ARDEE SHD

Bridgegate, Rathgory & Mulladrillen, Ardee

Landscape Design Rationale

January 2022

CHARTERED LANDSCAPE ARCHITECTS

LANDSCAPE DESIGN / LANDSCAPE PLANNING / URBAN DESIGN / VISUAL IMPACT ASSESSMENT

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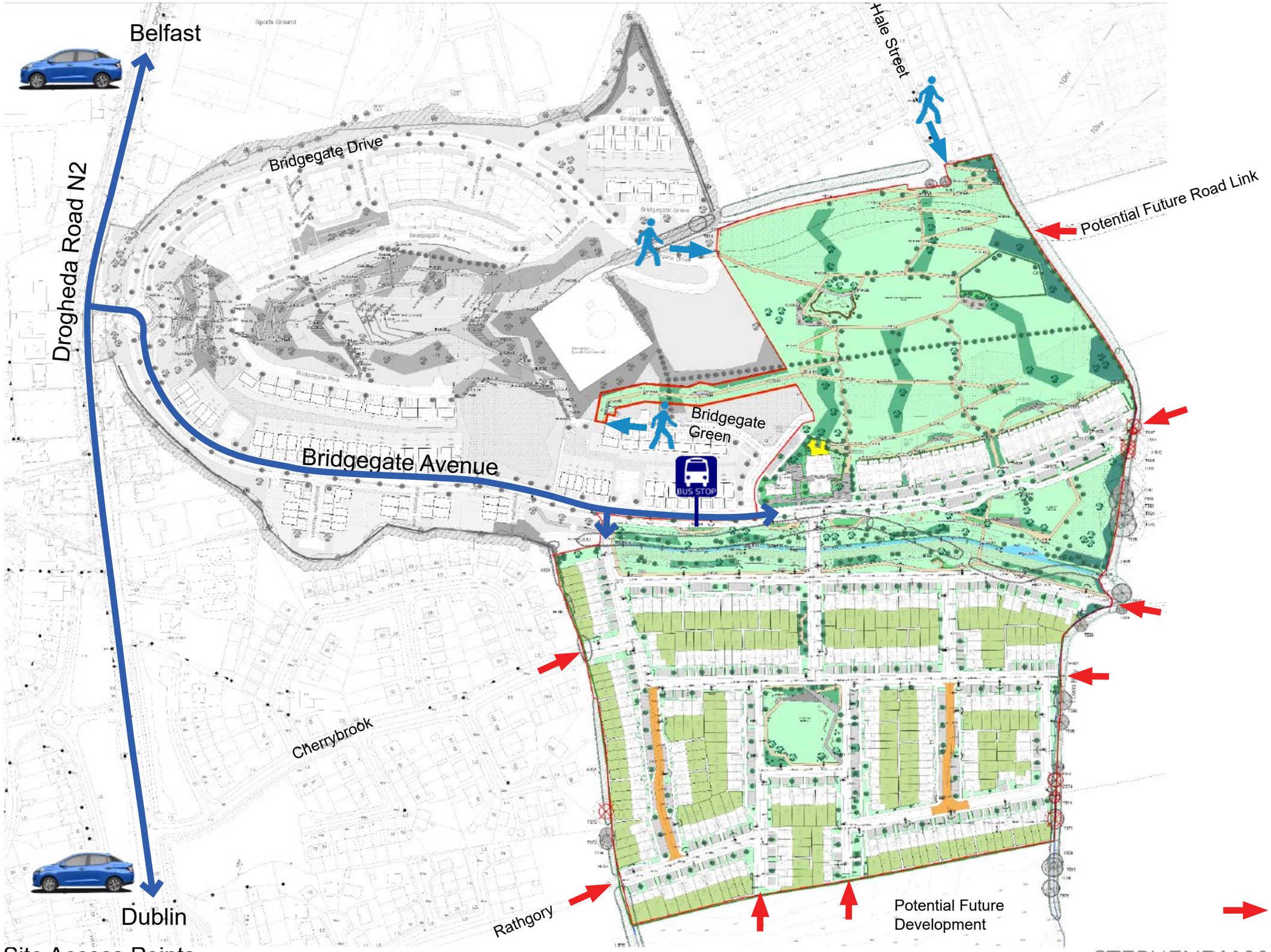
Ardee SHD

Landscape



Site Access Points

Potential Future Link

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CHARTERED LANDSCAPE ARCHITECTS

Pedestrian and Vehicular Movement

1.0 Introduction

Stephen Diamond Associates Landscape Architects have been retained by the applicant to submit a landscape design rationale and comprehensive and detailed landscape proposals for Ardee SHD, which is located in Ardee, Co. Louth.

