Phase 1- Corrib Causeway

Dyke Road, Co.Galway

Landscape Design Statement

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landscape architecture

LDA
Ghníomhaireacht Forbartha Talún
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Table of Contents

1.0 Introduction and Terms of Reference

Murray & Associates were commissioned by Galway City Council to work with the planning and design team for the proposed residential development at Dyke Road, with responsibility for the design of the landscape and external spaces.

The landscape architectural design proposal seeks to harmonise with existing and permitted development in neighbouring areas in an appropriate manner, which is compliant with Galway City Councils (GCC)Development Plan 2023-2029 and will create a high-quality landscape setting for the development.

This report has been prepared with the aim of outlining the landscape design rationale behind the proposals submitted within the planning application.

This Report should be read in conjunction with the following drawings and reports:

1911_PL_P_01- Landscape Masterplan

1911_PL_P_02- Landscape Plan: Ground Floor Level

1911_PL_P_03 - Landscape Plan: Roof Level

1911_PL_S_01 - Landscape Sections

1911_DD_01- Design Details: Soft Landscape

1911_DD_02- Design Details: Hard Landscape

1911_OLS- Outline Landscape Specification and Management Plan

1.1 Development Description

The proposed development will consist of the construction of a new residential development of 219 no. apartment units and a childcare facility (approx. 241 sq m) in the form of 1 no. new residential block (5 - 9 storeys over lower ground floor level) with associated car parking, bicycle parking, public and communal open spaces, and all ancillary works on a site area of 1.144 ha.

The proposed development will provide for:

- 219 no. residential apartment units (109 no. 1-bedroom units, 100 no. 2-bedroom units and 10 no. 3-bedroom units) each with an associated private open space area in the form of a balcony/terrace.
- A raised pedestrian boardwalk along the western elevation of the proposed building.
- Open Space (approx. 2,778 sq m) is proposed in the form of (a) public open space (approx. 1,183 sq m) to the west of the proposed building fronting on to Dyke Road accommodating outdoor seating, planting, a sunken garden and pedestrian pathways and connections; and (b) communal open space (approx. 1,605 sq m) to the east of the proposed building in the form of a courtyard including outdoor seating, planting, a children's play area and outdoor sports equipment.
- A childcare facility (approx. 241 sq m) at ground floor level with dedicated external play area (approx. 61 sqm) at surface level.
- A total of 33 no. new car parking spaces at surface level to serve the proposed residential development (including 2 no. accessible spaces). In addition, 2 no. set down / drop off spaces are proposed to serve the childcare facility.
- A total of 465 no. bicycle parking spaces to include 330 no. standard residential spaces, 100 no. visitor spaces, 25 no. cargo bicycle spaces and 10 no. bicycle parking spaces dedicated for the childcare facility staff, all at surface / lower ground floor level.
- Vehicular access to serve the development is proposed via Dyke Road at 2 no. new locations along the western site boundary (to the north west and south west of the main development site). Pedestrian and Cyclist access is also proposed throughout the site via Dyke Road and a new pedestrian crossing is also delivered at Dyke Road. The proposed development will extinguish the existing pedestrian connection between Galway Retail Park and the subject site as part of wider proposals for local improvements to permeability.
- The removal of 389 no. existing car parking spaces (311 no. from Car Park 1 and 78 no. from Car Park 2) is proposed to provide for the new development. An overall total of 165 no. existing car parking spaces will be maintained in Car Park 2.
- The extinguishment of the main existing vehicular entrance serving Car Park 1 and Car Park 2 at Dyke Road with provision made for a new vehicular access point (to the south of the main development site) to facilitate continued access to existing Car Park 2 and the remaining car parking spaces (165 no.).
- The removal of existing bring bank facilities including 2 no. clothing banks and 8 no. bottle banks from Dyke Road.
- 2 no. telecommunications lattice towers (overall height 6.45 m and 7.67 m) affixed to the rooftop supporting 9 no. 2m 2G/3G/4G antennas; 9 no. 0.8m 5G antennas; 6 no. 0.3m microwave transmission links; together with all associated telecommunications equipment and cabinets. The proposed overall building height including the telecommunications towers is approx. 38.18 m (+43.18 AOD).

The development will also provide for all associated site development works, infrastructure, excavation and clearance works including decommissioning the existing Black Box Theatre waste water pumping station, provision for a new pumping station complete with below ground emergency storage, all boundary treatment/retaining walls, public lighting, internal roads and pathways, ESB substations, switch rooms, water tank rooms, cleaner store and WC, meter rooms, facilities management office, parcel store, comms rooms, plant room, generator room / associated plant space, bin storage, bicycle stores, hard and soft landscaping, play equipment, below ground attenuation tanks, nature based SUDs features, green roofs, roof plant, new and replacement site services and connections for foul drainage, surface water drainage and water supply.

2.0 Site Analysis

2.1 Site Context

The site is located along Dyke Road approximately 0.5 km North of Galway Town Centre, along the Eastern bank of the River Corrib and is abutted by the Headford Road to the south, the Galway Retail Park to the East, The Black Box Theatre to the North and Dyke Road to the West.

Headford Road to the South provides a primary connection Westward into Galway Town Centre, connecting with both the N6 and N84 national roadways just east of the site.

The Galway Retail Park directly addresses the sites Eastern Boundary, spanning both sides of the Headford road and is comprised of a variety of large retail stores alongside extensive Car Parking.

Just North of site lies the Blackbox theatre, here a wide array of performances such as concerts, musicals, and film screenings are hosted. Further north of the Blackbox, the Terryland Forest Park is found which is comprised of extensive and dense native tree planting that provides a rich mosaic of habitats for local wildlife.

The site faces onto Dyke Road which is a primary access way into Galway City by means of a two way road south from the Coolough and Menlough area. Along the West of the site, the road runs in close proximity to the existing natural stone dyke, with a linear buffer of grass, parkland tree planting and riparian vegetation creating a setback from the River Corrib.

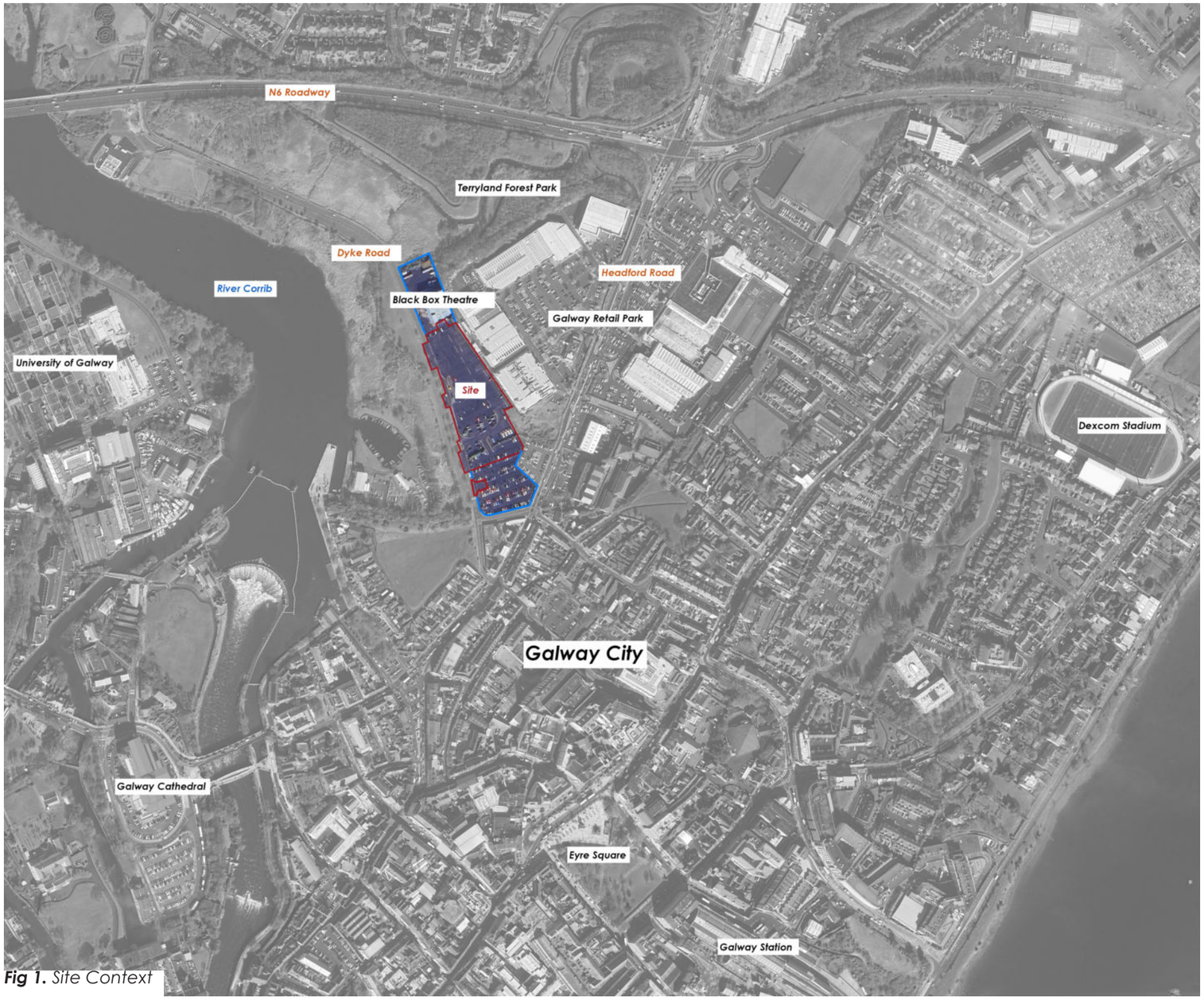


Fig 1. *Site Context*

2.2 Key Landscape Features of the Site

Topography:

The site slopes upward from North to south with an approximate level change of 2 meters over a distance of 180 m. Whilst the existing topographical profile itself does not present a major constraint to design, the allowances which have to be made in consideration of flood risk from the River Corrib have required the building finished floor level to be lifted to what would typically be the first floor level. Raising the building has left an undercroft space which will allow for flood water to run beneath and around the building without damage to the residential units. As a result of this, the landscape approach has had to be highly cognisant of flood risk, and its consideration has greatly influenced the development of the design.

