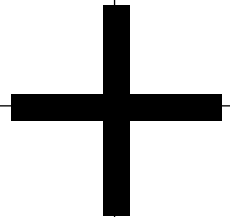


# **PROPOSED PART 8 RESIDENTIAL DEVELOPMENT**

Social Housing Bundle 4, Development at the Stanley Street Depot, D7 -  
Dublin City Council

Landscape Report and Biodiversity Management Plan

August 2024 - P05



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## DEVELOPMENT DESCRIPTION

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The construction of 167 apartments and duplex units at a site c. 1.15 ha at the former Dublin City Fire Brigade Maintenance Depot and Dublin City Council Mechanical Division, Stanley Street, Grangegorman Lower, Dublin 7. Development at the site will consist of the following:

The demolition and site clearance of the existing buildings, sheds, warehouses and garages.

Retention and modification of the south and east elevation of an existing structure (facing onto Grangegorman Lower) to form part of apartment Block G at the southeast corner of the site.

Construction of 167 no. apartment and duplex units across Blocks A-K (including frontage onto Grangegorman Lower).

Blocks A - C consist of 71 no. apartment units (43 no. 1 bed and 28 no. 2 bed units) and ranges from 5 to 6 storeys.

Blocks D-G consist of 84 no. apartment units (43 no. 1 bed units, 29 no. 2 bed units and 12 no. 3 bed units) and ranges from 4 to 5 storeys.

Blocks H-K consist of 12 no. duplex units (6 no. 1 bed and 6 no. 3 bed units) and are 3 storeys.

Provision of 270 long-stay and 101 short-stay bicycle parking spaces, 19 no. car parking spaces and 1 no. motorcycle parking space.

Construction of a 277.54 sqm creche.

Provision of 552 sqm of community, cultural and arts space located at ground floor level across Blocks B, E, F and G.

0.113 ha of public open space and 1350 sqm of communal open space

Vehicular access is proposed from Grangegorman Lower and vehicular egress is proposed onto Stanley Street.

Boundary treatments, public lighting, site drainage works, internal road surfacing and footpaths, ESB meter rooms, ESB substations, stores, bin and cycle storage, plant rooms, landscaping; and

All ancillary site services and development works above and below ground.

## Landscape Design Aims and Objectives

The landscape structure of the proposed residential development adopts the open space strategy of the Landscape Masterplan which provides for a varied, accessible and permeable open space network for community use that as it matures will become a significant resource.

As the Covid pandemic has brought into sharp relief for people's health and well-being there is a community requirement for open, natural spaces, which facilitate exercise, recreation, and free play.

The proposed open space network provides these flexible activities in a natural environment with inclusive access.

Although minimal vegetation is currently found on site, consideration has been given to any trees on and neighbouring the site, and will be protected where possible in line with the objectives of the Arboriculture assessments & Landscape Masterplan and brought back into a managed state and reinforced with new planting.

Varied habitats are created for ecological connections and landscape visual amenities;

- Native hedgerows along boundaries.
- New tree planting.
- Flexible amenity lawn areas.

### **Management Structure**

The landscape areas will be managed by the development management company for a period of 25 years. Hand over to local authorities following this period of 25 years.

### **Bird Season Restrictions**

Vegetation clearance will take place outside the breeding bird season (i.e. the start of September to the end of February, inclusive) to avoid any potential impact on breeding birds. Where this seasonal restriction cannot be observed, a check for active nests will be carried out immediately prior to any site clearance and repeated as required to ensure compliance with Irish wildlife law. This will be carried out under the supervision of a qualified Ecologist.

## **Ecology**

The open space landscape network has been designed to provide for ecological value in the area and this function will be enhanced following further recommendations from the Ecologist Consultant.

The two main design principles of landscape and biodiversity for this site are as follows.

- 1. Biodiversity enhancement in the landscaping scheme.**
- 2. Biodiversity enhancement for fauna**

These are outlined further in the biodiversity chapter below.

### **All Ireland Pollinator Plan 2021-2025**

Planting and management of the landscape areas shall be undertaken in accordance with pollinator-friendly management objectives as outlined in the “All Ireland Pollinator Plan 2021-2025 (Councils: Actions to Help Pollinators)” National Biodiversity Data Centre and will include interpretative signage highlighting the areas managed for Wildlife. Varied grass-cutting regimes will provide species richness within the grassland areas, of high importance in a scheme within an urban area.

### **SUDS integration for water management**

A coordinated approach within the landscape design has been taken for water management, with the provision of permeable surfaces, build-ups and detention basins throughout the scheme.

### **Standards of Care**

High standards will be maintained in all areas of service delivery.

High standards of care will be achieved by:

- a landscape maintenance specification
- maintenance works to be undertaken by trained staff members, providing on-site supervision of trainees
- providing Health & Safety training for staff
- proactive maintenance of hard landscape areas, mobility elements and seating
- a programme of tree works
- monitoring of standards of care
- working with local interest groups to ensure community ownership of the site
- updating risk assessments for operations by the landscape staff
- periodic review of standards and procedures
- perceptions of safety will be increased, and vandalism and other anti-social behaviour discouraged with additional natural surveillance by increasing circulation, overlooking from the residential development and maintaining open views across planted areas.

