

# **PROPOSED PART 8 RESIDENTIAL DEVELOPMENT**

Social Housing Bundle 4, Development at Church of Annunciation -  
Dublin City Council

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Landscape Report and Biodiversity Management Plan

June 2024 - P06



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## DEVELOPMENT DESCRIPTION

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Notice is hereby given of the construction of 110 residential units for 'Older Persons' at a site c.0.77 ha at the site of the former Church of Annunciation on Cardiffsbridge Road, Finglas, Dublin 11, which will consist of the following:

- One apartment block ranging from 4 to 5-storeys, containing:
  - o 110 residential units for 'Older Persons' comprising 106 no. 1-bed and 4 no. 2-bed; and
  - o 434 sq.m. of community, arts and cultural facilities.
- 15 no. car parking spaces and 87 no. cycle spaces.
- 935 sq.m. of public open space and 609 sq.m. of communal open space.
- One vehicular and pedestrian access and one dedicated pedestrian access off Cardiffsbridge Road.
- Boundary treatments, public lighting, site drainage works, internal road surfacing and footpath, ESB meter rooms, plant rooms, stores, bin and bicycle storage, 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.

The design incorporates wildlife considerations in the retention/ protection/ management and reinforcement of existing trees. Existing trees on the site 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.

### 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 three main design principles of landscape and biodiversity for this site are as follows.

1. Retention of existing ecological features.
2. Biodiversity enhancement in the landscaping scheme.
3. 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, especially in the context of their location on the outskirts of 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 and build-ups 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 along Cardiffsbridge Rd., which serves as a threshold to the scheme and provides opportunities for strategically located seating to take advantage of its exposure. This area is flanked on the side closer to the building by existing mature trees, which have been retained due to their ecological and visual values. The side adjacent to the street will also have a number of new semi-mature and multistem trees, allowing sightlines into the space to ensure adequate supervision and passive surveillance are achieved while providing a verdant space. This space will be delineated with a low wall and railing boundary along the public footpath, with openings to ensure circulation and a retaining wall behind the existing trees to provide a backdrop.

The public realm within the scheme is configured to cater to different types of mobility in and out of the scheme. Parking spaces and EV charging points are provided alongside bike racks and a dedicated motorbike space. Ease of circulation within the scheme is also a driving force in the design of the public realm, which provides front door access to units on the ground floor while ensuring a threshold to the units is formed by using native hedges to frame the space.

Boundaries are proposed to be made up of a continuous low wall and railings with the inclusion of native hedge planting to the front. Proposed trees will have a 2-meter clear stem to allow for unobstructed sight lines.

The central courtyard is designed to provide formal and informal recreation. This space has been designed to be predominantly a green space with some amenity pockets to ensure that future residents can engage in several activities and contribute to the overall communal feeling. A paved pocket within the lawn area with loose furniture and an integrated outdoor grill will provide the opportunity for residents to get together during summer days. The courtyard also provides further amenities, as mobility equipment has also been proposed in a pocket framed by hedging and semi-mature tree planting to ensure residents can also avail themselves of outdoor exercise. Grow-Your-Own planters are also proposed to be included within the circulation route within the lawn area to establish the opportunity for residents to grow their own vegetables and engage in the communal garden.

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

## 1- Internal courtyard – Communal amenities

The design of the internal courtyard focuses on the provision of communal activities to provide a space to foster rapport between future residents. Mainly kept as a green space, it offers opportunities for residents to get together in a more informal manner and engage in gardening or fire up a BBQ on the external grill. Loose and covered furniture are also proposed to form part of this space so that it can be used regardless of weather conditions.



*Stepping stones forming secondary circulation routes*



*Seating modules placed along circulation route*

## 2- Internal courtyard - Mobility equipment

The internal courtyard within the scheme offers two areas where mobility equipment is located so that residents can avail themselves of outdoor exercise opportunities at their doorstep. A combination of mobility equipment, training fundamental skills like walking on uneven surfaces, and strength equipment will ensure that there is a wide range of uses. Informally placed seating adjacent to the mobility equipment ensures resting points are close, and users can catch a break easily if they wish.



*Example of mobility equipment in a soft landscaped area*

### 3- Existing vegetation and Arboriculture impact.

An arboriculture assessment has been carried out by Charles McCorkell Arboricultural Consultancy and is submitted as part of this application. This assessment has informed the landscape design. Existing mature trees on site are retained where possible.

## 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. The existing trees for retention are to be protected in order to reduce the impact of the development on the existing biodiversity.

