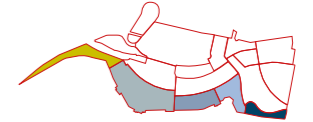


6.12 River wall safeguarding



Wider connections

Along the riverfront, two areas of the masterplan have been identified to have potential for the provision of river-based connectivity:

A / B / C

River Lea crossing

- A pedestrian and cycle crossing over the River Lea would connect the masterplan and new DLR station to the Goodluck Hope development and Trinity Buoy Wharf.
- A new crossing over the Lea could land in one of three potential sites between plots S and T, wither in a Trade Garden or Dock Garden.
- Assumptions have been based on an existing crossing from City Island to the Limmo peninsula.

D / E

River Bus jetty

- A new jetty into the Thames would provide cross-river and up/down-river connections for the Thames Clipper or similar River Bus services.
- The jetty could provide access to the river allowing for water-based activities such as sailing or kayaking.
- Assumptions have been based on the Royal Wharf River Bus pier recently constructed down-river of the site.



Illustrative landscape masterplan showing potential connection points on the riverfront



Existing River Lea showing potential bridge landing points



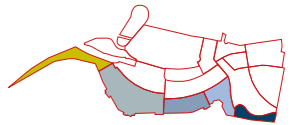
Lea crossing at City Island



New River bus jetty at Royal Wharf Pier



Existing Victoria Waterfront showing potential River bus connection points



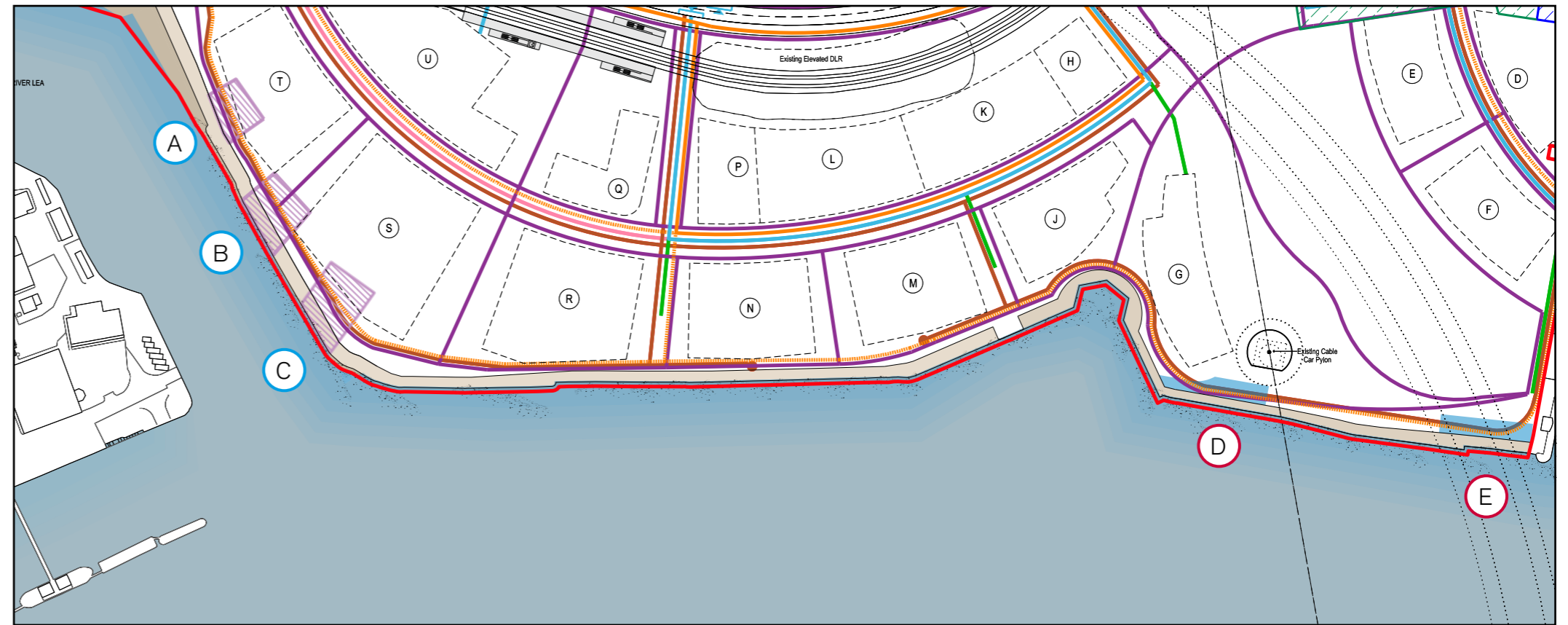
Control by Parameter plans

The masterplan Parameter Plans define, on drawing 2693-A-SL-011-xx-05, three areas of safeguarding for potential bridge landings adjacent to the River Lea, and two areas of safeguarding for a new jetty to serve River Bus connections along the River Thames.

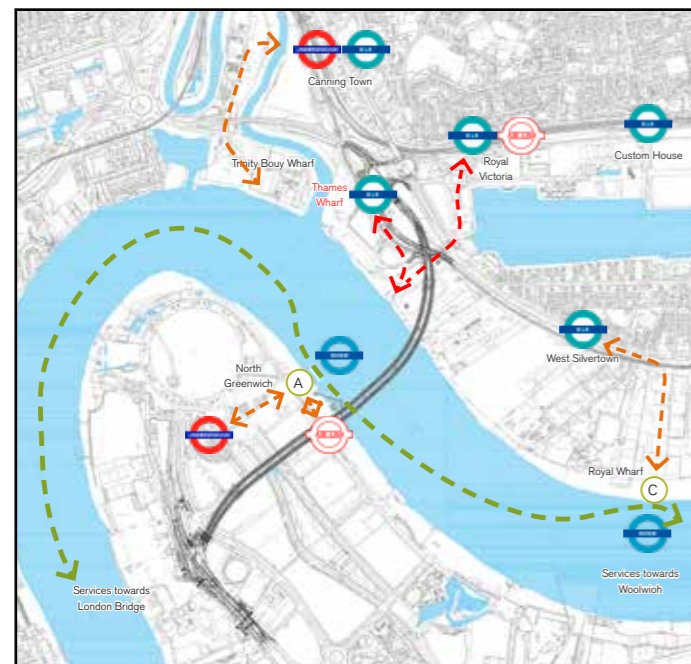
The safeguarded zones allocate potential sites for future infrastructure links, and protect the riverfront from any permanent structures being erected which would compromise the potential for the infrastructure to be installed.

Diagrams (below right) have been prepared to demonstrate that the riverfront safeguarding can be achieved without compromising the building plot parameters.

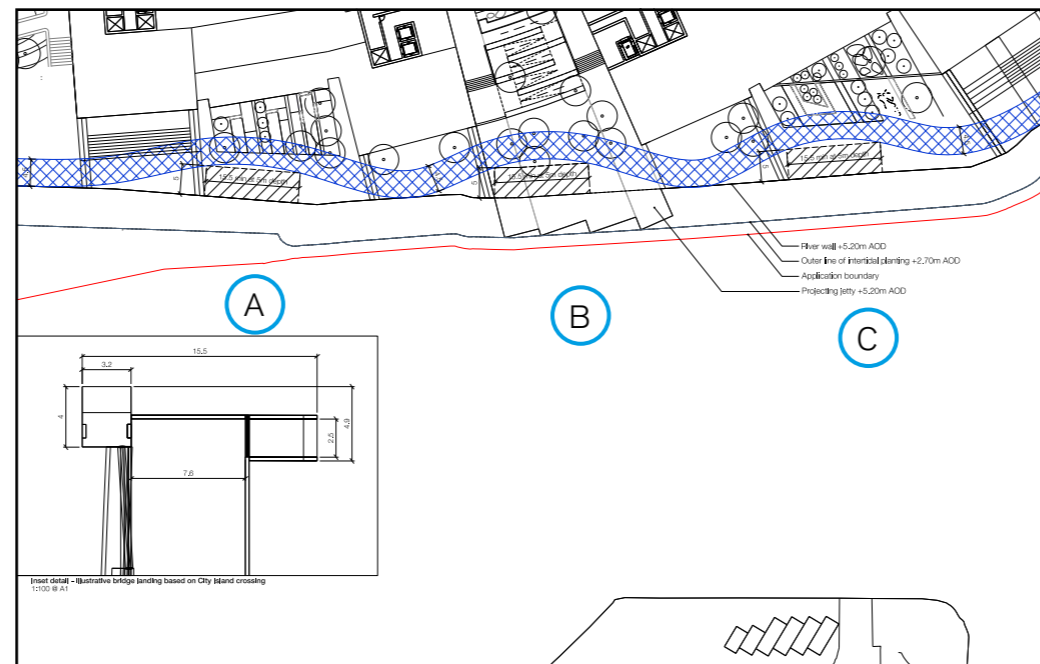
The design and coordination of any potential connection will be subject to a detailed planning application, and must not restrict the access, inspection and maintenance of the river wall flood defence line, or pedestrian, cycle and emergency vehicle access along the riverfront.



