong sense of enclosure and shape the open areas, tying back to the original landscape concept of 'Openness & Enclosure'. This is done through offering areas of planted copses with breakout open grass areas.

Shrub Planting to Apartments will be designed to be attractive to look at, improve biodiversity, provide screening and shading where required, be robust, low maintenance and drought tolerant, particularly for the planting on roof gardens. **The planting style ...**



Shrub and perennial planting around apartment blocks



Parkland planting of trees, understorey and meadow grass



Google View

Streetscape planting

3.0 Landscape Proposals

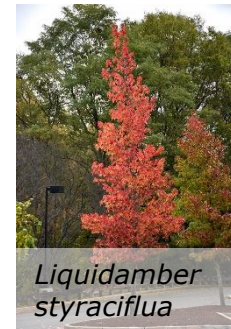
RESIDENTIAL DEVELOPMENT AT HICKEY'S LANE, ASHBOURNE

3.18 Tree Planting Strategy



Legend

- Malus baccata 'Street Parade' 14-16cm, 4.25-6m ht., br.
- Sorbus aria 14-16cm, 4.25-6m ht., br.
- Crataegus laevigata 'Paul Scarlet' 16-18cm, 6m+ ht., RB
- Tilia tomentosa 'Brabant' 14-16cm, 4.25-6m ht., br.
- Acer platanoides 14-16cm, 4.25-6m ht., br.
- Acer campestre 'Elsrijk' 14-16cm, 4.25-6m ht., br.
- Tilia cordata 'Greenspire' 16-18cm, 6m+ ht., RB
- Carpinus betulus 'Fastigiata' 16-18cm, 6m+ ht., RB
- Magnolia kobus 18-20cm gth., 6m+ ht., R/B, 4xtr.
- Liquidambar styraciflua 16-18cm, 6m+ ht., RB
- Pyrus calleryana 'Chanticleer' 14-16cm, 4.25-6m ht., br.
- Fagus sylvatica 14-16cm, 4.25-6m ht., br.,
Quercus petraea 14-16cm, 4.25-6m ht., br.,
Alnus glutinosa 1.75-2m ht., br. Maidens,
Betula pendula 12-14cm gth, 3.5-4.25m ht., br.,
Populus tremula 14-16cm, 4.25-6m ht., br.
- Prunus avium 12-14cm gth, 3.5-4.25m ht., br.,
Pinus sylvestris 120-150cm, RB,
Alnus glutinosa 1.75-2m ht., br. Maidens,
Betula utilis 'Jacquimontii' 14-16cm, 4.25-6m ht., br.
- Betula pubescens 14-16cm gth, 3-5m ht.,
Alnus glutinosa 14-16cm gth, 3-4m ht.,
Populus tremula 14-16cm gth, 3.5-5m ht.,
Pinus sylvestris 120-150cm, RB
- Populus nigra 14-16cm, 4.25-6m ht., br.,
Ulmus 'Dodoens' 14-16cm, 4.25-6m ht., br.,
Quercus petraea 14-16cm, 4.25-6m ht., br.,
Alnus glutinosa 1.75-2m ht., br. Maidens,
Betula pendula 14-16cm, 4.25-6m ht., br.



Woodland/Understorey Shrub Planting Strategy

Large Shrub Planting	
Corylus avellana	90-120cm ht, 1+1 br., @6/m
Berberis vulgaris	60-90cm ht, 1+1 br., @6/m
Euonymus europaeus	60-90cm ht, 1+1 br., @6/m
Ilex aquifolium	30-40cm ht, cg 2lt, m/f @ 6/m
Ligustrum vulgare	90-120cm ht, 1+1 br., @6/m
Prunus spinosa	90-120cm ht, 1+1 br., @6/m
Rosa canina	60-90cm ht, 0+1 br., @6/m
Salix caprea	90-120cm ht, 0+1 br., @6/m
Salix cinerea	90-120cm ht, 0+1 br., @6/m
Sambucus nigra	90-120cm ht, 1+1 br., @6/m
Viburnum opulus	90-120cm ht, 1+1 br., @6/m
Ribes sanguineum	60-90cm ht, 0+1 br., @6/m

Wildflower Meadow Mix Planting Strategy

Grassland Wildflower Mix	Swale/ Attenuation Mix	Shady Mix
Birdsfoot Trefoil, Black Meddick, Devil's Bit Scabious, Corn Marigold, Corn Poppy, Corncockle, Cornflower, Cowslip, Eyebright, Fleabane, Kidney Vetch, Lady's Bedstraw, Lesser Knapweed, Marjoram, Scented Mayweed, Ox-eye Daisy, Ribwort Plantain, Red Campion, Red Clover, Red Bartsia, Rough Hawksbit, Selfheal, Sorrel, St Johnswort, White Campion, Wild Carrot, White Clover, Yarrow, Yellow Rattle, Daffadils, Bluebells.	Birdsfoot Trefoil, Black Meddick, Corn Chamomile, Corn Marigold, Corn Poppy, Corncockle, Cornflower, Cowslip, Devils bit Scabious, Eyebright, Meadow Buttercup, Field Poppy, Fleabane, Greater Trefoil, Lady's Bedstraw, Lesser Knapweed, Scented Mayweed, Meadowsweet, Ox-eye Daisy, Purple Loosestrife, Ragged Robin, Red Bartsia, Ribwort Plantain, Selfheal, Water Avens, Wild Carrot, Yellow Flag Iris, Yellow Rattle, Meadow Cranesbill, Wild Valerian, Marsh Marigold.	Bluebell, Burdock, Dog Violet, Cowslip, Devils Bit Scabious, Foxglove, Hedge Garlic Mustard, Lesser Knapweed, Meadowsweet, Ramson, Red Campion*, Ribwort Plantain, Sorrel, Upright Hedge Parsley, Wild Angelica, Wood Avens, Hemp Agrimony, Hoary Plantain, Primrose, Sweet Violet, Wood Sage, Pokeweed, Cow-Parsley, Wood Sanicle, Welsh Poppy.