The River Corrib and Dyke Road Dyke:

The River Corrib lies just west of the site, with a linear buffer along Dyke Road formed by existing tree planting and vegetation separating it from the site. The proximity of the Corrib has influenced both the functional and aesthetic considerations of the landscape design. Where possible, a naturalistic design style has been prioritised utilising natural forms which will relate to the riparian nature of the site surrounds. The functional requirement to accommodate for flood risk has also heavily influenced the way in which the landscape design has developed. The layout has evolved out of close collaboration with the civil engineers to ensure the impact of such an event can be reduced.

Existing Trees and Hedgelines:

There are no existing trees on the site, which is currently used for car parking and composed solely of impermeable hard landscape materials such as tarmac and concrete. There is existing hedging to the Eastern boundary and additional tree and hedge planting is proposed here to ensure that there is adequate screening from the adjacent Galway Retail park. Any existing non native species and bramblles along the eastern boundary will be removed. Consideration has been taken of the Terryland Forest park to the North with an emphasis placed on the specification of native Tree and Hedgerow species which will encourage the formation of wildlife corridors and provide habitat opportunities for local wildlife.

The river Corrib lies just 130 Metres West of the Site

Terryland Forest Park to the North of the Site

2.3 Existing Site Conditions

Sunlight and Wind.

The prevailing wind on the site is coming from a westerly direction. The impact of wind on the development has been considered in the landscape approach, with extensive tree planting toward the western site boundary with the aim of reducing the impact of wind and providing greater comfort for users of the public open space.

Topography.

The site slopes upward from North to South, with an approximate 2 metre level change over a 180 metre distance.

Surfaces and vegetation.

Impermeable surface

Existing Vegetation

Existing vegetation on the site is restricted to a narrow hedge running along the Eastern boundary. Native species within this existing hedge are to be retained, with all non natives and brambles to be removed. Any existing gaps are to be closed with fencing to match the existing.Furthermore, native hedgerow and tree Planting is proposed to screen views of the adjoining Galway Retail Park.

The surface of the site is comprised of impermeable tarmac throughout both the parking area and the adjoining pathways along Dyke Road.

2.4 Landscape Planning Considerations

The Galway City Council Development Plan 2023-2029 sets out a number of policies relevant to the landscape planning of the site. Following here are a selection of some of the most relevant. The site is zoned Category C1: Enterprise, Light Industry and Commercial, with the areas just North and West of the site zoned as RA Recreation and Amenity.

In the following section, the main policies of relevance to the landscape of this site are listed out in italics, together with the design response in blue

Climate Action 2.2 (8)
"Support the implementation of water management measures through mechanisms such as SuDS, rain water harvesting, use of grey water, water storage and nature based solutions to adapt to the impacts of climate change".

The landscape approach has been considerate of the need for sustainable water management practices on the site and has sought to implement these through the proposal of SuDs planting, permeable paving surfaces and a biodiverse green roof.

Green Network and Biodiversity 5.1 (3)
"Support the retention and enrichment of biodiversity throughout the city in recognition of the need to protect and restore biodiversity to increase the resilience of natural and human systems to climate change".

A strong emphasis has been placed on enhancing site biodiversity throughout the landscape approach. Native tree,plant and hedgerow species will be specified throughout the design to ensure that the scheme is beneficial to local wildlife, providing both corridors and habitat opportunities. Furthermore, pollinator friendly plant species will be specified to attract a wide variety of pollinators such as birds, butterflies and bees with areas of native wildflower meadow and a biodiverse green roof also proposed.

Green Network and Biodiversity 5.1 (5)
"Support climate action through implementation of nature based solutions that enhance biodiversity in the green network, including measures such as tree planting, SuDS, and the use of green infrastructure. Such measures will be informed by the Green Space Strategy".

Extensive planting of native tree and hedgerow species is proposed throughout the site, with SuD's considered in the provision of areas of rain garden planting as well as permeable paving surfaces and green roofs to reduce pressure on the local stormwater system. The wider green infrastructure network and proximity to both the River Corrib and Terryland Forest Park have been taken into account with the planting specification prioritising benefit to local wildlife and pollinators.

Green Network and Biodiversity 5.1 (7)
"Ensure sufficient recreation and amenity open space for the future development of the city"

The proposed landscape scheme has sought to provide recreational and amenity open space which is inclusive and encourages both passive and active uses with provision made for spaces to play, rest, walk and exercise. Emphasis has also been placed on providing extensive soft landscaped areas to ensure that a high quality of open space is provided throughout the development, that can be enjoyed by both the public and residents of the apartment complex.

Green Network and Biodiversity 5.1 (11)
"Support the Healthy Green Spaces initiative which seeks to improve the quality of green spaces in the city, to enhance climate change resilience, aesthetic value, biodiversity and improve public health and wellbeing".

The climate resilience, aesthetic value and biodiversity of the green spaces provided within the development are closely considered. The provision of native and pollinator friendly planting, implementation of SuDs measures and emphasis on providing multi-functional and high quality landscape spaces all relate to the Councils Healthy Green Spaces Initiative.

Green Network and Biodiversity 5.4 (3)
"Integrate existing trees and hedgerows on development sites where appropriate and require tree planting, as part of landscaping schemes for new developments.".

Extensive planting of native tree species are proposed throughout the site which will provide substantial ecological and aesthetic benefits as well as helping to better integrate the development into its surrounding context.

Community Spaces : Child Friendly City 5.6(2)
"Support the right of the child to play by ensuring the creation and maintenance of inclusive natural and built play areas within every community"

The scheme will provide a wide range of play opportunities both natural and built, that are inclusive and considerate of a wide age demographic.

3.0 Landscape Concepts

The landscape approach has taken much inspiration from the sites proximity to the River Corrib, with a preference for more fluvial and naturalistic shapes and forms which relate to the immediate context and that will contribute to the creation of a strong and unique sense of place. This design intent paired with the functional requirements of the site in response to the challenge of flood risk, seeks to create a place that is both unique and distinct with the aim of creating a landscape which will enhance everyday life for residents and those that interact with the landscape spaces.

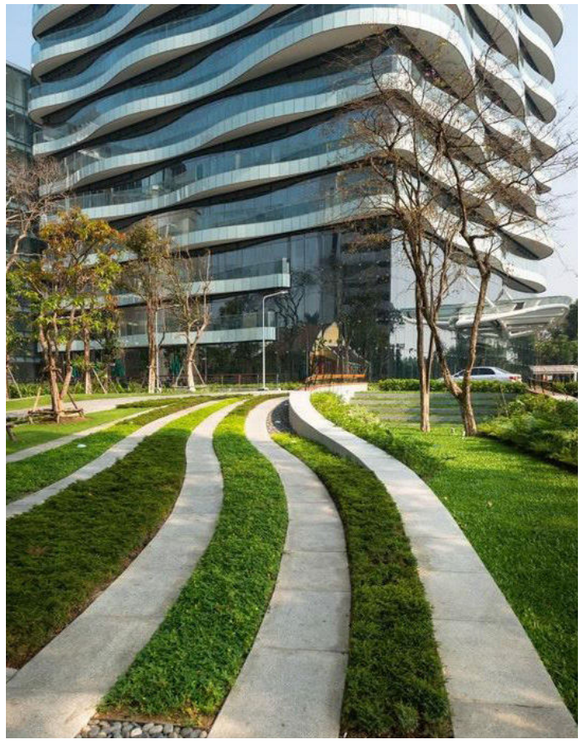
3.1 Design Reference - The River Corrib

The decision to integrate more natural forms and shapes into the scheme has been influenced by the sites location along the River Corrib. The use of naturalistic shapes both in the formation of soft and hard landscaped areas references this context giving the scheme a riparian character and creating a strong, unique and distinctive sense of place.

The design seeks to create a sense of movement and flow with ribbons of hard and soft landscape materials weaving between each other to create a naturalistic effect that ties with the surrounding context.