In keeping with the recommendations of the All-Ireland Pollinator plan it is proposed to plant boundary hedgerows with native Irish hedgerow species with 75% “Hawthorn” and 25% of four other native species, we are proposing 10% “Hazel”, 10% “Viburnum opulus”, 2.5% “Blackthorn” and 2.5% “Dogrose”. These hedgerows and



trees will provide connectivity between habitats, shelter and a food resource for small invertebrates. These also provide connectivity between habitats for many species including bats.

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'
- 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)
- 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.”*

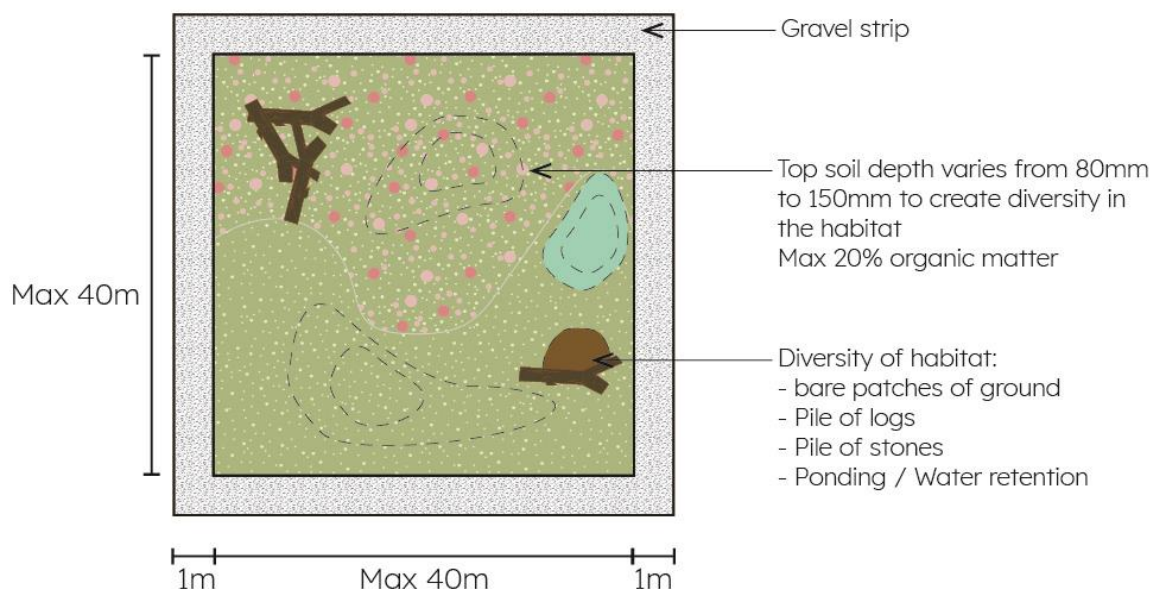
The site comprises c.0.77 ha and the proposed scheme has 935 sq.m. of public open space and 609 sq.m. of communal open space.

### Green and blue roof

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:

- SHB5-CAF-DR-MAL-L-P1-0001
- SHB5- CAF-DR-MAL-L-P1-0004

## 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 protects and retains existing trees, 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. Review the presence of rabbits within the grove planting area and if risk of damage to juvenile planting is low remove spiral rabbit guards after three years all other guards to be removed after five years. 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 Tarmac Pathways, 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: Tarmac pathways and 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

### Exercise Equipment

**Objective:** To provide opportunities for exercise within the communal 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.

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

### Stone mulch banding, dry stone walls

**Objective:** Provide an area on site for the collection of stones cleared from the site as part of soil preparation/excavations. Stone mulch bands provide refuge locations for eco-system invertebrates.

**Operations:** Any stones unveiled during maintenance practices to be positioned in these areas. Keep free of weeds, do not allow soil to enter areas. In advance of grass or meadow cutting replace dislodged stones back onto the areas.

## 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. This is particularly relevant to planting at the Dublin foothills.

- 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

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- 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. 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 in wooded areas 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



## BIODIVERSITY

### 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 Ecological Impact Assessment 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.