## Landscape design description

The development will include a public open space facing Stanley St., which serves as a threshold to the scheme, providing opportunities for strategically located seating to take advantage of its exposure and also offering a generous play area. This area is flanked by proposed mature trees, which will soften the transition between the new play area and the existing wall adjacent to Stanley St., proposed to be retained but lowered and overlaid with a steel railing to match the existing height. The play areas are located within a central soft enclave, which also doubles as a functional space, allowing fire tender access as it comprises a reinforced grass system.

The scheme is configured along a main boulevard from Stanley Street to Grangegorman Lower, ensuring ease of circulation and creating a visually attractive environment with mature trees lining the boulevard, featuring a 2-meter clear stem to allow unobstructed sight lines. Parking spaces are provided alongside ample bike racks. Ease of circulation within the scheme is also a key design consideration in the public realm, providing adequate access to ground-floor units while framing the space with native hedges to form a threshold to the units.

Furthermore, ample amenity opportunities are found within the two courtyards forming part of the scheme. The northern courtyard strikes a balance between utilitarian and aesthetic features, offering a large detention basin carefully integrated into the courtyard with circular stepping stones across, making the level difference a playful feature. Its large footprint also provides space for informal kickabouts. A large communal table covered by a pergola is positioned to take advantage of its south-facing aspect, providing residents with the means to gather and socialize or share a meal. Semi-mature trees and multi-stem trees abound in the northern courtyard, providing adequate shelter while ensuring passive supervision from the adjacent block. Considering the site's proximity to the city center, the northern courtyard also offers ample bike parking to facilitate cycling in and out of the scheme.

In the eastern courtyard, Grow-Your-Own planters are proposed along the main circulation route within the lawn area to provide residents with the opportunity to grow their own vegetables and engage in communal activity. A combination of semi-mature and multi-stem trees is proposed as the planting palette for the eastern courtyard.

Permeable build-ups and materials are proposed as finishes throughout the public realm of the scheme.

## 1- Internal courtyards – Communal amenities

The design of the internal courtyards focuses on providing communal activities to foster rapport among future residents. Primarily maintained as green spaces, they offer opportunities for residents to gather informally, engage in gardening, or socialize. The design utilizes the detention basin creatively, incorporating stepping stones to encourage exploration and physical activity among younger users. Robust detailing, such as the steel pergola and concrete long table, ensures minimal maintenance and longevity of the proposed elements.



*Stepping stones through basin*



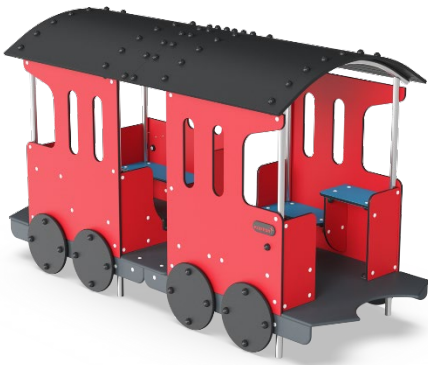
*Communal long table with covered pergola*

## 2- Public open space – Play and active recreation spaces.

A 100m<sup>2</sup> play area is provided facing Stanley Street and have been strategically located with consideration for sightlines. This ensures that passersby are made aware of the space and can take advantage of the amenities offered. The play area provides equipment for toddlers and children up to the age of six, as per the requirements set out in the Design Standards for New Apartments, with seating available both within the dedicated play area and adjacent areas to ensure adequate supervision of younger children. The proposed play equipment products are 1no. steam engine, 1no. railway carriage and 1no. slide, PE – all by Kompan.



*Steam Engine by Kompan.*



*Railway Carriage by Kompan*



*Slide, PE by Kompan*

Additional active recreation is introduced in the scheme by a synthetic surface ‘carpet’, which incorporates a basketball half-court, running loop and encourages other popular street games in the area by markings on the surface. Given the area is envisioned as a shared surface for recreation, no fences are proposed to surround the basketball area, creating an open and welcoming space. A lawn area breaks a



portion of the surface and introduces a playful element on its right with the inclusion of mounding, allowing children to run up and down.



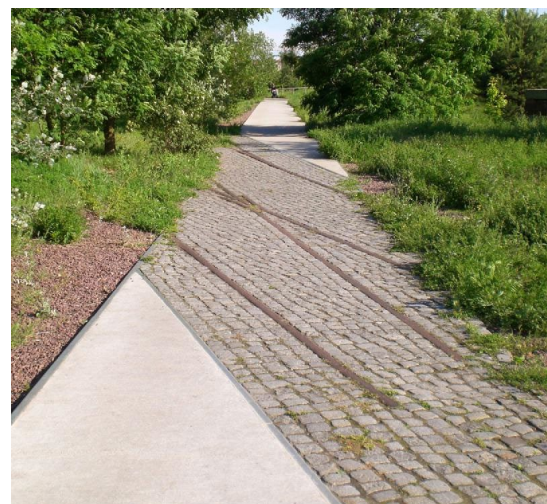
*Open play space with lush planting boundary*



*Synthetic surface with markings*

### 3- Historic Reference through materiality.

The former use of the site and legacy of materials used are referenced within the design with the integration of Tram line paving patterns that are a direct reference to the site's history. There are two ways to achieve this strategy. Firstly, as proposed in this scheme a dark granite contrasting band of paving, laid out in the pattern of the historic layout as per mapping is proposed on the landscape plan. And secondly as the project progresses and excavation occurs on site. The possibility of excavating and reusing actual retained elements of historic reference on site would be possible to integrate within the scheme. Below are two examples of this in public realms in New York and Berlin.