Integrating hard and soft landscape materials in naturalistic shapes to create a sense of movement and flow

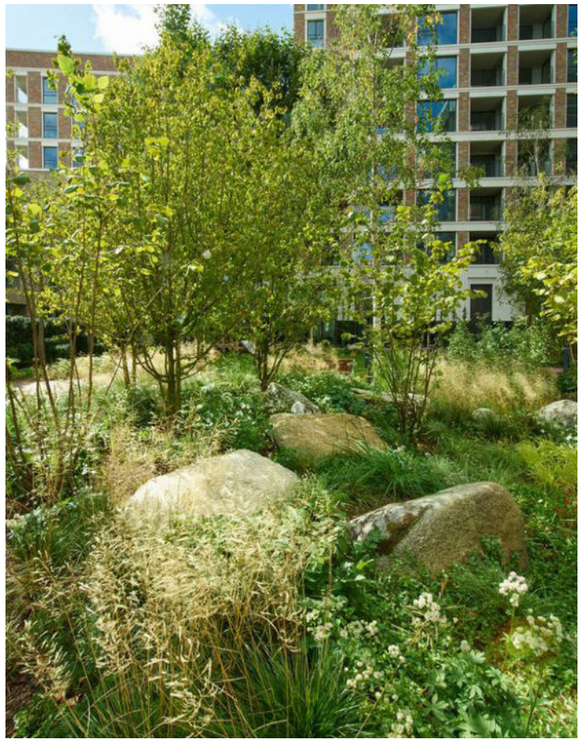
Ribbons of soft landscaping running throughout paving



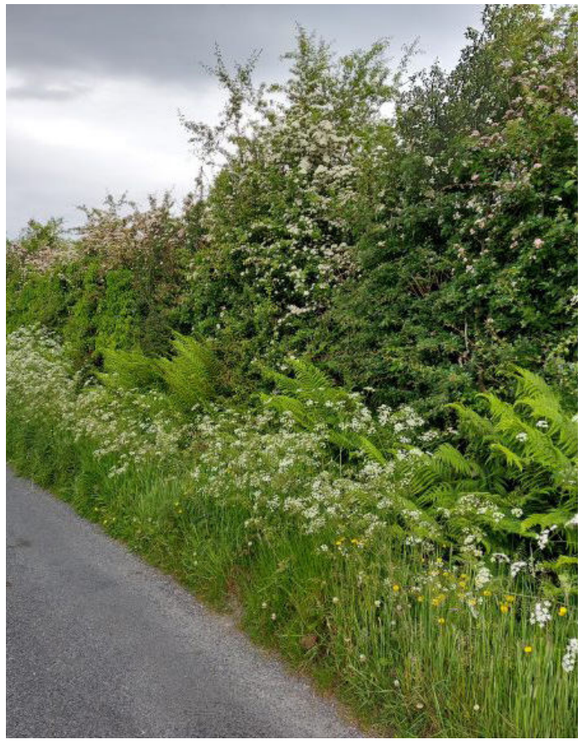
3.2 Design Reference - Naturalistic Aesthetic

The design seeks to introduce a naturalistic aesthetic that is reflective of the site's context, contributes towards biodiversity and promotes sustainable management practices. Native tree and hedgerow planting is proposed which will contribute to creating an appropriate sense of place as well as enhancing and protecting existing green infrastructure and the connection North Towards Terryland Forest Park. Furthermore, areas of the site are proposed as native wild-flower meadow which will provide a high ecological value, require low amounts of maintenance, and attract pollinators such as bees, birds and butterflies. Pollinator friendly planting will also be specified throughout the scheme where appropriate.

Meadow Grass with multi-stem tree planting throughout



Multi-stem trees, planting and boulders creating a natural feel



Mixed Native hedgerow to provide habitat and act as a corridor for local wildlife

3.3 Design Principle - Biodiversity and SUDS

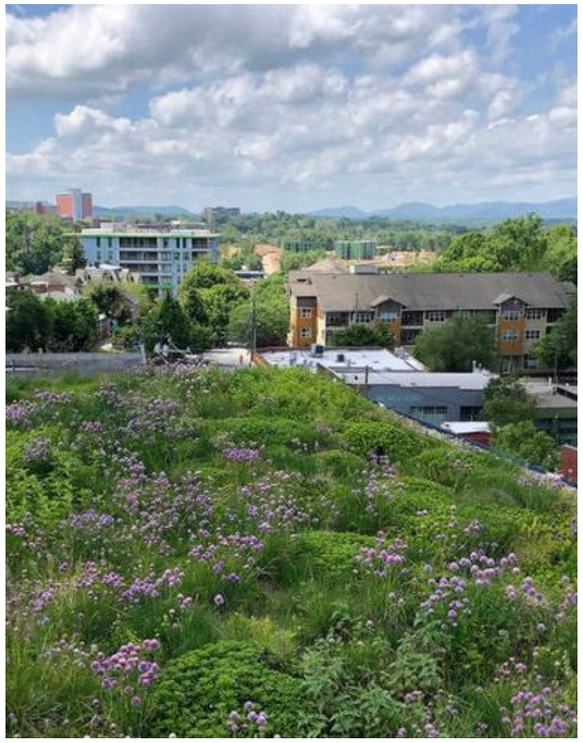
In choosing the planting palette for the development a strong emphasis will be placed on promoting biodiversity through the selection of pollinator friendly species and native meadow, trees and plants. The existing biodiversity baseline of the site is extremely low as it is almost wholly comprised of impermeable hard surfacing with only a very small amount of existing vegetation along its Eastern boundary. Therefore, the planting proposals will positively effect the biodiversity value of the site, with benefit for pollinators as well as potential new habitat opportunities for local wildlife.

As well as providing a high aesthetic value to the development, specific areas of the planting scheme will be proposed as flood tolerant species, which will contribute a SUDS function allowing surface water run off to drain into designated planted areas.

Furthermore, a large quantum of biodiverse green roof is proposed which will reduce run off from the building, relieving pressure on the stormwater system during heavy rainfall events. The green roof system proposed will allow for enhanced biodiversity with native sedum species, wildflowers and shrubs. For further information about green roof type please refer to the civil engineers infrastructure Report.

Where suitable, permeable hard landscape surfaces will also be proposed to parking areas and pathways in order to contribute to efficient and sustainable site drainage.

Example of a rain garden with flood tolerant planting species



Intensive Green Roof

Example of a permeable grasscrete surface

3.4 Design Principle - Play Areas, Natural play and Playful Space

As well as a formal play space, which will be equipped with high quality playground pieces, opportunities for playful activities will be provided at both the communal and public open spaces in a way that is integrated into the landscape. The intention behind a playful space is to introduce elements into everyday surroundings which encourage children to engage with imagination. Natural play is integrated into open spaces, using elements of nature such as boulders, mounding, trees and planting creating a sense of exploration and discovery.

Play spaces and recreational spaces are designed to be inclusive of all ages and abilities, with an emphasis on multi-functionality that will cater for an array of both passive and active uses. The position of the main play areas within the communal open space to the South-East of the building, provides a strong sense of security with good levels of passive surveillance from the residences allowing for play activities to be undertaken in a safe and secure environment.

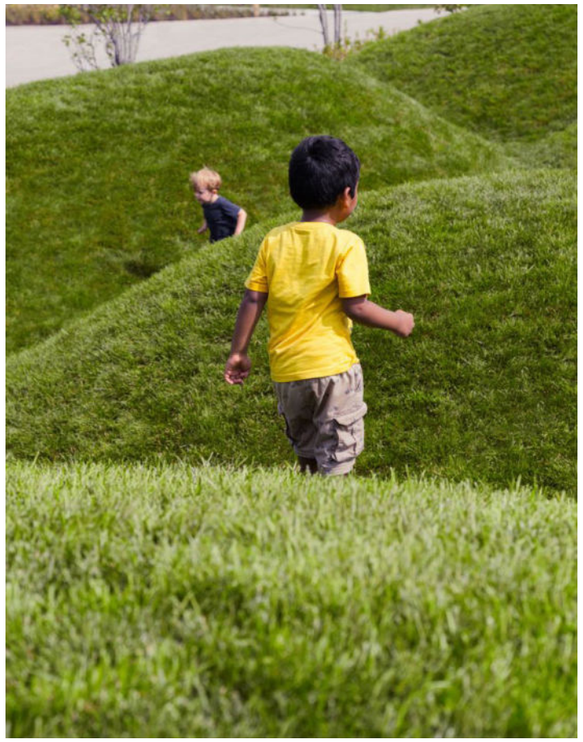
Smaller scale natural play opportunities such as stepping stones, boulders and logs are also proposed to the public open space along Dyke Road.

According to the National Play and Recreation Policies the best practice in play provision has been identified by the NPFA, PLAYLINK and CPC (2000) who emphasize the creation of rich and varied play environments. Such spaces should incorporate diverse physical features, like changes in level and natural elements (Earth,water,sand,trees) that inspire imagination and exploration.

Opportunities for physical challenges, movement, and sensory stimulation through activities like climbing, balancing, music making , and interacting with colors, shapes and textures, should be provided.

Play environments should also facilitate social interaction and provide opportunities to experience change in natural and built surroundings. The play spaces provided will be inclusive and considerate of the needs of neurodivergent and disabled individuals, ensuring an inclusive and engaging experience for all.

Secondary pathways and interaction between hard and soft landscape elements creating a sense of exploration



Changes in level to provide visual interest and play Opportunities

Built play equipment of high quality providing a variety of uses and activities.

4.0 Scheme Proposal

This section should be read in parallel with the Landscape Proposals. Please refer to landscape drawing nos.:

1911_PL_P_01- Landscape Masterplan

1911_PL_P_02- Landscape Plan: Ground Floor Level

1911_PL_P_03 - Landscape Plan: Roof Level

1911_PL_S_01 - Landscape Sections

1911_DD_01- Design Details : Soft Landscape

1911_DD_02-Design Details: Hard Landscape

4.1 Landscape Masterplan

Fig 2. *Landscape Masterplan*

Parking bays with permeable paving

Controlled Vehicular and pedestrian access

Street tree planting

Boardwalk access to ground floor level

Public Open Space 1183 sqm.

