

8.8 Access: residential accommodation

Access Aims

The proposals for Berol House and 2 Berol Yard, at this stage, demonstrate that a good level of inclusive design can be achieved by the finished scheme.

Designing Inclusively is defined by The Commission for Architecture and the Built Environment (CABE) as:

- Placing people at the heart of the design
- process;
- Acknowledging diversity and difference;
- Offering choice where a single design solution cannot accommodate all users;
- Providing for flexibility in use; and
- Providing buildings and environments that are convenient and enjoyable to use for everyone.

Where possible the design of the proposed development will also consider and incorporated the following:

- Design guidance stated in relevant British Standards and other current good practice guidance about meeting the requirements of disabled people.

Access Provision

The key access provisions for Berol Yard include:

- Accessible routes to all connections with local pedestrian routes and public transport;
- Safe external spaces and routes for pedestrians and cyclists, segregated from vehicle traffic;
- Inclusion of accessible cycle parking
- Provision of accessible vehicle parking spaces
- Step-free access to all parts of 2 Berol Yard, including amenity terraces accessed by residents, the Community Centre and Green Link Bridge that are open to staff, visitors and the public.

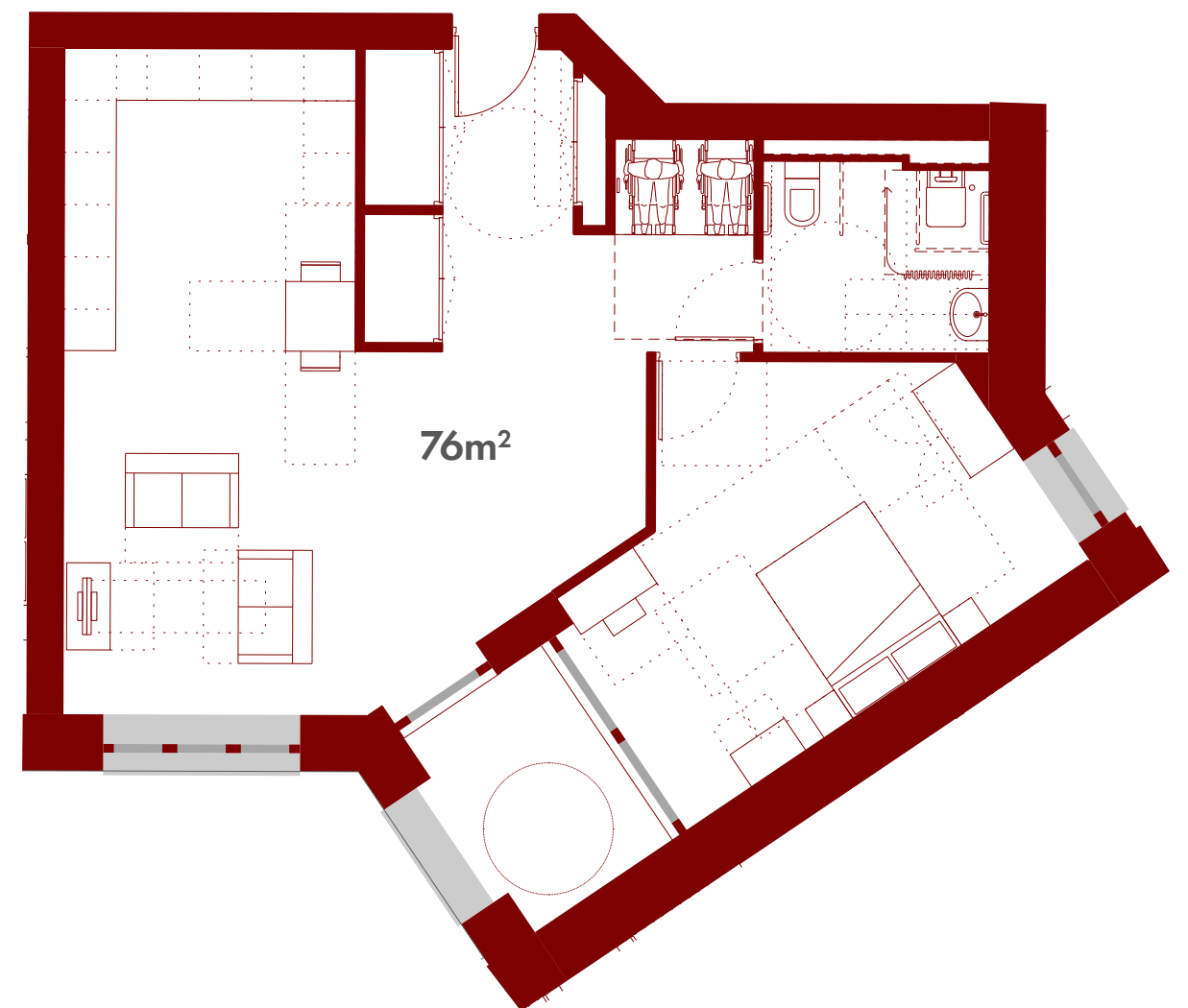
The scheme endeavours to comply with AD Part M and the public realm design complies with this. For 2 Berol Yard, the residential component targets 90% of units to Part M(2) and 10% to be adapted to Part M(3). The commercial components of Berol House also complies with requirements of Part M for universal access. This will be reviewed in detail at the next stage of design.