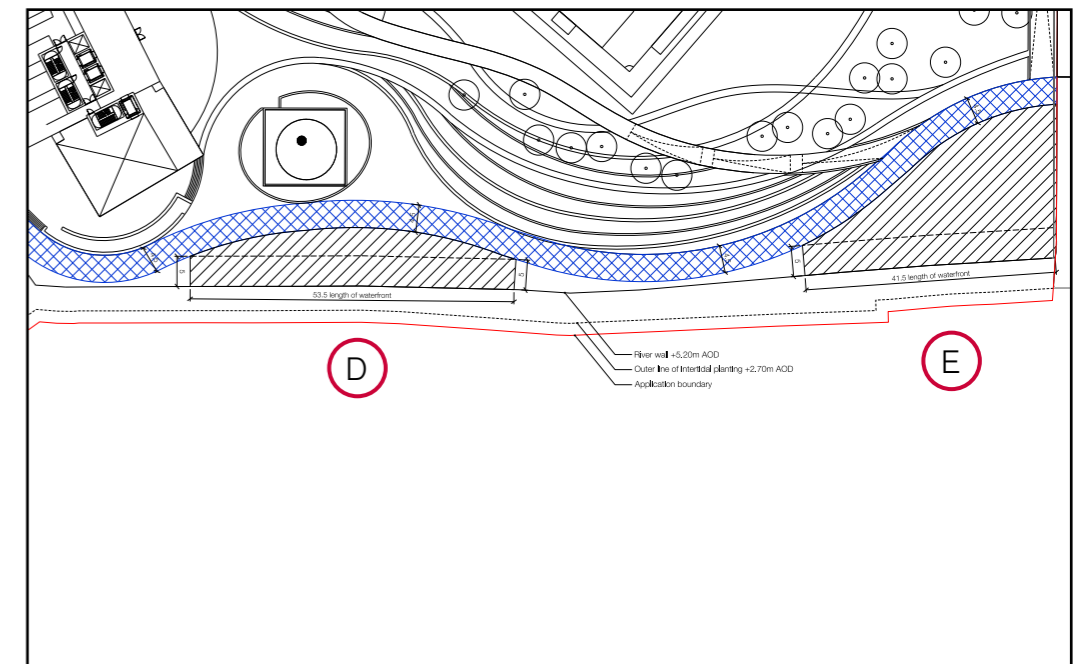
Extract from Parameter plan 2693-A-SL-011-xx-05 showing safeguarding zones for Bridge and Jetty landing points



Locations of existing and potential river bus connections

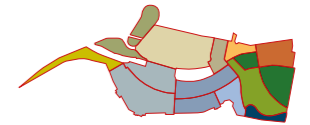


Detail extract showing safeguarding zones for Lea River crossing between plots S and T



Detail extract showing safeguarding zones for Jetty landing along Dock Park river frontage.

6.13 Amenity and open space strategy



Residential amenity space requirements are a product of the expected population and dwelling mix. The proposed mix will provide 5,000 homes. With no specific guidance available from the GLA or borough, the following assumptions have been made:

- Minimum total amenity space for family dwellings: 20sqm/home
- Minimum total amenity space for smaller dwellings: 15sqm/home

Amenity space provision

Amenity space will be provided in a hierarchy of private and public space:

Private amenity space **36,300sqm**

- Each home will be provided with private amenity space in the form of a balcony or terrace directly accessed from the dwelling to comply with Nationally Described Space Standards. An average of >7sqm per home is assumed.

Semi-private amenity space **12,347sqm**

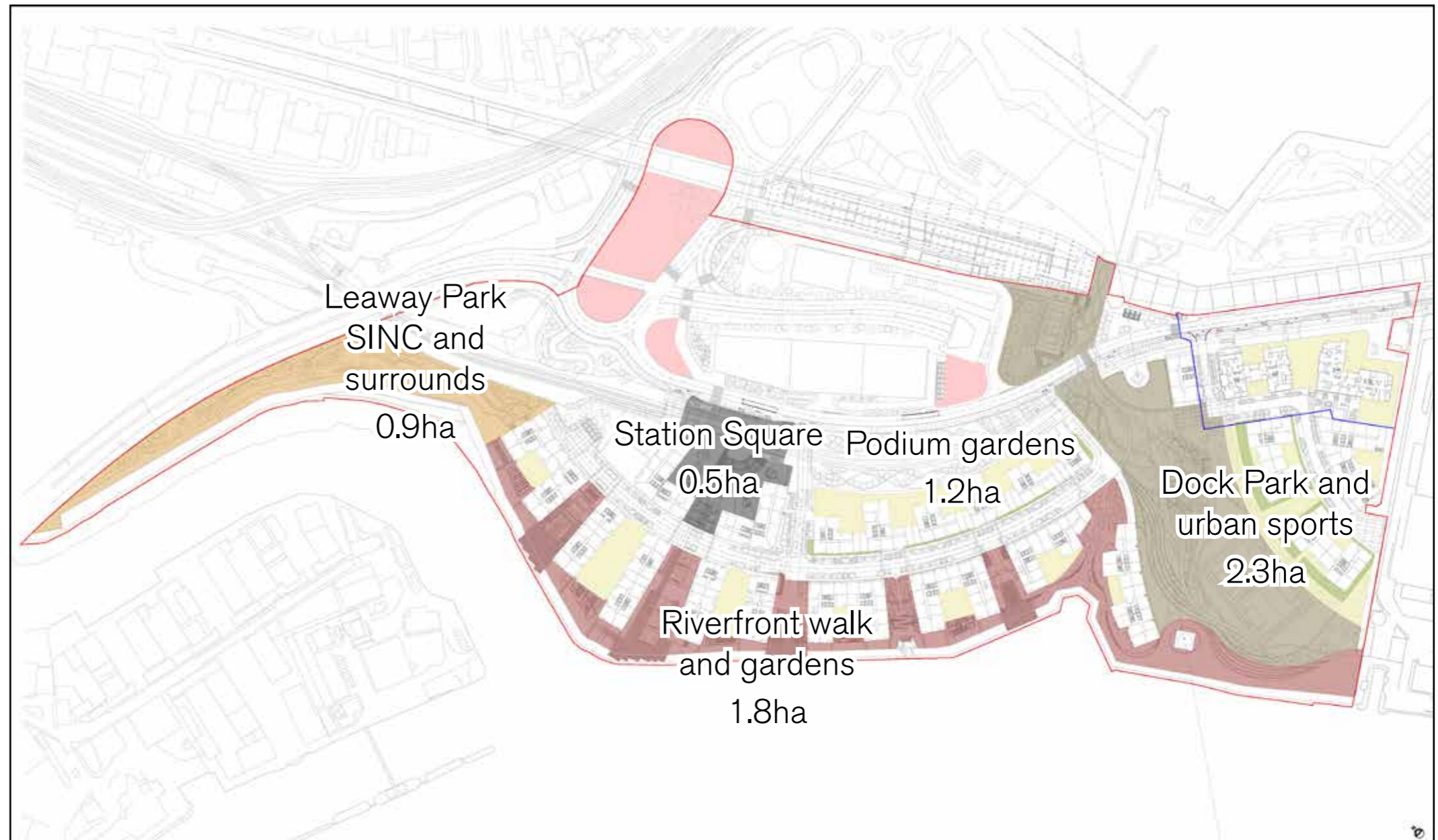
- In addition, most of the homes will have access to semi-private shared gardens, typically raised up to podium level.