Drifts of colour and texture of bulbs and wildflowers will be proposed in public areas, of predominantly native species with a high proportion of pollinators. A grouped into colour palette mixes, they will create a strong aesthetic from spring right through to early autumn.

Apartment Planting Strategy

Tree Planting	Height / girth or pot size
Acer campestre 'Streetwise'	2-2.5m ht. MS, RB.
Amelanchier 'Lamarkii'	1.25-1.5m ht. MS, RB.
Betula pendula	14-16cm, 4.25-6m ht., br.
Betula utilis 'Jacquimontii'	14-16cm, 4.25-6m ht., br.
Pyrus calleryana 'Chanticleer'	14-16cm, 4.25-6m ht., br.
Shrubs, Grasses and Perennials	
Berberis x frikartii 'Amstelveen'	2lt pot, @ 4/m2
Carex testacea	2lt pot, @ 4/m2
Cenothus 'Blue Mound'	2lt pot, @ 4/m2
Choysya ternata 'Sundance'	2lt pot, @ 4/m2
Euonymus fortunei 'Colouratus'	2lt pot, @ 4/m2
Fatsia japonica	2lt pot, @ 4/m2
Forsythia x intermedia 'Lynwood Variety'	3lt pot, @ 4/m2
Hebe 'White Gem'	2lt pot, @ 4/m2
Lavandula a. 'Hitcote'	3lt pot, @ 4/m2
Lavandula stoechas	2lt pot, @ 4/m2
Lonisera pileata	3lt pot, @ 4/m2
Hedera helix 'Hibernica'	2lt pot, @ 4/m2
Hypericum 'Hitcote'	3lt pot, @ 4/m2
Olearia traversii	7.5lt pot @ 1/m2
Perovskia 'Blue Spire'	3lt pot, @ 4/m2
Pinus mugo 'Mops'	5lt pot, @ 1/m2
Rosa 'Ruby'	3lt pot, @ 4/m2
Rosmarinus officinalis	3lt pot, @ 4/m2
Sambucus nigra 'Black Lace'	5lt pot, @ 1/m2
Santollina c. 'Nana'	2lt pot, @ 4/m2
Stipa tenuissima	2lt pot, @ 4/m2
Syringa vulgaris 'Mme Florent Stepman'	5lt pot, @ 1/m2

Hedge Planting	
Fagus sylvatica	90-120cm ht, 1+2 br., @6/m
Ilex aquifolium	30-40cm ht, cg 2lt, m/f @ 6/m
Crataegus monogyna	90-120cm ht, 1+1 br., @6/m
Ligustrum vulgare	90-120cm ht, 1+1 br., @6/m

Woodland/Understorey Shrub & Hedge Planting



Prunus spinosa



Euonymus europaeus



Rosa canina



Salix cinerea



Fagus sylvatica

Apartment Planting



Perovskia 'Blue Spire'



stipa tenuissima



Carex testacea



Lavandula stoechas



Betula utilis 'Jacquimontii'



Amelanchier 'Lamarkii'

Wildflower Meadow Mix Planting



3.18 Materials

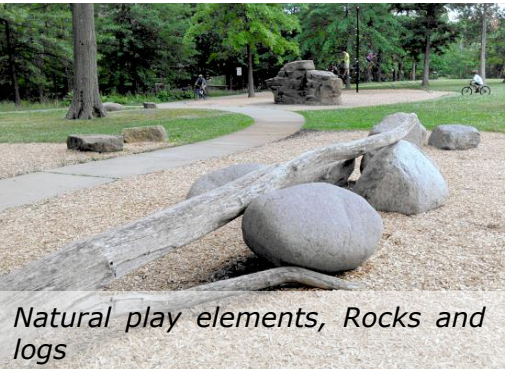
A robust palette of quality materials is envisaged. Used creatively to form well functioning and robust/sustainable and beautiful residential places. Materials will be of a quality to with stand a long life and have CE cert. A full quality audit will be carried out prior to installation of all materials. All street lighting will be positioned so no closer than 6m from a tree, or 10m if trees and lampposts are in a straight line, or the tree species used will be of a fastigate nature, with a canopy that will be no closer than 6m from a lamppost. For lighting proposals see the engineers drawings. For boundary materials see architects drawings and documents.