Level 02 to 05 plan identifying Part M4(3) units



3 bed 5 persons



1 bed 2 persons

9 Landscape & Public Realm

9.1 Landscape masterplan

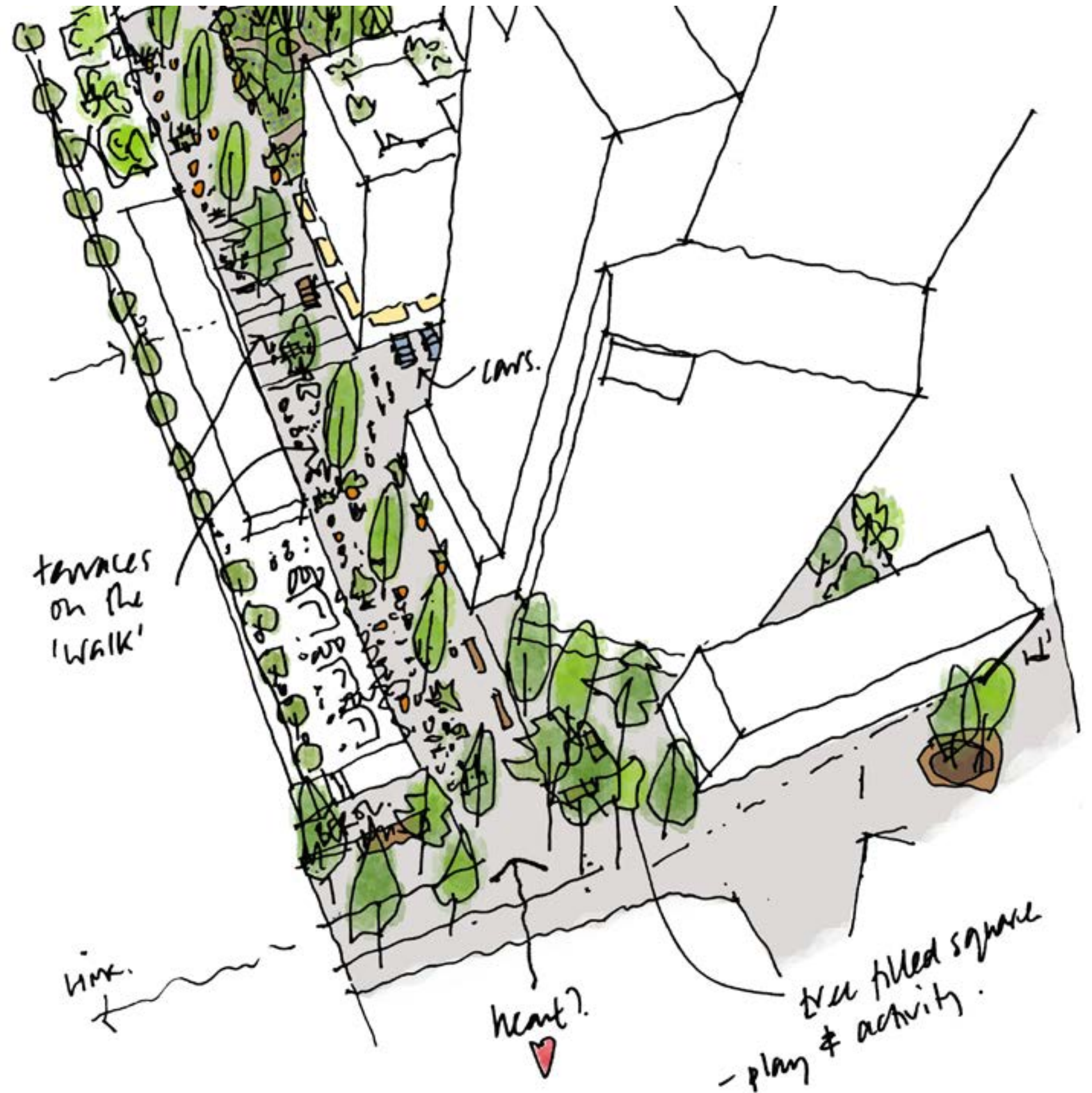
9.1.1 Introduction

The Landscape Brief

The key ambition for the landscape design of Berol Quarter is to complement the proposed activation of Berol House and 2 Berol Yard and create a distinct destination within the Ashley Gardens Masterplan and the wider local district centre of Tottenham Hale.

The public realm should engage with the proposed retail, commercial, and community uses to create welcoming and flexible spaces that may be activated by the spilling out of the neighbouring activities, accommodate temporary events and art installations, facilitate the safe movement of people through the site, and provide spaces for people to dwell.

Lastly, the landscape design integrates the strategic west-east Green Link that connects Tottenham High Road and the Lea Valley. The Square is envisaged as a 'moment' on this route - an enchanting and engaging space that draws visitors back again and again.

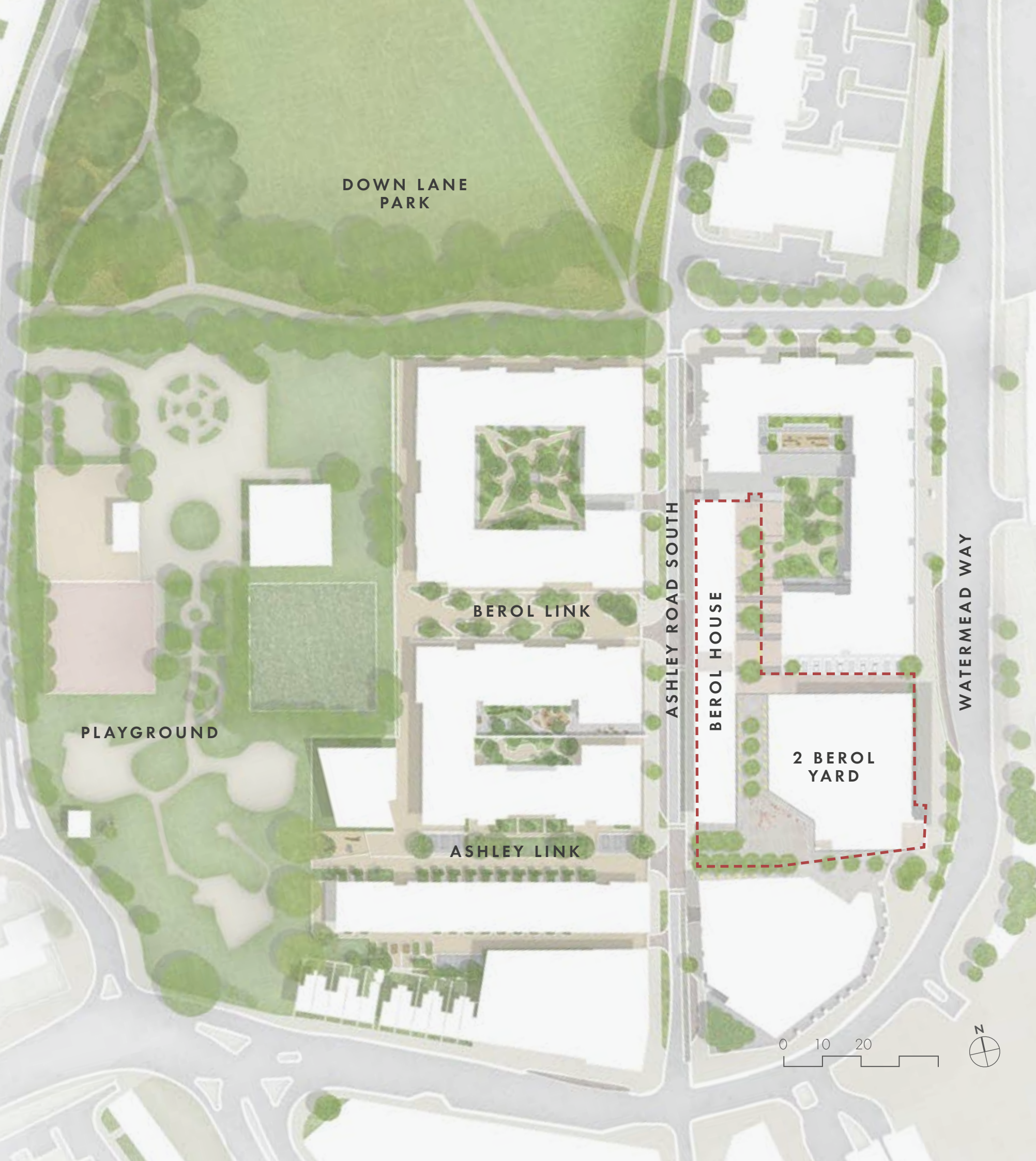


Sketch illustrating the landscape concept

9.1.2 Landscape context

The site is the last piece of the puzzle of the Ashley Road South Masterplan - a new neighbourhood that sits to the north of Tottenham Hale District Centre. The masterplan is developed around Ashley Road South that links the District Centre with Down Lane Park, the Harris Academy, and new development to the north.

Down Lane Park is an important green open space for the area, providing formal and informal play, and access to urban green space. The landscape proposals look to complement the park's community offer and spaces to create an attractive and varied destination. The masterplan creates new entrances to the park at the ends of Berol and Ashley Link, the latter being part of the wider 'Green Link'.



9.1.3 Ground floor masterplan

The proposals for the public realm looks to complete Berol Quarter with a new Square and completion of the Green Link.

The Square creates the foreground to 2 Berol Yard, signifying its significance. It is a public space framed by the adjacent buildings and the green thresholds formed by the proposed tree planting. The planting along the southern edge of the site enhances the Green Link whilst maintaining clear routes for pedestrian and cyclists. The granite paving reflecting the established palette of the site to the south.

Extending north of the Square, Berol Walk is a vehicle-free space into which the adjacent retail units will spill out, creating a vibrant, engaging space. The north section of Berol Walk creates an arrival point for the opening through Berol House, as well as spill out areas for the commercial unit and an area for visitor cycle parking.

Gessner Lane remains largely unchanged except for the resurfacing of the carriageway to create a permeable surface.

The design creates simple surfaces with tree planting and street furniture, including planters and sculptural elements. This provides maximum flexibility for activities and movement through these intimate spaces and routes.

