LANDSCAPE REPORT

In relation to the proposed commercial development at: Lands at the former Morton's Firhouse Inn in the townland of Knocklyon, South Dublin, at the junction of the R114 Firhouse Road and Mount Carmel Park (Eircode location D24 YYR4).Terenure, Co. DUBLIN.

On behalf of.
Bluemont Development Ltd.

November 2025

Reference; CCP045

LANDSCAPE ARCHITECT:

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JANE | MCCORKELL
DESIGN

Registered Landscape Architect 2024-25

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Section 1; Introduction

This Landscape Report has been prepared by Jane McCorkell Landscape Architecture on behalf of our Bluemont developments ltd. to support of a detailed planning application for a proposed development of a Large scale residential development at No. 2 Fir House and the Former Morton's The Fire House Inn, Firhouse road Dublin 24.
The proposed development seeks to provide for the demolition of all existing structures on site and the provision of a mixed-use development at the subject site.

The report should be read in conjunction with the submitted landscape drawings listed below, which form part of the overall planning pack. These drawings provide a detailed outline of the proposed external works, including hard and soft landscape treatment and SUDS integration.

Drawing List:

CCP045-01-01	Landscape Overall Plan
CCP045-01-02	Landscape plan Level 0
CCP045-01-03	Landscape plan Level 1
CCP045-01-04	Landscape plan Level 2
CCP045-01-05	Landscape plan Level 3
CCP045-01-06	Landscape plan Level 4
CCP045-02-01	Hard Landscape Plan
CCP045-02-02	Hard Landscape Features
CCP045-02-03	Bike parking in landscape
CCP045-02-04	Boundary plan
CCP045-03-01	Soft Landscape plan
CCP045-03-02	Tree and service co- ordination
CCP045-03-03	Green Factor plan

Project description.

Firhouse – LRD Amendment – Description of Development

We, Bluemont Developments (Firhouse) Limited, intend to apply for permission for a Large-Scale Residential Development (LRD) at No. 2 Firhouse Road and the former Morton's The Firhouse Inn, Firhouse Road, Dublin 24. The site is also bound by Mount Carmel Park to the east.

The proposed development seeks amendments to the previously approved Largescale Residential Development (LRD), granted under Reg. Ref. LRD24A/0001 / ABP Ref. 319568-24. The proposed amendments include a reduction in the footprint of the basement levels, amendments to the housing mix and elevations of Block A and Block B, amended roof profile, provision of surface level parking, and relocation of substation.

The revised application is seeking permission for a total of 83 no. housing units (100 no. units applied for and 78 no. units granted by An Bord Pleanála), providing an increase of 5 no. units within the building footprint granted within Reg. Ref. LRD24A/0001 / ABP Ref. 319568-24. The proposal provides for 2 no. blocks ranging in height from 3- 4-storeys over basement levels comprising; 4 no. duplex units (2 no. 1-bedroom units, 1 no. 2-bedroom 3-person unit, and 1 no. 2-bedroom 4-person unit); and 79 no. apartment units (1 no. studio units, 54 no. 1-bedroom units, 5 no. 2-bedroom 3-person units, and 19 no. 2-bedroom 4-person units. The apartment blocks will consist of the following:

- Block 01: Amendments to the previously permitted 3-storey rising to 4-storey over basement levels, comprising 54 units (2 no. studio units, 15 no. 1-bedroom units, 4 no. 2-bedroom 3-person units, 13 no. 2-bedroom 4-person units, along with 4 no. duplex units comprising 2 no. 1-bedroom units, and 2 no. 2-bedroom 3-person units), to now provide for a 3-storey rising to 4-storey over basement levels comprising of 38 no. units as follows: 1 no. studio unit, 16 no. 1-bedroom units, 4 no. 2-bedroom 3-person units, 13 no. 2-bedroom 4-person units, along with 4 no. duplex units comprising 2 no. 1-bedroom units, and 1 no. 2-bedroom 3-person unit and 1 no. 2-bedroom 4-person unit. Each unit will have its own private open space in the form of a private balcony or terraced area.

- Block 02: Amendments to the previously permitted 4-storey over basement levels comprising 40 units (18 no. 1-bedroom units, 2 no. 2-bedroom 3-person units, 17 no. 2-bedroom 4-person units, and 2 no. 3-bedroom units), to now provide a 4-storey over basement levels comprising of 45 no. units as follows: 38 no. 1-bedroom units, 1 no. 2-bedroom 3-person units, and 6 no. 2-bedroom 4-person units. Each unit will have its own private open space in the form of a private balcony or terraced area.

The development will also provide for amendments to the permitted 395.2 sq. m. of commercial space (including 1 no. office and 1 no. café located on the ground floor of Block 01, 1 no. creche and associated play area to the rear of Block 01, 1 no. barber between Block 01 and Block 02 and 1 no. bookmaker and medical consultancy, located on the ground floor of Block 02) to now provide for 423.5 sq. m. of commercial space as follows:

- 1 no. office and 1 no. café located on the ground floor of Block 01.
- 1 no. creche and associated play area to the rear of Block 01.
- 1 no. barber between Block 01 and Block 02.
- 1 no. bookmaker and medical consultancy, located on the ground floor of Block 02.

The proposed development will also provide for 63 no. car parking spaces including accessible parking and Electric Vehicle parking across basement, lower ground floor levels, and surface car parking, 196 no. bicycle parking spaces; 5 no. motorbike parking spaces; landscaping, including communal open space and public open space and children's play spaces; SuDS measures; boundary treatment; public lighting; re-located ESB substation; plant and waste storage areas; associated signage details; all associated site and infrastructure works necessary to facilitate the development, with 1 no. pedestrian and cyclist access from Firhouse Road and 1no. pedestrian and cyclist access from Mount Carmel Park, as granted under Reg. Ref. LRD24A/0001 / ABP Ref. 319568-24.

Section 2; Landscape Design

2.1 Site Location/Description

The 0.46-hectare site at No. 2 Firhouse Road, formerly the Firhouse Inn, occupies a prominent corner location beside Dodder Valley Park at the junction of Firhouse Road, Ballycullen Road, and Mount Carmel Park. The site consists mainly of existing buildings, a pub with an adjoining off-licence and a two-storey mixed-use building. The buildings are set within a large impermeable car park with minimal vegetation.
The site slopes gently from south to north. The site is bounded to the northwest by a stone and concrete block wall adjoining Dodder Valley Park, where mature trees stand within the park. To the North east and South of site residential housing is located.

Figure 1: Site Location, Google Earth (2025)

2.1 Green infrastructure

The subject site is located in close proximity to the River Dodder, a regionally important riparian corridor identified as a key Green Infrastructure (GI) asset within the Dublin Metropolitan Area. The corridor is designated in the Dublin Metropolitan Area Strategic Plan (MASP), which forms part of Ireland's Regional Spatial and Economic Strategy (RSES). The RSES identifies the enhancement of Green Infrastructure as a key Regional Strategic Outcome to be achieved by local authorities.

The River Dodder Corridor is recognised as both a Primary Green Infrastructure Corridor and a Strategic Corridor (refer to Figure A). There are no existing trees within the subject site. However, a tree survey was undertaken by Charles McCorkell, Arborist, who identified important existing trees located on the adjacent site. Design and construction works have been carefully managed to ensure that these trees are not adversely impacted.

As part of South Dublin's Policy, a green Space factor calculation is required for the site. We have carried out this exercise on the existing site and on the proposed development. The existing Green Space factor has a score of 0.22 while the proposed new development will have a score of 0.52 Which is a pass. Please refer to Appendix where both green space factor calculations can be found.