Publicly accessible amenity space **62,130sqm**

- Finally, a significant area of publicly accessible open space will be provide for the benefit of residents and the wider community.

Total residential amenity provision **110,777sqm**

- The combination of private, semi-private and publicly accessible open space will result in a total residential private and shared amenity area which will meet and exceed requirements for a development of this nature.



Amenity and open space distribution



Recreation in the local area

In addition to the publicly accessible spaces highlighted there is amenity space in close proximity consisting of the following:

Royal Docks

The local area benefits from the fantastic resource of the Royal Docks. On the two bodies of water, it is possible to take part in:

- Open water swimming
- Sailing
- Wakeboarding / waterskiing
- Rowing
- Dragon boat racing
- Canoeing / kayaking
- Power boating

A sandy beach is installed seasonally at the westernmost point of the docks, connected to the masterplan by the Dock Link.

Kier Hardie Recreation Ground

Within a 10 minute walk of the site, the Kier Hardie Recreation Ground features:

- Five-a-side football goalposts
- Floodlit MUGA area with hoops and goals
- Safety surface play areas with sand and water
- "Trim trail" fitness play equipment
- Open lawns for informal sports

Lyle Park

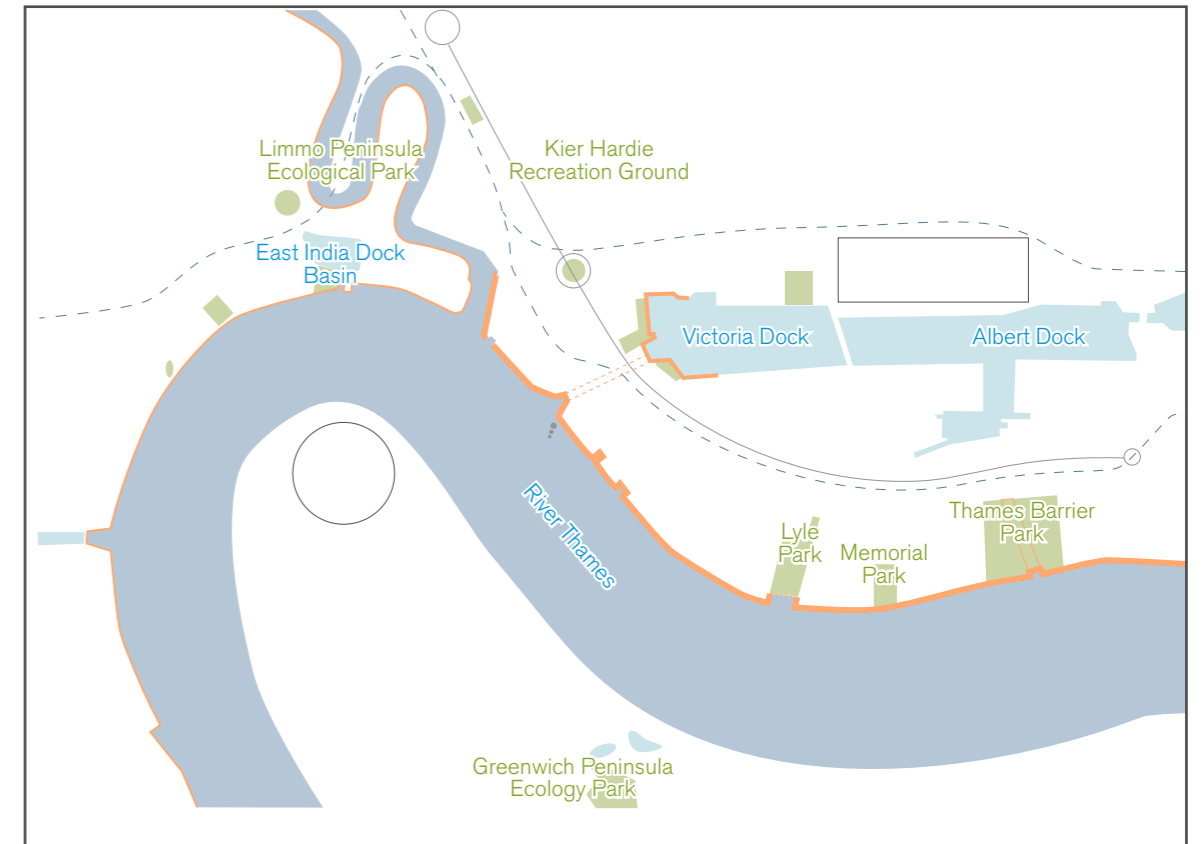
Within a 15 minute walk of the site, Lyle Park is divided into two key areas and features:

- Full size grassed football pitch
- 2 hard-surface tennis courts
- Play space
- Ornamental gardens

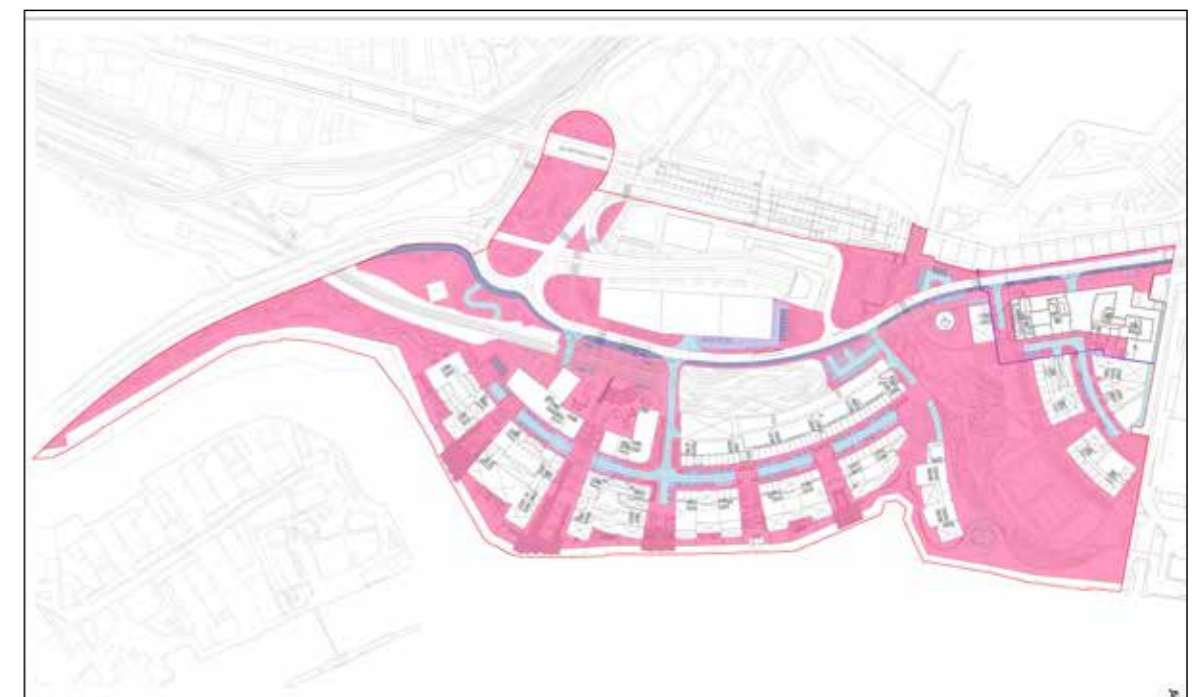
Thames Barrier Park

Within a 20 minute walk of the site, Thames Barrier Park is a significant public open space, featuring

- Ornamental sunken gardens
- Children's play space
- MUGA
- Outdoor gym equipment
- Open lawns for informal sports
- Cafe with toilet and shower facilities



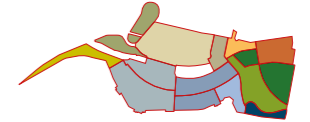
Neighbouring amenity spaces



Public realm within the masterplan

- Public realm - Pedestrian
- Public realm - Cycling
- Public realm - Roads
- Public realm - Parking

6.14 Sports and play



The masterplan will compliment the local area by providing a number of opportunities for formal and informal sports and recreation as part of encouraging an active lifestyle.