Native Hedgerow and tree planting to Screen Eastern Boundary

Proposed Rain Garden Planting to perimeter of building

Elevated boardwalk

Communal Open Space 1605 sqm.

Bank with native meadow, multi-stem and native tree planting

Public footpath upgraded

Controlled pedestrian Access

Proposed Substation

Proposed Location of pumping Station

Meadow verge to allow for level difference at redline boundary

4.1.1 Communal Open Space

The communal open space is located to the south east of the site.
The space is proposed to be multi-functional in its purpose with both active and passive activities encouraged and play opportunities provided throughout. Hard landscape materials will consist of resin bound to the main pedestrian pathways, safety surfacing to the formal play, outdoor exercise and basketball areas and grasscrete to allow for fire tender access. Secondary pathways of stepping stones are proposed to give the space an explorative character.

Planting proposals will include screening planting of trees and Hedgerow to the Eastern boundary, in order to ensure views into and out of the site to the adjoining retail park are reduced. Small multistem trees are proposed in closer proximity to the building and around the main pedestrian circulation routes.

Shrub planting will consist of ornamental species which will provide colour, texture and scent as well as shade tolerant and groundcover planting to the understorey of the proposed trees. Rain garden planting is proposed along the buildings edge.

Two sizeable mounds with tree planting to the centre of the design, provide further visual interest as well as an additional natural play element.

Rain Garden Planting

Outdoor Gym Space

Play Space

Mounding

Natural Play

Basketball Hoop

Stepping Stones

Cycle Parking

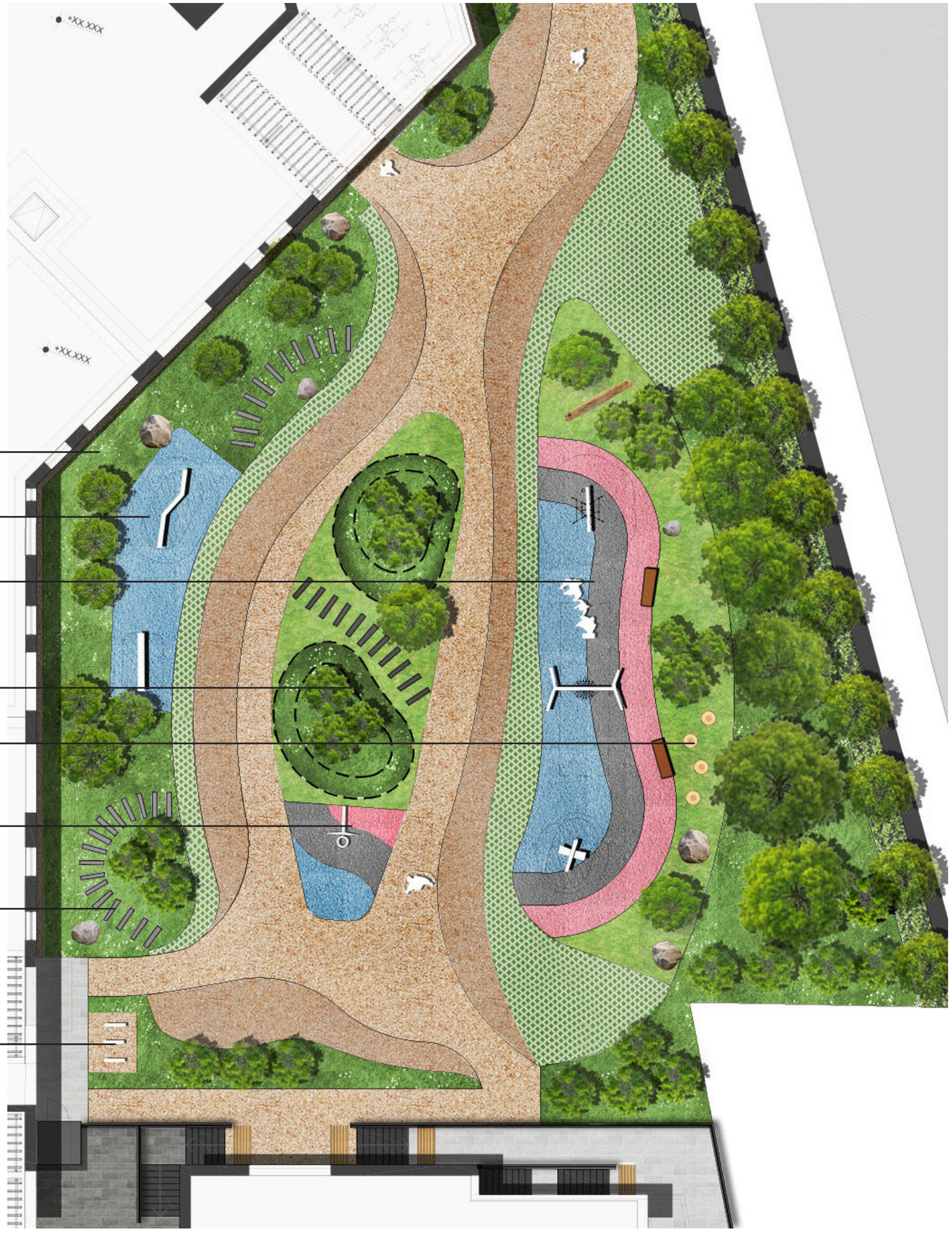


Fig 3.*Artistic Impression of Communal Open Space*

Fig 5. *Artistic impression of communal open space*

4.1.2 Public Open Space

The proposed public open space is located along the interface with Dyke Road. Here, two linking pathways from the main public footpath connect to a generous seating space, which is enveloped by tree planting. Hard landscape materials will consist of resin bound surfacing, and grasscrete to allow for fire tender access.

Tree planting proposals will include a combination of larger native trees as well as smaller multistems. Planting will consist of low maintenance native meadow and ornamental perennials which will benefit pollinators as well as rain garden planting which will continue beneath the boardwalk and along the buildings edge.

Smaller scale natural play opportunities are proposed off the main seating space in the form of boulders, logs and stepping stones.

To the North and South of the seating area, the primary objective is to screen the development from the adjoining Dyke road and provide habitat and corridor opportunities for wildlife.Here, extensive tree planting as well as a large areas of native meadow are proposed.

Fig 4. *Artistic impression of Public Open Space (Refer to landscape programme diagram for full extents of area)*

Fig 5. *Artistic impression of public open space (Boardwalk shown indicative, Refer to architects detail)*

4.1.3 Interface with Boardwalk

A key detail of the proposals is how the landscape will interface with the elevated boardwalk along the Western side of the building. Here, planting is proposed to be comprised of low maintenance native meadow to the boardwalks outer edge, with rain garden planting proposed to the areas beneath the boardwalk and towards the undercroft. Tree planting is also proposed to the boardwalks outer and inner edge to soften its appearance, creating a harmonious connection between the architectural design and surrounding landscape scheme.

Rain Garden example in Sheffield, UK

Native Meadow

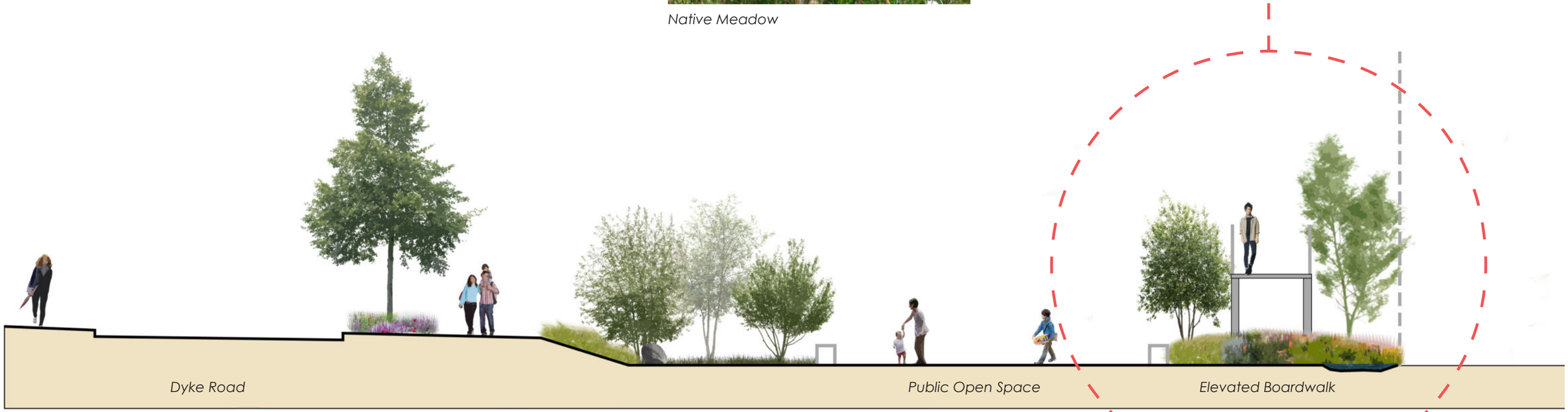


Fig 5. *Section showing interface with boardwalk*

4.2 Landscape Strategy - Programme

Elevated Boardwalk - Due to the potential for a flood event, residential units will begin at first floor level rather than ground floor. Along the Western side of the building access will be provided via an elevated boardwalk structure.

Disabled parking - There are 2 no. disabled car parking spaces provided. One to the Northern car park and one to the south.

Bicycle Parking- There is both standard,cargo and disabled bike parking provided with 110 no. short stay spaces, 8 no. cargo bike spaces and 2 no. disabled parking spaces. Further bike parking is provided within the building with a total of 465 no. bicycle spaces provided.