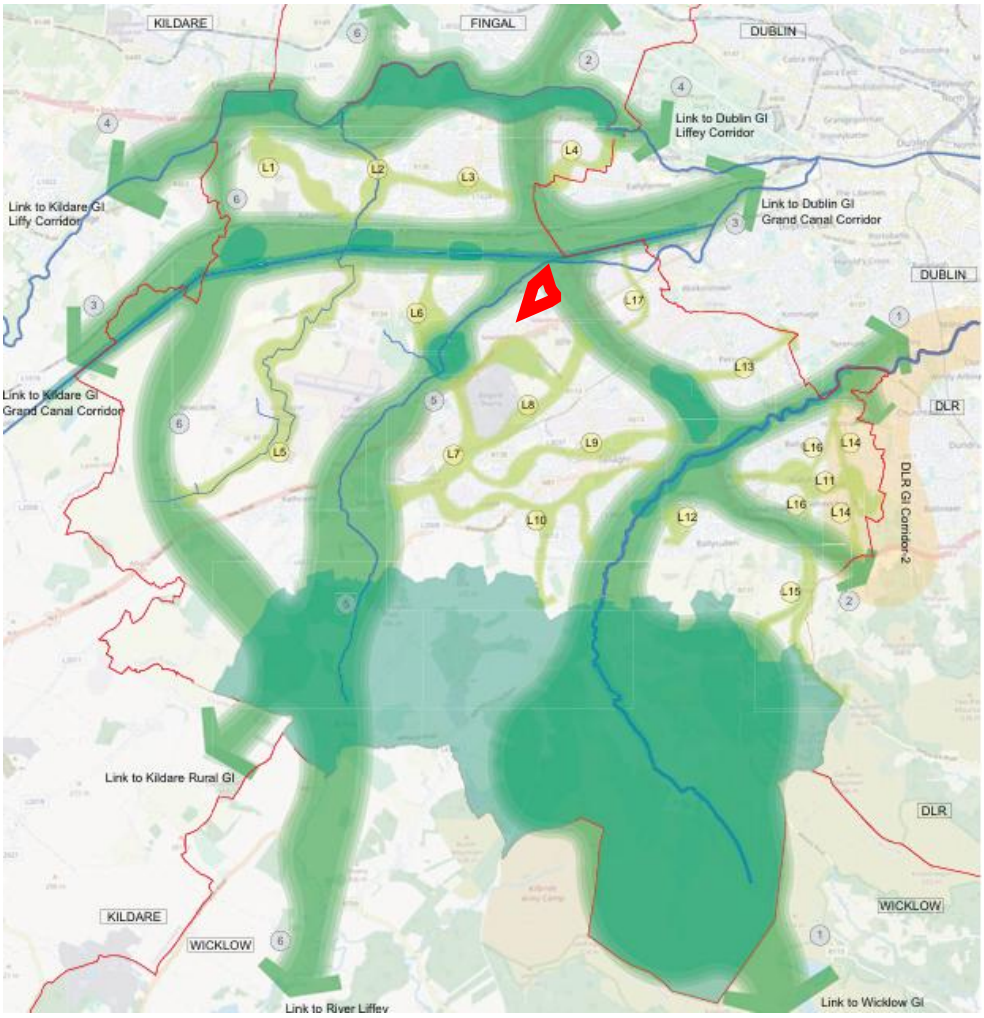


Figure 2 'Green Infrastructure Strategy Map', SDCC CDP 2022-2028

2.2 Landscape Proposal

1. Design Rational

The primary objective of the proposal is to establish a residential environment that is both sustainable and conducive to human habitation and interaction. The design incorporated a simple legible streetscape design that works with the proposed development and surrounding environments. The site layout provides many useable open spaces which have been designed to create a child friendly robust, landscape that meets planning guidelines and provides opportunities for enhanced biodiversity and integration of nature-based solutions.

2. Nature based solutions.

The landscape for the proposed development has a range of nature-based solutions and other elements incorporated into the design to create an environmentally sustainable, functional, and aesthetically pleasing development.

The proposal includes the incorporation of a retention basin, swale, Constructed tree pits and permeable paving. These features can assist with the management of stormwater runoff, and support water infiltration into the ground.

Other landscape elements incorporated into the proposal include pollinating vegetation and trees. These will support local biodiversity and reduces the need for irrigation and fertilization. Trees and vegetation have been strategically placed to provide shade, reduce noise pollution, and create attractive outdoor spaces for residents.

By incorporating a range of nature-based solutions and other landscape elements into the design, the development aims to create a more sustainable, resilient, and attractive community that supports the health and wellbeing of residents, with the aim of creating a development that is both functional and beautiful.

3. Landscape Strategy

The strategy for this development is to provide a user friendly, attractive landscape which must address a wide variety of considerations, from practical matters such as pedestrian circulation, and landscape character.

In designing the landscape, several objects were used as a starting point, including:

- Clear legible streetscape
- Plant selections to encourage pollination activity and attract small native wildlife species.
- The selection of high-quality hard and soft landscape material that is robust, safe and durable.
- Provision of usable attractive spaces to promote user interaction.
- A landscape design that will comply with all statutory and local development guidelines.
- Ecology and biodiversity, creating habitat.
- The incorporation of Sustainable Urban drainage systems throughout the development where possible.
- Creating welcoming and inclusive spaces that provide a comfortable and safe environment.
- To provide a sustainable soft landscape treatment which marries with the proposed development

4. Landscape Design

The landscape design for this residential development has been conceived as an integral component of the overall living environment, providing residents with meaningful access to high-quality green spaces. The design seeks to create a calm, attractive, and functional outdoor setting that supports everyday use, enhances biodiversity, and contributes to the distinct character of the scheme. Child-friendly, inclusive play areas are incorporated within both the crèche garden and the public terrace.

At ground level, a mixed-use retail frontage activates the lower-level open space. The use of Hydrolineo permeable paving within car parking areas softens the hardscape while ensuring functionality and effective surface water management. A retention basin is proposed within the open space to the southeast of the site, incorporating large feature rocks that provide a natural retaining element while enhancing habitat diversity and ecological value. A well-considered mix of predominantly native tree species has been selected for the site, complemented by ornamental shrub and multistem planting in areas where space does not allow for large canopy trees. A mixed native hedge defines the site perimeter, creating clear pedestrian routes and providing a sense of enclosure. Constructed tree pits are proposed where natural rooting volumes would otherwise be insufficient.

To the north of the site, the crèche area includes a variety of play equipment set within grassed areas and rubber safety surfacing for year-round usability. Permeable paving is used around the building perimeter and at the ESB access point. Planting in this area has been carefully selected to exclude toxic species and to include sensory plants to enrich children's play experiences. Trees along this boundary provide continuity with the tree canopy of the adjacent Dodder Park, reinforcing the ecological corridor. The crèche will be securely enclosed with fencing, along which a mix of climbing plants will be established to soften the boundary.

A generous provision of bicycle parking is included at ground level, comprising standard Sheffield stands, cargo bike stands, and covered shelters to encourage sustainable travel choices.

At podium level, several elevated gardens provide communal amenity spaces. The main podium garden at Level 1 offers access to both apartment blocks, with inclusive access via steps and lift. This space features a mix of planting, strategically positioned trees, and varied seating to encourage relaxation, social interaction, and passive recreation. Permeable resin-bound surfacing has been proposed to complement the soft, curving design geometry of the terrace. Planters positioned along the building frontage create privacy buffers for ground-floor apartments, constructed with metal edging to allow adequate soil depth for planting.

The Level 2 podium terrace provides a more intimate social space designed for relaxation. Large feature metal planters are incorporated to establish privacy screens and incorporate planting to provide shelter and to soften the appearance and provide ecological benefit.

The Level 3 podium terrace provides a larger communal area incorporating play elements for younger children, designed to discourage running and encourage imaginative play. Surfaces combine permeable paving, grass, and rubber matting for year-round usability. Large planters are included to enhance privacy, shelter, and visual amenity. These upper terraces contribute to the ecological and aesthetic value of the development, increasing overall green coverage and providing visual interest from surrounding properties.

The inclusion of sedum green roofs on other roof spaces further enhances the ecological performance of the development. These green roofs provide valuable habitat for pollinators, contribute to sustainable drainage by attenuating rainfall, and improve thermal performance. In addition to their environmental benefits, they will be visually attractive from upper-level apartments and surrounding viewpoints, softening the appearance of the built form, and integrating the development more harmoniously into its landscape context.

Throughout the design, the use of permeable paving complements the soft landscaping, supporting sustainable drainage while maintaining a cohesive and natural visual character. The planting palette balances native and ornamental species chosen for resilience in urban conditions, seasonal variation, and pollinator benefits.

Collectively, these design elements establish a high-quality, resilient, and visually engaging landscape that enhances resident well-being and contributes positively to the wider neighbourhood context.

2.3 Hard Landscape Palette

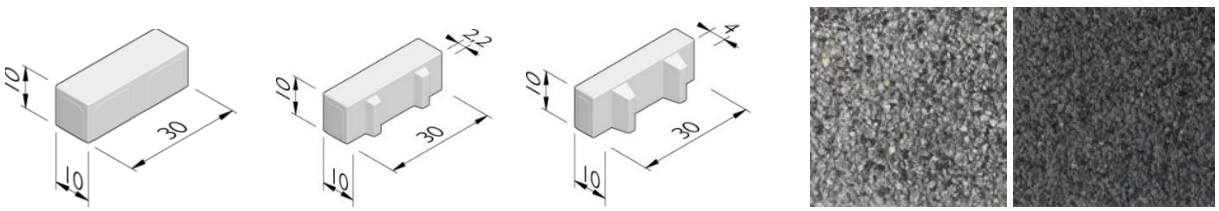
Hard Landscape concept

The hard landscape materials have been carefully selected to support the overall vision of a high-quality, durable, and visually cohesive environment. At the core of the landscape strategy is the use of Hydro Lineo permeable paving, which serves as the primary surface treatment across the site. This system not only delivers a clean and refined appearance but also supports sustainable drainage and long-term performance, making it ideal for urban residential environments.