Stephen Diamond Associates is a progressive design orientated landscape architecture consultancy based in Dublin. The office is a Registered Member of the Irish Landscape Institute (ILI), the professional organisation representing landscape architects in Ireland, and also holds full Membership of the Landscape Institute (CMLI), the professional organisation for chartered landscape architects in the UK.

Ardee is an historic town located at a crossing point of the Dee River in central County Louth, approximately 20 km north-west from Drogheda. The very busy N2 national primary route runs through the town, crossing the Dee River on a narrow stone arched bridge, then going through the Main Street of the town, a typical wide market street on the northern side of the river. The medieval origins of the town can be seen in the prominent tower house on the main street. On the southern side of the river are a number of fading and semi-derelict commercial uses, but this part of the town is mainly characterised by a number of housing estates dating from the mid-20th Century onwards and some large institutional uses.

This report should be read in conjunction with the following drawings which describe and illustrate the landscape architecture proposals:

• 20-547-SDA-PD-DR-001 Master Landscape Plan & Planting Shedule	Scale: 1:1000 at A1
• 20-547-SDA-PD-DR-002 Landscape Plan	Scale: 1:500 at A1
• 20-547-SDA-PD-DR-003 Landscape Plan	Scale: 1:500 at A1
• 20-547-SDA-PD-DR-200 Sections	Scale: 1:250 at A1
• 20-547-SDA-PD-DR-201 Stream Sections	Scale: 1:100 at A1
• 20-547-SDA-PD-DR-300 Planting Details	Scale: nts at A3

All hard and soft landscape works shall be completed as part of the general construction works contract, with tree planting carried out in the first suitable planting season following completion of building operations. Tender information for the works shall include for a minimum 12-month maintenance period and defects liability period.

1.1 Development Description

The proposed development site extends to c. 13.03 ha at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth and adjoins Phases 1-3 at Bridgegate (under construction) on lands to the

west, accessed from the N2 Drogheda Road. The proposals overlap the boundary of permitted development Reg. Ref.: 10174; ABP Ref: PL15.238053 (as amended) at the western boundary and will supersede granted development in this area which consists of 31 no. dwellings, crèche and community building and public open space. The development will consist of:

A) The construction of 272 no. residential units comprising a mix of 206 no. 2, 3 and 4 bedroom houses (all 2 storeys) including 50 no. 2-bedroom houses (Type 1), 145 no. 3-bedroom houses (Types 2, 3, 6) and 11 no. 4-bedroom houses (Types 4, 5) all with private open space and car parking, alongside 66 no. duplex units (all 3 storeys) including 17 no. 1-bedroom units (Types D5, D8), 24 no. 2-bedroom units (Types D1, D3, D6) and 25 no. 3-bedroom units (Types D2, D4, D7), all with private open space in the form of terrace at upper floor level and external garden space, with 499 sqm of communal open space serving Duplex Blocks A-B (48 no. units) (served by 2 no. bin and bike stores [each c. 51 sqm] adjacent) at Bridgegate Avenue, providing a total residential gross floor area of c. 28,168.9 sqm;

B) A part 1, part 2 no. storey crèche (c. 484.1 sqm) and playground and a single storey community building (c. 165 sqm) located adjacent at a central community hub (with bin and bike store [c. 23 sqm]) accessed from Bridgegate Avenue served by car parking located on Bridgegate Green and Bridgegate Avenue;

C) A landscaped Public Park located in the northern part of the site extending to c. 3.6 ha accessed from the community hub and between duplex Blocks B & C at Bridgegate Avenue, with 2 no. pedestrian links to permitted public park adjoining to the west and 1 no. pedestrian footpath extending to the northern perimeter at Hale Street, with a reservation for a future link road to lands to the east facilitated in the northern section of the park;

D) Works to the Rathgory Tributary located to the south of Bridgegate Avenue comprising the realignment of the channel and regrading and reprofiling of land (as required), implementation of 2 no. vehicular crossings (including culverts and mammal passes) and the provision of a riparian corridor based around the open watercourse comprising landscaping and planting with safe access to the watercourse provided for maintenance purposes and 1 no. pedestrian and cyclist crossing;

E) A series of landscaped public open spaces provided throughout the site with Public Open Space 01 (c. 1.05 ha) and Public Open Space 2 (c. 0.43 ha) located within the linear park (including riparian corridor) adjacent to the Rathgory Tributary with Public Open Space 03 (c. 0.29 ha) centrally located in the southern part of the site; open spaces will provide a mix of hard and soft landscaping, pedestrian and cycle access (cycle lanes provided at POS 1 and POS 2) and a range of activities including fitness spaces, kickabout area, amphitheatre and nature based play areas;