Engineered wood chips to play areas



MUGA, coloured asphalt surface



Natural play elements, Rocks and logs



Bat and bird box



Outdoor fitness equipment



Coloured asphalt to shared surfaces



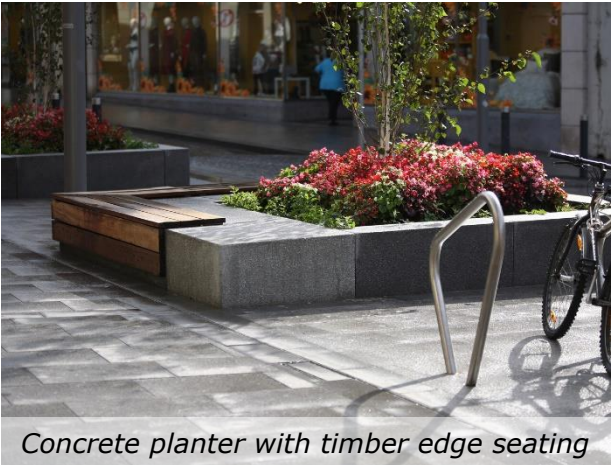
Rubber safety surface to play areas



Seating, timber and steel



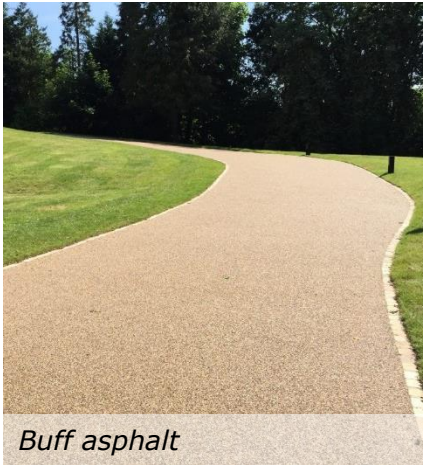
Pavers and block paving



Concrete planter with timber edge seating



Bins, steel

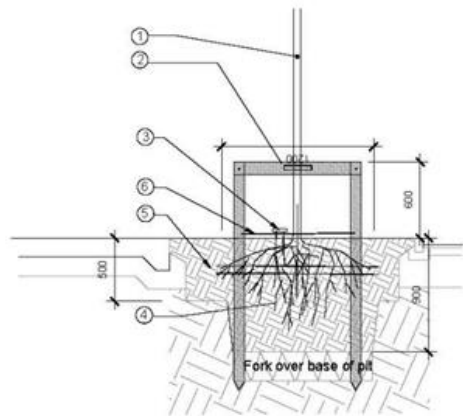
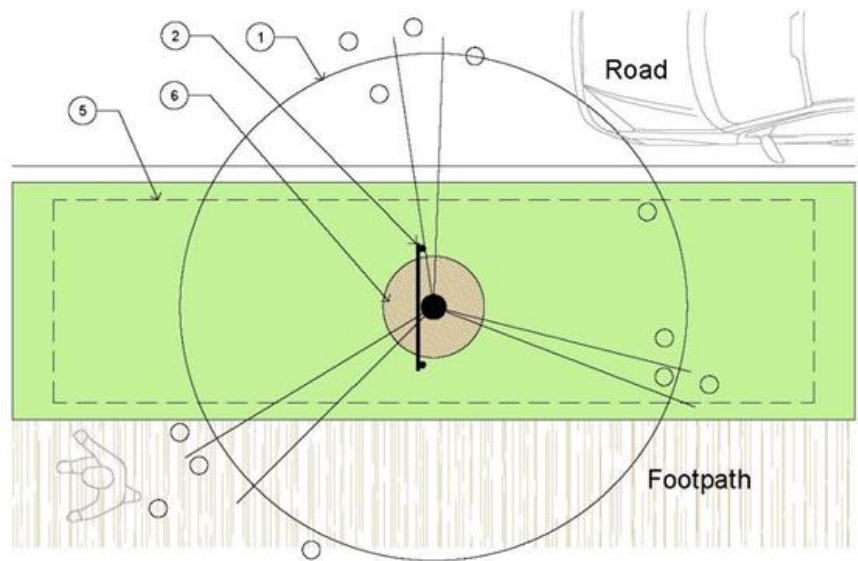


