Park Hood
Chartered Landscape Architects

Green Infrastructure plan

LDA Wilton, Sarsfield Road Cork - Green and Blue Infrastructure Plan

January 2025 / Project No. 7848

0. Contents

What is a Green and Blue infrastructure Plan?

According to the Cork City Development Plan (2022-2028), green infrastructure encompasses both green and blue assets, including parks, open spaces, rivers, and wetlands. It integrates natural features into urban planning to provide environmental, social, and economic benefits. Green infrastructure also encompasses sustainable design measures, such as the integration of solar panels, urban woodland planting, and rainwater harvesting to promote a resilient environment.

The Cork City Development Plan includes an active green infrastructure strategy aimed at supporting the city's growth while enhancing Cork's natural and blue assets.

The strategic objectives are summarised in page 209: "To strengthen the green and blue infrastructure of Cork City. To protect and promote biodiversity and habitat connectivity and protect natural areas. To protect and enhance Cork City's unique landscape character and maritime heritage. To ensure all of Cork City's residents have access to open spaces, recreation and amenity facilities and natural areas. A strong green and blue infrastructure network is essential to the quality of life of Cork City's residents and contributes towards the creation of places where people want to live and work. It is an objective of Cork City Council to achieve a healthy, green and connected City with high-quality and interconnected open spaces, parks, diverse natural areas and green and blue corridors. Proposals for new development in Cork City will respect and reflect the topography, landscape and ecology of the City, and will protect and enhance the City's green and blue infrastructure by ensuring that development does not fragment existing networks of green and blue infrastructure. Proposals for new development will demonstrate how green and blue infrastructure, open space, sport and recreation, landscape and biodiversity are considered commensurate to the scale and context of the development in the development process. Large-scale developments will incorporate open spaces to contribute to the green and blue infrastructure in the City".

In the perspective of Landscape architecture, some key relevant objectives include:

- Policy Objective 6.1 "To manage, protect and enhance the Green and Blue Infrastructure assets of Cork City in line with the Cork City Green and Blue Infrastructure Strategy set out in the Development Plan, and to support the actions, opportunities and projects identified in the Cork City Green and Blue Infrastructure Study 2021".

- Policy Objective 6.5 (Trees & Urban Woodland): Ensures the protection and expansion of urban trees and woodlands through surveys, mapping, and long-term planting strategies. The city aims to increase tree coverage and encourage planting of native species to boost biodiversity.

- Policy Objective 6.6: (Rivers, waterways and wetlands): This policy aims to protect and enhance the natural heritage and biodiversity of Cork City's rivers, watercourses, and wetlands, while promoting an integrated approach to maximize opportunities for biodiversity, recreation, tourism, and economic benefits.

- Policy Objective 6.9: (Landscape): This policy aims to preserve and enhance Cork's landscape character and key assets, ensuring development respects the environment and heritage while promoting sustainability. It requires high standards of placemaking, siting, and design in new developments and seeks to protect key hilltops, valley sides, and ridges that define the Cork City hinterland from development. The policy discourages the removal of significant trees, hedgerows, and historic boundary treatments, while supporting relevant recommendations from the National Landscape Strategy for Ireland 2015-2025.

- Policy Objective 6.11 (Landscape and development): "To ensure that the management of development throughout Cork City will have regard for the value of the landscape, its character, distinctiveness and sensitivity in order to minimize the visual and environmental impact of development, particularly in designated areas of high landscape value where higher development standards (layout, design, landscaping, materials) are required".

- Policy Objective 6.22 (Natural Heritage and Biodiversity): This supports the enhancement of Cork's biodiversity through tree planting, urban woodland preservation, and native hedgerow integration in new developments.

- Policy Objective 6.23: "To protect and enhance designated sites and areas of natural heritage and biodiversity and the habitats, flora and fauna for which it is designated, and to protect, enhance and conserve designated species".

City Scale GBI Opportunities for Cork City

#1 Lea to Sea Greenway Biodiversity and Greening Plan

- Existing scenic route
- Proposed connection of the Lea to Sea Greenway with scenic route
- Secondary cycle lanes
- Primary cycle lanes
- Lee to Sea Greenway route
- Potential creation of strategic links between city neighbourhoods / key GBI assets

#2 City Docks and Tivoli Docks Urban Drainage Strategies

- Potential development of urban drainage strategies to assess and outline a Nature Based Solution (NbS) approach to urban drainage

#3 Glen Valley Park Project

- Proposed enhancement of Glen Valley Park
- Proposed creation of a strategic link between Blackpool and St. Luke's as well as Tinker's Cross to the east

#4 Cork City Tree Planting and Management Strategy

- Potential delivery of a medium-term city-wide tree planting and management strategy.