F) Provision of shared surfaces, landscaped streetscapes including planting and landscaping at two neighbourhood streets in the southern part of the site, with roads provided to site boundaries to the east, south and west to facilitate possible future connections;

G) All landscaping including planting to consolidate treelines and hedgerows forming existing site boundaries with agricultural lands to the east and Cherrybrook residential development to the west and all boundary treatments;

H) Roads and access infrastructure taken from Bridgegate Avenue (permitted under Reg. Ref.: 10/174; ABP Ref: PL15.238053 [as amended]), the provision of a bus stop on the south side of Bridgegate Avenue adjacent to community hub and provision of cycle lanes at this location (continued through Public Open Space 01); a total of 480 no. car parking spaces (362 no. serving houses, 84 no. serving duplexes, 23 no. serving crèche and community building and 11 no. visitor and public open spaces), a total of 296 no. bicycle parking spaces (204 no. spaces serving duplexes [60 visitor spaces], 32 no. spaces at the community hub and 60 no. visitor spaces);

I) Provision of 2 no. ESB substations, all associated drainage and services infrastructure (surface water, foul and water supply), public lighting, SUDS drainage and works to facilitate the development.

2.0 Landscape Design Methodology:

The landscape design proposal for Ardee SHD should move beyond the traditional concept of landscape as pure scenery or as an urban palliative. This proposed sequence of open spaces should combine natural systems with programmatic and infrastructural systems, weaving together landscape and architecture to create a useful and beautiful contemporary landscape.

Good landscape design has a measurable impact on local economies and on human well-being, thriving green spaces increase property values and attract visitors. It can reduce carbon emissions and help with climate change adaptation. Urban landscapes can make a significant contribution to environmental sustainability through their provision for open space, water, air and habitat opportunities, as well as contributing to urban liveability, health and fitness.

Our physical and mental health is positively impacted by contact with nature, and engaging in even light physical activity makes us feel better. Research shows that those who regularly spend time in green areas are healthier, less depressed and less dependent on medication. Just a short walk each day improves our health and well-being considerably, reducing illness and improving the quality of our lives; something that also leads to lower health and medical costs for our society. Enabling groups of all ages to access open space helps them and their families build relationships and neighbourhood networks that can bind communities and promote social inclusion.

Our aim is not only to create a beautiful landscape of varied open spaces in terms of form, pattern, materiality, geometry and tactility, but also to understand how the landscape will work and how it might usefully perform over time.

2.1 Landscape Design Strategy

Our approach to the landscape architectural proposal is site-generated, with careful consideration given to the site's history, geology, ecology, microclimate, landscape and its context. Emphasis was placed on creativity and rigorous conceptual development in our search for robust design proposals, developed to imbue the site with distinct character.

We strive to capture and interpret the unique characteristics and power of the natural and urban landscape, often as abstracted contemporary compositions appropriate to the site, its architecture and infrastructure.

The landscape design concept was developed from the site's existing levels and proposed road levels to site.

The landscape design is intended to create and heighten qualities and characteristics in the open spaces enjoyed in nature such as change, surprise, awareness of transition and movement; weather, seasonal change, use and maturing. Pockets of nature are created within the hard-landscaped open spaces of the development, which are surfaced in durable attractive and hard-wearing materials to give the external spaces textural character.

Landscape proposals for the site are intended to contribute towards:

- A unique sense of place;
- A site-specific design proposal generated from existing landscape elements

and context;
- A high-quality environment;
- A permeable layout that assists ease of movement for pedestrians and vehicular traffic;
- A development that acknowledges the local landscape character and integrates well into the receiving environment.
- A development that promotes beneficial effects on biodiversity by providing new habitat.

Issues that have been considered throughout the landscape design are:
- Connection to the existing landscape, adjacent land use, proposed buildings, pedestrian and vehicular circulation, shared space;
- The appropriate selection of hard and soft landscape materials;
- Boundary treatments that are in keeping with the surrounding landscape;
- Mitigation of the proposed development, its buildings, access roads and associated services structures.
- Specification of native tree species and plants to enhance biodiversity and visual amenity.

Spatial design proposals are developed to encourage social interaction, engagement with the external environment and the full utilisation of external spaces. Such proposals involve the integration of seating/meeting areas, external reading areas and paving layouts to define a hierarchy of open spaces suitable to a variety of use requirements. These spaces will play a pivotal role in the delivery of a successful development.