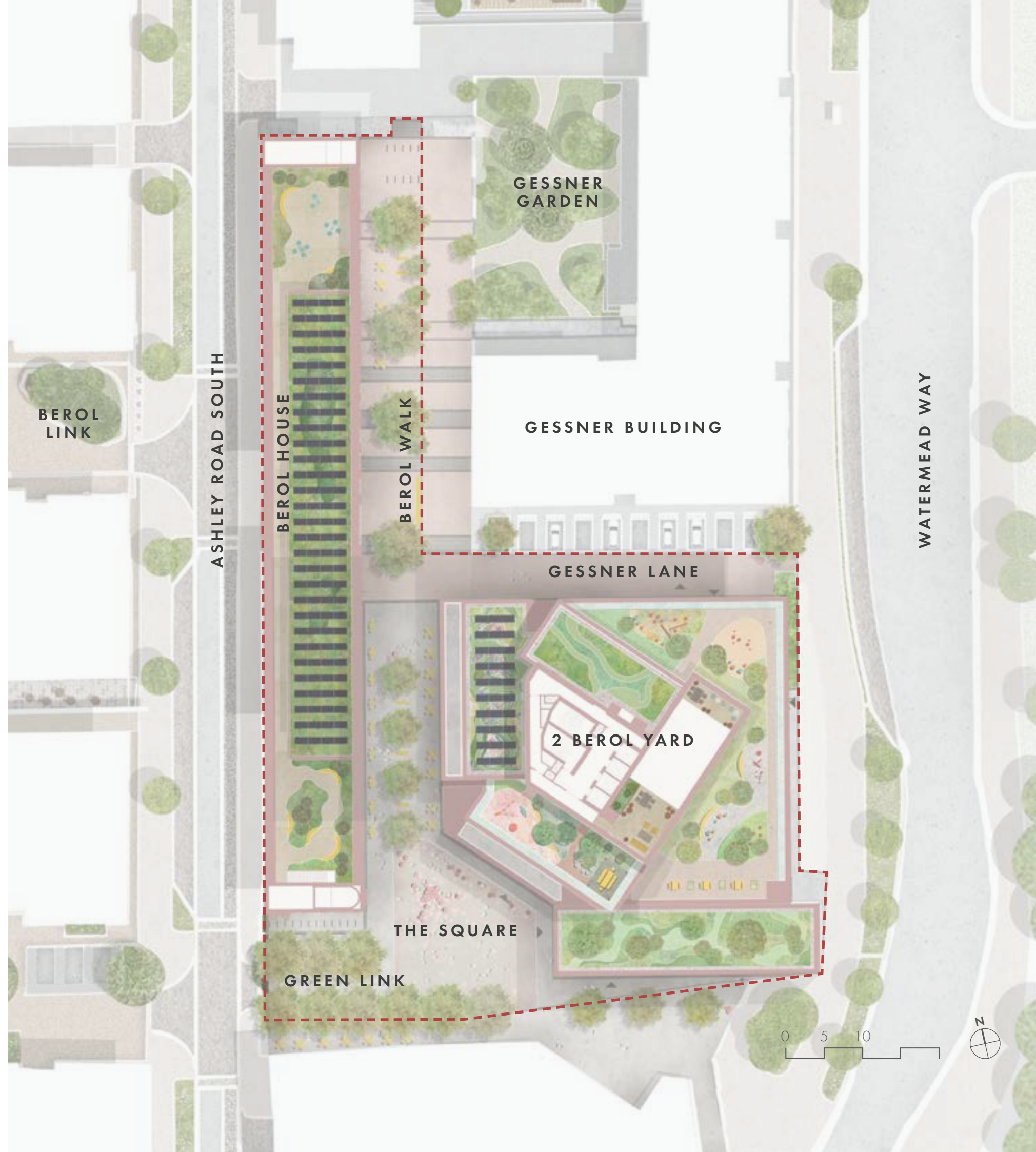


9.1.4 Roof level masterplan

The roof plan illustrates the approach of creating a collection of interesting, predominantly green tapestries across the site. The sinuous forms of the planters, paths and planting look like wandering pencil lines across the rooftops. Some of the roof gardens are designed for residents and workers to engage with, while others are not accessible and are left for wildlife and visual amenity.

The extensive areas of planting provides habitats and food sources for wildlife, attenuates water run-off, and reduced urban heating. The green views from the apartments will also provide year round visual interest and support well-being.

Areas of bio-solar roofs are proposed on Berol House and 2 Berol Yard. The planting provides cooling for the photovoltaic panels that improves their efficiency, whilst the panels create varied micro-habitats for different wildlife.



9.1.5 Design inspiration

Drawing on the industrial heritage

The Berol House is a locally listed building with an interesting and unique history which the landscape design looks to draw upon. The former pencil factory is a local landmark in the area.

The adjacent images illustrate the varied mix of industries that have occupied Ashley Road in Tottenham Hale. As well as Berol House, there was the Cannon Rubber factory immediately to the north of the site. There was also the print makers, Lorilleux & Bolton, with their influential patterns and colours.



1 – Aerial view of Berol House and the former industry



2 – The Berol Turquoise pencil



3 – Historical advertising of local products



4 – Inspiration of pencils and mark-making

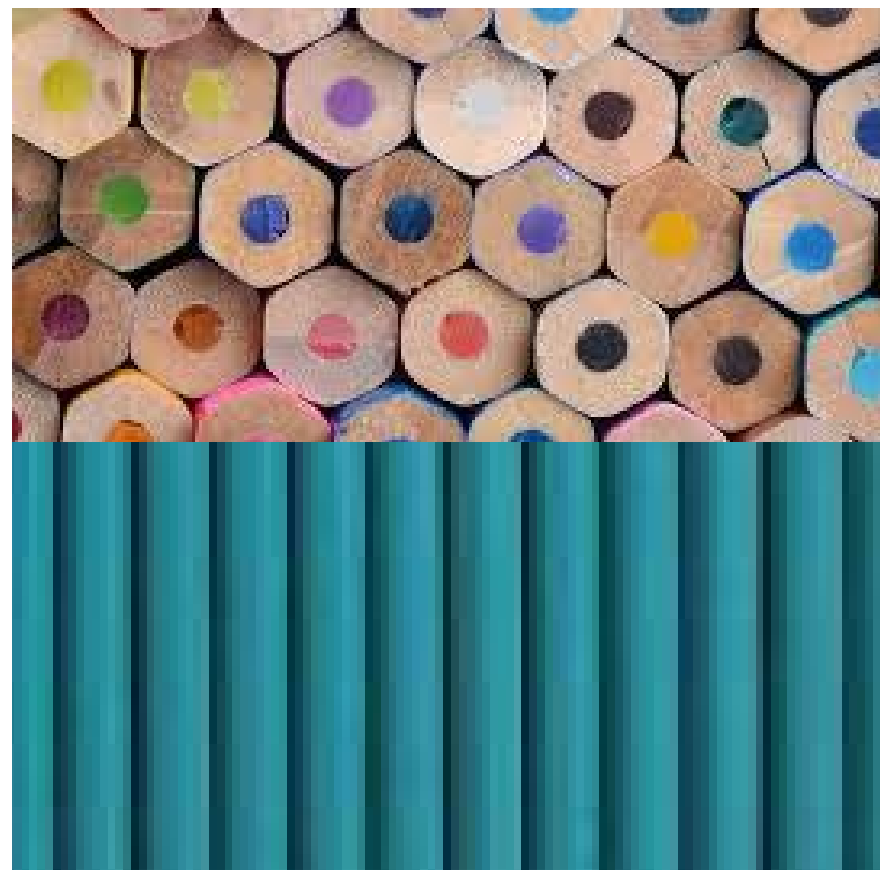
Creating an address

In developing the language of the public realm we drew inspiration from Berol House and the unique history of being a former pencil factory. This approach was consistent with how Gessner Gardens and public realm was developed.

The public realm design around 2 Berol Yard has different adjacencies to the Gessner, with the need to respond to the materials of adjacent building, 2 Ashley Road, and defining of the proposed Square. It was felt that with the activity of the adjacent buildings and proposed programming of the Square, the identity needed to be subtle and allow flexibility over the paving.

The design introduces a playful mix of hexagonal paving into the public realm - a subtle reference to the pencil and the molecular structure of graphite. The paving units spill across the surface, sometimes matching the adjacent paving, other times highlighted through the warm hues of pink granites.

In the Square, the shapes will be extruded to create a sculptural form that may interpreted as informal seating, play, or plinths for performances or exhibitions. Outliers of the extruded forms will create markers at the thresholds to the Square.



1 — The Berol Turquoise pencil



2 — Study of hexagon extruded forms



3 — Study of hexagon extruded forms



4 — Study of hexagon extruded forms

Scribble Rooftop Gardens

In contrast to the public realm, it was felt that the rooftop gardens and terraces could be more organic and playful in character. Here, the idea of the ‘scribble’ was developed in the gardens and biodiverse roofs. The meandering lines and forms across the roofscape creates a collection of green tapestries that can be enjoyed from the elevated views of the adjacent buildings.