#5 Vernon Mount Park Project

- Proposed enhancement of Vernon Mount Park
- Proposed creation of linkages with existing GBI destination sites (Tramore Valley Park)
- Proposed delivery of city scale NbS for drainage within Frankfield, Grange and Douglas

#6 New City Parks in the North East and North West of Cork City

- Proposed delivery of a new city park

#7 Cork City Rewilding, Rewetting and Reafforestation Projects

- Explore the opportunity to promote rewilding, reafforestation and rewetting projects
  1. Marlin Corridor at Ardamadane
  2. Blarney Peatlands
  3. Blarney Castle complex
  4. Shournaugh Valley
  5. Lee Valley
  6. Curragheen Lowlands
  7. Tramore Valley
  8. Douglas River Estuary and margins
  9. Passage Railway Greenway corridor
  10. River Glashaboy corridors
- Potential extension and enhancement of existing green corridors

#8 Activating Blue Corridors in Cork

- Proposed protection / restoration of river channels and riparian area

#10 International/National/Regional GBI Tourist Attraction in Cork City

- Proposed protection and restoration of Cork Harbour to promote a healthy ecosystem and sustain local economies

#11 Promotion of Cork City as a destination for water-based recreation

- Potential implementation of river access improvements

#12 Update and Review of the Cork City Landscape Characterisation Strategy

- Extended area to be included within the proposed study

#13 City Centre Neighbourhood Parks Pilot projects

- Proposed delivery of two neighbourhood scale pilot projects within the neighbourhoods of St Luke's/McCurtain Street (Mahoney's Avenue) and South Parish (Park Owen)

#14 Activate Greening Projects in Cork City Centre

- Proposed 'heart of urban greening' or concept for a 'green quarter' - showcase of urban greening in the City Centre

#15 Reinstatement of the weir and canal system at Ballincollig Regional Park

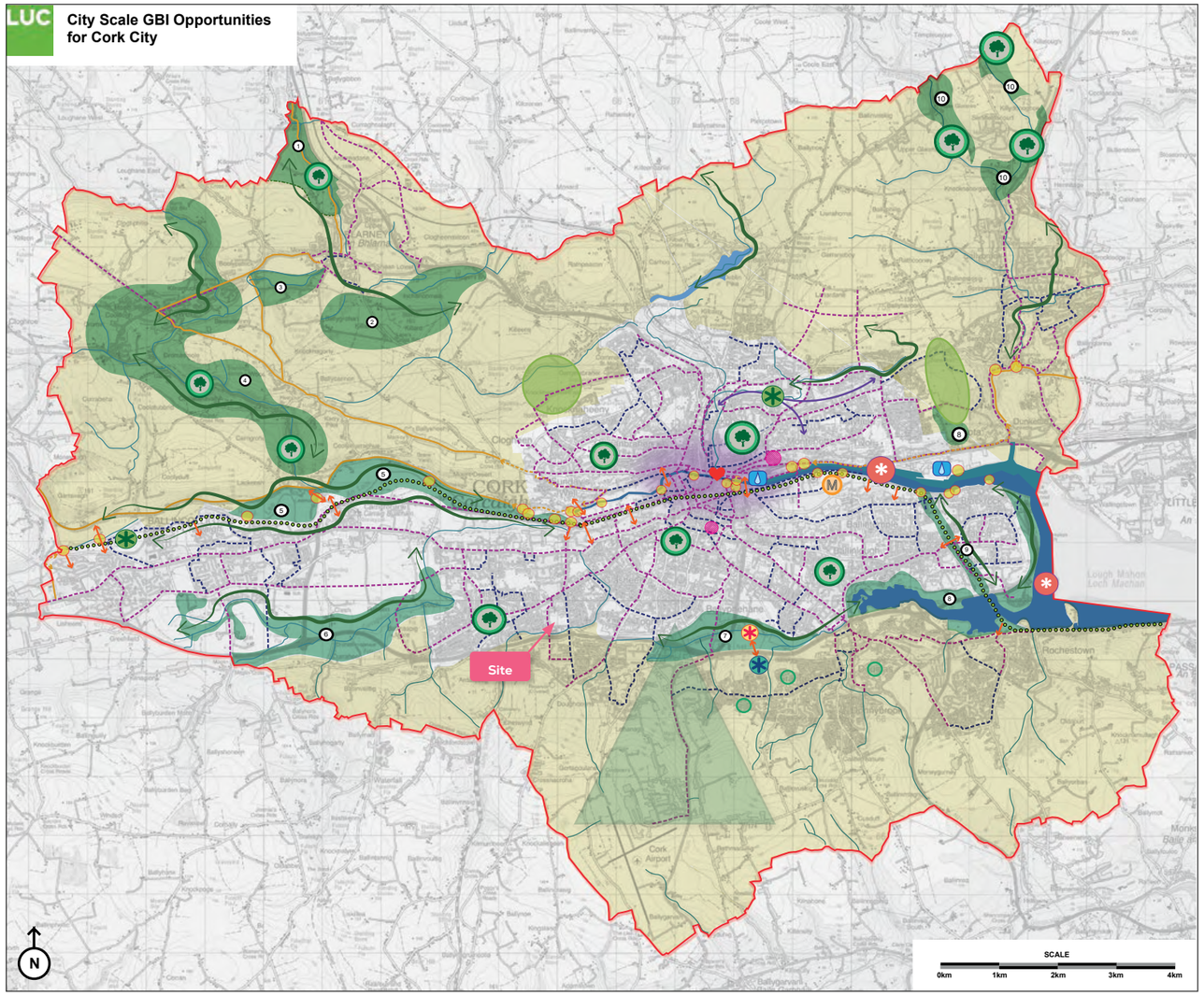
- Proposed reinstatement of the weir and canal system at Ballincollig Regional Park