Material choices have been made with a focus on longevity, weather resistance, and aesthetic appeal over time. A dark grey block paving has been introduced to define internal pedestrian routes, offering a crisp, modern contrast to surrounding green areas which provides visual distinction.

Hard Landscape Materials

- Permeable resin-bound surfacing will be installed on the Level 1 podium, providing a smooth, durable finish suitable for pedestrian use.
- Hydropave Textured Permeable Paving Flags in charcoal will be used along shopfronts to create a distinctive appearance and sense of character.
- Hydro Lineo permeable paving will serve as the main road and parking surface throughout the scheme. A blend of paving sizes will introduce visual variation and allow for increased grass growth and permeability.
- A contrasting colour will be used for disabled parking bays and pedestrian crossover points to aid visibility and accessibility.
- Roof terrace paving will consist of buff-coloured paving flags in a mix of sizes to add visual interest. Fusion block paving in an oat colour will be used on roof terraces to create feature areas and complement the architectural tones of the development.
- Hydropave block pavers in graphite will define the access points to the crèche and ground-level apartments. This paving will also continue into the crèche garden for consistency.
- The stepped access to podium levels will be constructed from high-quality concrete steps, incorporating a contrasting nosing for safety and compliance.
- Tactile paving will be installed at both the top and bottom landings of stairways to ensure accessibility for all users.
- A feature amphitheatre-style stepped seating area will be constructed on the Level 1 podium (above the barber shop), formed on-site and finished in resin surfacing.
- The main pedestrian path along the external road will be finished in concrete, with a raised kerb edge defining adjacent planted areas.
- The road surfacing to the basement will consist of permeable asphalt or equivalent to support drainage and reduce surface runoff.



a) Hydrolineo paving blocks *b) Saxum Bologna c) Saxum Zwart*

Landscape features

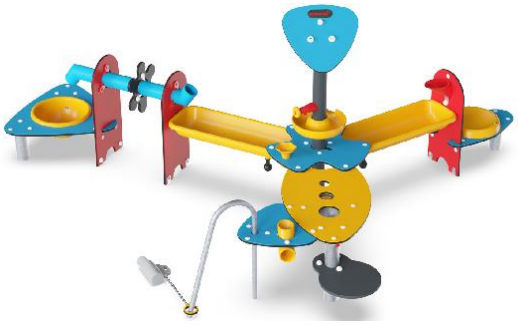
- Seating / Furniture:
    - Silaos Recycled Plastic Picnic Table Set – Pittman.
    - Benito EcoSens Recycled Park Bench with backrest and handrails – Pittman.
- Natural stone and planting to define and stabilise swales.
- Streetlife “Rough and Ready” planters or similar, to provide robust, urban-appropriate planting containers.
- Metal planters (roof terraces): Adezz Carrez Range Planters, 800mm height, aluminium, finished to RAL 9007 or to match the window frame colour.
- Metal urban edging: 300mm depth x 6mm thickness, used to define privacy planting and create crisp planting boundaries.
- Crèche fencing: 1.8m Kylemore fence or similar secure safety fencing, providing enclosure while allowing for climbing plants to soften the boundary.
- A mix range of bike parking has been included on the ground level to meet requirements.

Play equipment

All play elements have been selected to support inclusive, safe, and imaginative play opportunities for children of various ages:

- Kompan Play M188-Little Duckling
- Kompan Play M63274-Labyrinth, 4 Rooms
- Kompan Play PCM505-Waterfall with Sand Table
- Kompan Play KPL1017-Play Tower with 2.5m Swing
- Kompan Play CRP200401-No Return Trail
- Kompan Play FAZ103-Pull Up Bars Pro






2.4 Soft Landscape Palette

Soft Landscape Concept

The soft landscape design has been developed to create a cohesive, biodiverse, and visually engaging environment that enhances the quality of life for residents and complements the architectural and hard landscape framework. The planting strategy emphasises a balance between native and ornamental species, providing year-round seasonal interest, ecological value, and resilience to urban conditions.

The design approach integrates structural tree planting, shrubs, ornamental grasses, and groundcover species to define character zones, frame views, and soften the built form. Planting has been carefully selected to promote biodiversity, provide pollinator-friendly habitats, and ensure ease of long-term maintenance.

Planting Objectives

- Create a visually cohesive and ecologically rich landscape that complements the architecture.
- Establish a multi-layered planting structure for visual interest and habitat diversity.
- Use native and pollinator-friendly species to support local biodiversity.
- Ensure resilient, low-maintenance planting suitable for urban environments.
- Promote seasonal variation and a sense of connection to nature for residents

Tree Planting

A diverse mix of native and semi-mature tree species is proposed throughout the development to establish a strong landscape structure and contribute to the creation of a green, mature character from the outset. Tree species have been chosen for their canopy form, root tolerance, and adaptability to urban conditions.

Where large canopy trees cannot be accommodated, smaller ornamental multistem species will be introduced to provide visual variety, texture, and seasonal interest. Constructed tree pits with structural soil will be provided where rooting depth or volume is limited, ensuring healthy establishment and longevity.

Tree planting along the northern boundary adjacent to the crèche has been designed to create continuity with the tree canopy of the Dodder Park, strengthening ecological connectivity and contributing to the wider Green Infrastructure network.

Shrub, Hedge, and Groundcover Planting

Mixed native hedgerows are incorporated along the site boundaries to define edges, enhance biodiversity, and create a soft transition between built and natural areas. These hedges provide important nesting and foraging habitats for birds and pollinators while offering visual screening and delineation of pedestrian routes.

Within internal courtyards and podium gardens, ornamental shrub and perennial planting provides structure, colour, and texture throughout the year. Groundcover and low-maintenance species have been selected for durability, drought tolerance, and visual cohesion. Ornamental grasses and flowering perennials introduce movement and softness, contributing to a naturalistic planting character that supports ecological diversity.

Play and Sensory Planting

Planting within the crèche garden and associated play spaces has been designed with careful consideration of child safety and sensory experience. All species used in these areas are non-toxic and provide a variety of sensory stimuli through texture, fragrance, and colour. Planting is arranged to define play zones, encourage exploration, and create an immersive environment that complements the play equipment.

Climbing plants are proposed along crèche fencing and selected boundaries to soften vertical structures and enhance enclosure.

Ecological Enhancements

The inclusion of sedum green roofs on ancillary roof areas provides additional ecological value and visual interest. These roofs will support pollinators, improve rainwater attenuation, reduce the urban heat island effect, and enhance views from upper floors.

Retention basins and swales are integrated into the open spaces to manage surface water naturally while creating opportunities for wetland planting, habitat diversity, and seasonal visual interest. Feature rocks and native wetland species will provide microhabitats for insects and small fauna.

Collectively, these interventions contribute to urban greening, climate resilience, and biodiversity net gain, reinforcing the site's role within the wider ecological network connected to the River Dodder Corridor.

2.5 Landscape Summary

A detailed landscape plan has been developed in accordance with best practice guidelines and in close collaboration with the wider design team. The landscape strategy aims to create a multifunctional environment that serves both the residential community and the wider public realm.

The design delivers a high-quality, functional, and visually attractive series of communal spaces, encouraging social interaction, outdoor recreation, and a strong sense of place. It enhances both the character and functionality of the development and, through the balanced integration of hard and soft landscape elements, promotes biodiversity, visual amenity, and community engagement. The result is an inviting and inclusive setting for residents and visitors alike.

Constructed tree pits play a vital role in supporting street tree planting within the site, contributing to a mature green character while improving air quality and local microclimate. The extensive use of native and pollinator-friendly planting reflects a clear commitment to sustainability, climate resilience, and ecological enhancement. The landscape design also supports the broader objectives of the Regional Spatial and Economic Strategy (RSES) and aligns with local authority goals for Green Infrastructure connectivity along the River Dodder Corridor.

The scheme incorporates a variety of Sustainable Urban Drainage Systems (SuDS) measures, including permeable paving, swales, and green roofs, which work together to manage surface water naturally, enhance biodiversity, and strengthen climate resilience. Collectively, these elements establish a robust, sustainable, and visually engaging landscape framework that enriches the ecological, visual, and social value of the development.