The use of native plants will provide optimum biodiversity and aesthetic values. This varied profile is designed to provide a diversity of landscape and habitats throughout the site.

Hard and soft landscape and streetscape elements will be fully detailed and completed to the required level to meet current building regulations and best practice provided by the relevant guidance documentation e.g. Technical Guidance Document Part M – Access and Use Building Regulations (2010) and 'Building for Everyone: A Universal Design Approach' by the National Disability Authority.

We take universal design/access or design-for-all as a point of departure for the design of all external space.

Our aim is to design a landscape where built development, nature and amenity facilities co-exist.

2.2 Connectivity and Permeability

Vehicular and pedestrian access to the site is provided along Bridgegate Avenue, which extends west to connect with the N2 Drogheda Road (a National Primary Road). The site occupies a strategic central location approximately 1 hour drive from Dublin and approx. 1 hr 13 minutes' drive to Belfast (source Google Maps).

Access to the core housing area located south of the re-aligned stream is via two vehicular/pedestrian access bridges which connect to Bridgegate Avenue at the western end of the site and centrally opposite the crèche and community centre. A third pedestrian access bridge provides direct access from the southern housing area through the linear parkland to the crescent form housing units located along the southern parkland boundary.

Proposals include for a new centrally located bus stop adjacent to the crèche and community centre facilities located on Bridgegate Avenue. Additional bus stops are located within walking distance along the main Drogheda Road N2, which can be accessed via Bridgegate Avenue, with the potential for more direct pedestrian links along the western site boundary through Cherrybrook & Rathgory housing estates. Provision of a dedicated cycle lane along Bridgegate Avenue links and continues from the adjacent site.

A new pedestrian link provides direct access to the new public park from Bridgegate Drive at the north western corner of the public park. Also, a pedestrian footpath extends to the northern perimeter adjacent to Hale Street. Site layout and parkland design proposals have been further developed south of the water tower to provide for an additional pedestrian link from Brigdegate Green to the public park. A gateway access connects to the public park's southern boundary by way of a public plaza located between the crèche and crescent housing units. A further southern access point is provided midway along the crescent housing units.

Pedestrian access through the public park and various landscape amenities (picnic spaces, natural play area and dog park) has been designed in accordance with Part M (2010) of the Building Regulations as a network of 2m width gently sloped pathways. The design also provides informal pathways, with a more direct access route option, leading up to those amenities.

Provision has been made for six potential future links to adjacent development lands and established communities along the South, South-West and East boundary line to allow for further permeability to and from the site.

The design incorporates a green corridor that connects all three public open spaces, the crèche and community centre, and the public park. The design also incorporates two Neighbourhood street areas.

2.3 Natural Play Areas

Landscape scheme proposals have been developed to move beyond the traditional concept of play provision through the selection of off-the-shelf equipment to a Nature-based Play Opportunities approach, in line with the Irish governments National Children's Play Policy 'Ready Steady Play' and the UK's 'Learning for Landscapes' philosophy.

'We enrich the lives of children by helping them to connect with nature, become more active, learn outdoors, develop social skills and have fun.' (Learning from Landscapes).

A play strategy has been developed based on the guiding principle of sustainability, re-use, connection to nature and the utilisation of found or locally sourced materials for play. Our aim is to fabricate the majority of play items and seating from locally sourced trees and existing trees felled on site as part of the construction process.

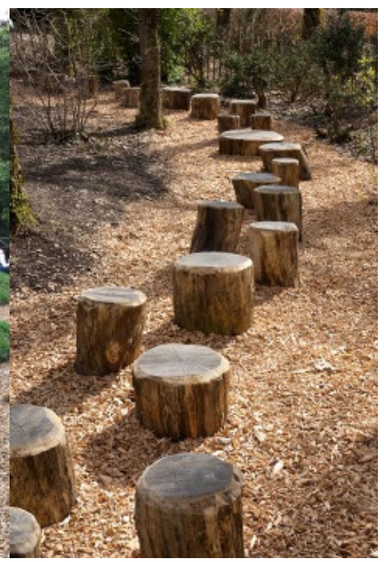
Play has been interwoven throughout the development site open space areas to provide dynamic spaces to excite, stimulate and provide children and family with a range of gathering space. Its layout and spatial design provides ease of access to seating areas and gathering spaces configured to encourage social interaction and an enhanced sense of community.

Refer to Landscape Plan for further detail and general arrangement layout of play facilities, hard and soft landscape treatments.