#16 Glenamought River Valley Park

- Safeguard and enhance the Glenamought River Valley as a linear wildlife corridor and riverside amenity

#17 Maritime Activities and Recreation Hub

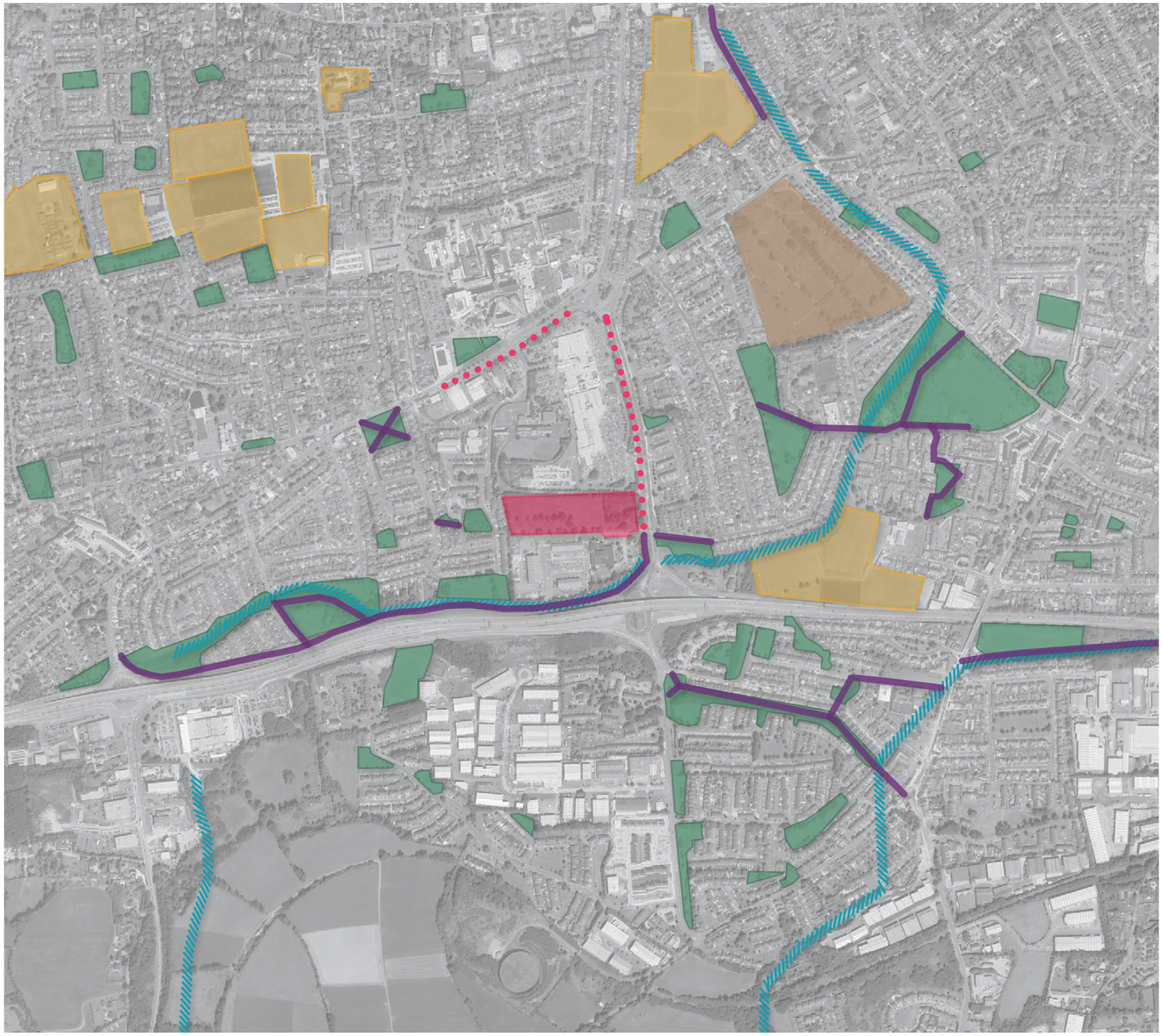
- Deliver a multi-use maritime activities centre within Marina Park, forming the gateway for aquatic and waterside activities in Cork City