Buff asphalt



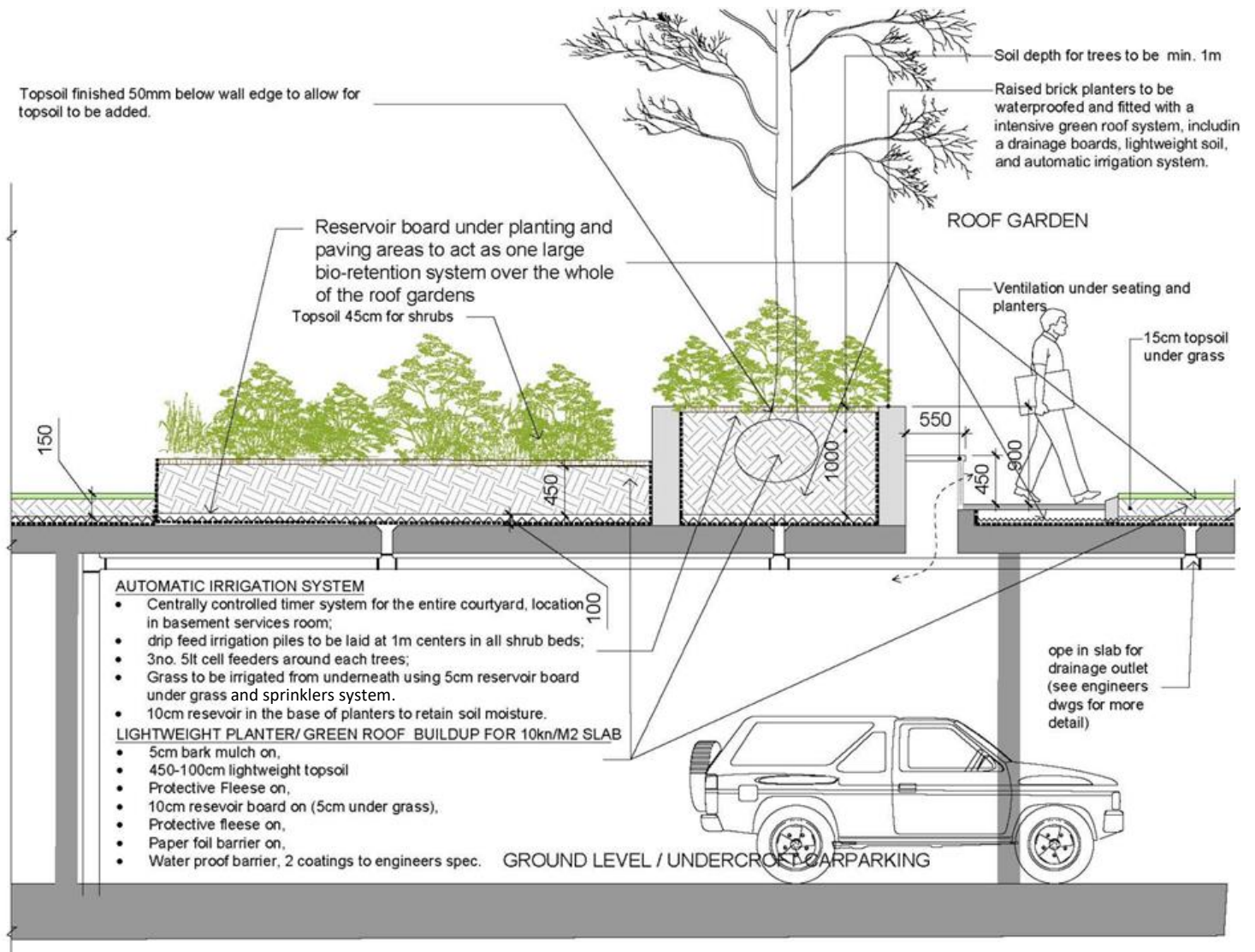
Timber decking

3.19 Typical tree pit and podium build up details



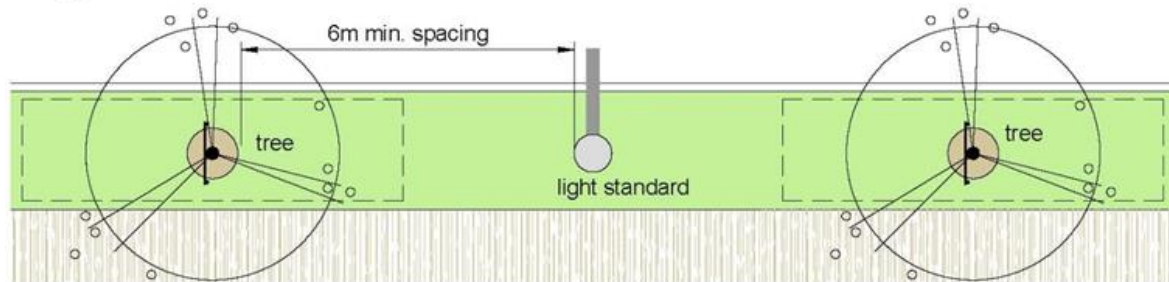
NOTES

- ① To have a clear stem height of 2000mm.
- ② 2no. 75mm diameter stakes pressure treated driven 1300mm below ground 600mm above ground with specified biodegradable adjustable tie affixed to tree & stake.
- ③ 6cm diameter perforated flexible plastic drainage pipe positioned as shown over rootball with one end open to surface to facilitate watering.
- ④ Pits to be size 120(w)x90(d)cm. Remove the full depth of topsoil and set aside for reuse. Scarify sides, break up base of pit to a depth of 200mm and incorporate a soil ameliorant into base. Back fill pit with topsoil mixed with soil ameliorant in 150mm firmed-in layers. All planting to receive a minimum of 25lit water per m2 immediately after planting.
- ⑤ The tree pit root zone shall extend beyond the tree pit for a 6 x 1.7m area 50cm deep.
- ⑥ 75mm bark mulch in 80cm dia circle to base of trunk.



V01 Tree Pit Detail for Street Trees.
SCALE: 1:50@A3

V02 Raised Planter Detail with Drainage
SCALE: 1:50@A3



V03 Light Standard and Street Trees Setout.
SCALE: 1:125@A3

INTRODUCTION

This document sets out the proposed maintenance and management plans for the establishment and ongoing maintenance of the landscape element of the proposed development. There will be a minimum 18 months defects period on all soft landscape works implemented. Thereafter the landscaping will be maintained in perpetuity consecutive 12 months periods.

1.0 SOFT LANDSCAPE WORKS SPECIFICATIONS

1.1 Site Clearance Generally

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 25mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life. In accordance with current Health and safety legislation.
- Vegetation: remove all weed growth.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

1.2 Weed Control

Remove all noxious and undesirable weeds from the site. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

Herbicide is not to be used for areas to be taken in charge by DLRCC, unless particularly recommended by specific method statement as approved by the Department of Environment; manual weed removal method to be used in areas maintained by DLRCC, alternative method may be proposed by contractor for approval.

1.3 Standards

In preparing the landscaping, supplying plants and maintaining the landscaping the following standards are to be adhered to:

- BS 3882 Specification for topsoil and requirements for use
- BS 3936-1 to 10 Specification for the supply of nursery stock
- NPS National Plant Specification
- BS 3998 Tree Works: Recommendations
- BS 4428 Code of Practice for general Landscape Operations
- BS 5837 Tree in relation to Construction
- BS 7370-1 to 5 Grounds Maintenance
- BS 8545 Trees: from nursery to independence in the landscape-recommendations
- BS 8601 Specification for subsoil and required use
- BS EN 1722-9 Fences Specification for mild steel - low carbon steel - fences with round square verticals and flat horizontals or
- RoSPA Standards for safety for play and exercise equipment.

The latest publications for each document are to be used.

All plants obtained for use within the Republic of Ireland should be from a nursery that is registered through the DAFM (www.agriculture.gov.ie/farmingsectors/planthealthtrade/) and supplied and planted by a registered Landscape Contractor. This is to ensure all plants supplied comply with the New Plant Health

Regulations. All registered operators (nurseries and contractors) should submit their Plant-Health Registration Number (PHR No.) and details of passports for all plants.

1.4 Soil Conditions

- Soil for cultivating and planting: Moist, friable and do not plant if waterlogged.
- Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

1.5 Climatic Conditions

- General: Carry out the work while soil and weather conditions are suitable.
- Strong winds: Do not plant.

1.6 Times of year for planting

- Deciduous trees and shrubs: Late October to early March.
- Evergreens/Conifers: October/November or Feb/ March.
- Container Grown plants: Any time of years.

1.7 Mechanical Tools

Restrictions: Do not use within 100mm of tree and plant stems.

1.8 Watering

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

1.9 Preparation, Planting and Mulching Materials

General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

1.10 Plants/ Trees - General

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
- Species: True to name.

1.11 Container Grown Plants/ Trees

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

1.12 Labelling And Information

General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:

- Full botanical name.
- Total number.
- Number of bundles.
- Part bundles.
- Supplier's name.
- Employer's name and project reference.
- Plant specification, in accordance with scheduled National Plant Specification categories and BS 3936.