## Planting Strategy

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

Throughout the scheme, the planting palette is uplifted with edible trees as part of the amenities provided for future residents.

The priority is given to locally sourced and native planting, when appropriate, to enhance biodiversity and support the local biome.

## Open space structure trees

Native and naturalized tree species are to be planted within the amenity space to increase opportunities for native wildlife.

Part of the planting strategy is to integrate edible planting as part of the internal courtyard's amenity. Proposed tree/shrub list (indicative):

- Magnolia 'kobus'
- Sorbus aucuparia 'Sheerwater seedling'
- Gleditsia triacanthos
- Cornus kousa 'China girl'
- Prunus lusitanica (shrub)
- Crataegus monogyna (shrub)

## Street trees

Street tree planting will consist of species with fastigiate or neat forms suitable to the scale of the streetscape and those that will thrive in a streetscape environment. The tree pits will be detailed as per the council's guidance. A selection of trees will be implemented along the public footpath and POS that will vary in species, size, and shape to future-proof the street planting in case of an unknown disease to this date.

Proposed tree list:

- Betula utilis 'Jaquemontii'
- Sorbus aucuparia 'Sheerwater seedling'
- Betula utilis 'Jaquemontii' (multistem)
- Acer campestre 'Elsrijk'
- Prunus padus
- Malus sylvestris

Street tree planting is located to avoid impacts with street lighting. Street trees will be planted into a minimum of 1.2m<sup>3</sup> topsoil (or to the requirements of the local authority parks department, whichever is greater), with the use of urban tree soils and topsoil-loaded root cells to increase rooting areas outside the main tree pit area as necessary.

## Development Plan Quantum

### DCC development plan

*"15.8.6 Public Open Space – "Public open space is an external landscaped open space which makes a contribution to the public domain and is accessible to the public and local community for the purposes of active and passive recreation, including relaxation and children's play. Public open space also provides for visual*



*breaks between and within residential areas and facilitates biodiversity and the maintenance of wildlife habitats.*

*The public open space requirement for residential developments shall be 10% of the overall site area as public open space.”.*

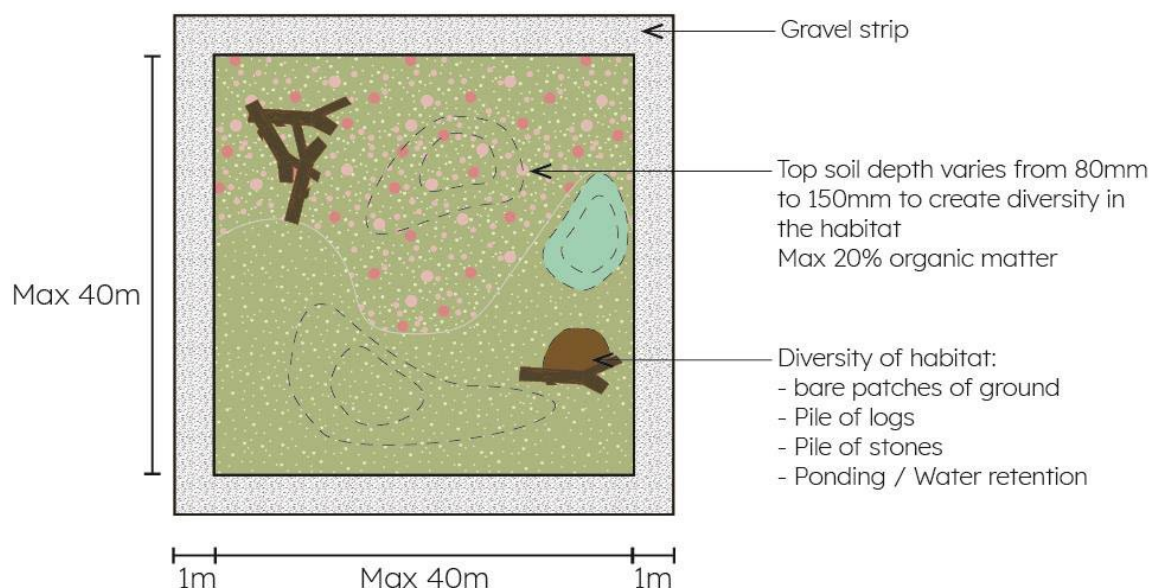
The site comprises c.1.15 ha and the proposed scheme has 0.112 ha of public open space and 1350 sqm of communal open space. Green and blue roof

## Green and blue roofs

Green and blue roofs are included as part of the strategy to enhance the biodiversity in the city. The below recommendations follow the DCC green and blue roof guide (issued in 2021), and the document should remain the technical baseline of each rooftop development.

The proposed development will provide intensive green roof planted with a mix of sedum and Irish native wildflowers plugs. As appropriate, a diversity of habitat will be created by a combination of:

- Modulating the depth of topsoil from 80mm to 150mm.
- Installing piles of logs and stones
- Providing bare patches of soil
- Creating localised ponding/water retention.