▲ City Scale GBI Opportunities for Cork city map, taken from Cork City Development Plan 2022-2028, page 177

Existing Green And Blue Infrastructure - Site context

- Site Extent
- Public Green Space
- Rivers
- Open Space pedestrian connections
- Cycle Lane
- Schools / Sport facilities
- Cemeteries



Landscape Proposal

Hardworks

- Asphalt Carriageway – Refer to Civil Engineer Specification
- Permeable Granite Aggregate Concrete Block Paving – Colour: Silver Grey
- Granite Aggregate Concrete Block Paving – Colour: Buff / Yellow Granite
- Permeable Parking Bays – Colour: Silver Grey
- Permeable Resin Bound Gravel – Colour: Buff
- Setts Paving to Balconies – Colour: Grey
- Coloured Asphalt Footpath – Refer to Civil Engineer Specification
- Coloured Asphalt – Refer to Civil Engineer Specification
- Rubber Safety Play Surfacing – Supplied by Specialist Play Supplier
- Grasscrete for fire access route – Supplied by Specialist

Walling

- New Retaining Wall to tie into existing. Height of Wall / Railing TBC. Refer to Architect/Engineer Details
- 1.2m Bowtop railing to Play Area
- 450mm High Raised Planter
- 125mm High Raised Kerb Planter

Features

- Play Equipment
- Road signage and bollards - refer to Civils Roads information
- Cycle Stands
- Site Boundary

NOTE:

- FOR INFORMATION REGARDING ROADS, PARKING DEMARCATION, KERB RADII, SETTING OUT, LEVELS AND DRAINAGE REFER TO CIVIL ENGINEER'S DRAWING PACKAGE.
- FOR INFORMATION REGARDING EXISTING SERVICES RETAINED, STAND PIPES, IRRIGATION, LIGHTING & EV CHARGING REFER TO MECHANICAL AND ELECTRICAL ENGINEER'S DRAWING PACKAGE.
- FOR INFORMATION REGARDING ARCHITECTURE REFER TO ARCHITECT'S DRAWING PACKAGE.

Softworks

Existing Trees to be retained

TREES

SUDs TREES

MIX 01 - HIGH AND MEDIUM SHRUBS 1075 sqm

MIX 02 - MEDIUM/LOW PLANTING - SUNNY 620 sqm

MIX 03- LOW SHRUBS - PARTIAL SHADE 1889 sqm

MIX 04 -ATTENUATION AREA PLANTING 310 sqm

HEDGE TYPE 01 109 lin m

HEDGE TYPE 02 860 lin m

Lawn Turf 2600 M2

Wildflower 1735 M2

Traditional Irish Wildflower Native Mix

Site Boundary

Revision Notes	By / Chk	Date	Rev
Issued for Planning	GB / MJ	03.04.25	00

Status: PLANNING

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Client: The Land Development Agency

Project: LDA Wilton
Sarsfield Road

Title: LANDSCAPE GENERAL ARRANGEMENT

Job No: 7848 | **Scale@A1** 1:500 | **Date:** Jan 25

Drawing Number

Project	Originator	Volume	Level	Type	Role	Number	Revision
7848	PHL	SW	XX	DR	L	1100	00

Proposed Green Infrastructure

The proposal carefully considers the existing green infrastructure, aiming to enhance and extend the established corridors and open green spaces to create a well-connected network of habitats and public amenity areas. Emphasis is placed on delivering a diverse landscape that prioritises the use of native flora and fauna.

A key benefit of the proposed development is the improved public accessibility to the site's green spaces, fostering greater engagement with nature while strengthening green links between Southbury Road and Cardinal Court.

Strategic tree, shrub, and hedge planting will be implemented to establish and sustain habitat corridors across the site, providing shelter and encouraging the movement of wildlife while also offering recreation and respite opportunities for visitors.

Wherever feasible, existing trees have been retained, and additional trees have been carefully introduced to enhance enclosure, provide visual screening of infrastructure, and establish valuable hedgerow habitats. Expansive wildflower meadows and amenity grasslands are proposed within the central open spaces, interspersed with clusters of retained native trees.

This approach will create open meadow habitats that support biodiversity while offering attractive and functional public amenity areas.

Integrated bioretention features within the site's Sustainable Drainage Systems (SuDS) will introduce a variety of habitats, complementing the broader ecological framework.

These features will not only contribute to sustainable water management but also enhance biodiversity by supporting a rich mix of plant species.

A comprehensive network of pedestrian and cycling routes will be incorporated throughout the site, encouraging active travel and promoting healthier, more sustainable modes of transport.