Section 3; Landscape specifications and performance standards

Landscape Specifications

Outline Landscape Specification

Works will be carried out as a sub-contract with the Employer and will involve spreading of topsoil, supply, protection, and planting of trees, shrubs herbaceous, bulbs, grass seed and aftercare for eighteen months from the completion of planting.

All landscape works shall take place in the appropriate season and only when conditions are suitable, i.e. dull, moist & mild, without undue risk of frost or drying winds. There shall be no cultivation or planting when soil is frozen or waterlogged.

The drawings for the landscape contract have been prepared by the Landscape Architect. The works will be supervised by the employer. The Landscape Architect shall inspect and advise upon the works at the request of the employer.

Defects Period

The defects liability period for each phase or element of work shall be eighteen months from the completion of that phase of work. The contractor will be responsible for the aftercare of both planting and grass for this period. Any of the works found to be defective within this period due to materials or workmanship not in accordance with the specification shall be replaced by the contractor at his own cost.

All trees and plants are to be adequately and carefully packed & protected to survive transport, loading and unloading. If roots, branches or shoots suffer slight damage they can be pruned. If major damage occurs the plant or tree shall be rejected and replaced at the Landscape Contractors own cost.

Inconsistencies

Any discrepancy in the Documents and Drawings shall be reported to the client for their decision, which shall be final.

Payments

The contractor shall submit a statement of account to the contract managers every month (copy to the Landscape Architect). The Landscape Architect will recommend the amount to be paid in respect of the contract to the Contract Managers who shall certify payment. The Employer will pay the contractor within 10 working days of receipt of the Certificate.

Access

Access to be agreed with the Employer prior to the commencement of works.

The space available for use by the contractor in carrying out the work and for his operatives, plant and materials shall be agreed with the employer prior to the commencement of works. The contractor shall be required to

confine crew and materials to this space and will be held responsible for any damage caused by his men or operations to any property outside the prescribed area.

The contractor shall be deemed to have visited and examined the site and have fully acquainted and satisfied himself as to local conditions, facilities for access to the site, storage of materials, the full extent and character of the operations, the nature of the ground, the conditions affecting the supply of labour and materials, and the execution of the works generally.

Retention

A retention fund of 10%, will be established from interim certificates. One half (5 %) will be released on practical completion of each phase or element of work. The residue will be released at the end of the defect's liability period.

Fixed Price

Except for increases or decreases in cost arising directly from changes in taxation, Employer's social insurance contributions or other contribution, payable under a legislative enactment, role or order, the contract shall be for a fixed price. No adjustment in rates or price will be permitted.

Items marked 'Provisional', Provisional and Contingency sums shall be expended only on the specific written instructions of the Employer or Landscape Architect.

Insurance

The Contractor shall provide for all necessary Employer's and public liability Insurances to indemnify the Employer against all claims whatsoever arising out of the execution of this sub-contract. The minimum sum for public liability Insurance is €6.5 million and employer's liability is €13 million. This contractor shall forward his insurance documentation to the Contracts Manager, for checking by his brokers, before the contract is signed.

The Contractor shall maintain his insurances until final complication of the works, including the period in which aftercare is provided.

Works Programme

The Contractor shall be prepared to commence work within 14 days of an order to proceed and shall execute his works in conformity with a programme to be agreed with the Contracts Manager.

Except for any periods of delay that may be required for herbicide to take effect prior to cultivation, the Contractor shall maintain a continuous and effective presence on site at all stages of his works from their beginning until completion. He shall be responsible for ordering his materials to ensure that this requirement is met. The contractor shall prepare for the above-named parties a bar-chart programme indicating the order in which he proposes to carry out the different parts of the work, and the labour on site at each week of the contract.

The following are requirements of the sub-contract programme: -

Seeding shall be carried out only between 15th of April and 15th of September

Planting of bare root material shall be carried out only between 1st of November and 31st of March. Container and Root balled plants may be planted outside this period, but shall then be watered in, and watered as often as necessary to ensure their establishment.

Weed killers based on c shall not be applied. Weed killers based on propyzamide shall applied only between November and Christmas. Where protective fences are shown to any area of planting, they shall be erected before planting is begun.

The Contractor shall enter dates for day works if provided for in the Schedule of Day Works. If any work is specifically instructed by the Contracts Manager or Landscape Architect that cannot be properly measures and valued at the rates inserted elsewhere in the Schedule of Quantity, the Contractor shall be allowed day work prices.

The Contractor shall not be permitted to subcontract any part of the work without the prior written agreement of the Employer. Such consent shall not be unreasonably withheld.

Water will be supplied on site at agreed locations. The contractor will be responsible for moving the water to the required locations and will allow for this inn his rates.

Notwithstanding the location of services and the layout of work shown on the Contract Drawings, the Contractor shall liaise with the Contract Managers and Main Contractor to determine the positions of all overhead and underground services, and he shall satisfy himself that none will be damaged by his works. Any damage to services caused in consequence of the contract operations shall be made good at his own cost.

The Contractor shall take all necessary steps to protect roads, kerbs, channels, gullies, walls, fences, and existing vegetation during his work, and shall include, where necessary, temporary coverings, planked barrow runs, etc.

The contractor shall be responsible for cleaning off mud and soil from all roads, kerbs, footpaths and surroundings to the works.

Any work damaged or soiled by weather, traffic or other causes due to inadequate protection shall be removed and made good at cost of the contractor.

The Contractor shall provide full and adequate supervision of the works, and at all stages shall have competent foremen, experienced in the work in hand, available to act upon the instruction of the Employer/Landscape Architect.

All areas of work and surroundings shall be kept in a tidy condition, all surplus material, excavated subsoil and rubbish being cleared as the work proceeds, and upon completion. Excavated soil, rubble or rubbish shall not be tipped against any hedgerow, into any ditch or stream nor under the canopy of any tree. No store cabin, or compound shall be erected against any hedgerow, nor under the canopy of any tree. No machinery shall be parked under any tree.

The Contractor shall provide all temporary accommodation on site necessary for the storage of materials, tools, equipment and drying facilities for clothing in a location to be agreed with the Employer.

The Contractor shall allow for the removal on a daily basis and as necessary to remove their rubbish, debris, surplus materials, protective casings etc. off site.

The Contractor shall give notice to the Employer/Landscape Architect by telephone, telex, or in writing of each period of his presence on site.

Health and Safety

The Contractor shall be responsible for the safety of his work people. He shall comply with the legal acts and regulations which apply to this site. Particular attention is drawn to the requirements of:

Safety, Health and Welfare Act, 2005

Safety, Health and Welfare (General Applications) Regulations 2007

Safety, Health and Welfare (Construction) Regulations 2006

The Contactor shall provide for complying with these Acts, and relevant Regulations including Notifications and placards for display.

The Contractor shall provide for complying with the requirements of the Project Supervisor (Construction) and shall include for all cooperation, the supply of additional information and resources, and all other matters to ensure that the Project Supervisor (Construction) can fulfil his function as defined in the Safety, Health and Welfare (Construction) Regulations 2006.

The contractor shall provide, prior to the commencement of the works, the following:

Copy of form of notice to be served on the Minister of Labour in pursuance of Regulations (5), (12), and form CR1

Company Safety Statement

Names of Contractors' Staff responsible for site safety, health and welfare and for first aid

Site layout plan showing facilities, materials storage, temporary parking, canteen, drying, toilets, washroom, etc.

The Contractor shall supply all the management, labour resources, plant, equipment, and facilities necessary to meet the requirements of safety, health and welfare on the site.

The Contractor shall allocate to a senior member of his staff the overall responsibility and resources necessary for ensuring that all obligations arising from legislative enactments are fully complied with.

The Contractor shall provide details and duties of the personnel to be involved both on and off site and of any independent safety, health and welfare inspecting authority which he proposes to employ.

The Contractor shall ensure that all personnel have appropriate qualifications, experience or training for tasks allocated to them. The Contractor shall arrange for all necessary site training of the labour force.

The safety, health and welfare shall be periodically and systematically reviewed by the contractor to ensure its continued effectiveness. Records of the review shall be maintained and made available for examination.

The Contractor shall provide to each site meeting a report to the employer in an agreed format advising on records kept safety equipment and site tidiness.

The Contractor shall ensure that all Contractors operate the necessary safety, health and welfare procedure and controls required by legislation and by his safety statement.

The Contractor shall take all precautions for the safety of users of public and site roads, shall comply with all regulations governing road safety, and shall include for warnings of any temporary obstruction. No vehicle entering or leaving the site shall deposit mud or materials of any kind on the surrounding roads.