Platform lift - 2 no. platform lifts are proposed to allow for universal access to the upper level.

EV Charging - Electric car charging points are proposed to the Northern and Southern car parks.

Natural play- Natural play is proposed to both the communal and public open spaces.

Gently sloped access- The design has been considerate of universal accessibility and pedestrian comfort, with gently sloping access routes provided at several points around the building.

Stepped access - In order to efficiently deal with the required change in level there are also a number of stepped access points.

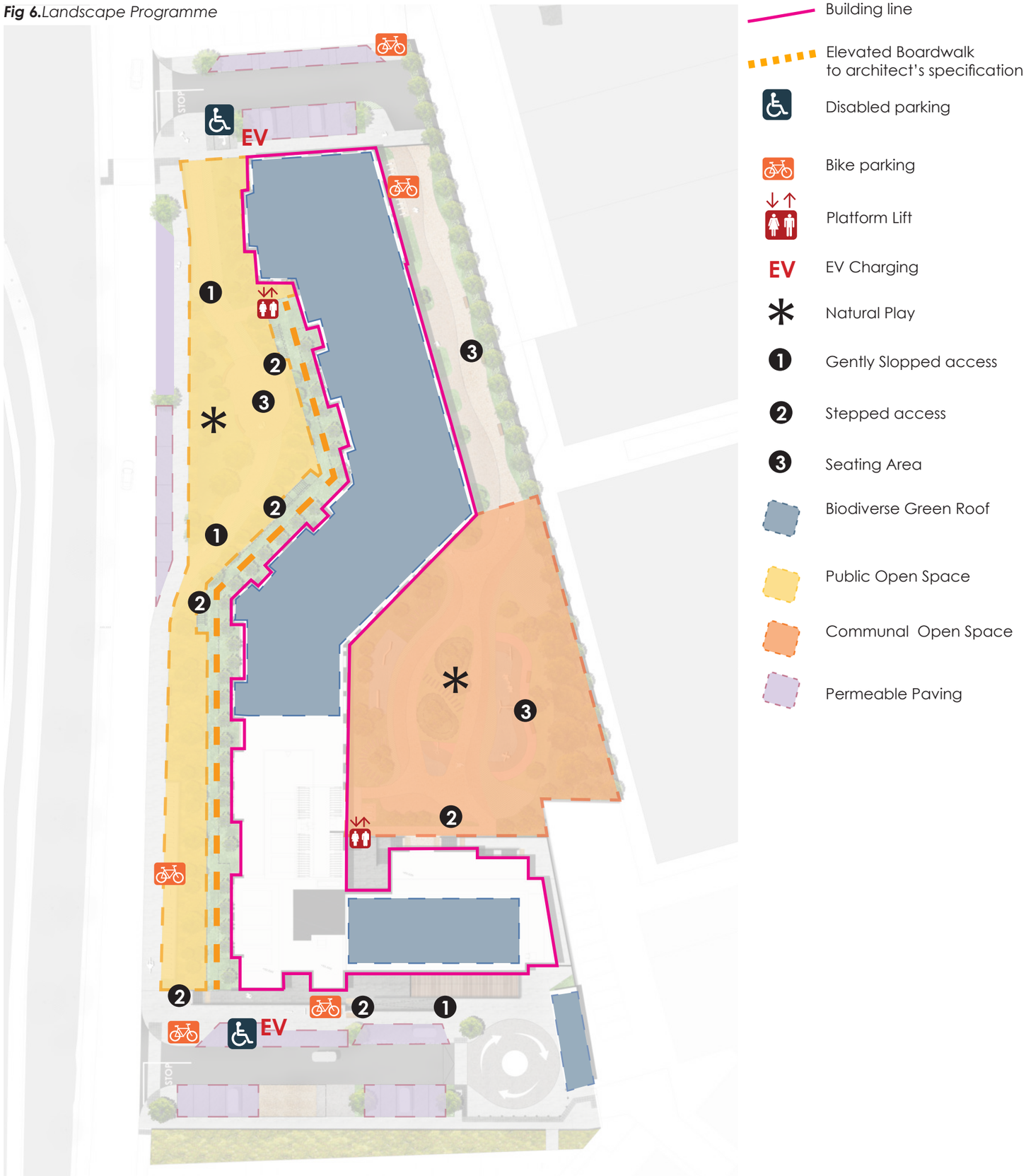
Seating areas - Seating has been provided at both the communal and public open spaces as well as along the access route to the Eastern side of the building.

Biodiverse green roof - A biodiverse green roof is proposed to the main residential block as well as the Substation within the southern car park. The Green roof area equates to Approximately 1870 Sqm.

Public and Communal open space- The main communal open space is located to the east of the building with public space along the western boundary. The communal open space area equates to 1605 sqm. with the public open space area equating to 1183 sqm.

Permeable Paving - Permeable Block Paving is proposed to all parking bays.

Fig 6.Landscape Programme



4.3 Landscape Strategy - Circulation

Consideration has been taken in providing universal access throughout the landscape design that complies with Part M standards.

Access to the public open space is provided via the upgraded Dyke Road pathway, and south from the Northern Car Park.

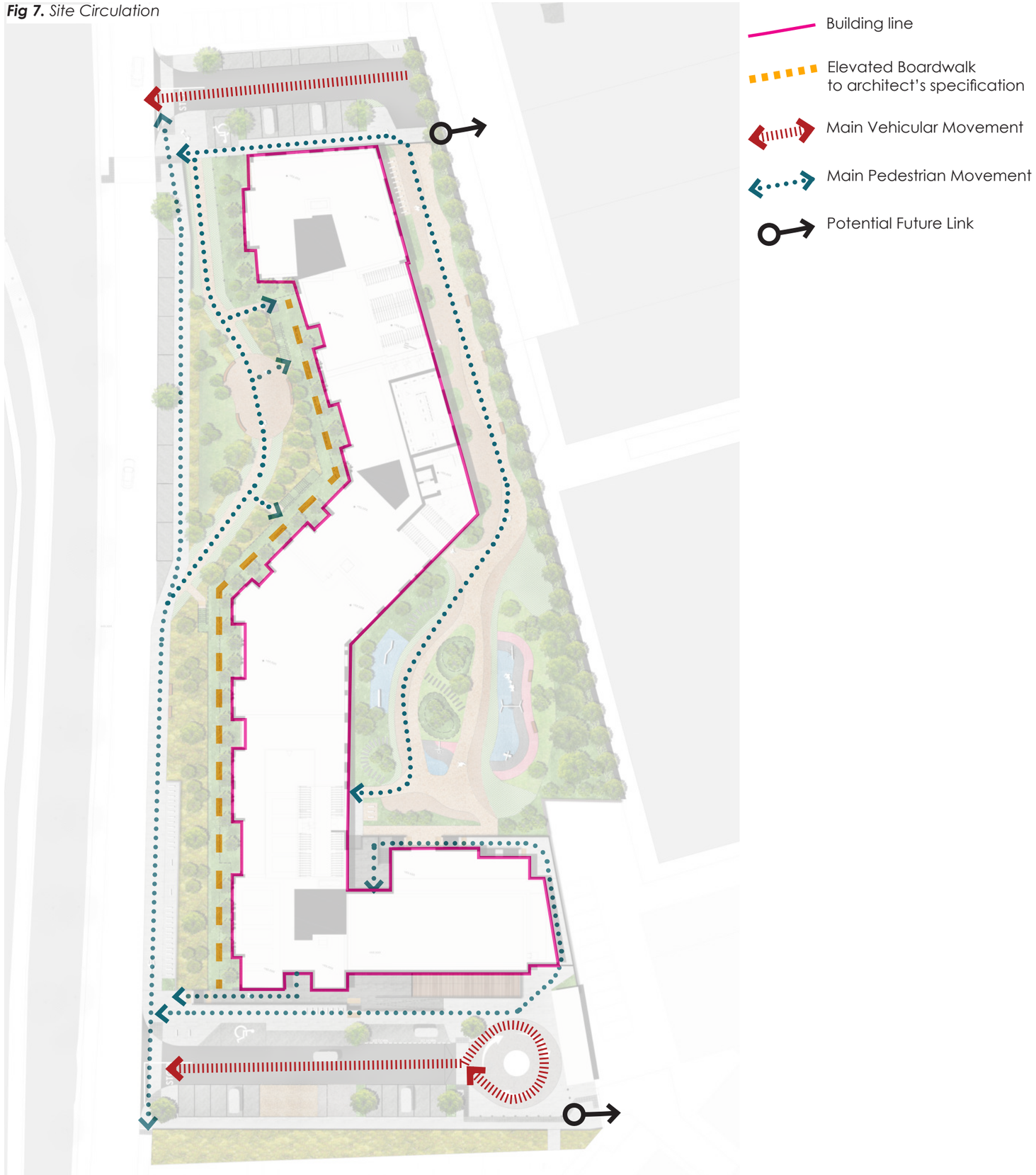
The communal open space and bike storage facilities are reached via a private access way along the Eastern site boundary, which has adequate width to allow for shared pedestrian and cyclist use.

Due to the requirement to allow for a flood event, living space is at approximately two metres above the surrounding ground level. As a result of this, stepped entry is required throughout the site, with two platfrom lifts allowing for disabled access. To the south of the site, the level change is addressed with the provision of steps and a ramp whilst on the Western side a raised boardwalk is proposed.

Vehicular circulation to the North operates with a turning head allowing vehicles to park, enter and leave the site efficiently.