The GLA has guidance (Policy S5) on sports and recreation facilities, stating that new residential development proposals should:

- Increase or enhance the provision of facilities in accessible locations, well-connected to public transport and link to networks for walking and cycling
- Maximise the multiple use of facilities, and encourage the co-location of services between sports providers, schools, colleges and other community facilities
- Support the provision of sports lighting within reasonable hours where there is an identified need for sports facilities and lighting is required to increase their potential usage, unless the lighting gives rise to demonstrable harm to the local community or biodiversity

Play space requirements

Play space requirements are a product of the expected population and dwelling mix. For the proposed mix of 5,000 homes, the child yield is assumed to be 2,261.

The GLA has guidance (Policy S4) which states that new residential development proposals should:

- Increase opportunities for play and informal recreation and enable children and young people to be independently mobile
- Incorporate good-quality, accessible play provision for all ages, of at least 10 square metres per child that:
- Provide a stimulating environment
- Be accessed safely from the street by children and young people independently
- Form an integral part of the surrounding neighbourhood
- Incorporate trees and/or other forms of greenery.
- Incorporate accessible routes for children and young people to existing play provision, schools and youth centres, within the local area, that enable them to play and move around their local neighbourhood safely and independently
- Incorporate incidental play space to make the space more playable.



Sports and play

Play proposal

	Informal Play 0-11 Play Areas 19,484 m2 total area
	Formal Play 0-11 Play Areas 8,284 m2 total area
	Formal Podium Play 0-5 Play Areas 3,230 m2 total area (assumed third of total podium area)

Total Play
0-11 Play Areas
31181.19

Minimum GLA requirements
under 5 yrs: 10382.7
5-11 yrs: 7581.1
12+ yrs: 4657.3
Total: 22606.1

Coverage areas

- 100m radius coverage area
- 100m radius coverage area
- 100m radius coverage area

- ① MUGA ball court
- ② BMX pump track
- ③ Stepped seating / equipment pavilion
- ④ Climbing features
- ⑤ Dock Park fitness trail
- ⑥ Dock Park formal playground
- ⑦ Dock Park informal playground
- ⑧ Lawn sized to 2 5-a-side pitches
- ⑨ Leaway Park
- ⑩ School MUGA

Play space provision

Play space will be provided across the masterplan within a mix of semi-private and public areas, providing discrete play opportunities for residents, as well as wider community benefits. The strategy for play within the masterplan has been considered to align with GLA guidance.

Local Areas for Play (LAP)

- Secure LAP for under fives will be provided very near to homes, typically within semi-private podium residential amenity spaces or designated areas in publicly accessible gardens.
- LAP are designed for children who must be supervised at all times.

Locally Equipped Areas for Play (LEAP)

- Targeted at children between 5 and 11 years old, these designated areas are provided in publicly accessible gardens and provide opportunities for play for children who are able to play independently with little or no supervision.
- LEAP are located a short walk, typically within 10 minutes, of residential building entrances.

Neighbourhood Equipped Areas for Play (NEAP)

- Targeted at children over 11 years old, these areas are provided in publicly accessible open space, and provide opportunities for play for older children who are able to play independently with little or no supervision.
- The masterplan has been designed to integrate playable features of landscaping for informal play, as well as more formally clustered play with larger equipment and safety surfacing.
- NEAP facilities are located a short walk, typically within 15 minutes, of residential building entrances.



Natural play



Sports equipment



Wetland habitats



Formal play equipment



Fitness equipment



Formal play equipment



Climbing equipment



MUGA pitch



Sports pitches

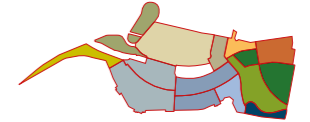


BMX pump track



Natural climbing equipment

6.14 Sports and play



Running/Fitness Trail

As part of the sport and play design, running routes have been planned in and around the site to show healthy living options for the local community.

A primary circuit of 2.5km allows for easy tracking of a standard 5km or 10km distance by running laps. Around the trails, places to rest or take on water will be provided, and distance markers could guide runners on their way.

Outdoor fitness equipment is proposed for the Dock Gateway, giving the possibility for resistance and cardio training to compliment a running circuit.

Walking and cycling

The masterplan has been designed to encourage walking and leisure cycling, both within the development and beyond. The streets have also been widened in most cases by 1.0m in addition to cater for easier cycling movements.

With the creation of a segregated cycle path along Dock Road and further linkages to major cycle routes including National Cycle Network Route 13 connecting Tower Bridge with Fakenham in Norfolk.

The site is ideally linked to provide formal dedicated and informal cycling routes along the streets and river walk.



Running routes

ROUTE	ROUTE LENGTH (APPROX)
Primary running route	2.50 Km
Short route A	1.00 Km
Short route B	1.25 Km
Off site route	0.80 Km
Alternative park routes	NA
Cycle route - designated cycle lane	
Cycle route - on road	

6.15 DCO / tunnel works

A large portion of the site proposals and construction phasing is dependent on the delivery and completion of the Silvertown Tunnel. Much of this involves the public realm experience when walking through to the riverside mixed use community.