Earthworks

The Contractor shall not fell or injure any tree which is within a designated working area. Excavated soil, rock, rubble or rubbish shall not be deposited under the canopy of the tree. No fires shall be lit under the canopy of any tree. No machinery shall be parked, or materials deposited under any tree.

Erect temporary fencing to enclose the full area under the crown of any trees within or adjoining the designated working area, unless the tree is to be felled.

Fencing shall be constructed as specified inPP135 - 02. Remove fencing on completion of the works.

The Contractor shall agree with the employer the location of any compound for storage of materials or plant, and the location of any site buildings. No materials shall be deposited, or machinery parked outside the agreed areas, which shall be fenced with a temporary fence as described above or with such other stronger fence as the contractor may at his discretion require. No fuel, oil, or chemical product shall be stores outside a compound area, nor be permitted to flow onto adjoining ground.

Topsoil shall confirm to B.S. 3882:1994 and shall be a free draining sandy loam. It shall be acid, pH 5.0-6.0, free of stones over 50mm diameter, and stones over 10mm diameter shall not exceed 5 % by weight. It shall be free from subsoil, sods, roots of trees and shrubs, and rubbish.

Topsoil shall be from the original surface layer of grassland or cultivated land, to a maximum depth of 200mm. Soils from woodland, heathland, bog or contaminated land shall not be acceptable. Do not strip from under the canopy of any tree, or closer than 4 meters to a hedge.

Topsoil shall be friable, well aerated and with a good crumb structure. It shall not be obtained from a site subject to waterlogging. It shall be free from persistent weeds, including dock, creeping thistle, stinging nettle, ragwort and couch grass.

Topsoil shall be subject to the inspection and approval of the landscape architect before spreading. Visible presence of fibrous roots and plant remains will be required.

Topsoil shall be moved and spread only in dry weather. No work to topsoil shall be carried out when it is waterlogged, or if its moisture content is conducive to structure deterioration. Minimise compaction of topsoil during spreading, running machinery over the surface as little as possible. Topsoil heaps not to exceed 1.5 meters in height during storage period on or off the site.

Before top soiling, remove all stones, rubble and rubbish over 50mm diameter from the surface of the subsoil formation. Dig out any areas polluted by oil or chemicals and make up with clean soil. Break up the formation under any areas liable to ponding after rainfall, so that they drain.

Tree pits shall be backfilled with topsoil by the Contractor.

The contactor shall allow for the disposal of subsoil excavated from tree pits, and for stones, rubble and rubbish removed from grass areas during cultivation

The contractor shall allow for the disposal off site of all debris, pruning's and rubbish relating to the landscape contract on site.

Planting

The Contractor shall satisfy the Employer / Landscape Architect that all works have been carried out to comply with BS 4428:1989 (General Landscape Operation) and BS 3936 (Nursery Stock).

It is essential that the site is tidy at all times and that the planting appears healthy. The Contractor should be prepared, at all times, to ensure that such conditions are met, and should include for this in his rates.

Any materials not meeting the specifications or qualifying for the approval for the Employer / Landscape Architect, for whatever cause, shall be rejected.

The Contractor shall familiarize himself with the layout of services and the position of all structures on the site and shall be liable to any damage to the above.

All operations hereinafter described will be carried out by suitable approved machines or by hand. Any work around the bases of existing trees, saplings, footpath edges, manhole covers, underground services etc. which cannot be carried out by machine for any reason shall be executed by hand and the Contractor must include for this in his rates.

Excavation, filling, cultivation, planting and other works will be suspended in wet weather and when conditions are unsuitable, and the Contractor shall allow in his prices for such eventualities.

"Suitable weather conditions" for planting will mean open weather (i.e. mild, dull and moist even in winter). Planting operations will be suspended in periods of drought, when soil is frost-bound or waterlogged and in periods of persistent drying cold winds. The Employer / Landscape Architect reserves the right to halt the works should the Employer / Landscape Architect consider the working conditions for the weather unsuitable.

Containerised plants may be planted throughout the year provided the weather is considered suitable, the soil is sufficiently moist, and each plant is watered following planting.

Planting outside the specified planting period will only be permitted in exceptional circumstances at the desecration of the Employer / Landscape Architect; such exceptional circumstance shall include unsuitable weather and no penalty shall be incurred under the heading of liquidated damages provided that any delay is formally accepted by the Employer / Landscape Architect as attributable to this cause. If works are delayed by inclement weather, the contractor shall complete them at the earliest opportunity afforded by suitable weather conditions.

All chemicals used will be non-toxic to human beings, birds and animals under normal use. No chemicals will be used for any purpose without the prior approval of the Employer / Landscape Architect. The Contractor will submit a list of all chemicals to be used to carry out the contract prior to commencement.

The Contractor shall be responsible for setting out all areas of planting to the satisfaction of the Employer / Landscape Architect.

The Contractor will give 48 hours' notice to the Employer / Landscape Architect of his intention to commence any of the following operations: setting out, planting, seeding, fertilising, herbicide application and maintenance visits. Alternative notification requirements may be stated relating to specific items and this over-rule this general requirement.

The Contractor will take all precautions to protect in the course of his work, any existing plant materials from malicious or accidental damage and will ensure that no branches will be lopped and no

roots over 50mm diameter severed from growing trees without express prior permission from the Employer / Landscape Architect.

All damaged plant materials shall have all cuts made flush leaving no snags or any cut over 50mm diameter and no bruises or scars on the bark, the injured cambium will be traced back to living tissue and removed. Wounds shall be smoothed so as not to retain water and the treated areas will be coated with "Tree Three" or other approved tree wood paint.

No soil, spoil, constructional materials or rubbish will be stored or tipped, and no construction plant or vehicles will be parked within the spread of existing trees, shrubs or hedges.

All operations hereinafter described may be carried out by suitable approved machines or by hand. Any work around the base of existing trees, in confined spaces or which it is impracticable to carry out by machine for any reason, shall be executed by hand, and the Contractor must include or this in his rates.

All litter, debris and fly-tipping are to be removed from the entire area of the site before planting operations begin. No burning shall be allowed on site.

The Contractor shall clearly mark boundaries of all planting and seeding areas and obtain approval of setting out by the Employer / Landscape Architect before commencing work.

In areas to be ripped all aggressive perennial weeds, dock, thistles and nettles are to be eliminated from the site.

In areas were existing grass is to be removed and the soil cultivated a combined contract / translocated herbicide is to be applied to remove all grass and weeds.

Surface cultivation will consist of ploughing or rotavating the topsoil to a minimum depth of 450mm over shrub areas; care to be taken to ensure that the subsoil is not brought to the surface. It shall then be worked to reduce the topsoil to a fine tilth.

After cultivation, all debris, perennial weeds and stones over 25mm in any dimension are to be removed off site.

Final grading is to be carried out to ensure the true specified level and slope and to avoid minor ridges, dishing or other depressions where water may collect.

Unless otherwise stated, finished levels of grass and shrub planting areas will be 50mm above adjoining paving or kerbs, retaining wall coping, manhole covers etc., and levels will be arranged to give gentle falls for drainage and to avoid ponding hollows.

Any area unduly compacted during the work of grading will be loosened by forking or harrowing. The use of heavy rollers to roll out mounds will not be permitted.

Plants

All trees shall conform fully to the specification in respect of species, size and quality. The Contractor shall name his supplier in his tender for approval by the Employer / Landscape Architect. All plants shall be well grown, sturdy and bushy according to type and free from all diseases and defects. The Employer / Landscape Architect reserves the right to reject any plant material (not previously approved) before or after planting if it does not conform to the specification. All plant material which does not conform to the specification will be automatically rejected and must be removed from site and replaced at the Contractors' expense.

All pant materials shall be good quality nursery stock, free from fungal, bacterial or viral infection, Aphid's, Red Spider or other insect pest, and physical damage. It shall comply with the requirements of the following sections of B.S. 3936, Specification for Nursery Stock, where applicable:

Part 1: 1992: Specification of Trees and shrubs.

Part 6: 1992: Specification of herbaceous, perennials & alpines

Part 7: 1992: Specification of bulbs, corms & tubers

Plant materials will also comply with the following where applicable:

BS 5236 Recommendations for cultivation and planting of trees in advanced nursery stock.

All plants shall have been nursery grown in accordance with good practice and shall be supplied through the normal channels of the wholesale nursery trade. They shall have the habit of growth that is normal for the species.

Except for any cultivated varieties or exotic species which do not set viable seed in Ireland, all plants shall have been grown from seed.