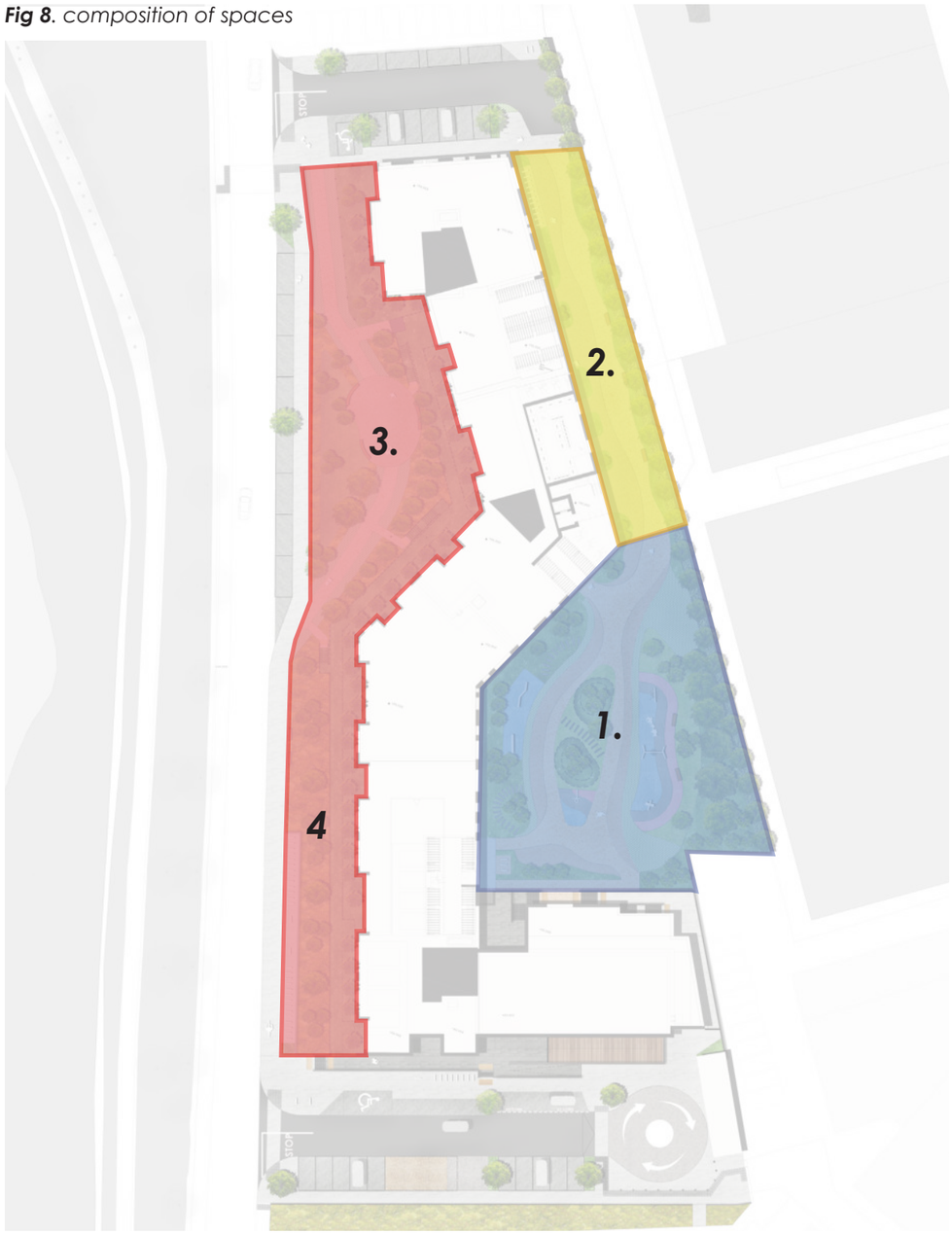
The Southern car park operates with a similar system, however a shared surface is proposed in the area of the turning head to give clearer pedestrian priority. Bollards are proposed to control the direction of circulation as well as parking numbers.

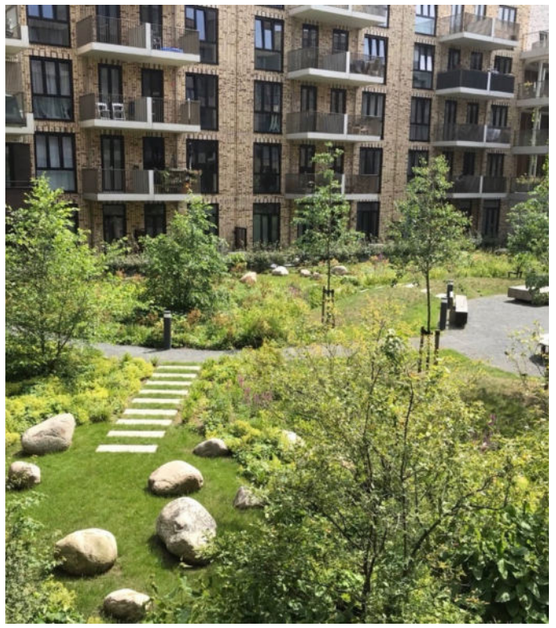
Fig 7. *Site Circulation*



4.4 Composition of Spaces

***Fig 8**. composition of spaces*





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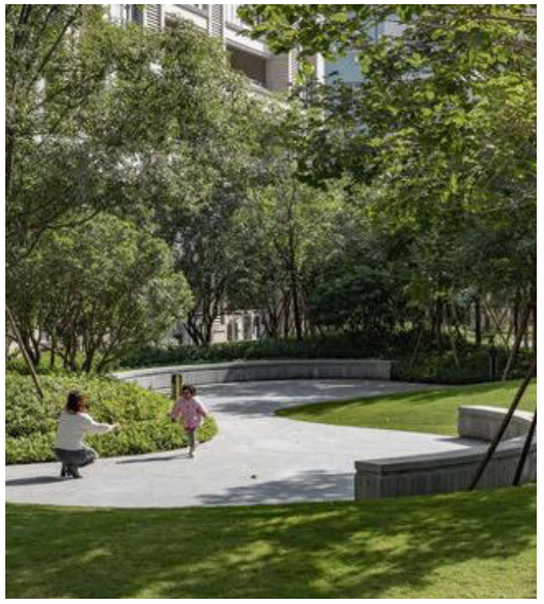

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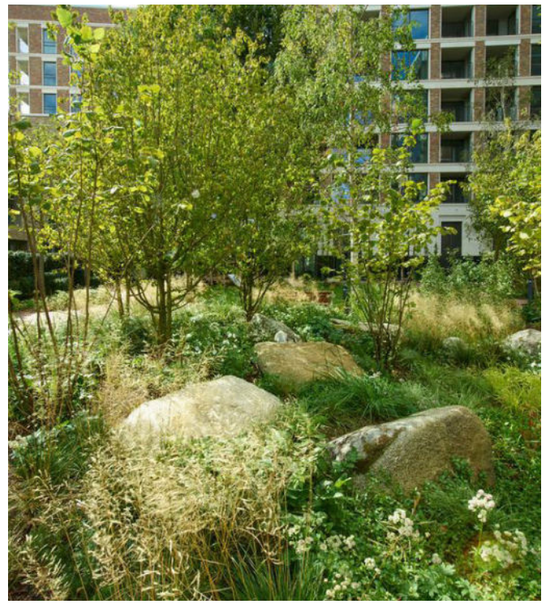


4.

The design intent is to provide a sequence of spaces that read cohesively and relate to one another aesthetically but which have varying characteristics that will provide a variety of landscape experiences and uses in a way which is cognisant of a wide demographic of abilities.

5.0 Scheme Proposal

5.1 Green Strategy & Planting Proposals

Planting proposals form a vital part of the strategy for the site, in accordance with County Development Plan objectives and national policy on biodiversity. Green Infrastructure is a term that is used to describe the inter-connected networks of land and water that sustain environmental quality and enhance the quality of our lives. The European Union's Biodiversity Strategy recognises the application of Green Infrastructure policies as a way to maintain biodiversity and ecosystems in the wider landscape. Green Infrastructure networks operate on many scales, from the national to local, and the protection and enhancement of these networks has the ability to positively affect communities into the future, especially in terms of climate change, sustainable development and spatial planning.

In the wider landscape, there are areas of woodland and habitat to the North of the site. The proposals for the site will create linkages and stepping stones for some species, notably Bats, birds and insects and the planting proposals are intended to benefit these species.

The planting proposals are aimed at gaining the maximum possible benefit for biodiversity and pollinators and are in accordance with the All-Ireland Pollinator Plan. This means that wherever possible, native vegetation will be proposed and where needed for functional or aesthetic reasons, non-native plants will be specified, with due care. Any non-native plants will be chosen to be non-invasive (i.e. the planting selection will avoid the use of all known invasive species, with reference to the latest lists of invasive species published by the National Biodiversity Data Centre) and will have value to insects and other fauna.

Ground layers in open spaces will primarily be wild grass and wildflower with amenity grass only in those areas designed for active use. A six-week mowing regime will be applied to the maintenance of peripheral amenity grass areas to ensure that they have maximum possible ecological and biodiversity benefit, allowing the grass and ground flora to develop. Active areas will need more frequent mowing, but margins will be maintained in accordance with the six-week guideline.

In boundary and edge spaces, native provenance wildflower seed mixes for bird and pollinator benefit are proposed. These will be cut no more than three times per annum, in accordance with best practice for biodiversity.