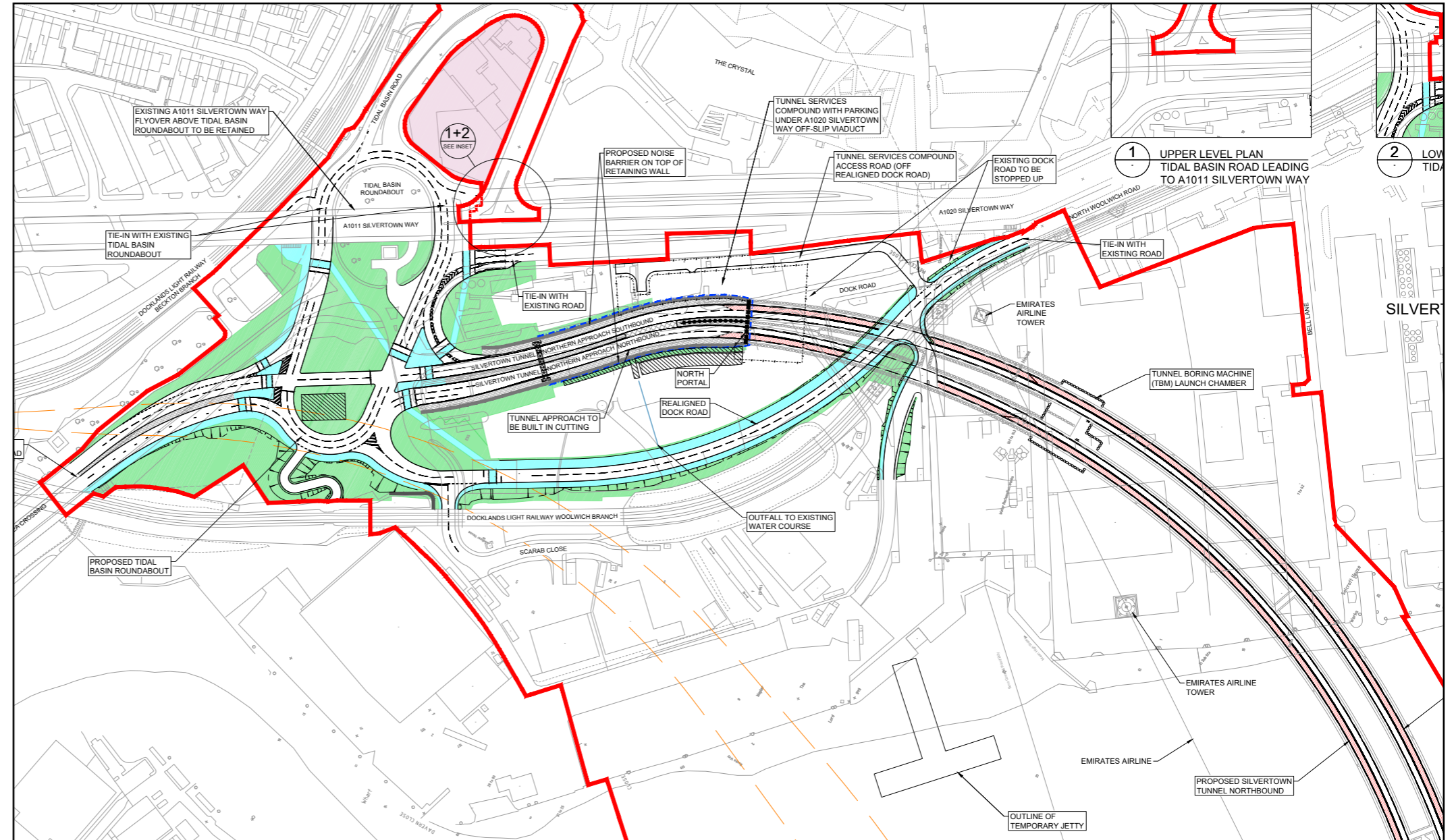
Coordination is expected upon the creation of Tender and Construction packages for the Development Consent Order (DCO) works which will enable the tunnel and associated land and road work.

Many of the new proposed site levels along Dock Road and the Tidal Basin Roundabout proposed in the DCO application have been referenced for our own site contouring and will require confirmation prior to construction.

It is proposed that TfL's landscape planting proposals for the Tidal Basin Roundabout and tunnel areas should be further developed to align with the SINC ambitions for the Leaway Park river frontage, creating a new Eastern Ecology Park.

Bicycle and pedestrian path coordination will also require close coordination to ensure a quality journey is possible to avoid isolate the site from the north.

The placement of the Energy Centre and industrial buildings will also require coordination, along with the Silvertown Yard amenity use areas, to ensure there is no conflict with the tunnel operation and maintenance.



TfL tunnel and road infrastructure works

6.16 Wayfinding

Establishing a navigation, or wayfinding strategy can provide a major contribution to the look, feel and sense of a place. Wayfinding provides opportunities to commission bespoke features that could establish an original visual presence across the different phases. Signage could carry 'local' information to help visitors and residents to navigate through the Site and its immediate environs.

A more widely adopted, integrated approach such as this will help to connect the Site into the wider landscape and will offer the ability to link it to other key relevant destinations.

A wayfinding strategy for the Site could take a number of forms: Visual navigational tools may include the obvious text-based signage, as well as physical route markers. Within the urban landscape these can range from architectural features and the targeted use of colour to specific elements such as street furniture, lighting, architectural details, gates, railings and bollards.

Walking and cycling trails could be considered as part of the local identity, drawing out local history and the contemporary community of the area.

A project could involve public art, education and play structures and could influence elements of the landscape such as signage, street furniture and hard landscaping as well as potentially utilising new technologies. A trail could guide people through the scheme and interweave into the play strategy, drawing on the history and heritage of the area.

Examples could include:

- Embedded Surfaces: a text trail using historical names and local references.
- Embedded Surfaces: roundels with poetry and prose based on the historical stories and contemporary texts.
- Signage: Embed a trail into the development of functional and creative signage
- Naming Strategy: Trail to contribute to a naming strategy for buildings and landscape spaces



Signage



Integrated seating and wayfinding



Lighting



Colour for wayfinding



Entrance signage



Art for wayfinding



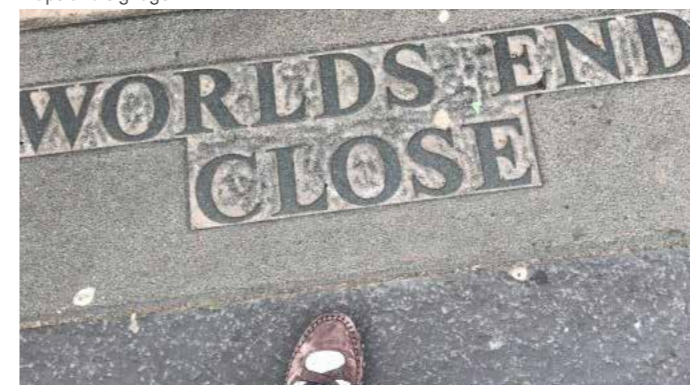
Local signage



Maps and signage



Signage



Graphic paving



Graphical wayfinding

6.17 Arts and cultural strategy

Creating a strong sense of place and identity will be central to the success of the Proposed Development. The public realm will offer spaces that:

- are convenient and well connected
- facilitate numerous uses
- encourage social interactions
- provide a sense of refuge and safety
- have a cultural and historic resonance.

Whilst the public realm has been designed to incorporate spaces with their own particular characteristics, there must also be common themes across the site.

Woven into the character areas will be narratives of local identity, history, play and orientation. These could be expressions of why this particular place is special; what it means to the residents and the wider community; the playfulness of the recreational spaces; and, inviting features that help to guide people through the spaces.

There is no need for these narratives to stop at the Site boundaries, and links with adjacent sites will be encouraged.

A range of history and heritage approaches could be developed to underpin and provide ideas for the development, themes for the embedded cultural programme, cultural partnerships, meanwhile uses and commercial uses for business and retail offerings.

Examples of possible projects utilising this rich resource could include:

- Artists working alongside the architects, engineers and landscape architects on embedded art initiatives for key areas of the scheme including public spaces, buildings and public realm.
- Work with available historical archives and local experts to develop history and heritage principles to assist the project team.
- Using the area's rich industrial history to provide ideas for wayfinding, signage, naming and public art
- Working with cultural partners to develop heritage based collection of projects through sound, film and photography.
- Finding contemporary ways of accessing, exhibiting and disseminating heritage information and archival material through permanent and multimedia platforms.
- Developing a 'Meanwhile Programme' that will encourage ideas for projects that promote, celebrate and interpret the site's history and context, including ideas for live events, festivals, skills and education.