1.13 Plant/ Tree Substitution

Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering. Submit alternatives, stating the price and difference from specified plants/ trees. Obtain approval before making any substitution.

1.14 Plant Handling, Storage Transport and Planting

- Standard: To HTA 'Handling and Establishing Landscape Plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Planting: Upright or well balanced with best side to front.

1.15 Treatment of Tree Wounds

Cutting: Keep wounds as small as possible.

- Cut cleanly back to sound wood using sharp, clean tools.
- Leave branch collars. Do not cut flush with stem or trunk.
- Set cuts so that water will not collect on cut area.
- Fungicide/ Sealant: Do not apply unless instructed.

1.16 Protection of Existing Grass

- General: Protect areas affected by planting operations using boards/ tarpaulins.
- Excavated or imported material: Do not place directly on grass.
 - Duration: Minimum period.

1.17 Surplus Material

Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, pruning's and other arising's: Remove.

1.18 General Planting/Seeding

- Planting shall be carried out within the contract period but not during periods of frost, drought, cold drying winds or when the soil is waterlogged, or when the moisture of the soil exceeds field capacity.
- All containers and protective coverings including biodegradable coverings to root systems shall be removed prior to planting. Roots, except for emergent vegetation, shall be teased out from the root-ball, spread evenly and not twisted.
- All plant material shall be planted upright or placed so as to be well-balanced. Extreme care

is to be taken to avoid damage to the root system, stem and branches when planting. The plant shall be positioned such that after planting the original soil mark on the stem is at finished ground level.

- Following completion of planting, grass seeding and turf laying, the soil over the whole of the planted, seeded or turfed area shall be sufficiently watered to achieve its field capacity.
- On completion of planting, watering and mulching, all areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.
- For shrub and transplant pit planting, notch planting and ordinary planting, the plant positions shall be set at equal centres in order to obtain a natural dense cover when mature. For notch and pit planting plants shall be planted in parallel lines. Planting positions in each row shall be staggered with the previous row.
- Finely-broken backfill material shall be carefully spread around roots and root trainers of all plants and the plants given slight shake to ensure that all interstices/ gaps are filled with soil, which shall then be consolidated by heeling. Careful filling and heeling shall continue as necessary at 150mm layers.

1.18.1 Mulching

Newly planted shrub areas shall be mulched immediately after planting to a depth of 50mm or in accordance with the details indicated on the drawing. Mulch shall be coarse chipped tree bark, composted for 2-4 months. Particle size 25-75mm diameter. No Fines.

1.18.2 After Planting & Mulching

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- All areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.

1.19 Tree Planting

Attached in the appendix are typical tree planting details for this site.

1.19.1 Tree Pits

- Sizes: at least 300mm greater than rootball in all directions.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a depth of 100mm.
- Pit sides: Scarify.

1.19.2 Semi-Mature Trees

- Standard: Prepare roots and transplant to BS 8545.
- Planting shall be carried out by positioning the tree in the centre of the pit closely against the tree stake and spreading the tree roots to their fullest extent.
- Backfilling material: Previously prepared mixture of topsoil excavated from pit and additional compost as required.
- Immediately following planting, trees with stakes shall be secured with tree ties. Tree ties shall be fixed so that movement of the tree shall not cause damage or abrasion to the bark, top tie to be 50mm below top stake.

1.19.3 Staking Generally

Softwood, peeled chestnut, larch or pine, straight, free from projections and large or edge knots and with pointed lower end. Adjustable rubber ties to be fixed to all trees and at the correct size for the tree.

1.19.4 Mulch Circles/Squares

All existing trees/newly planted trees within open grass areas or grass verges shall have 50mm depth mulch circle/square of a maximum 1m diameter or as allowed by verge width.

1.20 Shrub Planting

- All shrubs are to be pit planted. General pit dimensions are to be wide enough to accommodate roots when fully spread and 75mm deeper than root system.
- Break up base of pit to a depth of 150 mm, incorporating soil ameliorant/ conditioner at 50 g/m².
- Pits to be backfilled with previously excavated material. Backfilling to be done in layers of 150mm depth; at each stage the filling to be firmly consolidated.
- Soil ameliorants can be premixed with the soil applied or mixed in during planting.
- Soil ameliorants to consist of an approved compost at 10L per m²; and 150g/m² of 10:10:10 NPK slow release fertilizer, or as approved.
- All shrub areas to be finished, with 75mm of medium grade bark mulch.

1.21 Hedgerow Planting

- Preparation: Dig trench to 500mm width for single staggered row, ensuing pit base is broken up 100mm deeper than plant rootball.
- Ameliorants: Compost at 10lt/m² and 10:10:10 NPK slow release fertiliser at 150g/m².
- Planting: Mix in soil ameliorants with excavated topsoil, or if there is poor topsoil then mix in with imported new topsoil. Firm down topsoil lightly in layers of 150mm by treading.
- Additional Requirements: If there is no existing fencing or barrier, install a protective fence to stop people walking through it until hedge is established. If there is livestock adjoining hedge install a stockproof fence or electrical fence 1m from hedge line until hedge is established.
- Prior to new growth cut the hedge back by 300mm to encourage new growth from base.

1.23 Removing Trees and Shrubs

- Identification: Clearly mark trees and hedges to be removed.
- Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.

1.24 Failures of Planting

- Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
 - Exclusions: Theft or malicious damage after completion.
 - Rectification: Replace with equivalent plants/ trees/ shrubs.
- Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- Defects Period: 5 years.

1.25 Green Roofs

Due care is to be taken when planting in gardens to ensure no damage occurs to the waterproof membranes. All planting is to be laid over a green-roof system that complies with European Federation of Green Roof Associations, (EFB), or equivalent, and in accordance with the drawings provided.