1 — Seating integrated into sinuous planters



2 — Sinuous paths and organic planting beds



3 — Example of planted ‘tapestries’ from above



4 — Flowing planters and seating

9.1.6 Landscape Strategies

Introduction

The following pages set out the different landscape strategies that have informed the landscape and public realm design.

Many of the strategies have been established in the Ashley Road South masterplan while others have been developed in response to the evolved aspiration for the role of Berol House and 2 Berol Yard in establishing and nurturing an new community.

Zoning



Zoning diagram

- Movement
- Pause
- Event

Thresholds



Thresholds diagram

- Thresholds

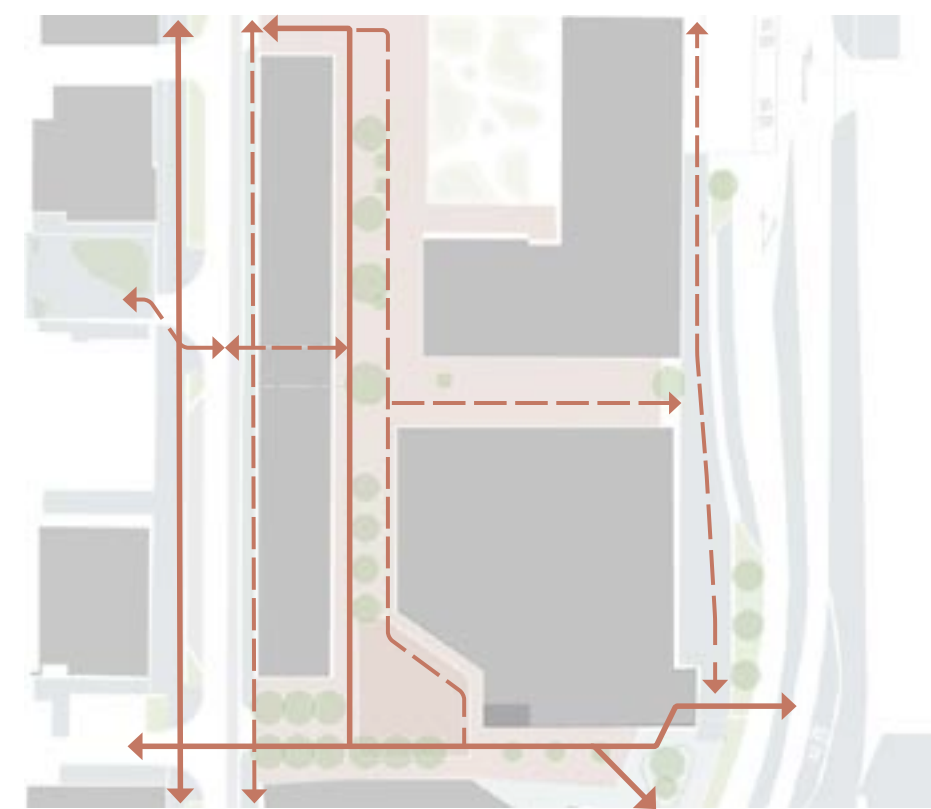
The Berol Quarter public realm is envisaged as a welcoming and vibrant destination. The public realm will be support this movement and spill out from the adjacent ground floor uses, with this the Square being a place to pause and dwell. The Square will be animated with a changing programme of events and pop-up artworks.

Sculptural elements will create a focal point in the Square and mark the arrival points in to the Quarter.

The Square is envisaged as being an open, flexible space that fronts 2 Berol Yard, as well as being a 'moment' on the Green Link.

The public realm design looks to strengthen the definition of the Square by creating green thresholds on the routes approaching the space - the containment provided by the adjacent buildings and greenery giving way to the open space with the sky above.

Pedestrian movement



Pedestrian Movement diagram

- Primary routes
- Secondary routes

The pedestrian movement strategy sits within the agreed principles of movement established in the Ashley Road South Masterplan.

The Berol Quarter public realm is envisaged as public realm through which the wider community can move through with ease, facilitating movement from the Transport Interchange to the southeast to Down Lane Park in the northwest. The public realm looks to strengthen the key west-east route along the south of the site known as the Green Link.

Cycling movement



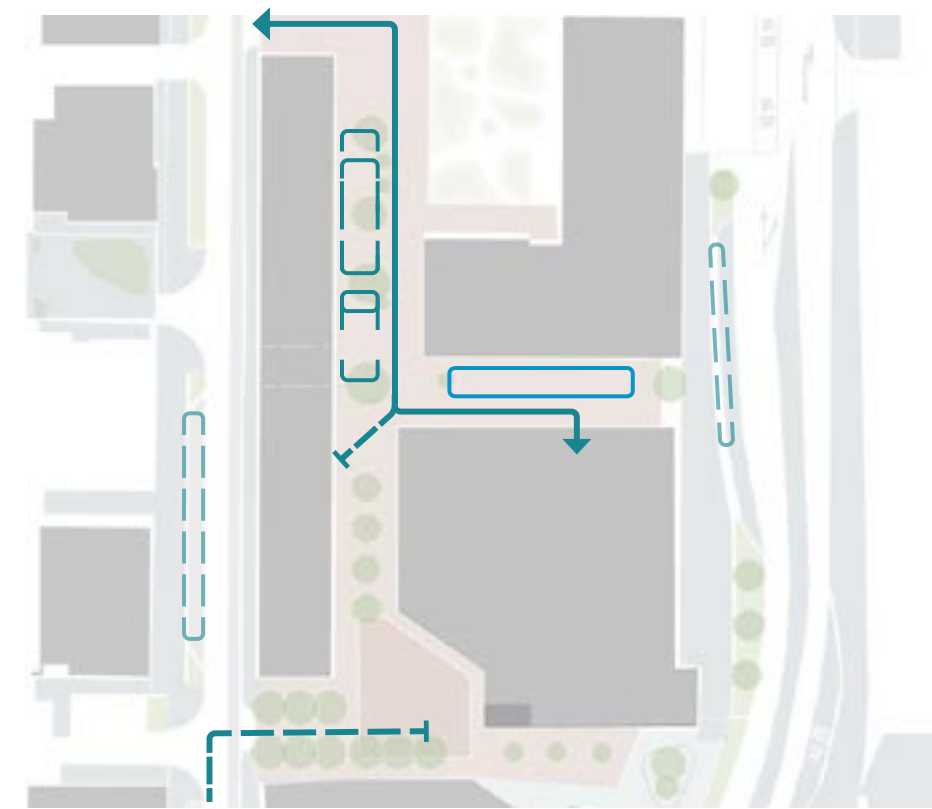
Cycle Movement diagram

- Dedicated route
- Primary route (N Bound)
- Contraflow (S Bound)
- Informal routes
- Cycle parking

The cycling movement strategy sits within the agreed principles of movement established in the Ashley Road South Masterplan.

The Berol Quarter has formal and dedicated cycle routes along its east (Watermead Way) and west (Ashley Road South) edges. The public realm facilitates east-west movement across the site through shared spaces. Visitor cycle parking is located at the north and south ends of Berol House, while commercial and residential dedicated cycle storage is in the buildings.

Vehicles movement



Vehicular Movement diagram

- Controlled route
- Refuse/Emergency
- Accessible bay
- Future potential bays
- Existing Gessner parking
- Delivery bay

The vehicle movement strategy sits within the agreed principles of movement established in the Ashley Road South Masterplan.

Vehicular access into Berol Quarter is limited to accessible parking, refuse and emergency access only. This will be managed with drop bollards.

All deliveries will use the service bays located on Ashley Road South and Watermead Way.

9.1.7 Uses and activities

The public realm provides a backdrop to a range of activities and uses that will animate the spaces and create a changing series of events to draw people to Berol Quarter.

The ground floor uses will be encouraged to spill out on to the public realm to animate the spaces, whilst still providing routes for people to move through the site.

The Square will be a setting for a changing programme of art installations and pop-up events. These may include temporary pavilions, screening of films or events, food stalls, or seasonal celebrations such as a Christmas tree.

Berol Walk is an intimate space that may be enhanced through public artwork and lighting to create a draw for people to explore when passing along the Green Link.

The north section of Berol Walk provides an arrival point from the Berol Link connection, and break out areas for commercial units that can enjoy the adjacent Gessner Gardens. The main visitor cycle parking space is located at the far north of Berol Walk.