In the courtyards and planted areas, high-value and diverse pollinator plants are proposed to ensure that the site has benefit for insects and the ecologies that depend on them.

The Tree Planting Strategy for the site is to use a wide variety of native trees and non-native flowering and fruiting varieties that will encourage bat, bird and insect activity. Where possible, multistem and feathered trees will be utilised for additional visual interest and to create additional cover for wildlife.

A selection of indicative tree and plant species are shown on the following two pages. Native species are noted with an asterix *

5.1.1 **Indicative Planting Palette -** Trees

Prunus padus - Bird cherry *

Salix caprea - Goat willow *

Pyrus calleryana 'Chanticller' - Callery Pear

Coryllus avellana - Hazel *

Alnus glutinosa - Common Alder *

Tilia cordata - Small leaved lime

5.1.2 **Indicative Planting Palette -** Shrubs

The planting species proposed will seek to provide year round visual interest whilst also being considerate of variation in site conditions, pollinators and maintenance requirements.

Hedging along the sites Eastern boundary will be composed of native hedgerow species which will provide both screening from the adjacent Galway Retail Park as well as potential habitat and corridor opportunities for local wildlife.

Where appropriate, ornamental perennial planting will be implemented. This will provide variation in height, colour, texture and scent to the scheme. Plants will be chosen that will benefit pollinators such as butterflies, bees and birds.

In areas of shade around the building and beneath dense tree canopies, shade and groundcover planting will be proposed. This will create a low maintenance understorey layer of textural low growing planting.

Rain gardens are proposed along the Eastern and Western edges of the building. Here plants will be selected that can tolerate damp and wet soil conditions, allowing these areas to receive surface water runoff.

Hedgerow

Crataegus monogyna- Hawthorn *

Ilex aquifolium- Holly *

Prunus Spinosa - Blackthorn *

Ornamental + Pollinator

Achillea milefolium - White Yarrow *

Nepeta × faassenii - Catmint

Anemone x Honorine - Japanese anemone

Shade + Groundcover

Drypoteris affinis - Scaly Male Fern*

Sarcococca confusa - Christmas box

Luzula sylvatica - Great wood Rush*

Rain Garden

Veronica beccabunga - brooklime *

Ajuga reptans - Bugleherb*

Geranium Rozanne - Cranesbill

5.1.3 Biodiversity Enhancement Plan

In Reference to the Ecologists appropriate assessment screening report, " *The Proposed Development site is characterised by buildings and urban development, as well as some recolonising bare ground. The development site does not contain any habitats for which any of the listed European sites have been designated. Based on the desk study and site walkover, they do not contain any suitable Annex I habitat for any species for which any European sites have been designated". The habitat types within the site consist of Buildings and Artificial Surfaces (BL3) and Recolonising bare ground (ED3).* The ecologists Biodiversity Net Gain report also records that The area of the Proposed Development site is entirely composed of "*Built land and artificial surfaces (BL3), which has no ecological value and is therefore calculated to have zero Biodiversity Units using the Statutory Biodiversity Metric. Based on the current landscaping proposals for the site, the redevelopment would provide on-site biodiversity net gain of 4.0 Habitat Units, and 1.2 Hedgerow Units".*

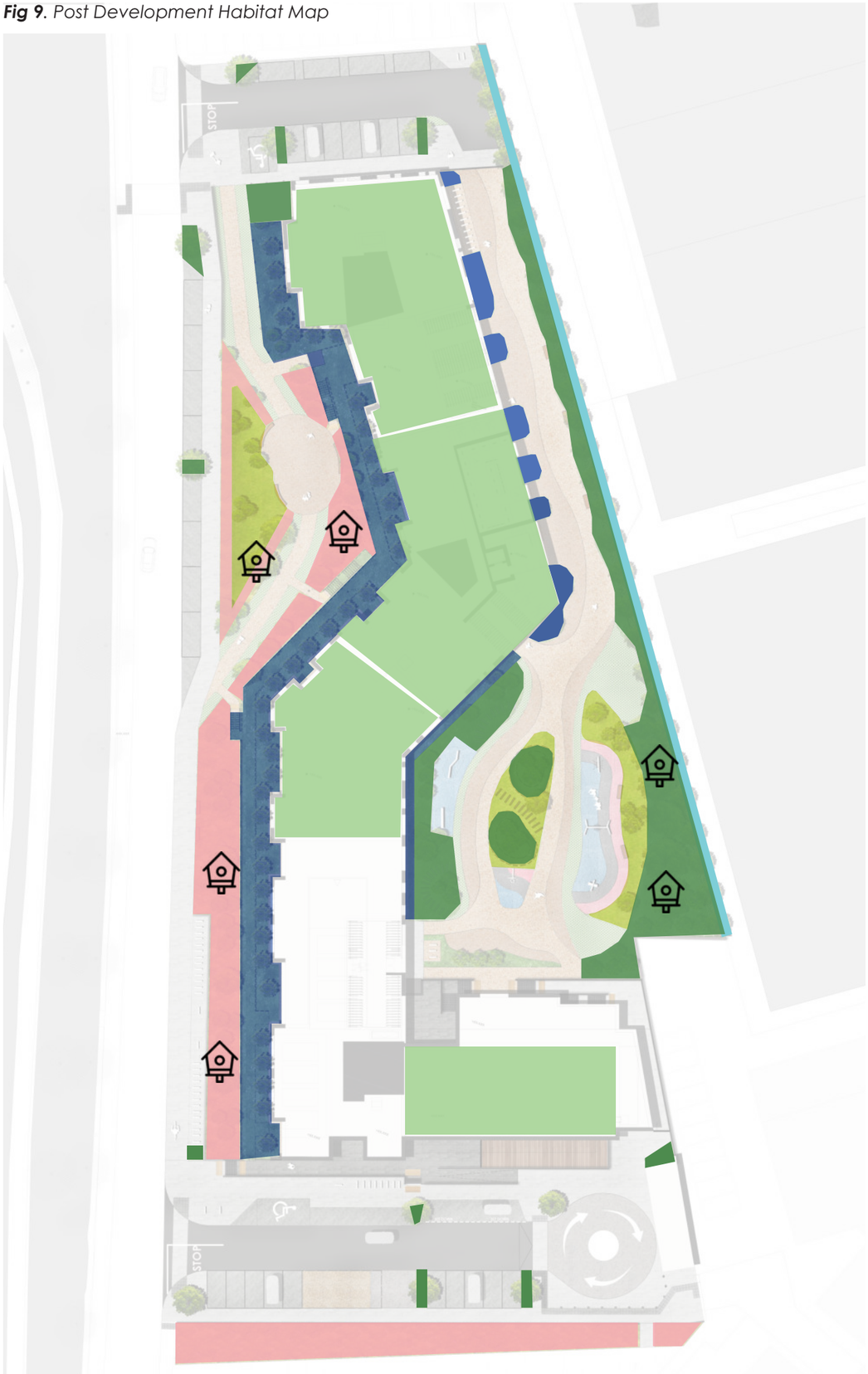
The Diagram on the right (With reference to the submitted biodiversity net gain report) shows a habitat map for the proposed development site, post development.

The NBDC database holds records of Annex II Lesser horseshoe Bat Rhinolophus hipposideros, within approximately 2km of the subject lands. In response to this, 6no. batboxes are also proposed across the site area.

Timber Bat box fixed to tree trunk

Native wildflower meadow

***Fig 9**. Post Development Habitat Map*



Post Intervention Habitats

- Amenity Grassland (GA2)
- Raingarden (GM1/FS1)
- Wildflower Meadow (GS2)
- Hedgerow (WL1)
- Ornamental Shrub (WS3)
- Green Roof (GA2)
- Indicative Bat Box Locations

5.1.4 Tree Management Considerations

Whilst not within the Site's boundary, the redline runs in close proximity to 4 no. lime trees along Dyke Road. Due to their position outside of the site boundary, a survey of these trees has not been undertaken. While their setback from the proposed site works means any damage to these trees is unlikely, it is recommended that a detailed survey be carried out by a qualified arborist prior to construction taking place. This way, appropriate tree management measures can be identified to fully ensure that the trees will remain in good condition both during and after the works are completed.
Any required tree protection works should be supervised by the arborist to ensure that all necessary procedures take place in accordance with best practice.