1.26 Grass Seeding**1.26.1 Herbicide Application (for areas in private management, herbicide not to be used in areas taken in charge by Meath CoCo)**

- Type: Suitable for suppressing perennial weeds and existing grass.
- Timing: Allow fallow period before cultivation.
- Duration: As manufacturer's recommendation

1.26.2 Seedbed cleaning before sowing

Operations: Kill pernicious weeds with selective contact herbicide (for areas in private management, herbicide not to be used in areas taken in charge by Meath CoCo, manual weed removal method to be used in Meath CoCo areas).

1.26.3 Cultivation

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer are to be used to boost late seeding only. Type to be used is to be agreed with the administering body depending on the time of year and the condition of the soil.
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
 - Depth: 75 mm.
 - Particle size (maximum): 20 mm.
- Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

1.26.4 Topsoiling

- Areas to be reinstated shall be top-soiled to a min. depth of 150mm.
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- General: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable;
 - Hazardous to human or animal life;
 - Detrimental to healthy plant growth.

1.26.5 Grading

- General appearance to be achieved: A fine graded finish to bring the ground to a uniform and even grade at the correct finished levels with smooth, flowing contours.
- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
- Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.
- Give notice: If required levels cannot be achieved by movement of existing soil.

1.26.6 Fertilizer for Seeded Areas

- Types: Apply both:
 - Superphosphate with a minimum of 18% water-soluble phosphoric acid.
 - A sulphate of ammonia with a minimum of 20% nitrogen.
- Application: Before final cultivation and three to five days before seeding/turfing.
- Coverage: Spread evenly, each type at 70 g/m², in transverse directions.

1.26.7 Final Cultivation

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
- Depth: 50-100mm.
- Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Remove surface stones/earth clods exceeding:
 - Pastoral areas: 50mm.
 - Fine lawn areas: 10mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

1.26.8 Grass Seed

- All seeds shall carry appropriate certificates.
- Seed shall be purchased fresh for each growing season and seed purchased impervious sowing seasons is not to be used.
- Seed shall be stored under non-transparent wrapping, off the ground, in a dry, shaded place, in well ventilated conditions under cover and shall be protected from vermin and contamination until required for use.
- No seeding shall take place until the seedbed is completed. All seeding shall be carried out within the sowing season.

1.26.9 Sowing

- General: Establish good seed contact with the root zone.
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
- Distribution: 2 equal sowings at right angles to each other.
- Protection: fence off areas with suitable fencing to stop people or animals from trampling new growth.

1.26.10 Grass sowing season

Grass seed generally: April to June or August to November.

1.27 Cleanliness

After completion of all works remove all debris and waste material from site.

- Soil and arisings: Remove from hard surfaces and grassed areas.
- General: Leave the works in a clean tidy condition at completion and after any maintenance operations.

1.28 Wildflower Meadow**1.28.1 Preliminary requirements:**

- Submit programme before execution of works.
- Samples: All samples or changes to products to be submitted within 2 weeks of the commencement of the works or within reasonable time to allow for changes to be made prior to practical completion.
- Calcareous on site soils to be stripped and saved for re-use in wildflower meadow areas
- Methodology for soil stripping, storage and re-use of soil to be drawn up and agreed with ecologist and landscape architect prior commencement

1.28.2 Workmanship

- Standard: All works are to be carried out in accordance with BS 4428: 1989 and BS3936: 1998.
- Operatives: Contractor should have the appropriately skills and experiences for the type of work, having appropriate training and be a competent landscape Contractor with ALCI accreditation or equivalent.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of demolition to be used.

1.28.3 Climatic conditions

General: Carry out the work while soil and weather conditions are suitable.

1.28.4 Watering

- Quantity: Wet full depth of topsoil.
- Application: Even and without displacing seed, seedlings or soil.
- Frequency: As necessary to ensure the establishment and continued thriving of all seeding.

1.28.5 Notice

- Give notice before:-Setting out.-Applying herbicide.-Applying fertilizer.-Preparing seed bed.-Seeding .-Visiting site during maintenance period.-Period of notice: 5 working days for setting out, all others 2 working days.

1.28.6 Setting out

- Boundaries: Mark clearly.
- Delineation: In straight lines or smoothly flowing curves as shown on drawings.

1.28.7 Preparation of materials

- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

1.28.8 Cultivation - general

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer: Fully incorporate into topsoil to a depth of 150mm.
- Tilth: Reduce topsoil to a tilth suitable for blade grading:
 - Depth: 50mm, Particle size (maximum): 30mm.
- Material brought to the surface: Remove stones and clay balls larger than 30 mm in any dimension, roots, tufts of grass, rubbish and debris.

1.28.9 Grading

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
- Hollows and ridges: Not permitted.
- Finished levels after settlement: level with adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.
- Give notice: If required levels cannot be achieved by movement of existing soil.

1.28.10 Final cultivation

- Timing: After grading.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
 - Depth: 50mm.
 - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
 - Remove surface stones/earth clods exceeding:-General areas: 30mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

1.28.11 Seeding – Wildflower seed

- Mixture: see drawings for grass seed mixtures.
- Application rate: see bill of quantities.

1.28.12 Quality of seed

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations.
 - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- Samples of mixtures: Submit when requested.

1.28.13 Sowing

- General: Establish good seed contact with the root zone.
- Method: by hand or by petrol drive machine. If to be by Hydraulic submit method statement.
 - Distribution: to rate specified.

1.28.14 Wildflower sowing season

- Wildflower seed generally: Optimum dates March/April or September/October. Outside these windows seeding mixes are to be adjusted accordingly and approved.

2.0 MAINTENANCE

The maintenance programme will be organised on the basis of specific **performance standards** which must be met by the contractor at all times and will be the basis on which this contract will be assessed. Along with these performance standards a monthly report sheet shall be filled out and returned each month. Details of the performance standards are outlined below.

Remove all noxious and undesirable weeds from the site. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

Herbicide is not to be used for areas to be taken in charge by Meath CoCo, unless particularly recommended by specific method statement as approved by the Department of Environment; manual weed removal method to be used in areas maintained by Meath CoCo, alternative method may be proposed by contractor for approval.