The Contractor will be deemed to have advised his specification, including all protection required, at the time of enquiry and shall in all cases be liable to replace materials brought on site which are not in accordance with this specification.

All plants supplied shall be exactly true to name as shown in the plant schedules. Unless stipulated, varieties with variegated or otherwise coloured leaves will not be accepted, and any plant found to be of this type upon leafing out shall be replaced by the Contractor at his own expense.

Bundles of plants shall be marked in conformity with the relevant part of B.S. 3936. The Contractor shall replace any plants which are found not to conform to the labels.

Advanced nursery trees shall comply with B.S. 8545: 2014. They shall have a well-defined straight and upright central leader, with branches growing out of the stem with reasonable symmetry, or a well-balanced branching head, according to the Schedule. The crown shall be well shaped, balanced, of a form and habit natural for the species. Trees shall have a sturdy, reasonably straight stem not less than 1.80 metres from ground level to the lowest branch, and other dimensions as follows: -

Category Girth At 1.00m Min. Height

Mature 40-50cm 6.00 – 7.00m

Heavy standard 12-14cm 3.60m

Select standard 10-12cm 3.00m

Trees shall be supplied with roots balled, and securely wrapped to ensure that the soil and roots remain moist and impact until planting. Trees shall have been transplanted or undercut and shall have been spaced in the nursery to permit development of a full and balanced crown. Trees shall have been carefully lifted, avoiding tearing of major roots and preserving a suitable proportion of smaller and fibrous roots to be conducive to successful transplantation. Any torn or lacerated roots shall be pruned to sound growth before dispatch.

Except for named cultivated varieties, all trees shall have been grown on their own roots. Budded or grafted trees will be rejected. Each tree shall be labelled with a durable tie-on label.

Trees shall have a sturdy, reasonably tapered stem, a well-defined and upright central leader, with branches growing out of the stem with reasonable symmetry, or a well-balanced branching head according to the Schedule. The crown and root systems shall be well formed and in keeping with the nature of the species. Roots shall be reasonably balanced with the crown and shall be conducive to successful transplantation.

Trees shall be supplied root-balled unless otherwise scheduled. All trees shall have been regularly undercut or transplanted. Root balled trees shall be supplied with a root-ball made from a mechanical 'Damcon' under cutter or similar approved, shall be 90cm diameter, wrapped in bio-degradable burlap and tightened with a 90cm diameter tempered steel root ball cage.

Bare root trees shall have been lifted carefully to avoid tearing of major roots and to preserve a substantial proportion of smaller and fibrous roots. Trees shall have been growing on their roots. Budded or grafted trees will be rejected.

Half standard trees shall be as described for trees but with a clear stem of 1.05m to 1.35m, a minimum girth of 6cm, a total height of 1.8m to 2.4m, and a well-balanced, branching head.

The Contractor will allow in his price for the up to 3 people of the Design Team to inspect all plant materials in the nursery prior to any deliveries to site. The Design Team must be given at least 10 working days' notice in order to permit inspection of trees.

All trees of the same species and size shall be of the same clone. All trees shall have a certificate of origin and the number of times a tree has been transplanted shall be certified.

The Contractor will provide a certificate to the effect that all plant materials are fully in accordance with the specification. All plants will be inspected by the Employer / Landscape Architect at time of planting for variety and size, but approval from this inspection will not preclude rejection of plant materials for defects which may appear during the progress of the works.

One plant of each group, bundle or batch of plants will bear a permanent label of metal or other indestructible material, securely attached, having the full botanical name thereon.

Upon submission of substantial evidence that materials are not available at the time of contract, the Contractor will be permitted to substitute other plants with the approval of the Employer / Landscape Architect with an adjustment of price if necessary, to that originally specified.

All plants are to be adequately and carefully packed and protected to survive transport, by whatever means, to the site, without damage in loading, transit or unloading. If, in spite of these precautions, roots, branches or shoots suffer slight damage they are to be carefully pruned. If major damage has occurred the plants will be rejected and replaced at the Contractor's own expense.

If plants cannot be planted immediately upon arrival they will be heeled in or their roots be adequately covered with moist Hessian or, good quality topsoil for a maximum period of 10 days. The roots are to be kept moist throughout this time by adequate watering; waterlogging shall be prevented as shall exposure to wind, frost or direct sunlight. Any plants which fail due to inadequate protection prior to planting will be rejected and shall be replaced at the Contractor's own expense.

Planting of containerised materials may be permitted outside this period with the Employer / Landscape Architect's approval. Planting will not be permitted during periods of drought, frost or cold drying winds nor when the ground is water-logged.

All planting operations shall be carried out in accordance with BS 4428 and good horticultural practice. Particular attention must be paid to correct depth of planting ensuring the soil is firmed around the roots.

Prior to planting all broken roots must be carefully pruned back and any snags to the crown carefully cut back. Bad bruising or abrasion of their cambium must be treated with "Tree Three" or equal and approved tree paint. Roots must be kept well moistened before planting in the prepared pit.

Herbicides

Weed killers based on Glyphosate shall not be applied. Weed killers based on propyzamide shall applied only between November and Christmas. Where protective fences are shown to any area of planting, they shall be erected before planting is begun.

Propyzamide – 'Kerb 50W'. Apply between 1st October and 20th December only, when round is damp. Ensure complete cover of the ground.

The Contractor may use alternative formulations of the above herbicides, by other manufacturers, with the prior approval of the Main Contractor and Employer / Landscape Architect. Such alternative formulations shall be applied to give the same degree of control as the application provided for in the Schedules of Quantity.

All weed killers shall be applied to manufacturers' recommendations with properly designed equipment, maintained in good working order and calibrated to deliver the specified volume, evenly and without over-dosing.

The Contractor may, with the Employer / Landscape Architect's prior agreement, apply foliar acting weed killers with an ultra-low-volume applicator. The rate of application shall be such as to achieve the same control as the general rate specified. Such application shall not be used post-planting, nor with fosamine ammonium.

Fertilisers

Controlled release fertiliser N:P:K 15:9:11 plus trace elements – Osmocote plus o similar approved applied at specified rates.

Fertiliser shall be supplied in sealed bags or containers bearing the manufactures' name, the net weight and analysis.

Tree Pits

Tree pits shall be excavated to 1.5 cubic metres in square shape. The base of the pit shall be thoroughly forked to a depth of 300mm to allow roots to penetrate below the pits. The Contractor shall draw the attention of the Employer / Landscape Architect to any waterlogged pits.

All trees shall be planted according to the general directions on planning given above.

A mixture of slow release fertiliser and approved tree compost in quantities stated in the Schedule shall be placed at the bottom of each pit prior to spreading out roots.

Backfilling shall be with good quality topsoil to BS 3882: 1965 and shall conform to the above specification. The finishing surface to the filled tree pit shall be slightly cambered.

In waterlogged areas, at the direction of the Employer / Landscape Architect, the pit shall either be over dug by 250mm and have the base filled with 10mm gauge pea gravel or tree pit drainage may be required.

All heavy standard trees shall be short, triple -staked, using 2.5m Ong round peeled pressure treated larch, pine or Douglas fir, preserved with water-borne copper-chrome-arsenic to I.S. 131, to a net dry salt retention of 5.3 kg. Per cubic metre of timber, 75mm minimum diameter, pointed at one end. Stakes shall be turned and painted one end. The stakes shall be set 900mm into the ground and shall be set around the tree as agreed with the Employer / Landscape Architect. A cross brace 100x30mm length and approved tree tie shall be affixed to the tree and stakes. Cross brace shall be recessed into the stakes. Drive stakes before planting with a drive-all, wooden maul or cast iron headed mell, not with a sledgehammer.

Set Stakes vertically in the pit, to the tree station, and drive before planting. Drive stake with a drive-all, wooden maul, or cast-iron headed mell. Not with a sledgehammer.

Tree ties shall be hessian and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie.

Plants shall be handled with care at all times, including lifting in and dispatch from the nursery. Plants or bundles of plants shall not be tossed, dropped or subjected to any stress likely to break fine roots.

Any roots damaged during lifting or transport shall be pruned to sound growth before planting. On completion of planting any broken branches shall be pruned.

All plant materials shall be free of eggs, larvae and adult form of vine weevil. Prior to material arriving on site all materials shall have been treated for vein weevil. A statement of the vein weevil protection plan shall be provided by the plant nursery if requested.

When material arrives on site, line out all container grown plants on level ground. Drench pots with 40g of 40% Diazinon W.P. in 100 litres water. Allow to stand for at least three days before planting.