Play is organised around a meandering 'Play Route' surfaced using site generated woodchip and bark mulch. Lily pad stepping logs and rounded Irish stone boulders encourage children to journey through the open space to a series of strategically placed play items to include:
- Climbing tree frame, cut to shape from appropriate felled trees, placed in a secure horizontal position and fixed into ground;
- Tree trunk balance beam secured along the ground plane in a horizontal position;
- Balance poles - used to improve balance in tandem with tree trunk balance beam and lily pad stepping logs;
- Upright totem poles - used for climbing on and jumping off, den building, art gallery mounts etc. The stumps vary in height and challenge to present children with their own risk judgements;
- A number of tree trunk thrones have been placed to provide children with their own seating areas within view of the paved seating terraces;

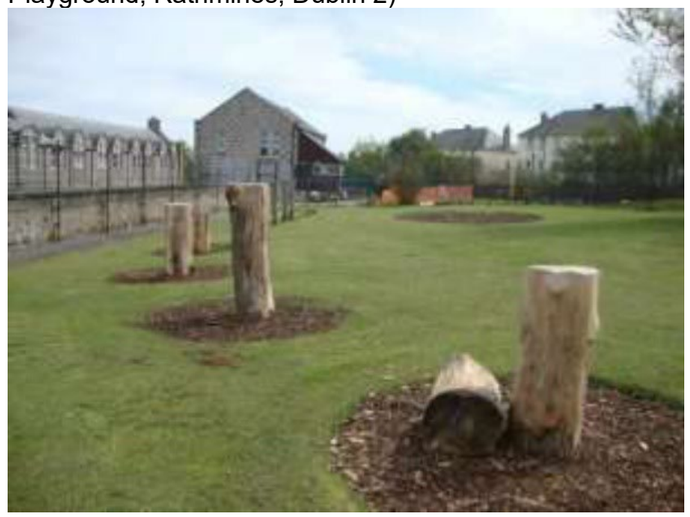
(above: A. Climbing tree frame, image source Google)

(above B. tree trunk balance beam, image source Google)

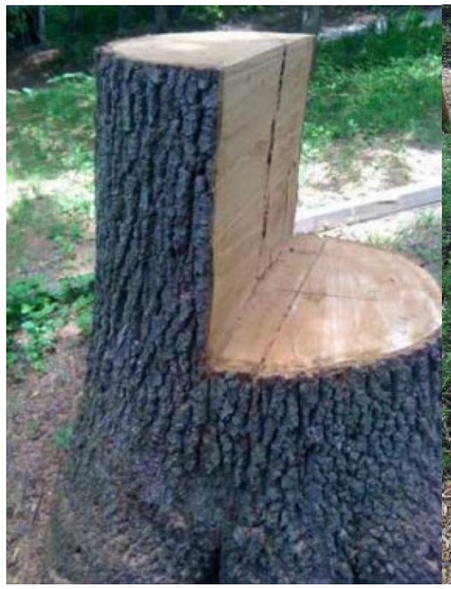


(above: C. Balance poles. Merrion Square Playground, Dublin 2)
(above right: D. Lily pad stepping logs, image source Google)

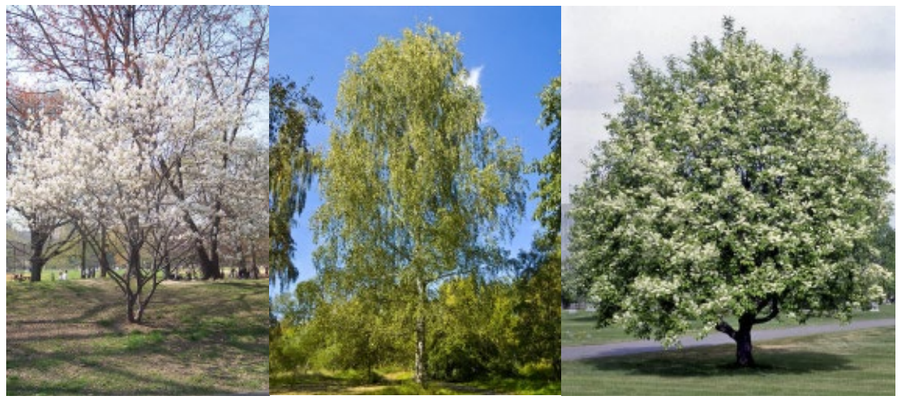
(above: E. rounded Irish stone boulders, Belgrave Square Playground, Rathmines, Dublin 2)



(above: F. Upright totem poles, Woodside Primary, Aberdeen City Council. Image source Learning Through Landscapes)



(above: G. tree trunk throne, saw cut on site, image source Google)
(above right: H. meandering 'Play Route' surfaced using site generated wood-chip, Merrion Square Playground, Dublin 2)



Multi stemmed Amelanchier lamarkii (Snowberry: ref. photo above left) standard clear -stemmed Betula pubescens/pendula (Downey/Silver birch: ref. photo above centre) Prunus padus (Bird cherry: ref. photo above right) and Sorbus aucuparia (Mountain ash) trees provide shelter, draw nature into the communal open spaces and encourage children to climb, make tree huts and interact directly with nature. Larger native oak (Quercus petraea and Quercus robur) and Scots pine (Pinus sylvestris) are located within the larger open spaces away from buildings.