Performance Standards and Maintenance Operations

2.1 Grassed Areas

2.1.1 Fine-Cut Grass Areas

Fine cut grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. No more than 5% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

Fine-Cut Mowing

Where practical fine grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. All grass clippings shall be collected and removed off-site after each cut.

Lawn grass cutting shall be carried out every 10-14 days during the growing season, (throughout the period of March to October), but will need to be adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 50mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

Weed Control

Herbicide is not to be used for areas to be taken in charge by Meath CoCo unless particularly recommended by specific method statement as approved by the Department of Environment for noxious weeds removal; manual weed removal method to be used in areas maintained by Meath CoCo, alternative method may be proposed by contractor for approval.

Lawn grass areas in private ownership shall be treated using an approved selective herbicide according to manufacturer's instructions. Areas of invasive and noxious species in the lawn or areas, shall be spot sprayed.

Fertilizer

Approved fertilizer shall be applied 2no. times per year to lawn areas if required due to poor grass growth / establishment or yellowing. Spring fertilizer application of NPK ratio 9:7:7 shall be applied in May of each year and Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

2.1.2 Amenity Grass Areas

Amenity grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. Unless otherwise agreed with the landscape architect no more than 15% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

Amenity Grass Mowing

Where practical grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. Unless excessive or unsightly, or likely to cause a nuisance or damage to the sward, arisings shall be spread evenly over sward areas collected.

Lawn grass cutting shall be carried out every 10-14 days during the growing season, (throughout the period of March to October), but will need to be adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 75mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

Weed Control

Aggressive weeds such as dock, nettle, thistle and bramble shall be dug out if causing a nuisance.

Fertilizer

Approved fertilizer shall be applied 2no. times per year to lawn areas if required due to poor grass growth / establishment or yellowing. Spring fertilizer application of NPK ratio 9:7:7 shall be applied in May of each year and Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

2.1.3 Wildflower Meadow Maintenance

- Duration: Carry out the operations in the following clauses from completion of planting until substantial completion.
- **Failures of seeding/ turfing**
 - Defective materials or workmanship: Areas that have failed to thrive.- Exclusions: Theft or malicious damage.
 - Method of making good: Recultivation and reseeding/ returfing.
 - Timing of making good: The next suitable planting season.
- **Meadow grassed areas**
 - Preparation: Before each cut remove all litter and debris.
 - Height and frequency of cut in first growing season:
 - Time of first cut: April, July/August or September.
 - Height of first cut: 150mm.
 - Frequency of subsequent cutting (min.): 1 in 1st year. Mown strip along cycle paths 5 cuts /per year.

- Height and frequency of cut in second growing season:
 - Time of cut: Year: Year 2 = 2 cuts in spring and autumn. For mown strip along cycle paths 5cuts per year.
 - Height of cut: 150mm.
- Trimming: All edges.
 - Arisings: Remove.

2.1.4 Edging and Strimming

Grass edges along pathways, planting borders, roadways, trees, lampposts, signs and any other obstacle shall be kept neat and tidy at all times.

Between the months of March and October inclusive edging shall be carried out to all areas of grass abutting isolated/ specimen trees or shrub borders or mulch circles. These areas shall be maintained using a half moon tool or similar to maintain straight or curved defined line and shall be carried out a minimum of 2 - 3 times per year.

Mowing strips against permanent obstacles shall be a max. width of 150mm and shall be maintained using a hand strimmer. Large areas of desiccated/ burnt off grass are not permitted. Strimming shall be carried out a min. of 12 times per year.

Grass clipping and all arisings shall be swept up and removed off site.

2.1.5 Spring Bulbs in Grassed Areas

Only cut grassed areas populated by spring bulbs after the leaves of the bulbs have died down and/or yellowed completely. Initially reduce height by one third, followed by a 2-3 stage further reduction over two weeks to achieve desired grass height.

2.1.6 Failed areas

Areas of grass which fail or are damaged or worn shall be reinstated by re-turfing or re-seeding in accordance with the original specification.

2.2 Shrub Planting

Shrub areas shall be kept litter and weed free, particularly of perennial weeds. Healthy growth shall be maintained to cover as much as possible of the planting area and allowing the individual plants to achieve as near as possible their natural form. With the exception of hedges, boxing or pruning to shapes is prohibited. Plants shall be contained with designed planting areas and pruned to avoid obstructing pathways or sightlines. Climbers are to be pruned and tied into trellises as required, with two main inspections annually to check trellis system is intact and anchor points are secure.

2.3 Pruning

In general pruning shall be done only to enhance natural growth. Dead, damaged and diseased portions of the plant will be removed. All cuts shall be flush and clean, leaving no stubs or tearing of bark. All major pruning shall be done following flowering or during plant's dormant season. Emergency or minor pruning shall be done when needed.

Pruning shall be carried out to maintain proper size in relationship to adjacent plantings and intended function. Remedial attention and repair to shrubs shall be provided as appropriate by season or in response to incidental damage.

Groundcover plants shall be pruned as required to restrain perimeter growth to within planting bed areas where adjacent to walks and curbs. Tip prune selected branches of low growing shrub or groundcover masses to maintain even overall heights and promote fullness.

Certain plants, such as Cornus spp. will require heavy annual pruning in order to maintain healthy colourful stems and healthy leaves. All arising's from pruning shall be removed of site.

2.4 Weed Control

Planting beds shall be maintained relatively weed free (no more than 10% of weed cover at maximum) by hand weeding. Saplings shall be removed from all planting areas on emergence or immediately after to prevent establishment.

Specific weed control operations shall be carried out a min of 9no. times per year, however it will be the contractor's duty to control weeds by hand weeding or other approved means if weed cover exceeds 10% of the planting area.