Planting shall be not carried out while the ground is frozen or waterlogged, or during periods of drought. Ripping shall be carried out only when the ground is dry enough to fracture. Cultivations shall not be out when the ground is frozen or waterlogged.

All root balled and pot grown plants shall be well soaked before planting. All planting shall be watered after planting, to consolidate soil around the roots, unless ground is so wet as to make additional water unnecessary.

Standard Tree Planting

Excavate planting pits 1500 x 1500 x 1500mm deep. Position tree, drive 2nr 1500 x 75mm stakes 900mm into firm ground to leave 500mm over ground avoiding damage to either services, root system or root-ball. 1nr 100x30x1200mm cross brace and approved tree tie affixed to tree and cross brace. Stakes rebated to accommodate cross brace. Backfill incorporating 40g fertilizer and 0.25cu.m. moist organic matter.

Trees shall be planted at the same depth as in nursery, as indicated by the soil mark on the stem of the trees. They shall be centred in the planting pit and panting upright. The roots shall be spread to

take up their normal disposition. Fit tie. Clean a neat circle 1000mm diameter of all grass. Fit rabbit guard if scheduled. Spread mulch 50mm deep.

Tree pits shall be excavated a further 500mm to accommodate position of timbers in the case of underground guyed species. Refer to Detail 1 for planting specification of 40/50 rootball specimens.

Horticultural graded bark from coniferous trees, particles 25-75mm, free of fine materials, dust or wood. Spread to 75mm deep, over full areas of tree and shrub planting described in the schedule.

Include for tip pruning of all standard trees. Pruning will be undertaken to reduce the crown volume, while retaining a proportion of live buds on each branch. The extent of pruning for each species will be instructed on site. Leading shoots are not pruned.

A high quality of finish will be expected at all times on this prominent site.

Shrubs and Ground Covers: Rake off surface, to leave even, free of all stones over 30mm diameter, and free of weeds, before mulching.

The planting will be inspected in Spring and again in the September following planting. Any tree or shrubs found to have died from any cause expect as provided below or the work of the other Contractors shall be replaced by the Contractor at his own expense. Replacement planting shall conform in all respects with this Specification, including all specified excavation, provision and incorporation of all fertilizers and ameliorants, and weedkiller treatments.

Replacements

Failures will not be charged to the Contractor in the following cases: -

Damage by hares or rabbits, where not protected by fencing or shelters.

Damage by livestock, where not protected by fencing.

Failure solely due to prolonged dry weather, except where the Contractor will be responsible for watering.

Losses due to theft, vandalism or disturbance by other Contractors.

Persistence of weed in planting areas will be regarded as a contributory cause of failure due to drought. Prolonged dry weather will not exonerate the Contractor if he scheduled aftercare operations have not been carried out as programmed.

Standard Shrub and Herbaceous Planting

All shrubs shall be pit planted in precise locations of planting plan to be provided prior to planting. Pits shall be excavated 150mm wider in all directions than the natural root spread of the plant, and the bottom of the pit must be well forked to improve drainage.

Back filling of all pits shall be with soil and compost, or an approved peat substitute in the ratio of 4:1

All plastic and non-degradable wrappings and containers shall be removed before planting. Make four vertical cuts with a sharp knife on the quadrants through edge of container grown root balls to sever girdling roots.

Aftercare

The Contractor shall be responsible for aftercare of the completed works for 18 months from the date of practical completion.

The aftercare program will be organised as follows: -

Scheduled operations, in who's timing the Contractor will be permitted some flexibility, and which will be the basis of payment to the Contractor.

Performance standards, which the Contractor is required to meet at all times, and on which his performance will be assessed.

Critical dates, by which time scheduled operations shall have been completed, and at which performance will be assessed.

Performance

The Contractor is to note and make full allowance for the high-profile nature of the site and to observe a high standard of maintenance at all times.

Trees: Weed-free circles around trees shall be 1000mm diameter in grass areas. Weed control shall only be done by hand, except in circumstances where persistent perennial weeds may be chemically treated. The use of chemicals shall only be upon approval from the Landscape Architect.

Shrub & Herbaceous; Weed control shall only be done by hand, except in circumstances where persistent perennial weeds may be chemically treated. The use of chemicals shall only be upon approval from the Landscape Architect.

Grass: Cut to the specified height evenly over the whole area, with cuttings removed from the surface. Cutting shall not fall onto adjacent hard surfaces or planting areas. Cuts carried out at regular intervals, as provided in the programme. Grass shall be healthy, and of the quality specified above for each respective grade of grass.

Programme

Programme is subject to alteration dependent on progress of construction works of the site. A provisional programme is as follows but is subject to review at time of appointment of the Contractor.

Approx. Time Element

CRITICAL DATE: TBC Practical Completion

CRITICAL DATE: TBC All snags completed

CRITICAL DATE: TBC Assessment of Plant Establishment

CRITICAL DATE: TBC End of Defects Liability Period

Inspections

The Employer/Landscape Architect will inspect the site with the Contractor on each critical date, or as soon as possible thereafter. The Contractor may apply for a variation of the programme. Any application must be made to the Employer/Landscape Architect at least two weeks before a critical date. An application will be granted if sought for reason beyond the Contractor's control (e.g.

inadequate development of noxious weeds to justify spraying before the critical date). It will not be granted to allow time to remedy poor performance.

Weed Control

Weed killers and their application shall be as specified under 'Planting' above.

Protect foliage of all plants during applications of a non-selective foliar-acting herbicide with an 'Arboguard', 'Politec' guard, or equivalent to the satisfaction of the Employer/Landscape Architect. No plant, foliage or stem, shall be directed sprayed, even in winter.

Remove weeds by surface hoeing and pulling. Dig out all roots of deeply rooted or noxious species. Remove all weeds from site each day and dispose. Make good disturbance to mulch.

The Contractor will be responsible for watering planting in all trees in grass, hedges, shrubs, groundcover, herbaceous and annual bedding areas necessitated by dry weather. Apply water as a fine spray, to moisten full depth of root run. Avoid washing or compaction of the soil surface.

Firm any plant loosened by frost, wind or cultivation.

Any shoot damaged or found to be dying back on a periodic visit shall be cut back neatly to sound growth with a sharp pruning knife. Prune off wind-damaged shoots to sound growth.

Osmocote 18:11:10, applied @ 50 g/sq.m, and lightly raked in through mulches.

Apply 'Bayleton 5' in accordance with manufacturer's instructions.

10:10:20. Apply in two equal passes in transverse directions at a combined rate of 17 g/ sqm. Avoid any 'branding'.

Remove all litter in all planting when weeding or spraying.

Defects Arising

The Contractor shall include in pricing for the immediate remedy of any defect noted at an aftercare visit, e.g. plants loosened by wind, tree shelters fallen, or stakes broken, fence wires loose or posts rocking.

The Contractor shall report to the Employer/Landscape Architect any outbreak or build-up of insect pest, fungus disease or disorder affecting the plants, or grass, as soon as it is noticed. The Employer/Landscape Architect shall issue instructions for treatment of the outbreak

A provisional sum has been inserted in the schedule of quantities to cover costs of prompt repair and reinstatement of vandal damage.

Access to the site must be arranged in advance and clearance at security will be required for each visit.

Protection

The Contractor shall verify the position of any overhead and underground services and shall ensure that none will be damaged by his work.

The Contractor shall take all necessary steps to protect paving, roads, kerbs, channels, gullies, walls, fences, structures, furnishing and existing vegetation during his works. Include were necessary temporary covering, planked barrow runs, etc. Clean mud and soil of all hard surfaces and surroundings to the work.

Any damage to services, surfaces or structures or to existing vegetation caused in consequence of the work shall be made good at the cost of the Contractor.

All areas of work and access routes shall be kept in a tidy condition. All areas of the site will remain in use by the public and/or building users during the course of the contract. The Contractor shall clean all debris from beds and surrounding surfaces daily during his visits to site, and at more frequent intervals if necessary, for the safety of the site.

The Contractor shall provide full and adequate supervision of the works, and at all stages shall have a competent foreman, experienced in the work in hand, available to act upon the instructions of the Employer/Landscape Architect.

Water will be available at locations on the site and locations of sources to be agreed with Employer/Landscape Architect.

The contractor shall be responsible for the safety of his workpeople.

The Contractor shall take all precautions for the safety of users of public roads, shall comply with all regulations governing road safety, and shall include for warning of any temporary obstruction. He shall comply with the instructions of the Garda Siochana. No vehicle entering or leaving the site shall deposit mud or materials of any kind on the public road.