*Diagram by Mitchell + Associates based on the DCC Green and Blue roof Guide (2021)*

The maintenance of the roof is essential to the development of the planting and the regulation of fire hazard. The maintenance regime must be approved with the stakeholders prior to implementation as it will dictate the appropriate planting on the rooftop. The regime maintenance should allow for:

- Removal/Regulation of invasive species that can self-seed and damage waterproofing, such as buddleia.
- Annual cutting (in autumn) of wildflower mix.
- Removal of dead and dry plants and cutting.

## Furniture and Finishes

Proposed Furniture and finishes are outlined on the landscape drawings and associated legends, and on the detail sheets:

External seating is provided, it is inclusive of arms and back rests. Sheltered seating is provided in communal open spaces in the for of pergola covered seating area.

- SHB5-SSD-DR-MAL-L-P1-0001
- SHB5-SSD-DR-MAL-L-P1-0002

## LANDSCAPE MANAGEMENT STRATEGY

Maintenance should maximize the biodiversity potential of the site, providing new opportunities for expansion of (and cross-interaction between) habitats whilst also providing an attractive area of green open space with high amenity value. The open space network can be broken down into the following softworks planting types for maintenance:

### **Amenity Active Use Grassland**

**Objective:** To produce a firm hard wearing sward with the appropriate cover of acceptable species, and adequate control of weeds, pests and diseases. The lawn is to be maintained to 40mm height to create a close mown turf for active and passive recreational use.

**Operations:** Grass maintenance strips to be cut at 2-week intervals to a height of 40mm during the growing season of April to October. Grass cuttings to be broken down and spread evenly across the area and remain on site. Lightly roll Amenity Grass areas in spring and autumn annually to consolidate the soil. Carry out when ground conditions are appropriate when soil is moist but not waterlogged. Any settlements or local depressions should be made good.

### **Grass Footpaths**

**Objective:** To produce a firm hard wearing sward with the appropriate cover of acceptable species, and adequate control of weeds, pests and diseases to a width of 3m to clearly indicate the circulation network.

**Operations:** Grass maintenance strips to be cut at 2-week intervals to a height of 40mm during the growing season of April to October. Grass cuttings to be broken down and spread evenly across the area and remain on site.

### **Maintenance Grass Strip to All Pathways**

**Objective:** To produce a firm hard wearing sward with the appropriate cover of acceptable species, and adequate control of weeds, pests and diseases to a width of 2m to both sides of all pathways. This maintenance strip is required to all tarmac, concrete, compacted gravel and grass footpaths. Mown grass edges to present a maintained appearance to the open space and prevent overhanging of tall grasses or planting encroaching upon the circulation network.

**Operations:** Grass maintenance strips to be cut at 4-week intervals to a height of 40mm during the growing season of April to October. Grass cuttings to be broken down and spread evenly across the area and remain on site.

### **Pollinator Friendly Grassland Area**

**Objective:** These are areas for amenity use that are maintained to a higher level of 75mm and cut less frequently than general amenity grass areas. This is to promote biodiversity following the recommendations of the All Ireland Pollinator Plan 2021-2025.

**Operations:** Grass shall not be mown until the 15th of April. Thereafter grass shall be cut on a six-weekly rotation (5 cut and lifts per year). Second cut at the end of May, third cut in mid-late July to maximise growth of Clovers and other wildflowers, fourth cut at the end of August and the fifth cut after mid-October. Remove cutting arisings to off-site compost facility. Carry out when ground conditions are appropriate when soil is moist but not waterlogged. Any settlements or local depressions should be made good.

### **Meadow Grassland Areas**

**Objective:** Meadow areas are to produce and promote a species rich meadow providing for increased biodiversity and different character areas to the park network.

**Operations:** Meadow areas shall be cut once a year in late September to a height of 75mm. Meadow areas that are cut should be left for 3-5 days so that insects can move to refuges as moisture content is lost from the cut areas. Meadow cuttings are then to be removed from site. As a general rule always remove 'cut' materials as most wildflowers will die if grass cuttings are not removed. If winters are mild meadow can be mown or topped between October and April if growth exceeds 250mm.

### **Grassland Slopes**

**Objective:** Grassland slopes are general areas of grassland and areas where gorse or brambles should not be allowed to colonise on banks of the site.

**Operations:** Gorse, brambles, herbaceous and scrub growth to be cleared to ground levels of 75mm height. Grass cuttings to be broken down and spread evenly across the cut area to remain on site. Grassland slopes to be cut at the end of July and the end of September annually.

## **Hedgerows Management**

### **Box Cut Hedgerow**

- o Treatment 1 will comprise an Urban type “Box-Cut Hedgerow”;

### **Natural Hedgerows**

- o Treatment 2 will comprise a “Natural Hedgerow”, varying in width and surrounding the site. It will be maintained to promote biodiversity and is proposed to be a native species;

The Natural Hedgerows will be maintained so that a diversity of hedgerow structure is provided. Tall and short ( $\leq 3\text{m}$ ) sections will be provided. Thick and dense cover at the base of the hedgerow will be maintained and gaps along hedgerows will be minimised. Gaps to facilitate pedestrian access or visual permeability will be provided at selected locations along hedgerows. The outer edges of the Natural Hedgerows will be maintained so that they undulate, or have a wavy plan profile.

Natural Hedgerows will be managed as follows:

- o Hedgerow trimming will be undertaken on two to five year rotations to create diversity in hedge structure and allow some species to produce fruit (an important food source for birds) in different years.
- o Hedgerow trimming will be alternated between sections of hedgerows so that at least one-third of the hedgerow length remains uncut.
- o Hedgerow trimming will be undertaken between the months of January and February.