Services to facilitate the above, such as power and water, will be integrated in the public realm design.



1 — Retail and Community spill out



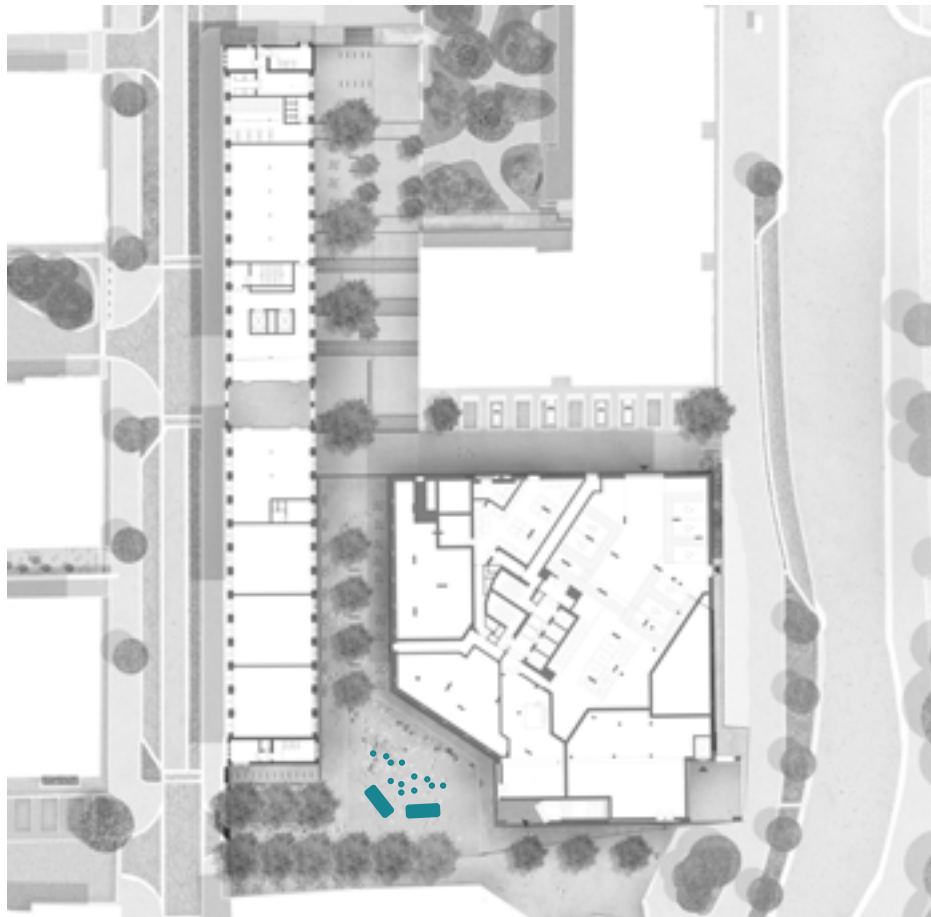
2 — Art Installation



Deptford Market Yard - London



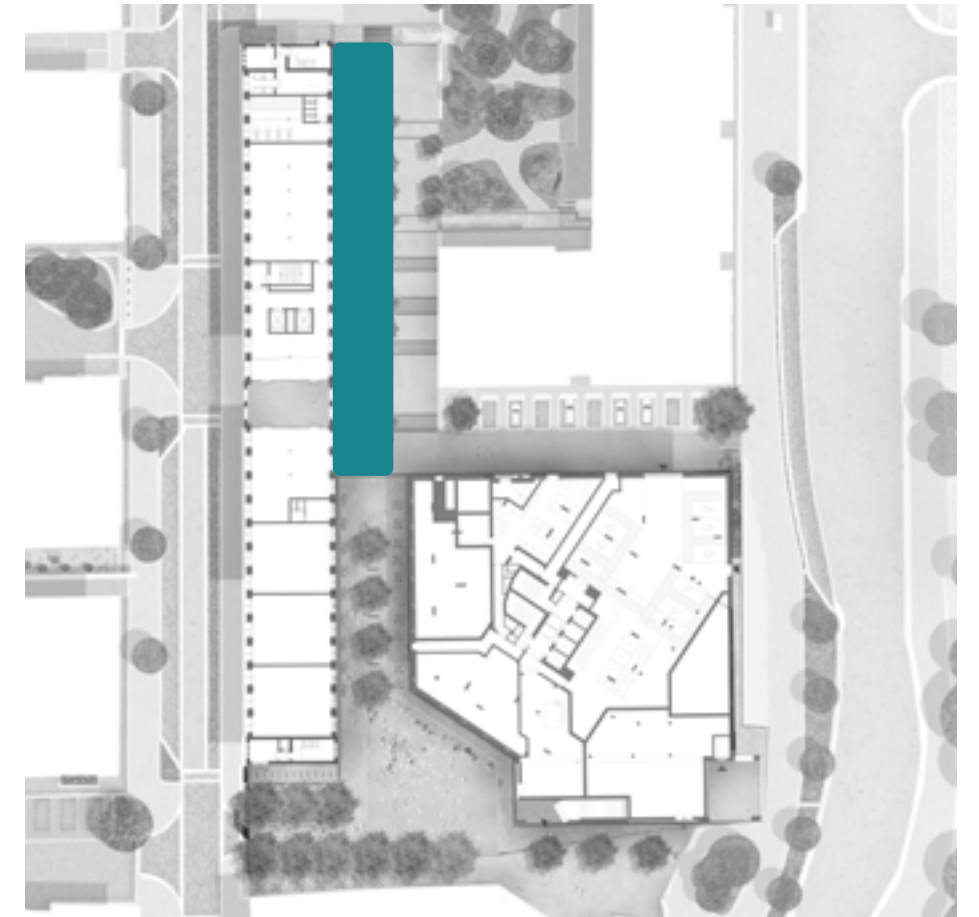
Bubble Pavilion - Seville, Spain



3 — Seasonal Pop-up



4 — Celebration



5 — Break Out and Cycle Parking



Granary Square - London



Pride Celebration - Bath



Coal Drop Yard - London

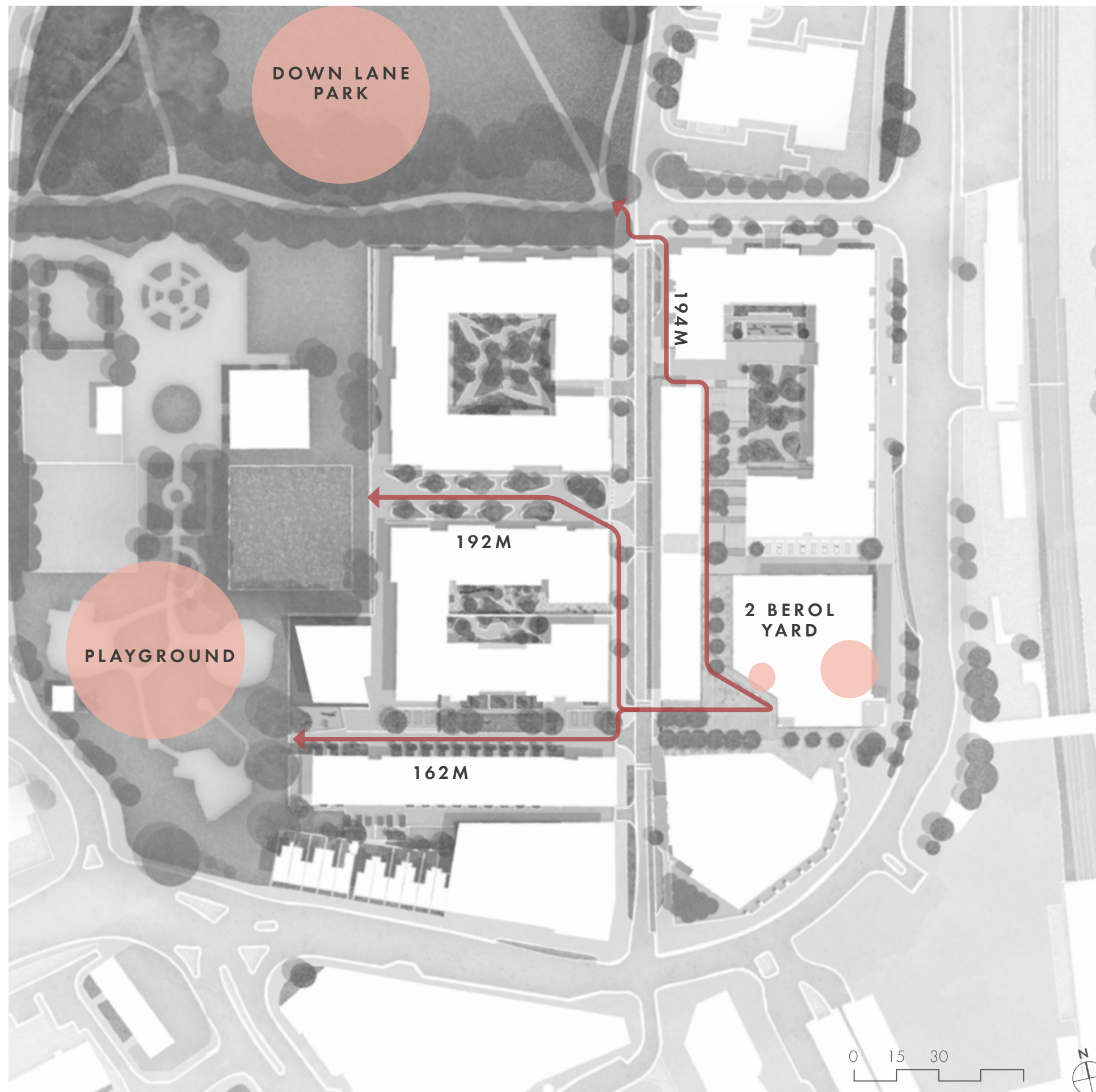
9.1.8 Play provision

The play provision in this planning application relates to 2 Berol Yard as the only residential building. Berol House is a commercial and retail uses and therefore has no play requirements.

The play provision has been calculated using the GLA Shaping Neighbourhoods Play and Informal Recreation SPG 2012 document. The child yield and required play area provision is set out in the adjacent table.

Play provision for 2 Berol Yard is located at podium level and upper roof terrace accessed only by the residents. The garden integrates 365m² play spaces. This area accommodates the play provision requirements for children aged 0 to 11 years old. The play area will accommodate a variety of formal and informal play opportunities including, sand, balancing beams and boulders, a climbing structure and other play elements. Seating for carers is included in the design.

It is proposed that the play provision for over 11 year old children is located in Down Lane Park which is a 194m walk from the entrance to the residential lobby to the existing park gate. This is less than the 400m maximum distance noted in the guidance. Two additional future park gates are proposed as part of the delivery of the Ashley Road South masterplan, both of which are slightly closer in distance.