Biodiversity and visual amenity will be further enhanced by ground cover plantings of nectar and pollen rich perennials to include Rudbekia, Echinacaea, Iris, Salvia, Ajuga, Sedum species etc.

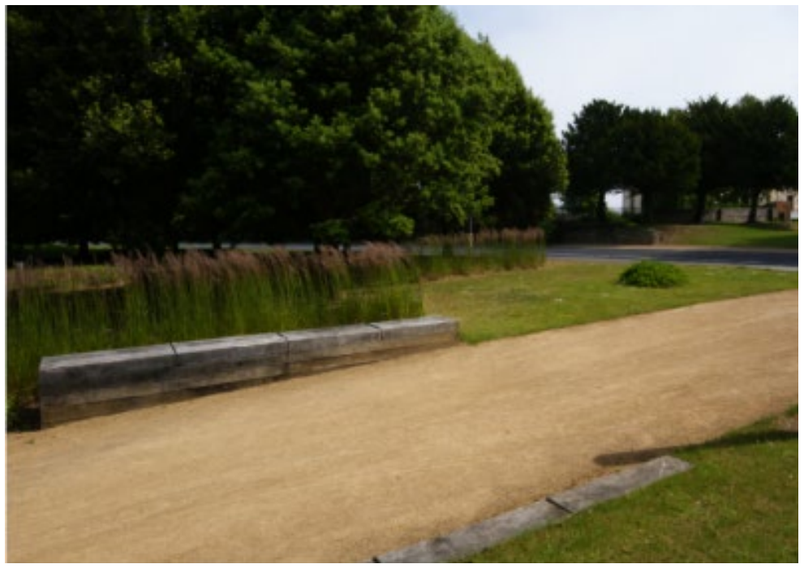
Full specification of all tree and shrub planting has been provided in the Planting Plan & associated planting schedule.

3.0 Paving:

Paving materials within the open spaces have been specified with the intent of providing high-quality surface materials which will survive well over the long-term and require little maintenance.

All external paving materials have been specified to meet with minimum slip resistance Pendulum Test Values (PTV's) of 36+. Finishes will be installed with appropriate bedding, sub-base and joints – flush finished with no changes in level across paving which might cause a slip, trip or fall, and are suitable for access by all abilities in compliance with TGD Part M.

Hard compacting gravel is an attractive golden coloured finish suitable for vehicular and pedestrian trafficking, it is porous and does not require surface water drainage. Min 50mm compacted depth golden hard-compacting gravel to perimeter path. Spread and level aggregate whilst damp/moist and then compact to manufacturer's instructions with a min. 1 tonne roller.



(above: Hard compacting golden gravel, image source Google)

(above: Hard compacting golden gravel, image source Google)

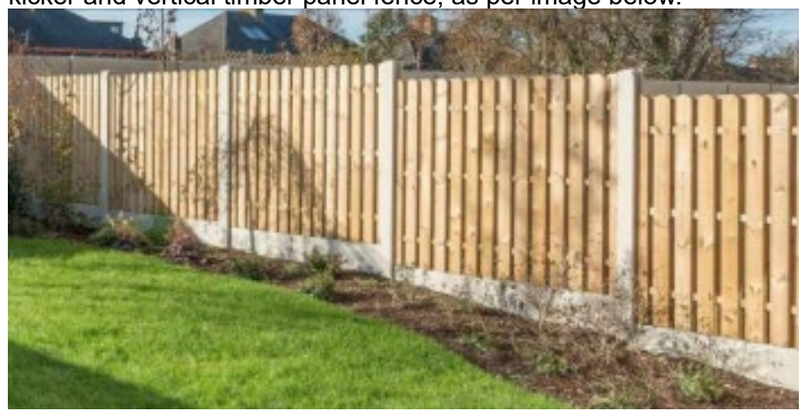
Hard-binding gravel can be sourced in Ireland, and has been selected for its previous properties and rich golden colour, which provides a warm tone even during the winter. Its hard compacted nature and small aggregate diameters (6-10mm) mean that it is trafficable by wheelchairs and is fully accessible.