Box-Cut Hedgerows will be a minimum width of 1m and a minimum height of 1.5m. They will be comprised of typical native hedgerow species.

Box-Cut Hedgerows will be cut on an annual basis during the months of January and February. Hedges should not be cut between March and August as this is the main breeding season for nesting birds. Encourage a bushier and denser hedge by cutting at least 2cm above the previous year’s growth. This keeps the hedge full of vigor and growth. It is easy to prune a hedge too heavily and lose the fruit. Remove all hedge cuttings from the site.

### **Grove Planting Areas**

**Objective:** Areas planted with trees and shrubs to promote and develop native deciduous and mixed planting in the development. The grove area provides habitat and seasonal interest in the park and provides an amenity space for community use.

**Operations:** Grove planting areas to remain clear of weeds to a diameter of 1m circle around each plant planted. Achieved by a circle of mulch 75mm deep being maintained to the base of each tree planted. At all times, weed cover to be less than



5% and no weed to exceed 100 mm high. Check condition of stakes, ties, guys and guards. Replace broken or missing items. Adjust if necessary to allow for growth and prevent rubbing of bark. Gently firm loosened soil around trees. Straighten leaning trees/ shrubs.

**Frequency of checks:** Every month or after periods of strong winds. Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.

### **Hard Surfaces including: Insitu Concrete and Paved Areas**

**Note:** Paved areas that drain into grass areas/rain gardens, tree pits and planted areas avoid use of high concentrations of salt, detergent or soil-acting herbicides. Materials used in repairs should match the existing surface material specification, and be laid to the same depth as originally specified and, where applicable, to a similar degree of compaction.

**Objective:** Steps throughout the area are to provide a solid surface for users of the open space to circulate. Maintain clean, even, consistent surfaces, safe for use by normal traffic in all weather conditions.

Hard surfaces to be kept free from the following:

- litter including autumn leaf fall,
- dust and accumulated grit,
- stains, e.g. oil or paint spillage,
- graffiti,
- weeds, moss and algae
- standing water

**Operations:** Arisings or cuttings to be removed from pathways after maintenance of planting. Surface of tarmac pathways to be clean, not slippery, build up of algae etc to be removed.

#### **Insitu concrete –**

Refer to Engineers documentation for repairs compliance

If litter accumulates, increase the frequency of sweeping.

Where weeds colonise cracks and joints, remove and repair.

If moss and algae grow, treat by scraping or sweep.

#### **Tarmac –**

If litter accumulates, increase the frequency of sweeping.

Where weeds colonise cracks and joints, remove and repair.

If moss and algae grow, treat by scraping or sweep.

Where the surface becomes uneven or there is a drainage problem, patch or replace to falls. Repair cracking and frost damage by raking out and repairing or replacing the surface. Potholes to be reinstated should be cut back to sound material, the sides cut vertically to a square/rectangular shape, painted with bitumen emulsion, and filled with new bitumen.

## **Furniture**

### **Play Equipment**

**Objective:** To provide opportunities for play within the open space for individuals. Including opportunities for social interaction, physical activity, imaginative or intellectual stimulation, creative achievement, emotional and educational development.

**Operations:** A visual inspection is to be carried out when on site carrying out other maintenance works or at 2 week intervals whichever is more frequent, or immediately in response to reports or complaints from the public. This inspection must bring any defects to the immediate attention of the management company. As a general policy, equipment is repaired as soon as possible. Every twelve months a full ROSPA inspection shall take place using independent inspectors. This results in a full written report with a safety assessment and recommendations for action. The recommendations are acted upon immediately, or should they require large capital investment, they will be used as justification to support the application for funding.

Play equipment is repaired by the manufacturer/supplier other than routine replacements.

## **Planting Seasons**

- Bare Root Deciduous Stock: November to Mid March
- Rootballed Deciduous Stock: November to Mid March
- Rootballed Evergreens and Conifers: late September or October or between March and early May
- Container Grown Stock: Any time of the year
- Grass Seeding: Spring or Autumn – when the soil is still warm and there is the promise of rain.

No planting should take place during periods of frost, drought, cold drying winds or when soil is water logged, or when the moisture of the soil exceeds field capacity (the maximum amount of water that soil can hold).

## **Grass Seeding**

Grass seeding should only be carried out at the correct season from late summer to mid autumn and in suitably calm but moist weather conditions. If the opportunity to

sow grass in autumn is not possible sow seed in mid Spring, but only if there is the promise of rain as it is critical to provide the seed with sufficient water to prevent it from shriveling up and dying. Ideal growing conditions for grass seed to germinate is warm soil damp from rain. Seed should be cross sown in two directions at right angles to each other (half the seed to be used in each direction) to prevent striping.

### **Replacements**

In September or each year, the Landscape Maintenance Team shall provide a list of all trees and plants that are dead, dying, vandalised or not growing in a vigorous condition. These are to be replaced during the November - December of the same year or for evergreens April/May of the following year. All plants shall be planted at the size as shown in the Planting Schedule.

All replacement planting shall be in accordance with the Specification/Planting Schedule.

### **Dead Plant Removal**

Remove dead plants and dead parts of plants as soon as possible and replace plants within the appropriate planting seasons.