Play provision - diagram illustrating the distances from 2 Berol Yard to the nearby Down Lane Park

GLA Population Yield Calculator

	1 bed	2 bed	3 bed	4 bed
Market and Intermediate Units	68	114	28	
Social Units				

Total Units	210
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Geographic Aggregation	London
------------------------	--------

PTAL	PTAL 5-6
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Notes
Sample size of 27 sites
Shaded cells require user input
Select both geography and PTAL
For developments in Outer London with PTAL 5-6 use [London/PTAL 5-6] or [Outer London/3-4] to calculate yield

Yield from Development (persons)

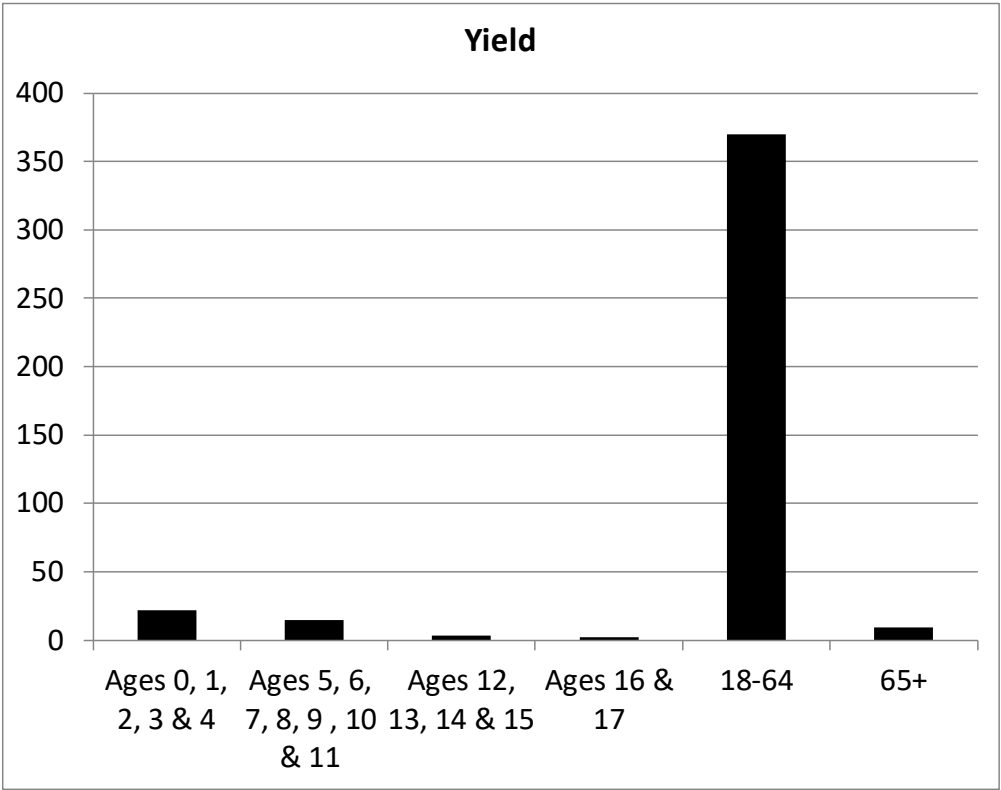
	Market & Intermediate	Social	Total
Ages 0, 1, 2, 3 & 4	21.9	0.0	21.9
Ages 5, 6, 7, 8, 9, 10 & 11	14.4	0.0	14.4
Ages 12, 13, 14 & 15	3.4	0.0	3.4
Ages 16 & 17	1.8	0.0	1.8
18-64	369.7	0.0	369.7
65+	8.8	0.0	8.8
Total Yield	420.0	0.0	420.0

Play Space Calculator

Total Children	41.4
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	Benchmark (m²)	Total play space (m²)
Play space requirement	10	414.3

Estimated yield from a development of 210 units
Located in London with a PTAL of 5-6



9.1.9 Water Management

The water management strategy has been designed holistically across the site, including the buildings and landscape, to achieve the required surface water run-off rate. The adjacent diagram illustrates the water management strategy, with the following elements:

- Extensive green roofs
- Intensive green roofs
- Intensive green roofs with an additional attenuation layer
- Permeable paving with attenuation
- Tree trenches with attenuation
- Attenuation tank under the Square

The application of rain gardens was considered but not pursued due to constraint of the high invert level of the connection to the existing sewer in Ashley Road South.

Refer to WSP document for further details.