2.5 Mulching

Shrub beds shall contain a min. depth of 50mm bark mulch throughout the year. Contractor to top-up as 2 times per year or as appropriate to maintain depth. Mulch is not required in areas where plant foliage completely covers the soil surface, such that the soil is not visible through the foliage. The contractor shall spot treat to remove emergent weeds as specified above but do not cultivate or incorporate the mulch into the soil. Any mulch outside of designated planting areas shall be returned to the planter on a weekly basis.

Mulch shall be uniform in colour and appearance, and free of leaves, sticks, or trash. Mulch may be chipped or shredded wood, bark. When replacing existing mulch, use a mulch product that is similar in appearance to that already at the site.

2.6 Tree Planting Care

Trees shall be maintained in a healthy, vigorous growing condition with a well-shaped framework for future growth.

2.7 New Tree Planting

Spring and autumn of each year during the maintenance period the trees, double-stakes, rabbit guards and ties shall be checked and adjusted, the soil firmed, any dead wood removed back to healthy tissue and mulch adjusted to original levels. Any broken stakes or ties evident throughout the maintenance period shall be replaced.

A 1m-diameter mulch circle/square shall be maintained at the base of each tree located in open grass areas or grass verges. Top up bark mulch to 75mm where required and make good any mulch mats.

During the first growing season all standard trees / semi-mature trees shall be watered at least five times during the growing season - in April, May, June, July and August unless otherwise directed by the Landscape Architect. During the second growing season trees will be kept well watered, particularly during June, July and August.

The edge of the mulch circle shall be maintained in a neat and tidy condition as above.

The surface of all planting pits is to be kept free of weeds during the maintenance period by hand weeding of annual weeds throughout the growing season.

2.8 Tree Stakes and Ties

Check tree stakes and ties on each maintenance visit. Repair, strengthen and adjust (loosen / tighten) to ensure optimum functioning and trees not being damaged by poor fixings. If trees no longer require stake / tie remove. Prior to handover, check all tree stakes and ties and remove those no longer required.

2.9 Woodland/Scrub Area Management

Woodland areas specified shall be maintained in a healthy, vigorous condition and free from litter and noxious weeds throughout the year.

Certain areas of woodland may require thinning over the 5-year period. These areas shall be thinned by no more than 10%, removing only the weaker tree specimens. Thinning shall be carried out as directed onsite by the administrative authority.

A weed free area of 800mm diameter shall be maintained around all trees by a combination of hoeing and mulching. Occasionally digging may be required.

Areas of natural scrub as indicated on the maintenance plans shall be contained by trimming back once per year. The perimeter of the scrub shall be cut to ground level to prevent scrub encroachment on adjacent spaces. This shall be carried out 2no. times per annum.

All clearance operations within woodland and scrub areas shall be carried out outside of the bird-nesting season to preserve the bird life in the area. This season extends from the 1st March to 31st August.

2.10 Litter Clearance/Pick-up

The contractor shall maintain all areas free from litter. This shall mean the removal of all extraneous litter, rubbish and any other debris from all areas, which will include grass areas, planted areas, carparks, footpaths as well as woodlands and tree canopies.

Notwithstanding the above it is expected that the contractor and his staff shall take sufficient pride in the appearance of the site and that they would pick up all visible litter during every site visit.

In addition to removal of litter from footpaths, planted areas, etc., the contractor shall make provision for the immediate (within 1 days of notification) arrangement for collection and removal of all extraneous matter which has been deliberately been deposited on site by persons known or unknown (fly-tipping).

2.11 Replacements

Any tree, hedge or shrub that is removed, uprooted, destroyed or becomes seriously damaged, defective, diseased, or dead shall be replaced in the same location with another plant of the same species and size as that originally planted within 5 years after planting. All such replacements shall be carried out in the first available planting season after the requirement to do so is recognised.

2.12 Hedge Maintenance

- **Native Hedgerow Management:** cut back every three years on rotation to allow flowering of native species, unless encroaching into road / paths or causing other nuisance then trimming of encroaching sides to be carried out once a year. Trimming to be carried out in mid to late February to provide resources for wildlife in autumn months and allow wildlife to access Hedera helix berries and avoid conflict with the nesting season.
- **Beech Hedge Management:** cut once a year in early September.
- **Ornamental Evergreen Hedge Management:** trimmed twice a year. Once in February and once in early September.

2.13 Green Roof System and Irrigation

Care is to be taken not to damage any fleeces or waterproof membranes during maintenance. Irrigations systems are to be blown-out and a full pressure test carried out annually and monitored for leaks. Remove soil and dead foliage from irrigation pipes to ensure they do not get blocked. Cut back root systems if they become entangled in the irrigation system. Regular monitoring (bi-monthly) should occur to ensure the timer system and moisture monitoring system, are working efficiently and make adjustments to suit the weather conditions, if required.

3.0 Maintenance Programme

This programme is a guideline only and times of operations may vary on approval by landscape architect.

ONGOING REQUIREMENTS:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Lawn grass cutting (Min 24 cuts)		*	**	**	***	***	***	***	***	**	**	
Edging to lawn grass areas				*			*			*		
Rough Grass							*					
Fertiliser application to lawn grass areas.					*		*			*		
Native Hedgerow pruning/cutting (<i>once every three years, see section 2.12</i>)		*										
Deciduous Hedge pruning/cutting									*			
Evergreen Hedge pruning / cutting		*							*			
Shrubs pruning and feeding				*		*			*			
Weed control of hedge and shrub planting areas		*	*	*	*	*	*	*	*	*	*	
Tree pruning											*	*
Removal of tree stakes (3-5yr)				*								
Mulch top-up to tree circles/ squares						*				*		
Watering of new trees (or after 3 weeks of no rain)				*	*	*	*	*				
Trimming of scrub areas												*
Weed control of scrub areas				*					*			
Application of residual weed killer to footpaths, cycle paths.				*								
Litter Clearance/pick up	***	***	***	***	***	***	***	***	***	***	***	***