Walls and screens



Graphical patterns and displays



Sculpture



Graphical paving



Graphical paving



Graphical building elements



Texture and pattern



Uplighting



Feature walls

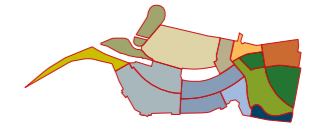


Sculpture



Uplighting

6.18 SUDS and landscape water management



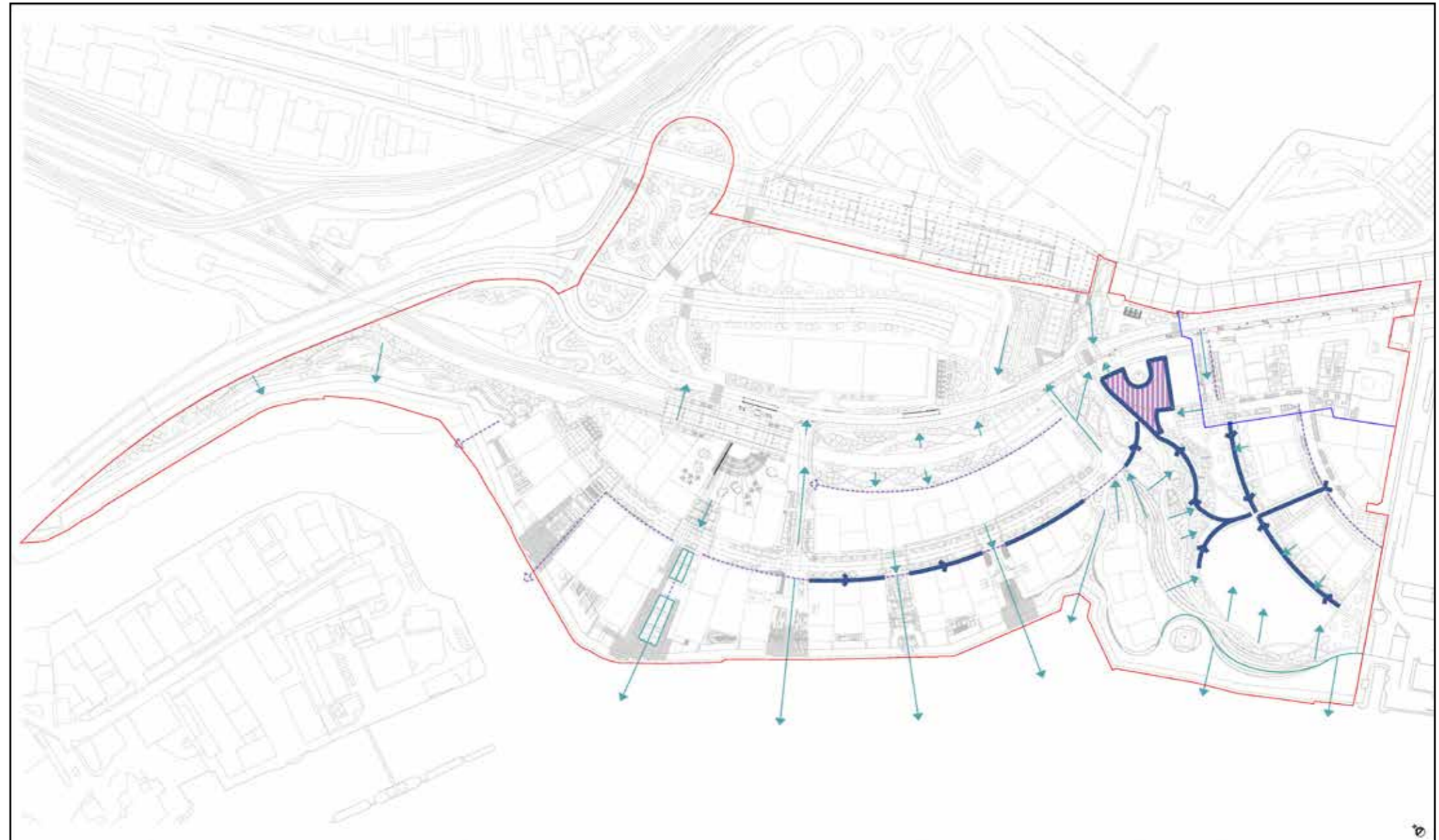
Surface water drainage and the potential for flooding provide significant challenges, but also the opportunity to use water as an underlying aesthetic and ecological advantage for the Site. By evaluating the topographic levels where water may flow across the site in major flood events or typical daily flows, our team of designers and engineers has created a network that binds together with the streetscape, landscape and public realm making spaces useful and visually appearing.

Drainage principles begin by capturing and limiting flow of rainfall into the drainage network. This will be done in three ways:





- Green/brown roofs on all apartment buildings.
- Permeable public green spaces.
- Permeable private gardens and parking areas.

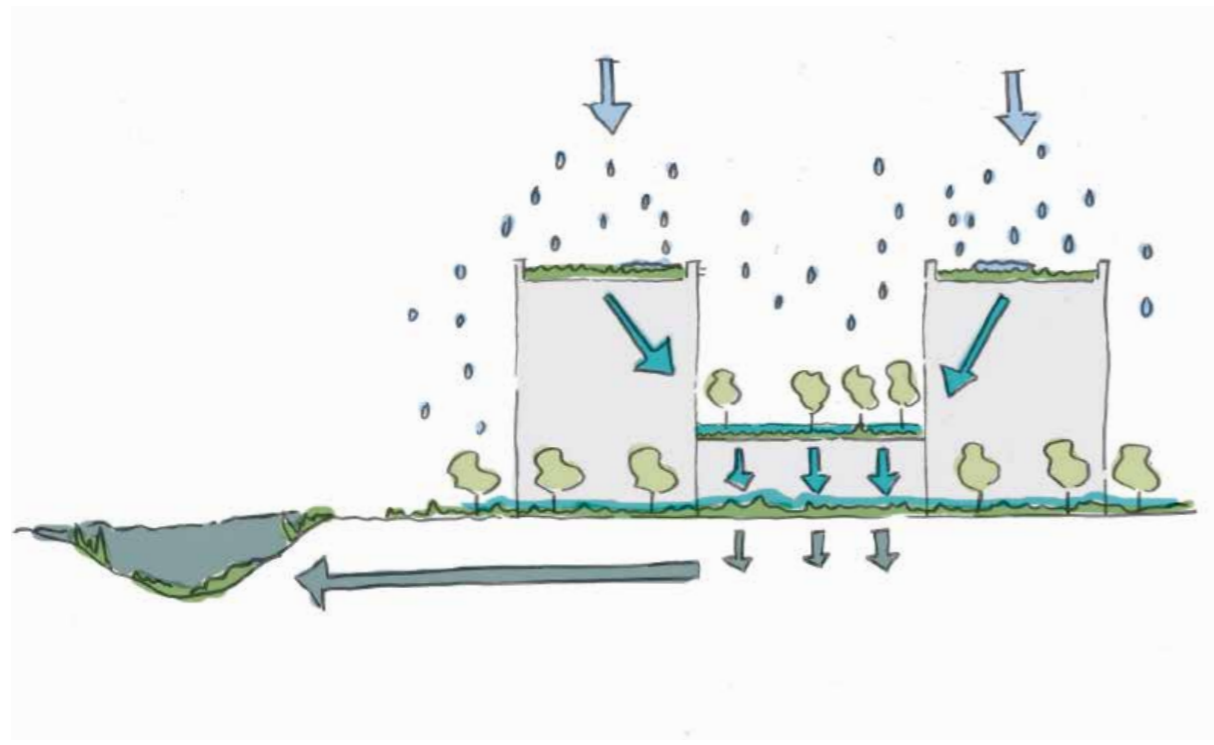
A series of dry drainage swales will be the link between the overflow drainage and flooding as they provide a major landscaping feature that runs through the Site creating an intertwining green/blue link from the homes to Dock Park. Strong landscape and tree planting will utilise the water to thrive and allow for a biodiverse environment.

All flows are then contained in Dock Park itself, a reed bed water lagoon is proposed as a major visual and ecological feature. Where a final outflow would lead into drainage outfalls.