- Attenuation tank under Square
- Tree trenches with attenuation
- Permeable paving
- Attenuation (podium garden)
- Slot drain



Diagram illustrating the water management strategy

9.2 Roof Gardens

9.2.1 Roof gardens

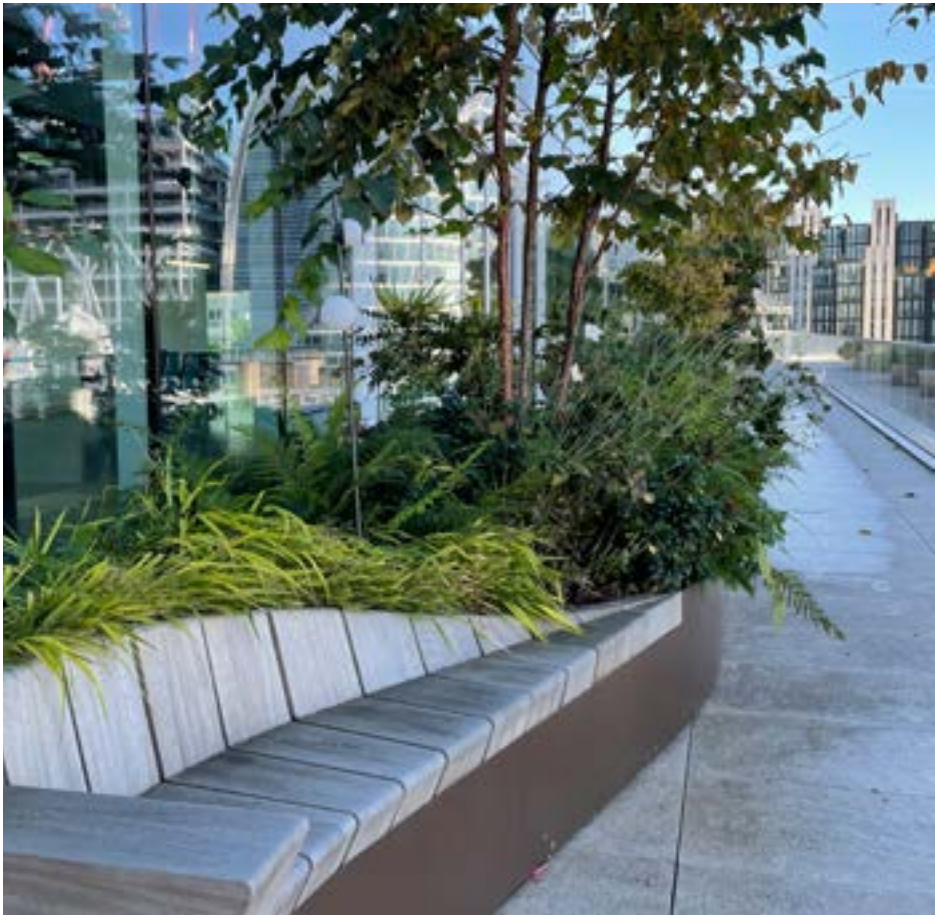
Introduction

There is a great variety of roof gardens in Berol Quarter, some of which are dedicated to play, others to relaxing or entertaining. Whatever form they take, the roof gardens integrate generous planting and habitats for wildlife to enhance the site’s biodiversity and improve people’s well-being. The planting communities are intended to be typically low water tolerant species.

Many of the roofs will be visible from above so it was important that the designs could be read together as a series of tapestries that echoed the Gessner Garden too.

There was also a desire that the greenery could be seen from the public realm. This was particularly important for the treatment of Berol House and the 2 Berol Yard building on the Green Link.

The adjacent images illustrate the principles of tapestry, greening seen from the street, low water tolerant plant species, and the integration of photovoltaic panels and biodiversity.



Project 60 London Wall by Churchman Thornhill Finch



Exampe of a bio-solar roof

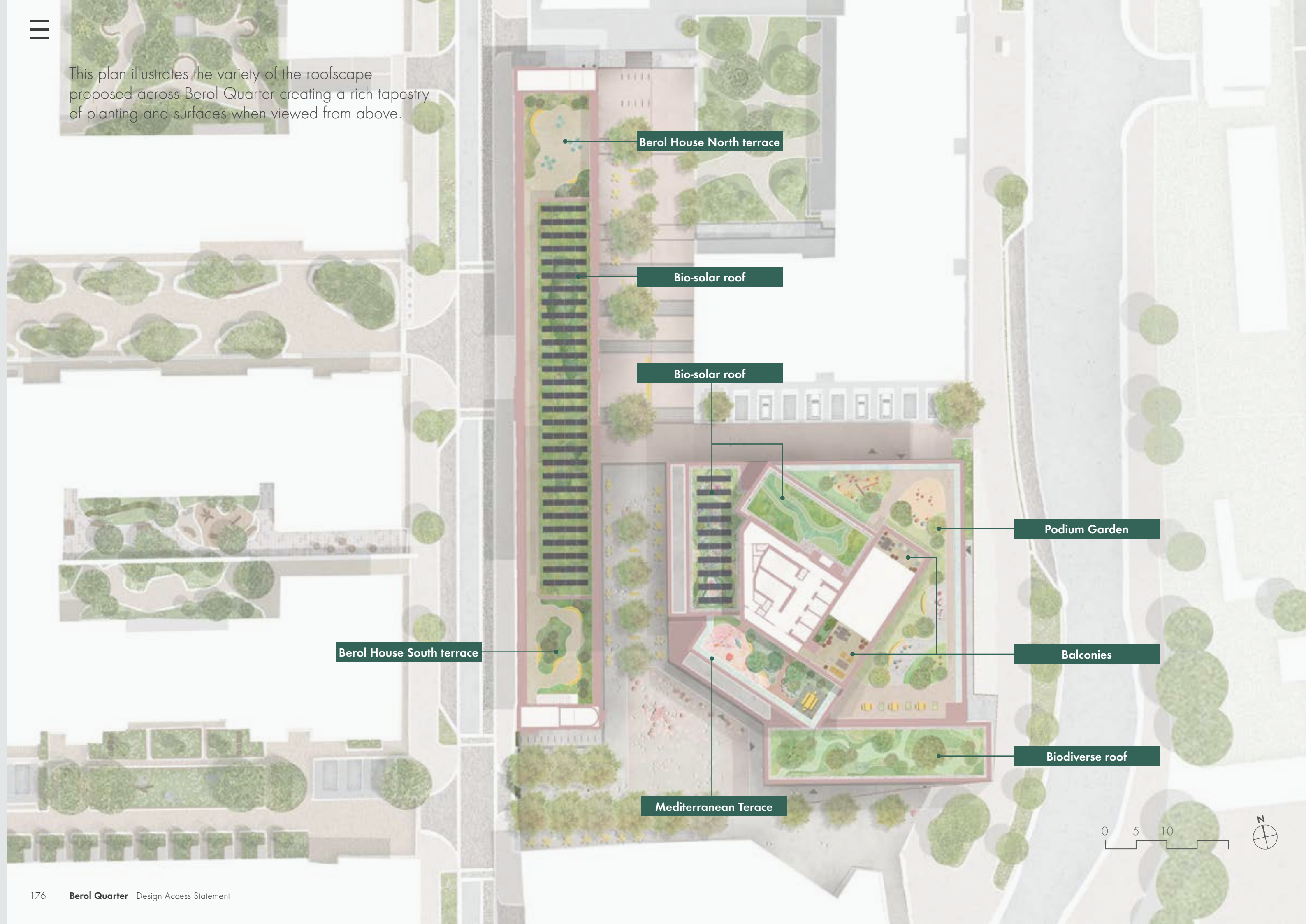


Project 60 London Wall by Churchman Thornhill Finch



Dry garden planting

This plan illustrates the variety of the roofscape proposed across Berol Quarter creating a rich tapestry of planting and surfaces when viewed from above.



Berol House North terrace

Bio-solar roof

Bio-solar roof

Podium Garden

Balconies

Biodiverse roof

Mediterranean Terrace

Berol House South terrace

0 5 10



Podium Garden



Level 01

- Entry into the garden
- Seating space
- Play island
- Sand play space

The Podium Garden is designed to integrate play opportunities for young children. The play area will accommodate a variety of formal and informal play opportunities including, sand, balancing beams and boulders, a climbing structure and other play elements. Seating for carers is included in the design.

There will be hardy planting that provides sensory experiences, such as grasses and perennials. A few multi-stem trees will add shade and vertical interest.

Biodiverse Roof



Level 06

- Planted roof
- Perimeter maintenance strip
- Potentail shrub locations

This roof is non-accessible to residents and focusses on providing habitat for wildlife. It will include a variety of drought tolerant plant species, mulches and elements to enhance the benefits to wildlife.

The proposed substrate will be a minimum of 150mm deep with local mounding up to 500mm deep to support some shrub planting. The aim is that the planting will be partly visible from the public realm and strengthen the perception of the Green Link.