Legend

- Site Boundary
- Wildlife corridor
- Green Infrastructure Linkage
- Existing Trees to be retained
- Proposed public open space
- Private Garden Green Space
- Planted Attenuation
- Green Roofs

4.0
Planting Strategy

The Development Plan notes that green infrastructure has a critically important role to play in making Cork a climate resilient, healthy and green city. The key relevant section within the development plan state as follows:

- Supports a co-ordinated and managed network of multifunctional green spaces linked to the wider regional Green Infrastructure network.
- Supports the integration Green Infrastructure and an ecosystem services approach into new developments / new growth areas.
- Supports the protection, maintenance, and enhancement of the watercourses and their riparian corridors in the city.
- Requires tree planting in the planning and development of new development and to protect existing trees as part of new development.

Within Chapter 15.6.1 Green Infrastructure and Landscaping, it states the following measures to strengthen the city green infrastructure (GI) network plan will be required.

- Increase habitat protection to support the wider GI network.
- Provide additional green space to meet deficiencies in connectivity of the GI network.
- Ensure retention of mature habitats and provide for long-term ecological succession.
- Increase connections and improve accessibility for pedestrians and cyclists to the wider GI network.
- The use of drainage systems (SuDs) and soft/ nature-based engineering solutions for surface water management to control the rate of run-off, protect water quality and mitigate the environmental impacts of flooding and erosion.
- Provide for public access to ensure that the benefits of access to the GI network is available to all citizens.
- Ensure that proposed developments do not create negative impacts on the existing GI network.

The subsequent requirements in relation to the assessment and incorporation of biodiversity, green infrastructure and landscaping include the following:

- Surface Water Management and SuDs
- Green / Blue Roofs
- Green Wall / Living Wall
- Urban Greening
- Sensitive Ecological Areas
- Landscape Design Rationale
- Landscape Plans and Design Reports
- Trees and Hedgerows
- Tree Removal
- Public Open Space and Recreation
- Boundary Treatments

Strategic tree, shrub, and hedge planting will be implemented to establish and sustain habitat corridors across the site, providing shelter and encouraging the movement of wildlife while also offering respite for visitors.

This approach supports biodiversity and ecosystem services, key components of green infrastructure planning.

Wherever feasible, existing trees have been retained, and additional trees have been carefully introduced to enhance enclosure, provide visual screening of infrastructure, and establish valuable hedgerow habitats.

These measures contribute to climate resilience and sustainable land use planning by integrating multifunctional green spaces.

Expansive wildflower meadows and amenity grasslands are proposed within the central open spaces, interspersed with clusters of retained native trees.
This approach will create open meadow habitats that support biodiversity while offering attractive and functional public amenity areas, aligning with objectives for cultural and heritage integration.

Integrated bioretention features within the site's Sustainable Drainage Systems (SuDS) will introduce a variety of habitats, complementing the broader ecological framework.

These features will not only enhance biodiversity but also contribute to sustainable water management by supporting a rich mix of plant species and assisting in flood mitigation

Planting Strategy

Trees

Avenue tree planting is proposed to corridors along roadsides to encourage movement of wildlife through the site and to provide amenity value. Large specimen tree species have been selected to create high amenity impact and shelter to mammals, birds and insects.

To the site boundary a mixture of feathered and clear stem native trees are to be planted along native boundary hedgerows to mimic existing field boundaries and to integrate the scheme into the wider landscape character.

Trees proposed within private gardens include a high proportion of native trees with attractive visual form, texture and seasonal interest. Planting within soft landscaping beds to private frontages will ensure a continuation of proposed tree corridors through amenity hard landscape areas in close proximity to development plots. Furthermore this provides an attractive outlook from within private dwellings and enhances experience of active travel through the development.

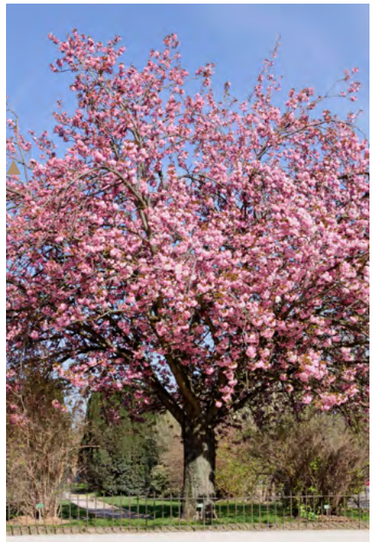
▲ Betula Pendula

▲ Sorbus acuparia

▲ Pyrus calleryana ‘Chanticleer’

▲ Acer campestre ‘Elsrijk’

▲ Liquidambar styraciflua (SUDs Tree)



▲ Prunus serrulata

▲ Tilia cordata ‘Greenspire’

▲ Betula utilis var. Jacquemontii

▲ Amelanchier lamarckii

▲ Betula nigra (SUDs Tree)

4.0
Planting Strategy

Shrubs

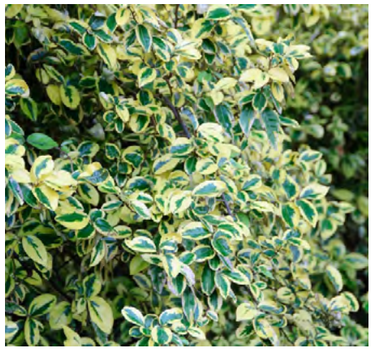
Pockets of shrub planting provide a softening to areas of hardstanding. A high proportion of native species will create areas of intermittent cover for wildlife and habitats for foraging species. Flowering, seeding and fruiting species have been chosen to provide feeding opportunities for a variety of fauna.