### **Topsoil**

Topsoil should be clean, free from stones, perennial weeds, roots and other plant matter, sticks, sub soil or any waste, toxic, rotting or foreign matter. The soil should be fertile with a humus and fibre content and be of a medium texture having a pH value of between 6.0 and 7.5 (unless imported for specific wildflower meadow seeding areas. Imported topsoil should not contain stones greater than 40mm in size, nor have a total stone content exceeding 10 per cent by mass.

Topsoil should be spread evenly on formation levels. Grass areas and shrub/groundcover areas should have a minimum of 150mm and 450mm respectively, after firming. Stones should be removed up to 40mm in diameter.

### **Plant Material**

All plants should be well grown, sturdy and bushy, according to type, and free from all disease and defects. All plants should be adequately hardened off prior to planting, where frost or cold winds may be a problem.

- Shrubs should be bushy, well established nursery stock with a good fibrous root system.
- All trees should be full and well shaped, bark unmarked and have healthy root systems. Rootballed trees should be rootballed immediately when lifted at the nursery.

- The rootball should be suitable for the size of crown and the rootball should be flat bottomed.
- The rootball should be formed through regular transplanting; every 2-3 years minimum. The rootball should be wrapped in hessian and steel wire netting or other suitable and approved decomposable material. Trees should have a well defined, straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown should be well shaped, balanced, of a form and habit natural for the species.
- All coniferous trees should be supplied rootballed or container grown, with a good fibrous root system. Trees should conform to specified height with well developed, uniform branching systems.

### **Planting Preparation**

The proper preparation of the ground, the quality of plants and materials, and good planting techniques are essential for proper plant growth and establishment, ensuring minimal loss of plants and ease of maintenance. Where the project requires earthworks such as the formation of subsoil levels and topsoiling works it is important that it is done in the right way to avoid compaction, so that the best conditions are available for planting.

If topsoil is stockpiled on site it should be stored in mounds of maximum height 1.5m constructed so that they shall shed water and not puddle. Care should be taken that no trafficking of placed topsoil and no mixing of topsoil and subsoil take place. Any Topsoil stockpiles should be kept weed free.

The areas for planting should be prepared prior to planting by ensuring that the subsoil is free draining and well cultivated and suitable for topsoiling. The aim of cultivation is to produce a well-drained and textured soil suitable for plant growth.

All areas to be planted or seeded should be cultivated to a minimum depth of 450mm or deeper if needed. Areas where obvious compaction has occurred should be ripped to allow adequate drainage.

Subsoil should be placed in layers not exceeding 150mm in depth.

To create the best growing environment for the planting in subsoil a combination of actions were applied to each planting pit. Any future planting works into subsoil should follow the following these principles:

- The pits should be dug prior to delivery of plants so that the trees are out of the ground for as short a time as possible.
- Planting to be into pits which are excavated 200mm deeper and 300mm greater in diameter or 1/3 greater depth and diameter than the root size (whichever is greater)
- The plant must be planted to the same level relative to top of soil as that grown in the nursery.
- The sides and bottom of the planting pits are to be thoroughly broken up by forking to alleviate compaction and to facilitate drainage.

- When planting on slopes ensure that an area made by a 0.3m diameter circle from the centre of each plant is level (horizontal) at the ground surface upon completion of backfilling.
- The backfill or soil placed back in around the plant roots will comprise of broken up (to a loose friable state) soil removed to form the planting pit. Large solid soil / clay clods larger than 50mm will be rejected and deficiencies made up with topsoil.
- Bare root stock to be dipped in root dip gel containing sufficient species of mycorrhizae for the tree or shrub being planted, water holding gel and bio-stimulant.
- 100mm bark mulch to be applied to surface for weed suppression and water retention

### **Planting Seasons**

- Bare Root Deciduous Stock: November to Mid March
- Rootballed Deciduous Stock: November to Mid March
- Rootballed Evergreens and Conifers: late September or October or between March and early May • Container Grown Stock: Any time of the year
- Grass Seeding: Spring or Autumn – when the soil is still warm and there is the promise of rain.

No planting should take place during periods of frost, drought, cold drying winds or when soil is water logged, or when the moisture of the soil exceeds field capacity (the maximum amount of water that soil can hold). Grass Seeding Grass seeding should only be carried out at the correct season from late summer to mid autumn and in suitably calm but moist weather conditions. If the opportunity to sow grass in autumn is not possible sow seed in mid Spring, but only if there is the promise of rain as it is critical to provide the seed with sufficient water to prevent it from shrivelling up and dying. Ideal growing conditions for grass seed to germinate is warm soil damp from rain. Seed should be cross sown in two directions at right angles to each other (half the seed to be used in each direction) to prevent striping. Replacements In September or each year, the Landscape Maintenance Team shall provide a list of all trees and plants that are dead, dying, vandalised or not growing in a vigorous condition. These are to be replaced during the November – December of the same year or for evergreens April/May of the following year. All plants shall be planted at the size as shown in the Planting Schedule. All replacement planting shall be in accordance with the Specification/Planting Schedule.

### **Works near Existing Trees and Softworks**

When developing near existing trees, ground levels, especially under their canopies should remain unchanged. Most roots are found in the top 600mm of soil. They often grow out further than the trees height. The majority of these roots can be thin in diameter. Some species of trees can tolerate a small increase in level – generally up to 75mm but since most of the roots occur in the top 600mm of soil, raising the ground level can reduce the air available to the root zone and change the feeding of the tree by these roots and lead to the demise of the tree.