Existing Lime Trees Along Dyke Road

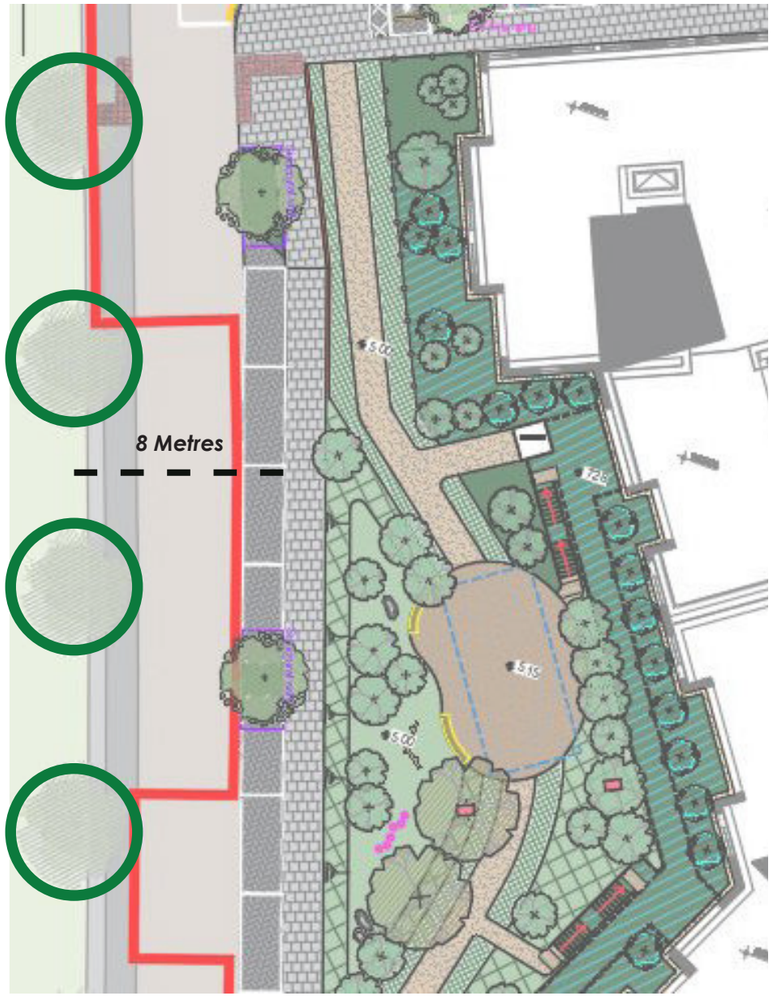


Fig.10 *Location of existing Lime trees in relation to site works showing setback distance*

5.2 Hard Landscape Materials

Material selection is an important part of placemaking. High quality and varied materials are proposed throughout the scheme.

External spaces are designed to minimise hazards or impediments to access or movement. Hard landscape surfaces are chosen for accessibility, robustness, slip resistance and to be free draining.

With regard to pedestrian areas, pathways are primarily proposed to be resin bound surfacing, in contrasting tones and patterns related to the landscape design concept. Concrete block paving is proposed to pathways at the car parking areas, areas leading up to building entrances and the public path along Dyke road. Permeable surfacing is proposed to all car parking spaces, and permeable grasscrete will be used in areas where fire tender access is required. Roadways are proposed to be tarmac and Play spaces will be surfaced with a safe surfacing material compliant with EN1176/1177.

Site furniture will include timber or timber composite seats with steel frames, standard stainless steel cycle stands, and flexible bollards to control vehicular circulation within the Southern car park.

Proposed Hard Landscape Material palette:

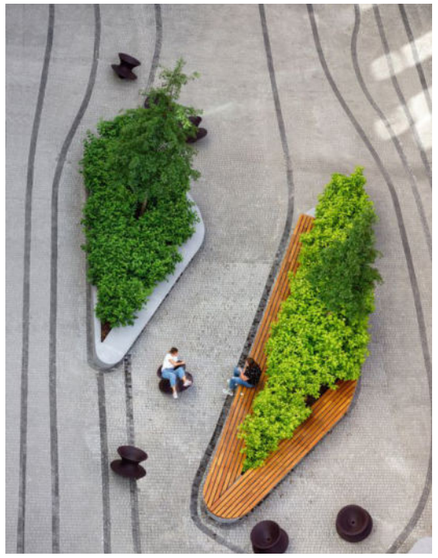
Resin Bound

Exposed aggregate

Concrete block paving

Grasscrete

Paving Precedents:



Furniture precedents

5.3 Boundary Treatment Strategy

The proposed boundary treatments are intended for the following purposes:

1. To assist integration of the development into the wider landscape character.

2. To screen views into and out of the development for both privacy and visual purposes

3. To provide corridors and stepping stones for wildlife

To assist integration of the development into the wider landscape character

The proposed boundary treatments to the West and East of the site composed of native tree and hedgerow planting will assist in better integrating the development with the surrounding landscape context and character.

To screen views into and out of the development for both privacy and visual purposes

The proposed boundary planting will screen views into the site providing greater privacy for residents of the development. The buffer planting proposed will also reduce the visual impact of Dyke road to the West and the Galway Retail park to the East looking outward from the site.

To provide corridors and stepping stones for wildlife

The boundary proposals for the East and West of the site will create linkages and stepping stones for wildlife, in consideration of areas of ecological importance such as Terryland Forest Park just North of the site.

- Native species within existing hedge to be retained, with non natives to be removed. Any existing gaps in the boundary to be closed with fencing to match existing and native hedgerow and tree species to screen.

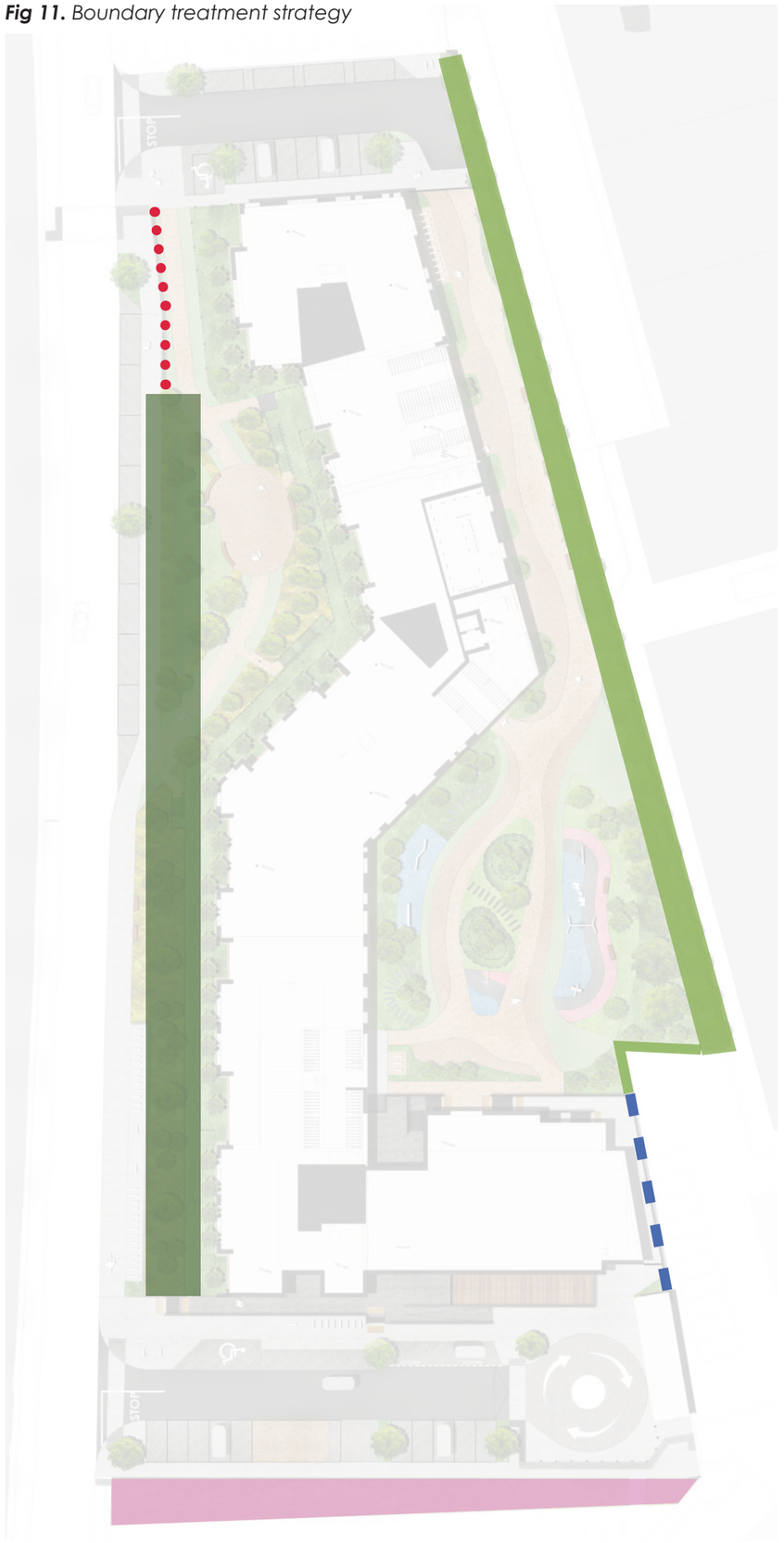
- Multi-stem and parkland tree planting to screen views in and out to Dyke Road.

- Meadow verge at redline boundary to allow for level change at interface with phase 2 site

- Retaining wall topped with Railing

- Retaining wall (Max 600 mm) to allow for fire tender access. Topped with railing for fall protection.

Fig 11. *Boundary treatment strategy*



The Images above show the existing vegetation along the sites Eastern boundary. The existing hedge is composed of species such as *Escallonia, Buddleia, Rubus* and *Salix*. All non-native species and bramble are to be removed. The existing boundary fence is almost completely screened or overgrown with a number of openings or breaks which connect from the car park into The Galway Retail Park.

5.4 Future Links and Connections

The scheme has been considerate of the planning context and the need to be cognisant of potential future links and connections.

1.To the Northeast of the site there is scope for a North-South pedestrian & cycle connection to Headford Road subject to future agreement. The Eastern boundary treatment has been considerate of this with potential for a portion of the proposed hedgerow to be removed to allow for permeability.

2.Furthermore, a similar opportunity presents itself to the South of the site, with opportunity for a further eastward connection towards Headford Road and the existing Galway Retail Park through the permitted student accommodation scheme (Planning Ref.20184)

Fig 12. *Future Links and Connections*

End.