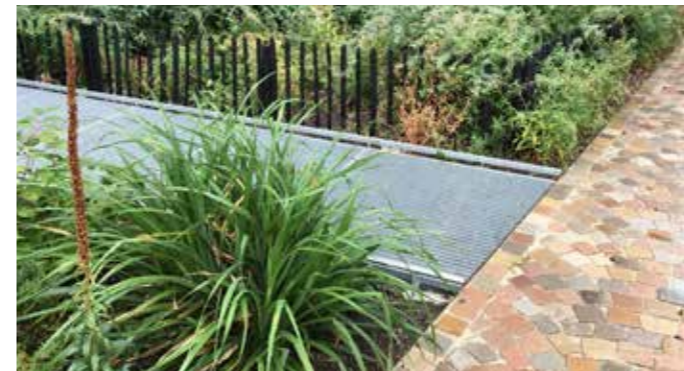


SUDS strategy

-  Typical falls
-  SUDS connections (pipe/culvert)
-  Dedicated SUDS (visible landscape feature)
-  Reed bed lagoon (outlet and low point, 5.4m AOD)



Rainwater capture and drainage strategy



Swale planting



Wetland ponds



Reed beds



Formal swale



Soft swale planting



Swales buffering building entrances



Reed planting



Swales



Wetland ponds

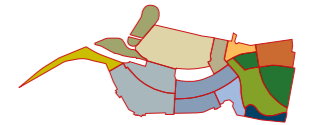


Wetland ponds



Reed planting

6.19 Ecology



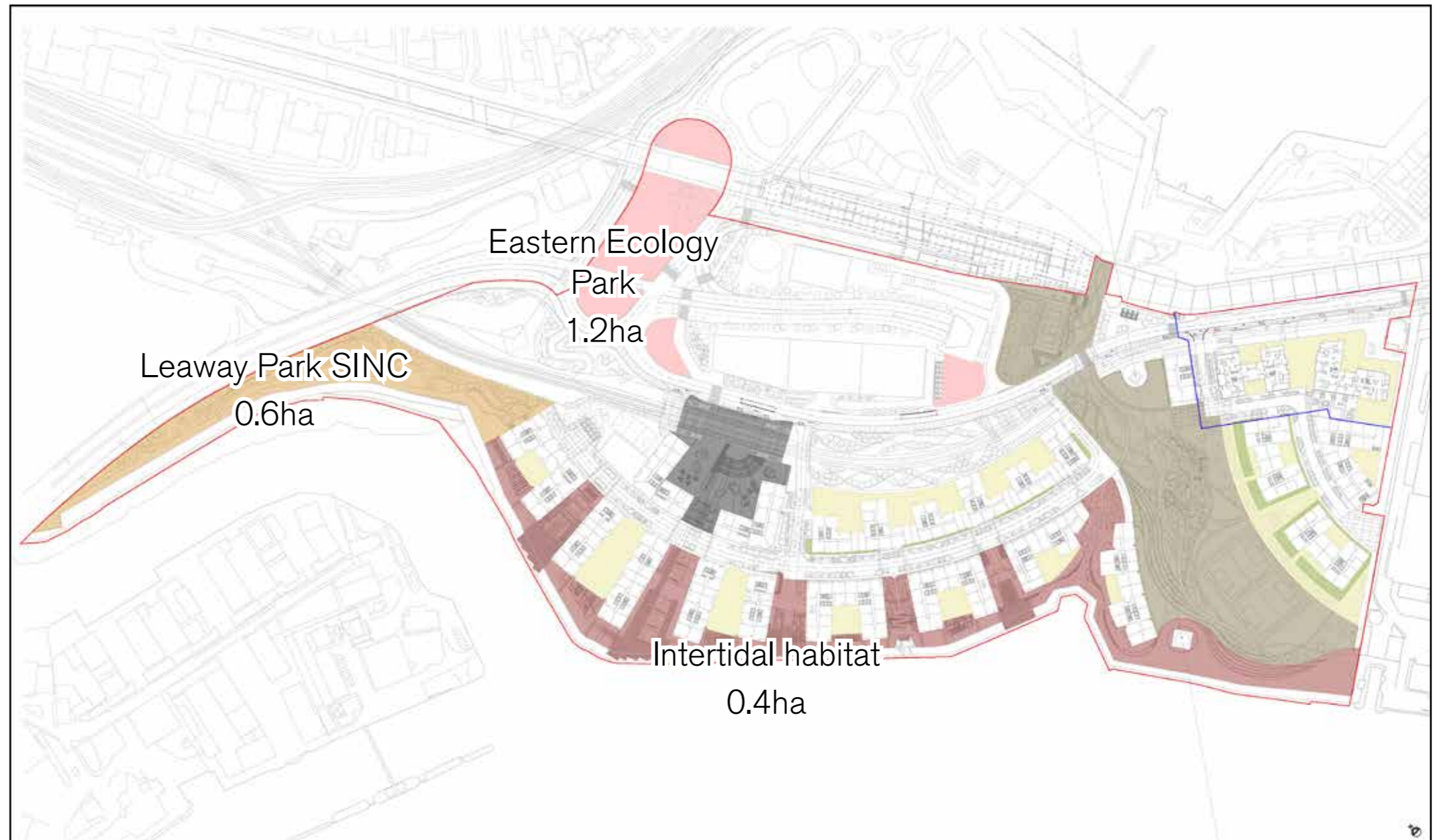
Currently the Site holds little ecological value except in existing infrastructure buffer planting next to roadways and DLR tracks. The ecological strategy is envisaged as the tool to protect, enhance and promote ecological values on Site. The banks of the River Lea and the River Thames are characterised by mud flats that emerge at low tide. In addition to the intertidal habitat creation along the River Thames edge, a Site of Importance for Nature Conservation (SINC) is set out in the Newham Biodiversity Action Plan to focus on habitat creation and education for ecological purposes. This has been split into two areas: Leaway Park and the Eastern Ecology Park.

Leaway Park proposals look to enhance the river environment and to promote species such as invertebrates and black red starts. As part of the tunnel works the Eastern Ecology Park will be delivered by TfL to provide wildflower meadows, enriched amenity grassland and semi-improved formal grassland. Detail of this space should be coordinated with TfL to ensure continuity across the site.

The Landscape masterplan has been designed to reinforce the strength of the park while creating linkages throughout the Site. By utilizing green/brown roofs, bird/bat boxes and the proposed green network, habitats have been indicatively designed with a 'landscape vision' of promoting biodiversity, encouraging the contribution of London Biodiversity Action Plans for the benefits of both people and wildlife.

SUDS and swales will provide ecological corridors for fauna movement through the site and leading to the improved parkland. New ecology friendly terraces will regrade the river banks to provide dense river reed and tree planting to promote new habitat environs.

Design and soft planting considerations to limit the increased possibility of wildlife strike for London City Airport has promoted certain types of green and brown roofs. Installed and managed appropriately these roofs will not support increased populations and movement of the identified birds of concern for the airport. The roofs will still be ecologically valuable, designed specifically to provide replacement habitat mosaics for other wildlife species, such as the black redstart and invertebrates. Detail information is provided in the ecologist's report.