Paths of underground service runs should avoid the tree root spread of existing trees and if this is unavoidable then any excavations should be carefully done by hand and services ducting placed through the roots by hand.

Ideally no roots should be severed, so where construction is of necessity within the root spread, damage must be minimized by careful routing of services, with any excavation carried out by hand to allow larger roots to remain undamaged. No root over 25mm in diameter should be cut; they can be left bridging a trench while pipes or cables are laid. Smaller roots should be cut cleanly by hand. Pipes and cables can be passed through or under root systems that have been given minimum disturbance by hand digging. If services cannot be routed clear of trees, they can be laid below the root run level, at about 1.2m or greater depth.

When back-filling trenches, the correct sequence of topsoil above subsoil should be observed.

#### **Services**

No digging below 300mm depth using powered machinery will be permitted near to known sub-surface pipe and infrastructure locations. In all other areas the depth restriction will be 600mm deep.

### **Tree Surgery and Emergency Tree Works**

A tree survey condition report on the condition of the existing trees on site has been undertaken, including 12no. trees outside the northern boundary. Any recommendations should be implemented by qualified personnel in compliance with British Standard B.S. 3998: 1989 ‘Recommendations for tree work.’

Following this initial tree condition survey, trees seen to be in good condition should undergo regular visual safety inspections. A visual inspection should be carried out as part of the routine maintenance works on site coupled with specific visits following storm events or periods of very heavy rain.

Trees should be reviewed for dead wood in the canopy, storm damage, decline in vigor in the crown or damage caused following other maintenance practices.

In addition to regular visual surveys of the existing trees a professional tree condition survey should be undertaken by a suitably qualified arboricultural consultant every 3 years producing a report on condition of trees.

Any recommendations should be implemented by qualified personnel in compliance with British Standard B.S. 3998: 1989 ‘Recommendations for tree work.’ Any wind

damaged trees or trees requiring emergency works should be made as safe as possible and contact made with the management company.

An annual inspection of the trees will establish and programme restorative/remedial pruning, and in order to prevent an aging tree stock, some new trees will be planted to reinforce the existing tree planted structure.

### **Scheduling of works**

Pre-construction tree works will follow that outlined below:

- Remedial works to trees being retained throughout the site as per the Tree Survey document.
- The erection of tree protection fencing

### **Protected Tree Zone.**

The 'Protected Tree Zone' should under no circumstances be used for storage of materials, equipment, or site debris. No fires should be lit within the Protected Tree Zone, or equipment washed or cleaned.

Code of Practice for the preservation of trees.

The Code of Practice will be brought to the attention of all site personnel; including Contractors, Sub-Contractors and Engineering Specialists associated with works on site. All operations to be in accordance with BS 5837 Trees in Relation to Construction (2005). The management company should purchase and make available on site a copy of the above.

### **The Arboricultural Contractor will:**

- Submit a full method statement containing machinery to be used, removal of wood etc to the CA.
- Carry out works to the most up to date arboricultural practices available e.g. BS 3998.

Recommendations for tree work (as amended).

- Undertake work only with suitably qualified operatives in constant consultation with the Site Arborist.
- Trees identified for removal will be section felled so as not to damage remaining trees.

### **Control of dogs**

It is recommended that dogs should be kept on a lead when walking the path network within the open spaces. Signage should be erected to encourage public cooperation. This may help to reduce disturbance impacts to bird species.





### Introduction

This chapter aims to describe aspects of the landscaping scheme that are intended specifically for biodiversity. It includes the retention of existing features, (e.g. existing trees, where possible), biodiversity enhancements included in the landscaping scheme (e.g. meadows and native hedgerows), and biodiversity enhancements for fauna.

Some features have been discussed in detail elsewhere in this report, in which case we will refer readers to relevant locations rather than repeating information.

This document should be read in combination with the Preliminary Ecological Appraisal for the development (NM Ecology Ltd, 2024), which provides information on the baseline condition of the site.

### Green and Blue Infrastructure

The proposed landscape design aims to strengthen the value of the site as a place for delivering green/blue infrastructure whilst protecting and enhancing the natural/built and cultural assets of the site.