The paving is to be laid with cross-falls on a sub-base to engineer's details.

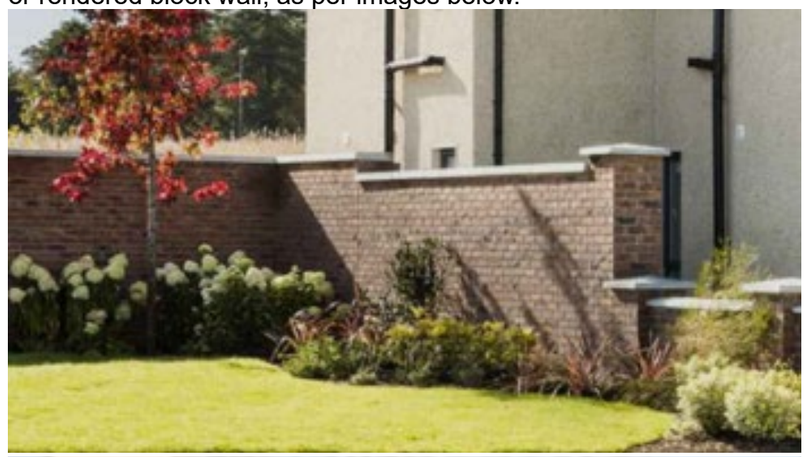
4.0 Boundary treatments

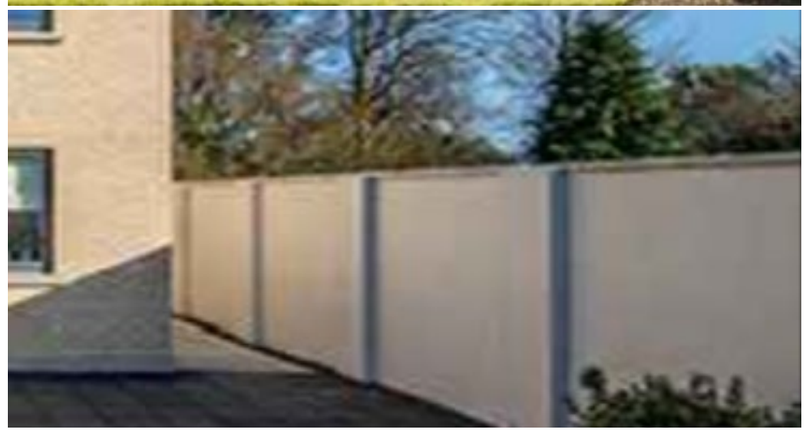
Types of boundary treatments that will be used:

- To site boundary: Existing dense hedgerow retained and managed as dense boundary. New proposed hedgerow to south site boundary. New proposed hedgerow to east boundary where the existing hedgerow was removed due to site works. Refer to landscape plan drawing 20-547-SDA-PD-DR-001.
- To front housing: 1m high hedge. Refer to landscape plan drawing 20-547-SDA-PD-DR-001.
- Between rear gardens: 1.8m high Concrete post, concrete kicker and vertical timber panel fence, as per image below.



- Between rear gardens and public areas: 1.8 m brickwork wall or rendered block wall, as per images below.





5.0 Planting:

The detailed specification of planting – trees, ornamental grasses, flowering perennials - attempts to recreate the sensory experience of lush Irish nature. Trees and shrubs will be used to provide a counterpoint to the hard landscape and built elements so as to provide dynamic and sensual external spaces.

Ornamental perennial and shrub plantings have been concentrated along the main entrances of the public parkland and seating areas. The specification of planting material will act to improve the micro-climate of the open spaces, providing shade, year-round visual interest, and improving the biodiversity of the site by attracting wildlife.

Inspired by the diversity of Irish nature, different types of biotopes have been established such as native birch and flowering wild cherry groves – spaces that visually merge into each other and invite further exploration, strolling and contemplation.

The visual impact of the development is softened by the specification of flowering perennials & shrubs, scrubs, woodlands and leafy groves of decorative trees. Throughout the seasons the colours and textures in the planting change to constantly provide new sensory experiences for the residents.

5.1 Tree planting:

It is the intention to provide a feeling of maturity and permanence as soon as possible by planting semi-mature standard trees. A mix of native deciduous and evergreen trees has been specified to provide year-round visual interest, habitat and screening. The detailed specification of trees is inspired by the species of tree currently found on the site, and suitability of the tree to the location.