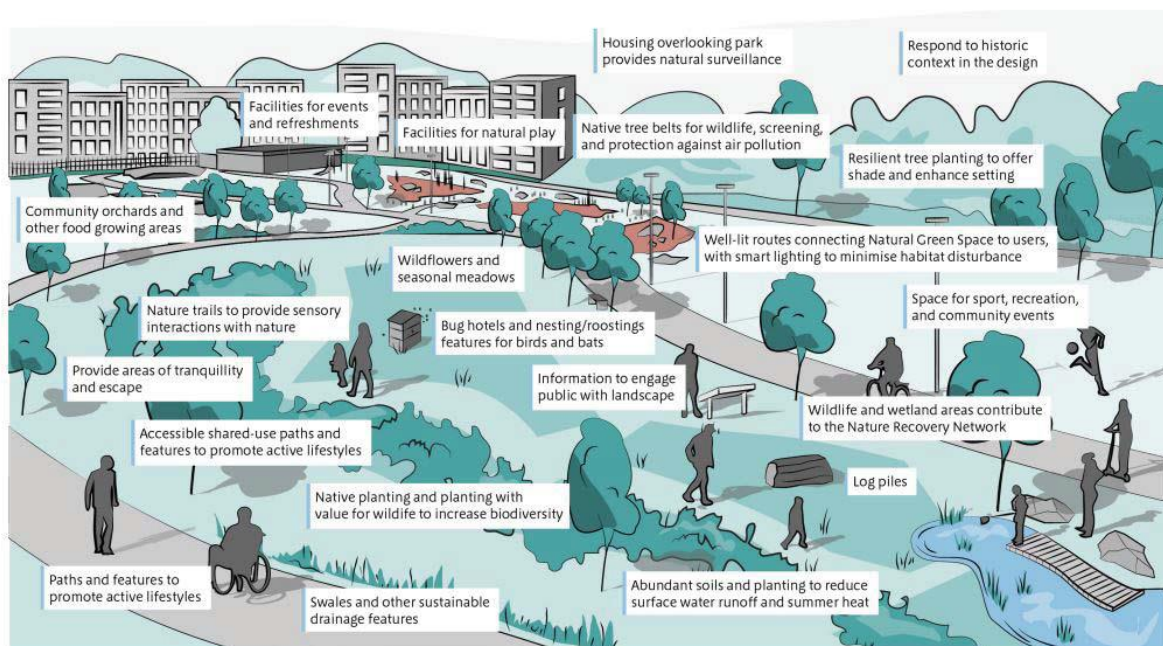


Figure 21: Parks and Green Space

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.

### Ecology Design Elements

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

##### Habitats

Habitats within the proposed development site were mapped and described by NM Ecology Ltd as part of the Preliminary Ecological Appraisal. Four habitats were recorded - buildings / artificial surfaces, recolonizing bare ground, a treeline and dry meadow - all of which were considered to be of Negligible botanical importance.

Part of the treeline will be retained and incorporated into the landscaping scheme for the proposed development. Measures for the protection of retained trees are provided in the previous chapter.

All other existing habitats will be cleared prior to the construction of the proposed development.

##### Birds

The treeline may provide nesting habitats for birds, and any nests would be disturbed/destroyed if these trees were felled during the nesting season. Therefore, the trees will be felled 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.

## 2. Biodiversity enhancement in the landscaping scheme.

New habitats of biodiversity value will be created as part of the landscape masterplan submitted with this application. This includes:

- Planting of native semi-mature trees in the POS facing Cardiffsbridge Rd and in the internal courtyard, including some native species (*Crataegus monogyna*, *Prunus padus*).
- A native hedgerow will be planted along the southern and eastern boundaries of the site, consisting primarily of hawthorn plus smaller proportions of other native species.
- A large area of 'reinforced grass' in the south and east of the site will be managed as a meadow, with one cut each year in September.

Detailed planting and maintenance proposals are included in the Landscape chapter of this document.

The project ecologist considers that the creation of these habitats will result in a net gain in biodiversity when compared to the baseline habitats.

Additional planting is recommended to strengthen areas within the site for wildlife and biodiversity and to reinstate green infrastructure across the site where feasible.

## 3. Biodiversity enhancement for fauna.

### New habitats for fauna

New habitats will provide habitat for a range of fauna, as follows:

- New semi-mature trees and hedgerows will provide nesting habitat for birds, and shelter for ground-dwelling mammals (e.g. hedgehogs)
- Meadows will support a range of native flowers that will provide nectar for pollinators. Flowering shrubs in hedgerows (notably hawthorn) will also provide a significant resource for pollinators in early summer
- New trees and shrubs (notably hawthorn) will provide berries for over-wintering birds.
- The meadows will also provide a significant feeding resource for fauna, including invertebrates for birds and small mammals, and grass / flower seeds for birds

Some additional measures for fauna are outlined below.

### Bird boxes

Swift nest boxes will be integrated into the walls of the apartment buildings at roof height. They will be located at least 5 m above ground level, and will face in either an eastern or western aspect.



*Example of swift nest boxes that can be integrated into masonry walls*

In addition, 6 no. bird boxes will be installed on retained trees. They will be of designs suitable for small garden birds, e.g. finches and tits

#### Mammal passage

It will be necessary to install fencing around the site boundary. To ensure that small mammals (e.g. hedgehogs) are able to move in and out of the site, small gaps (20 cm in width and height) will be created at ground level at two locations on each of the northern, eastern and southern boundaries of the site. In particular, it is intended that the site will be connected to the large area of grassland to the east of the site.