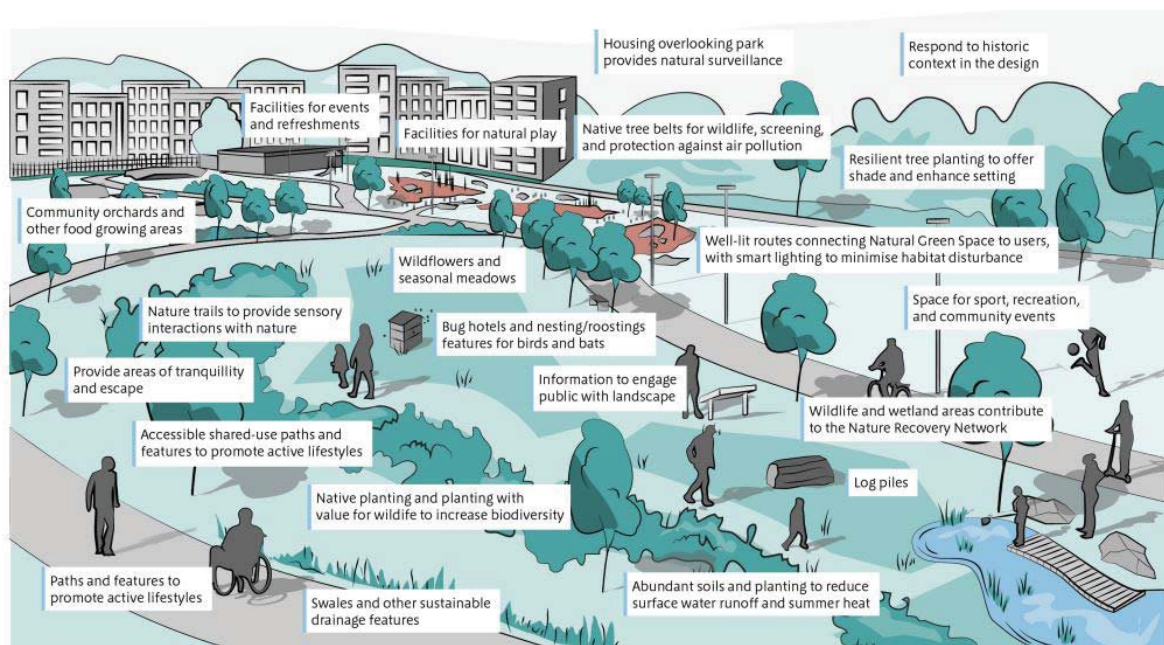


Figure 21: Parks and Green Space

Figure Extract from “Green Infrastructure Planning and Design Guide” published by Natural England

Green Infrastructure is designed and managed to provide and facilitate the following:

- High quality open spaces which provide health and social benefits for people through the provision of formal and informal nature-based play areas, safe and attractive areas and routes for meeting with a variety of seating areas for socialising and relaxing, accessible walking routes facilitated.

- Opportunities and space for contact with nature, which is considered essential for good health and well-being and to promote community cohesion. In the design this is implemented by the provision of grow-your-own planter beds for residents to engage in an outdoor and communal activity.
- Adaptation to the impacts of climate change and flooding.
- Space for biodiversity (nature and wildlife) to flourish
- A sense of place and local distinctiveness.
- The design facilitates connections for people and wildlife; active travel routes are maintained through the site for neighbours and residents through green spaces, the network of open space is designed to connect with the existing surrounding movement/open space networks to access a number of adjacent neighbourhood amenities and facilities.

Retention of ecological connectivity/ stepping stone function of the site to facilitate movement of fauna, to keep foraging and commuting routes, and as a nesting resource.

- Features are multifunctional, they are designed to benefit people and wildlife.

### Biodiversity National Guidance

National Biodiversity Action Plan 2017-2021

Ireland's Vision for Biodiversity:

“That biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally.”

The Biodiversity Climate Change Sectoral Adaptation Plan. 2019. Department of Culture, Heritage and the Gaeltacht.

“The Goal of this Plan is to protect biodiversity from the impacts of climate change and to conserve and manage ecosystems so that they deliver services that increase the adaptive capacity of people and biodiversity while also contributing to climate change mitigation”.

Action 4.4 “Co-design green spaces and wildlife refuges in cities and peri-urban areas with local communities to provide habitats for species under threat from climate change and to connect people to biodiversity”

All Ireland Pollinator Plan 2015-2020 (Councils: Actions to Help Pollinators) NBDC

There are 7 key actions in the guidance document – all of which inform the planting design within the site:

A: Identify and protect existing areas that are good for pollinators

B: Alter frequency of mowing of grassy areas to allow more native plants to flower

C: Pollinator-friendly planting

D: Provide wild pollinator nesting habitat: hedgerows, earth banks and hotels

E: Reduce the use of pesticides

F: Raise public awareness of pollinators

G: Tracking progress and recognition for efforts

Protecting pollinators by planting and appropriately maintaining:

1. Flowering Native Hedgerows

2. Flowering margin of 0.5 to 2 metres around field edges

3. Low to zero pesticide inputs

4. Pollinator-friendly trees

5. Wildflower meadow, flower rich pasture, cover crop, herbal ley

Planting and management of the planted areas shall be undertaken in accordance with pollinator friendly management objectives as outlined in the “All Ireland Pollinator Plan 2021-2025 (Councils: Actions to Help Pollinators)” National Biodiversity Data Centre and will include interpretative signage highlighting the areas Managed for Wildlife.

### Ecology Design Elements

#### 1. Retention of existing ecological features.

The ecologist did not identify any existing habitats or other features of biodiversity value within the site, so it is not necessary to retain any existing features

#### 2. Biodiversity enhancement in the landscaping scheme.

Biodiversity enhancement in the landscaping scheme. The landscaping scheme will introduce a number of habitats that are not currently present at the site, including trees, hedgerows, grasslands and wetlands (detention basin). Procedures for the planting and maintenance of these features are presented elsewhere in this document. These measures will substantially increase the biodiversity value of the site. See landscape chapters above and Landscape Plan drawing number SHB5-SSD-DR-MAL-L-P1-0001 for details

#### 3. Biodiversity enhancement for fauna.

Bird boxes will be provided, including swift nesting boxes on the northern faces of the apartment buildings. A range of designs suitable for common garden birds (e.g. finches, tits, blackbirds) in the garden of the creche