Performance Standards

Introduction

The regular care and maintenance of any are of landscape has a profound effect on its appearance, its value as an amenity area, and even in the long term, its plant structure and overall nature. The right levels of maintenance and the methods to be used, will vary considerably from site to site as well as being influenced by the layout and use, will also are a reflection of the soil types, topography, exposure to the elements and local climatic variations.

Match the maintenance regimes to the needs of a site is a major part of landscape management and it is not possible to give any absolute prescription or standard specification that can be applied for a particular type of landscape. However, this chapter attempts to describe and define the main operations that go into routine maintenance. Under the heading of each main type of landscape feature there are performance specifications and objectives for the various operations.

The specifications and operations are grouped under the following headings.

Amenity Grass Areas

Mixed Planted Areas

Newly Planted Trees

General Litter Clearance

Grass Areas

Maintenance Objectives

To provide an even stand of vegetation of uniform height and colour comprising predominantly grass species, although a small percentage of dicotyledonous plants – no more than 5 per cent – will be accepted.

Maintenance Operations

Mowing shall be carried out using a cylinder mower to maintenance the vegetation length within the limits of 30mm and 35mm during April to August inclusive and between 35mm and 50mm during the rest of the year. (This will normally require mowing at up to once a week in the peak of the season and up to, 20 times per year).

The arisings shall be left fly but must be distributed evenly over the surface and at no time shall the layer of clippings be of such a depth that will affect the growth of vegetation. At no stage must arisings come to rest on paved or planted areas.

Additional Operations

All edges of grass areas, against buildings, footpaths, roadways, trees, posts, and any other obstruction shall be kept neat, trimmed and tidy. Mowing strips against walls, etc. shall be 100mm wide and may be maintained by the use of an appropriate approved herbicide. Border edges shall be clipped and not be allowed to exceed 75mm length. Grass areas must be sprayed overall with a suitable approved selective herbicide in accordance with the manufacturer's instructions. Alternatively, spot weeding of isolated weed infestation may be carried out.

Fertilisers to be applied in the period of March to April and in period September to October to provide 40kg N, 10 kg P and 40 kg K per hectare annually. Provisional item reinstatement reseeding of worn areas may be undertaken as necessary.

Mixed Planted Areas

Maintenance Objectives

Establish a vigorous and healthy display of plant growth, with diverse interest through the year.

Maintenance Operations

Spring, cut back tall grasses, Weed, mulch, and edge, Thin and divide plants when established

Summer, Weed, Water plants as necessary, Fertilize with organic material on six-week rotation, and dead head plants that can re flower in same growing season

Autumn, Water as necessary, Move and divide plants, Deadhead and prune as per plants requirements

Winter, prune all perennials to ground level, and clear all planted areas of debris.

Newly Planted Trees

Young trees will need regular attention to ensure establishment. The most important operation is to keep the soil around the base of the tree free from weeds or grass and to ensure secure and correct staking.

Maintenance Objectives

Establish a stable and healthy tree with a well-shaped framework for future growth.

Maintenance Operations

Maintain a 1-meter diameter circle of plant-free soil around the base of each isolated tree by hoeing or the use of approved herbicide other than a residual.

Allow for hoeing up soil once every 4 weeks in the growing season (5 times per year). Allow for herbicide treatment once in the winter or spring and 3 additional treatments

Note: In some areas, this operation may be replaced by the application of bark mulch as ground cover.

Cut back any tall vegetation that is threatening to shade or smother the young tree (i.e. taller vegetation growing from outside the 1 m weed free area). Allow for cutting back regularly (3/4 times a year).

Provisional item water the newly planted trees throughout the summer months (May to August) as required for any period of 4 weeks without significant rainfall (less than 5mm). Apply sufficient water to thoroughly wet the top 150mm of soil around the tree roots. This will normally require approximately 20 litres for a standard tree, and 40 litres for any larger. Supply / Transport of water to be the responsibility of the Landscape contractor.

Check stakes and ties for firmness and support and adjust as necessary. Allow for checking twice a year, preferably in late spring and late summer.

Firm the soil around the roots to ensure that the plant is securely planted in the ground and upright. Allow for firming once in the spring after planting.

Formative prune to remove any dead, diseased or damaged shoots and create a balance form for future growth. Allow for pruning once in the season after planting.

Litter Clearance

Maintenance Objectives

Collect and remove from the site, all extraneous litter and rubbish on a regular basis so that its presence is not detrimental to the appearance of the site. (This means that the site should be free from litter after each visit to the site)

Maintenance Operations

Collect and remove to the contractors tip all extraneous rubbish, not arising from maintenance works, which is detrimental to the appearance of the site. This rubbish to include stones (over 50mm dia.

which may be buried), bricks, debris, paper, confectionery and other wrappings, bottles, cans and plastic containers.

Allow for this operation to be carried out at regular intervals based in conjunction with other maintenance visits and operations

Provisional item Collect and remove to the contractors tip all extraneous matter which has deliberately been deposited on the site by persons known or unknown (fly tipping). Such matter to include bricks, rubble, garden and household refuse, discarded domestic appliances, furniture and scrap metal. Priced per occasion based on an estimate of the volume of material to be collected.

Section 4; Appendix

Landscape Drawings Listed.

CCP045-01-01	Landscape Overall Plan
CCP045-01-02	Landscape plan Level 0
CCP045-01-03	Landscape plan Level 1
CCP045-01-04	Landscape plan Level 2
CCP045-01-05	Landscape plan Level 3
CCP045-01-06	Landscape plan Level 4
CCP045-02-01	Hard Landscape Plan
CCP045-02-02	Hard Landscape Features
CCP045-02-03	Bike parking in landscape
CCP045-02-04	Boundary plan
CCP045-03-01	Soft Landscape plan
CCP045-03-02	Tree and service co- ordination
CCP045-03-03	Green Factor plan

Green Space Factor Calculations

CCP045 SDCC Green space factor calculation existing site

Green Space Factor Tool
South Dublin County Council

Comhairle Contae Átha Cliath Theas
South Dublin County Council

User input indicated by Orange fields

User Input	
Zoning lookup	Minimum GI Score
LC	0.5

1. Enter Development Site Area m² HERE▶		4626	
Surface Type (see tab for detailed descriptions)	**Factor**	**Proposed Surface Area m²**	**Factor Values**
1. Short Lawn	0.3	88	26.4
2. Tall Lawn (wild, not mown)	0.5	0	0
Permeable Paving	0.3	3211	963.3
Vegetation		0	0
4a. Vegetation-Shrub below 3m	0.4	65	26
4b. Vegetation-Shrub / Hedgerow above 3m	0.5	0	0
4c. Vegetation-Pollinator friendly perennial planting	0.5	0	0
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	0	0
5b. Preserved trees	1.2	0	0
7. SuDS intervention (rain garden, bioswale)	0.6	0	0
Green Roof			0
9a. Green Roofs - Intensive green roof (substrate is 200-1200mm in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (substrate is 80-200mm in depth)	0.6	0	0
10. Green wall	0.4	0	0
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
Total Equivalent Surface Area of Greening Factors		3,364.00	

Green Factor Numerator	1015.70

Minumum Required GI score	Final GI score	Result
0.5	0.22	Fail

CCP045 SDCC Green space factor calculation for proposed site

Green Space Factor Tool
South Dublin County Council

Comhairle Contae Átha Cliath Theas
South Dublin County Council

User input indicated by Orange fields

User Input	
Zoning lookup	Minimum GI Score
LC	0.5

1. Enter Development Site Area m² HERE▶		4626	
Surface Type (see tab for detailed descriptions)	**Factor**	**Proposed Surface Area m²**	**Factor Values**
1. Short Lawn	0.3	342	102.6
2. Tall Lawn (wild, not mown)	0.5	0	0
Permeable Paving	0.3	1770	531
Vegetation		0	0
4a. Vegetation-Shrub below 3m	0.4	200	80
4b. Vegetation-Shrub / Hedgerow above 3m	0.5	150	75
4c. Vegetation-Pollinator friendly perennial planting	0.5	1150	575
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	112	67.2
5b. Preserved trees	1.2	0	0
7. SuDS intervention (rain garden, bioswale)	0.6	45	27
Green Roof			0
9a. Green Roofs - Intensive green roof (substrate is 200-1200mm in depth)	0.7	1305	913.5
9b. Green Roofs - Extensive green roof (substrate is 80-200mm in depth)	0.6	0	0
10. Green wall	0.4	36	14.4
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
Total Equivalent Surface Area of Greening Factors		5,110.00	

Green Factor Numerator	2385.70

Minumum Required GI score	Final GI score	Result
0.5	0.52	Pass