Planting to encourage insects



Habitats for birds



Intertidal planting



Wildflower meadows



Planting to encourage insects



Habitats for birds



Bat houses



Insect homes



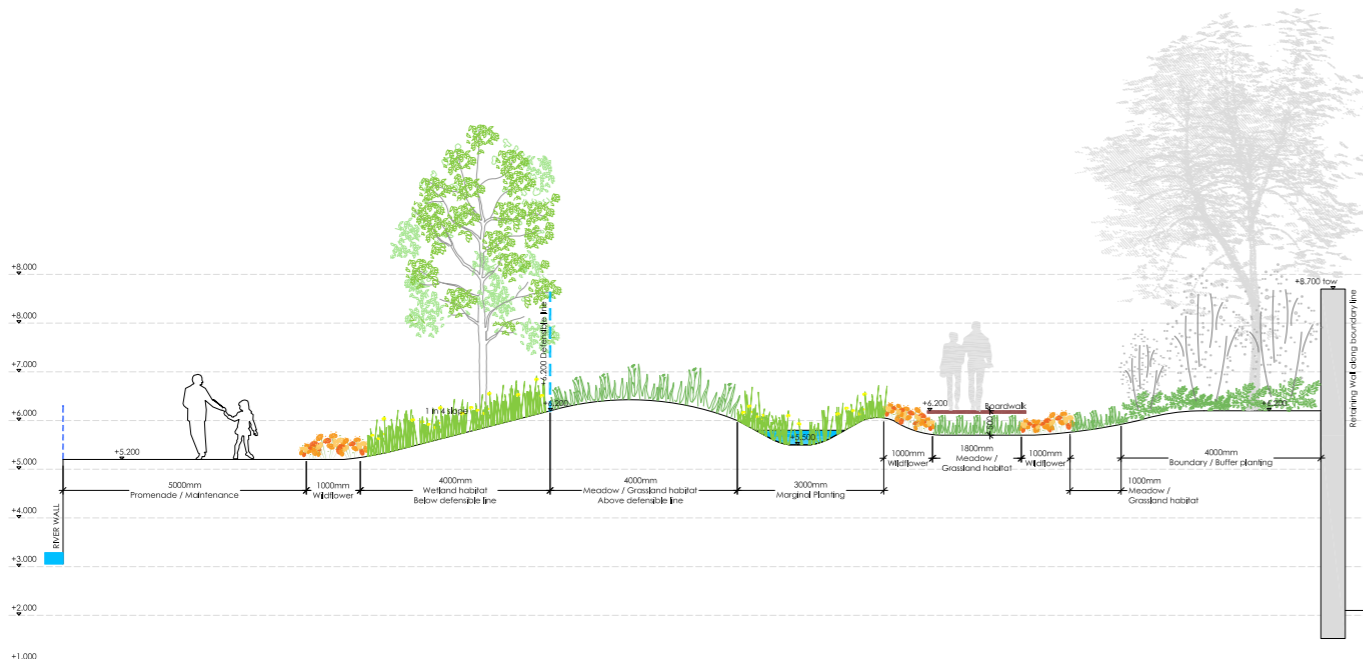
Insect homes



Habitats



Beehives



Section through the Leaway Park SINC



Brown roofs

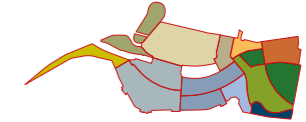


Amphibians



Planting to encourage bees

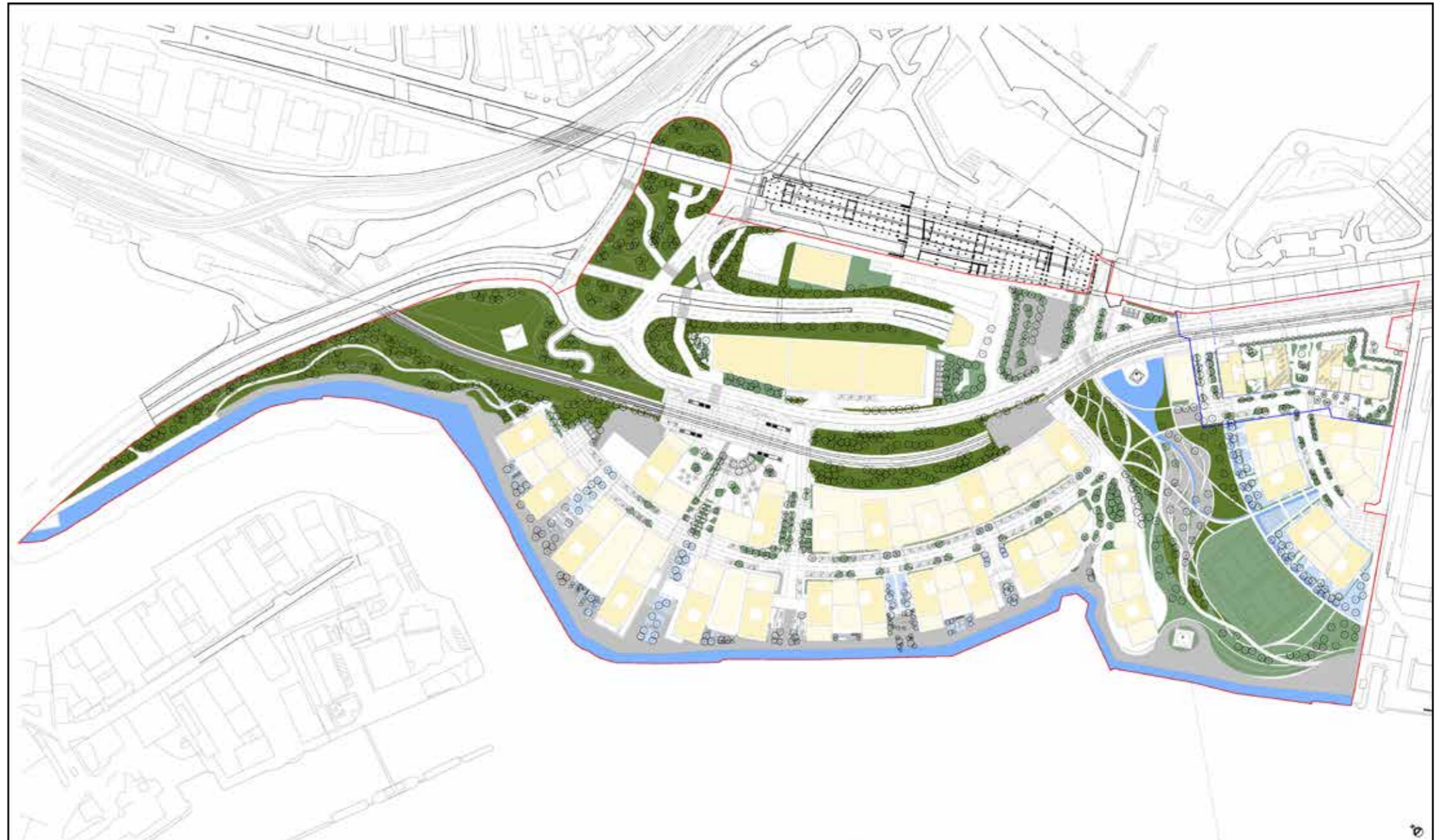
6.20 Urban greening



In line with the draft London Plan policy G5, Urban Greening has been used as a tool to contribute to the installation of high quality landscape and green infrastructure within the site and in the London context.

A formula to determine the appropriate amount of greening has been used as per the plans and figures opposite. The proposals work close to meet this policy and ensure ample planting occurs across the site.

Across the masterplan, the scheme achieves an Urban Greening Factor of 0.4 in line with Mayoral targets.



Urban greening

Greening type	Measured area	UGF	Ratio area			
Semi-natural vegetation	30,407.30 sqm	x 1 =	30,407.30 sqm	100.00 sqm measured area 100 sqm @ UGF 1		
Wetland or open water	11,389.89 sqm	x 1 =	11,389.89 sqm	100.00 sqm measured area 100 sqm @ UGF 1		
Trees in natural soils	18,077.45 sqm	x 0.8 =	12,861.96 sqm	125.00 sqm measured area 100 sqm ratio area @ UGF 0.8		
Rain gardens	3,999.87 sqm	x 0.7 =	2,799.77 sqm	142.85 sqm measured area 100 sqm ratio area @ UGF 0.7		
Planting - hedges/groundcover/grassland	15,025.44 sqm	x 0.6 =	9,015.26 sqm	166.66 sqm measured area 100 sqm ratio area @ UGF 0.6		
Trees in pits	2,690.85 sqm	x 0.6 =	1,614.39 sqm	166.66 sqm measured area 100 sqm ratio area @ UGF 0.6		
Green or secure roofs	18,454.08 sqm	x 0.3 =	5,536.22 sqm	333.33 sqm measured area 100 sqm ratio area @ UGF 0.3		
Permeable paving	14,832.58 sqm	x 0.1 =	1,483.26 sqm	1,000.00 sqm measured area 100 sqm ratio area @ UGF 0.1		
				Total Ratio Area (Sqm)		75,108.05
				Total Site Area		187,970.55
				Urban Greening Score	0.400	