Mix 01 - High and medium shrubs

▼ Viburnus tinus 'Eve Prince'

▼ Pyracantha 'Saphyr Orange'

▼ Elaeagnus x ebbingei 'Gilt Edge'



▼ Viburnum davidii 'Angustifolium'

▼ Euphorbia amygdaloides v. robbiae

Mix 02 - Medium/Low Planting - Sunny

▼ Potentilla fructicosa

▼ Euonymus fortunei

▼ Spiraea Japonica

▼ Nandina domestica

▼ Salvia nemorosa

▼ Sesleria autumnalis

▼ Anemanthele essoniana

▼ Narcissus 'Thalia'

▼ Narcissus 'Lemon Drop'

Mix 03 - Low Shrubs - Partial Shade

▼ Skimmia japonica ‘Pink Dwarf’

▼ Hebe ‘Green Globe’

▼ Pachysandra terminalis

▼ Leucothoe Keiskei ‘Burning Love’

▼ Euonymous fortunei ‘Emerald Gaiety’

▼ Pieris Japonica ‘Little Health’

▼ Hebe Caledonia

▼ Narcissus ‘Thalia’

▼ Narcissus ‘Lemon Drop’

Mix 04 - attenuation area planting

▼ Iris pseudoacorous

▼ Geranium 'Gerwat'

▼ Lythrum salicaria

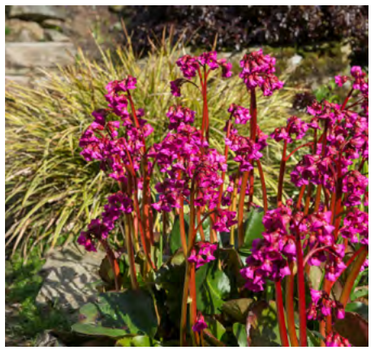
▼ Hemerocallis 'Luxury Lace'

▼ Deschampsia cespitosa

▼ Caltha palustris

▼ Ajuga reptans

▼ Bergenia cordifolia 'Overture'



▼ Monarda 'Cambridge Scarlet'

▼ Osmunda regalis

4.0
Planting Strategy

Hedges

Mixed species native hedge planting is proposed to site boundaries to provide nesting and foraging habitats and movement corridors for wildlife.

Hornbeam hedge planting is proposed to delineate plots at unit frontages and to provide intermittent cover for wildlife in proximity to development plots and gardens.

Grass Areas

Amenity grass will cover areas of open space to provide amenity value to residents. Grass mix to include clover to improve biodiversity.

Wildturf and Traditional Irish Wildflower - Native Mix

Wildflower meadow is proposed to areas of open green space to enhance the sites biodiversity value and create habitat for pollinating species.