Clear-stemmed trees are specified to create a sense of security, clarity and free movement beneath the leaf canopies.

All semi-mature trees will be staked and planted as per details. 75mm depth bark mulch and 600-1000mm depth topsoil will be provided to all semi-mature tree planting.

5.2 Ornamental shrub planting:

The design, layout and specification of ornamental shrub planting is intended to add interest and variety as well as assist in defining spatial qualities across the site. Species have been selected that will successfully establish and grow in the local conditions as well as being sufficiently robust to survive in the various open space areas and public realm with limited maintenance.

Ornamental shrub planting is contained with a series of defined planter beds. Formed in treated timber edging or concrete to accommodate min 300mm depth topsoil, topped with 75mm depth medium-grade bark mulch.

The planting scheme consists of a range of flowering, evergreen and deciduous perennials, selected for their suitability to the site conditions and to provide year-round visual interest. These perennials will also attract honeybees, butterflies and birds to the development, increasing the biodiversity potential of the gardens and open spaces.

The perennials will provide seasonal visual interest, as the interplay of colour and billowing form will stand out as a constantly changing pattern. The slightest breeze sets these perennials in motion, highlighting the landscape finish, especially when planted as a mass border.

Larger Mass plantings of perennial wildflower meadow seed mix lawns areas are provided throughout the parkland, facing south to enjoy warm sunshine, and to provide space for a range of external activities, such as gardening, ball-games, sitting, walking, resting and quiet contemplation.

5.3 Woodland:

We have proposed a predominantly native planting plan and schedule to attract wildlife to the site and support the development of a habitat and microclimate. Where possible existing trees along the site boundaries will be retained to maintain the existing site ecology, and supplemented with a native species transplant mix of Privet, Hazel and Holly transplants.

Larger open areas have been planted with a native woodland transplant mix to comprise sizeable native trees such as Alder, Silver birch, Downy birch, Mountain ash, Bird cherry, Wild cherry, Scots pine, Oak and an under-storey planting of Willow, Hazel and Holly.

Native woodland transplants species to provide biodiversity, support for wildlife & screening as they mature.

5.4 Wildflower Meadows:

A sequence of low-maintenance native wildflower and grass meadows will be provided in strategic locations throughout the site. These meadows require limited maintenance, merely cutting once or possibly twice a year, once established. Located next to woodland they can attract valuable pollinators in spring and summer. Paths and lawns can be mown through such wildflower meadows to create an informal route and allow people to engage directly with the flowers and wildlife.

6.0 Anticipated Programme of Works:

(i) The planting programme shall generally be carried out during the following periods;

-All root-balled trees	early November – late March
-Bare Root Shrubs, Whips etc,	mid November – early March
-Container Grown shrubs perennials	at any time

Planting outside of the above periods must be agreed with the Landscape Architect, with appropriate container grown stock used and an additional watering programme enforced.

7.0 Establishment Maintenance:

Generally:

(i) Establishment maintenance will form part of the landscape contractors works. The period of establishment maintenance and defects liability will be 12 months post Practical Completion.
(ii) Prior to handing over all plant failures shall be replaced, and all defects made good to the satisfaction of the project landscape architect.
(iii) The landscape architect will be retained by the developer to inspect all planting works until handover to the management company.

8.0 Landscape Maintenance:

8.1 Planting Preparation Specification and Management Notes For Soft Landscaped Areas - General Information

Area: Soft landscape areas to include the following elements:
- Grassed areas;
- Perennial shrub planting;
- Tree Planting.

8.2 Management Responsibility:

Following the completion of the one year's defects liability period for the main works contract, responsibility for the day to day maintenance of all areas in the site curtilage will be passed to a landscape management company.

The management company will engage a landscape sub-contractor. It will be the management company's responsibility to monitor and review the works of the sub-contractor to ensure the management objectives as outlined below are attained.

8.3 Management Objectives:

The objectives of the management company will be as follows;
- To maintain all areas in a neat, tidy and substantially weed free condition,
- To ensure that all seeded areas are maintained in a condition that contributes to the visual amenity of the development,
- To establish and maintain tree and shrub planting to provide an overall landscape framework for the development.

8.4 Performance Criteria:

Performance criteria are indicators for assessing the quality and success of the particular plant mixtures used for a purpose i.e. structure/ screen planting, specimen planting, tree planting etc.
Such indicators will be based upon aspects such as;
- Health and condition of planting
- Plant growth
- Achievement of desired effect

The achievement of the performance criteria and the monitoring of the landscape contract will be under the direction and supervision of the developer's landscape architect. As previously stated the management company will monitor longer-term performance criteria.