▼ Hedge Type 1 - Prunus Lusitanica

▼ Hedge Type 2 - Carpinus Betulus

▼ Traditional Irish Wildflower - Native Mix

5.0
Drainage/SuDS

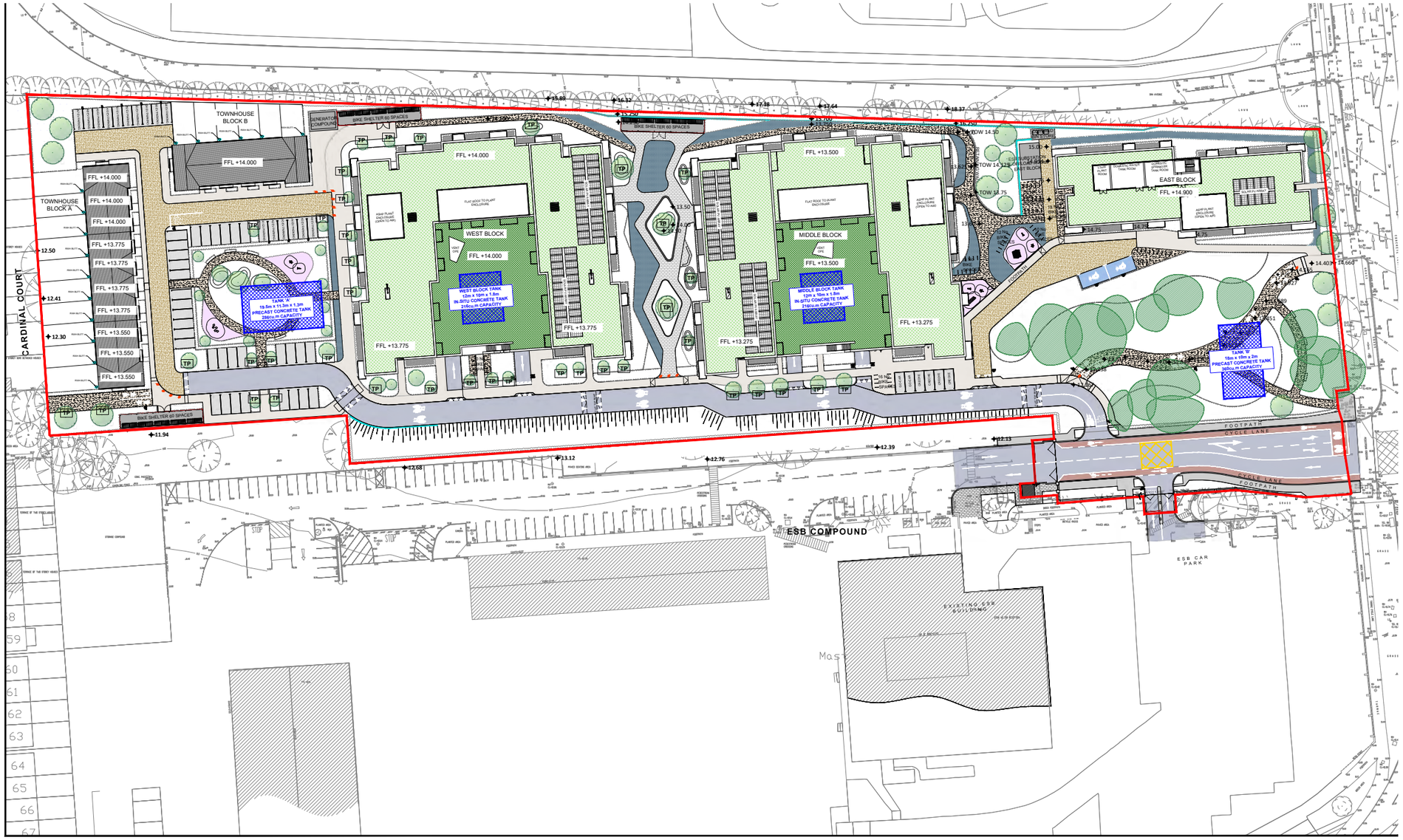
Sustainable Drainage Strategy

Information on proposed drainage strategies can be found on document “23215-IR-01 - Infrastructure Report-PL2” Provided by the engineers. It can roughly be summarised as follows:

The Sustainable Drainage Systems (SuDS) approach for the project emphasizes replicating greenfield runoff conditions and minimizing urbanization impacts. Extensive and intensive green roofs are proposed to provide interception storage, reduce runoff rates, and improve water quality.

Permeable paving is planned for pathways and surface-level car parking, enabling water infiltration close to its source.

Additionally, bioretention areas and tree pits are incorporated to treat and further infiltrate runoff from impermeable surfaces. These measures align with guidelines from the Greater Dublin Strategic Drainage Study (GDSDS) and CIRIA SuDS Manual, ensuring effective stormwater management and compliance with regulatory standards.



SuDS PLAN LAYOUT

SCALE @ A1: 1:500
SCALE @ A3: 1:1000

LEGEND

- EXTENSIVE GREEN ROOF WITH INTERCEPTION TRAY AS PER DETAIL D1.1 OF DRAWING 12300
- INTENSIVE GREEN ROOF TO PODIUM LEVEL WITH INTERCEPTION TRAY AS PER DETAIL D2.1 & D3.1 OF DRAWING 12300
- TP — DENOTES SuDS STREET TREE PIT AS PER DETAIL DRAWING 12320
- DENOTES DOMESTIC REAR GARDEN RAIN WATER HARVESTING BUTT

LEGEND

- ASPHALT CARRIAGEWAY (BLACK) REFER TO DETAIL A1.1 PER DRAWING 12112
- RED COLOURED CYCLE LANE SURFACING TO CARRIAGEWAY
- ASPHALT CARRIAGEWAY (BUFF) REFER TO DETAIL A1.2 PER DRAWING 12112
- COLOURED ASPHALT FOOTPATH REFER TO DETAIL B1.2 PER DRAWING 12110
- IN-SITU CONCRETE FOOTPATH REFER TO DETAIL B2.1 PER DRAWING 12110
- POROUS RESIN BOUND GRAVEL REFER TO DETAIL B5.1 PER DRAWING 12110
- PERMEABLE PAVING REFER TO DETAIL C2.2 PER DRAWING 12300
- PERMEABLE PAVING REFER TO DETAIL C2.2 PER DRAWING 12300
- POROUS GRASSCRETE REFER TO DETAIL C3.1 PER DRAWING 12300
- POROUS PLAY SURFACING REFER TO DETAIL B7.1 PER DRAWING 12110

5.0
Drainage/SuDS

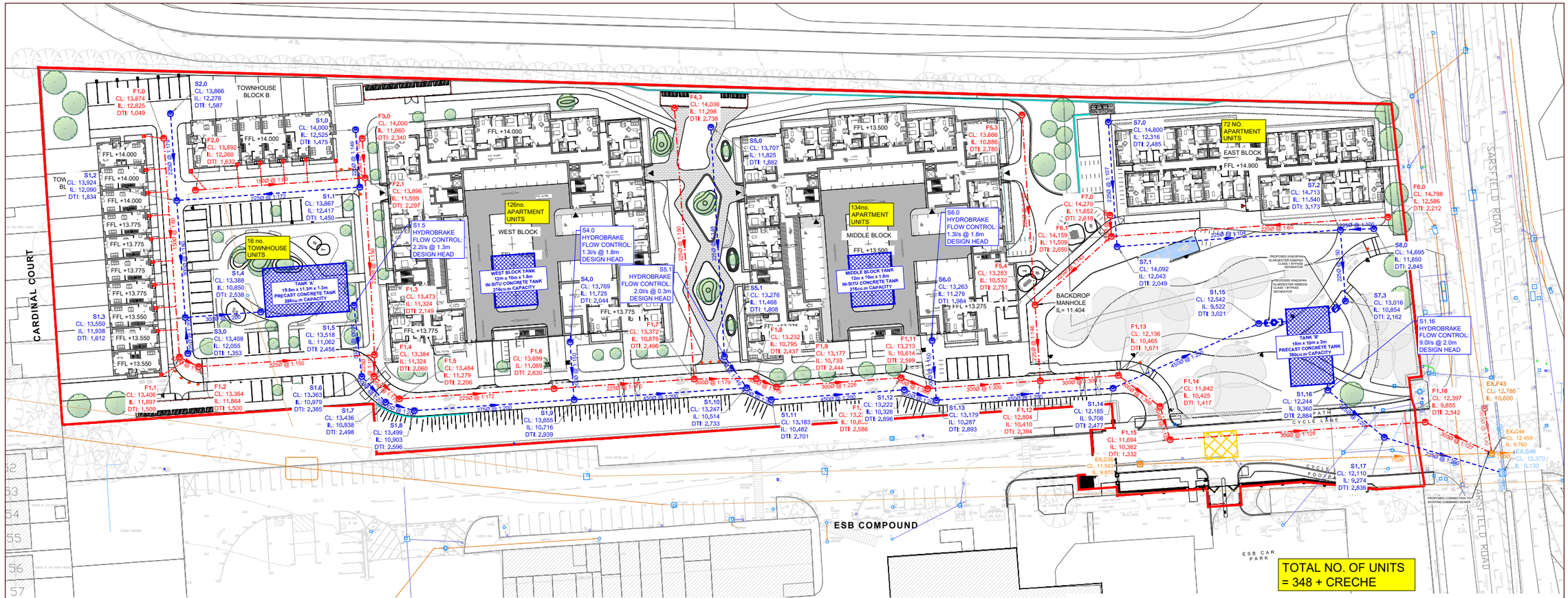
Buried drainage strategy

Information on proposed drainage strategies can be found on document “23215-IR-01 - Infrastructure Report-PL2” Provided by the engineers. It can roughly be summarised as follows:

The drainage strategy addresses the lack of formal infrastructure on the site by incorporating localized attenuation and controlled discharge. The design features distributed tanks and permeable paving, avoiding a central attenuation facility to preserve mature trees and accommodate site constraints.

Discharge to external stormwater networks is limited to 9.0 liters per second, reducing the impact on downstream systems.

Hydraulic modelling accounts for storm durations and climate change, ensuring the design’s robustness. The drainage system adheres to the principles of SuDS while complying with GDSDS criteria to maintain ecological and hydraulic balance.



BURIED DRAINAGE PLAN LAYOUT

SCALE @ A1: 1:500
SCALE @ A3: 1:1000

6.0
Conclusion

The proposal carefully considers the existing green infrastructure, aiming to enhance and extend the established corridors and open green spaces to create a well-connected network of habitats and public amenity areas.

Emphasis is placed on delivering a diverse landscape that prioritises the use of native flora and fauna, aligning with key green infrastructure objectives in Ireland such as enhancing biodiversity, improving climate resilience, and supporting sustainable land use.

A key benefit of the proposed development is the improved public accessibility to the site's green spaces, fostering greater engagement with nature while strengthening green links between Southbury Road and Cardinal Court.

This aligns with Ireland's green infrastructure goals of encouraging active travel and recreation by providing pedestrian and cycling infrastructure that promotes healthier lifestyles.

The Sustainable Drainage Systems (SuDS) approach for the project emphasizes replicating greenfield runoff conditions and minimizing urbanization impacts to ensure there is no impact on existing blue infrastructure within the sites surroundings.

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