Mediterranean Terrace



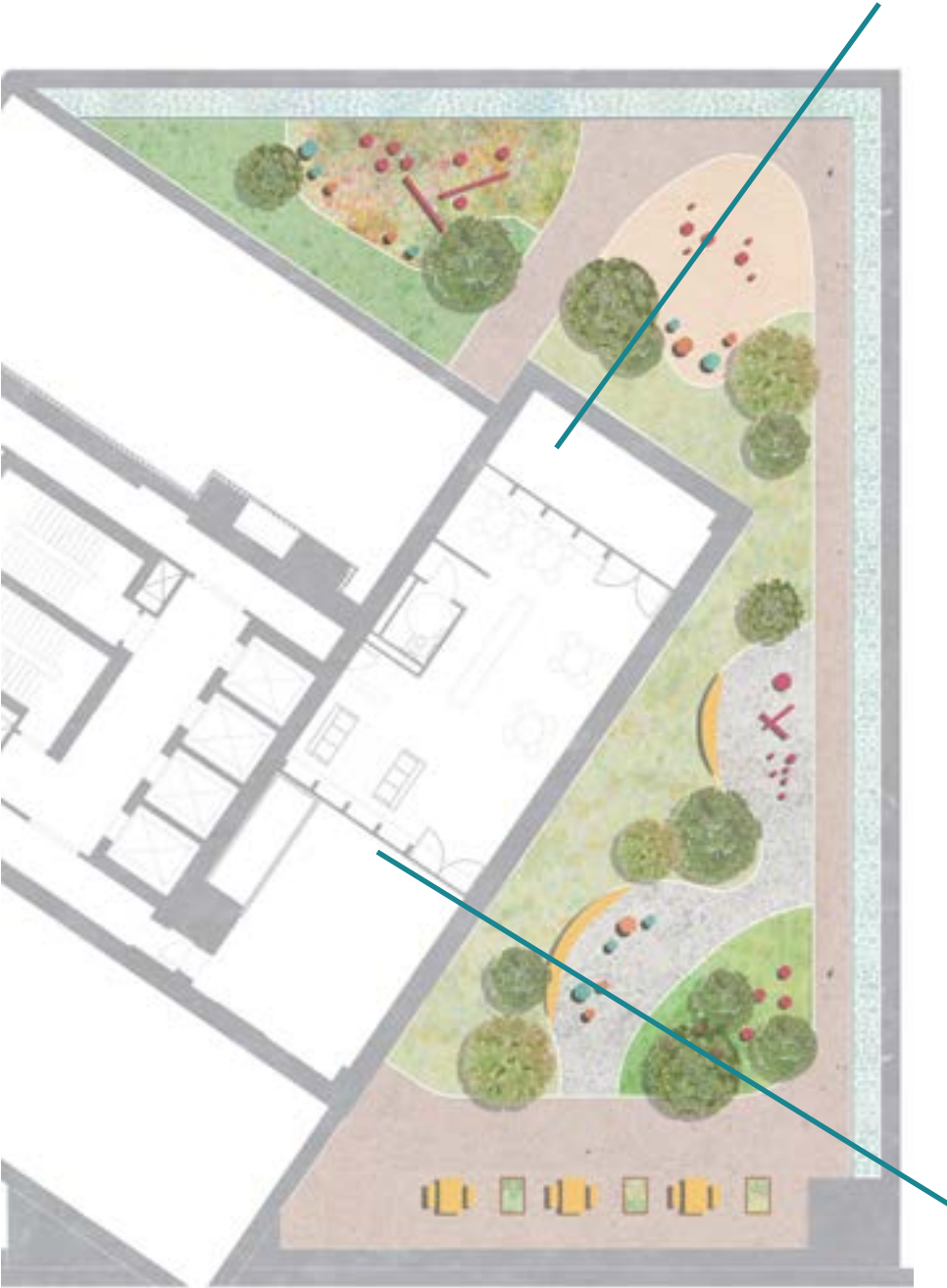
Level 18

- Herb garden
- Dining terrace and pergola
- Seating in the planting
- Quiet alcove

This garden is the key amenity space for the residents. Overlooking the Square, the south-facing terrace provides areas to sit together to enjoy the sun and elevated views, meet at the communal dining terrace, tend to herbs and other edible plants, or find solace within the planting.

The proposed planting is inspired by Mediterranean gardens with low water tolerant planting that provide fragrance, seasonal colour and year round structure.

9.2.2 Podium Garden



1 — Illustrative section through the seating area and planting



2 — Illustrative section through the play area

9.2.3 Mediterranean Garden



Illustrative long section through the garden

Bio-solar roof



Level 25

- Planted roof
- Photovoltaic panels
- Perimeter maintenance strip

This roof is non-accessible to residents. The design is a bio-solar green roof - integrating photovoltaic panels and planting that provides habitat for wildlife.

The planting provides cooling for the panels that improves their efficiency, whilst the panels create different micro-habitats for different wildlife.

Biodiverse roof



Level 30

- Planted roof
- Perimeter maintenance strip

This roof is non-accessible to residents and focusses on providing habitat for wildlife. It will include a variety of drought tolerant plant species, mulches and elements to enhance the benefits to wildlife.

The exposed nature of this roof will mean that species will be low growing and hardy.

Balconies



Level 30

- Internal amenity space
- North terrace
- South terrace

This is the highest roof terrace available for residents to enjoy. The elevation offers wonderful views towards the City of London and the Lea Valley.

There are external roof terraces either side of the internal amenity space, with seating and varied pots and planting to create a relaxed and calm environment. The furniture and pots may be moved to accommodate events.

Berol House North Terrace



Level 06

- Open flexible space
- Raised planters
- Integrated seating
- Specimen trees and shrubs

The North Terrace provides an area of flexible, open terrace for the workers to use - either for dining or having a coffee, or for activities such as events or exhibitions, yoga, exercise classes, tai chi, etc.

The terrace is framed by raised planters filled with low water demanding planting that will provide year round structure and seasonal interest. A few small multi-stem trees provide further interest, privacy and sense of greenery from the street level.

Berol House South Terrace



Level 06

- Raised planters
- Integrated seating
- Specimen trees and shrubs
- Access to escape stair

The South Terrace provides more intimate set of spaces for small groups or individuals to sit and meet. The seating, set into the planting beds, provide a sense of enclosure and privacy, enhanced by the inclusion of a few small multi-stem trees .

Both terraces are designed to be seen from above with strong lines and bold areas of greenery. The forms echo the gardens on 2 Berol Yard and those in the adjacent Gessner Garden.

Berol House Bio-solar roof



Level 07

- Planted roof
- Photovoltaic panels

This roof is non-accessible to residents. The design is a bio-solar green roof - integrating photovoltaic panels and planting that provides habitat for wildlife.

The planting provides cooling for the panels that improves their efficiency, whilst the panels create different micro-habitats for different wildlife.

9.3 Open space

9.3.1 Creating distinct interventions

The landscape and public realm design creates a collection of distinct interventions within Berol Quarter and the wider Ashley Road South masterplan. These include:

- Completing the Green Link that connects Tottenham High Road with the Lea Valley.
- Facilitating the potential bridge link over Watermead Way at the West Approach.
- Placing a new square on the Green Link that creates a 'moment' on this route and an attractive threshold into Berol Quarter.
- Animating the edges of Berol House through the design of Berol Walk. This space provides an arrival point for the proposed new passage through Berol House.
- Creating a collection of distinct varied gardens with different activities and planting character.



Illustrative plan indicating the distinct spaces

9.3.2 The Square

The Square is designed to create an open space that fronts 2 Berol Yard and the approach from Ashley Road South. The ground floor community space in 2 Berol Yard is visible from the Square, with activities encouraged to spill out and activate the public space. Additional activity is created by the adjacent retail units in Berol House and 2 Ashley Road. The public realm design provides broad thresholds for these activities whilst maintaining clear movement corridors.

The Square will be a setting for a changing programme of art installations and pop-up events. These may include temporary pavilions, screening of films or events, food stalls, or seasonal celebrations such as a Christmas tree. Services to facilitate the above, such as power and water, will be integrated in the public realm design.

Sculptural elements, reflecting the hexagonal pencil form, create a point of interest in the Square as well as acting as informal seating, play elements and exhibition or performance areas.

Formal seating is provided at the edges in the form of linear seating, benches and chairs with tables.

- 1

Hexagonal paving in the Square
- 2

Sculptural forms
- 3

Linear bench
- 4

Tables, benches and chairs
- 5

Cycle racks
- 6

Street trees
- 7

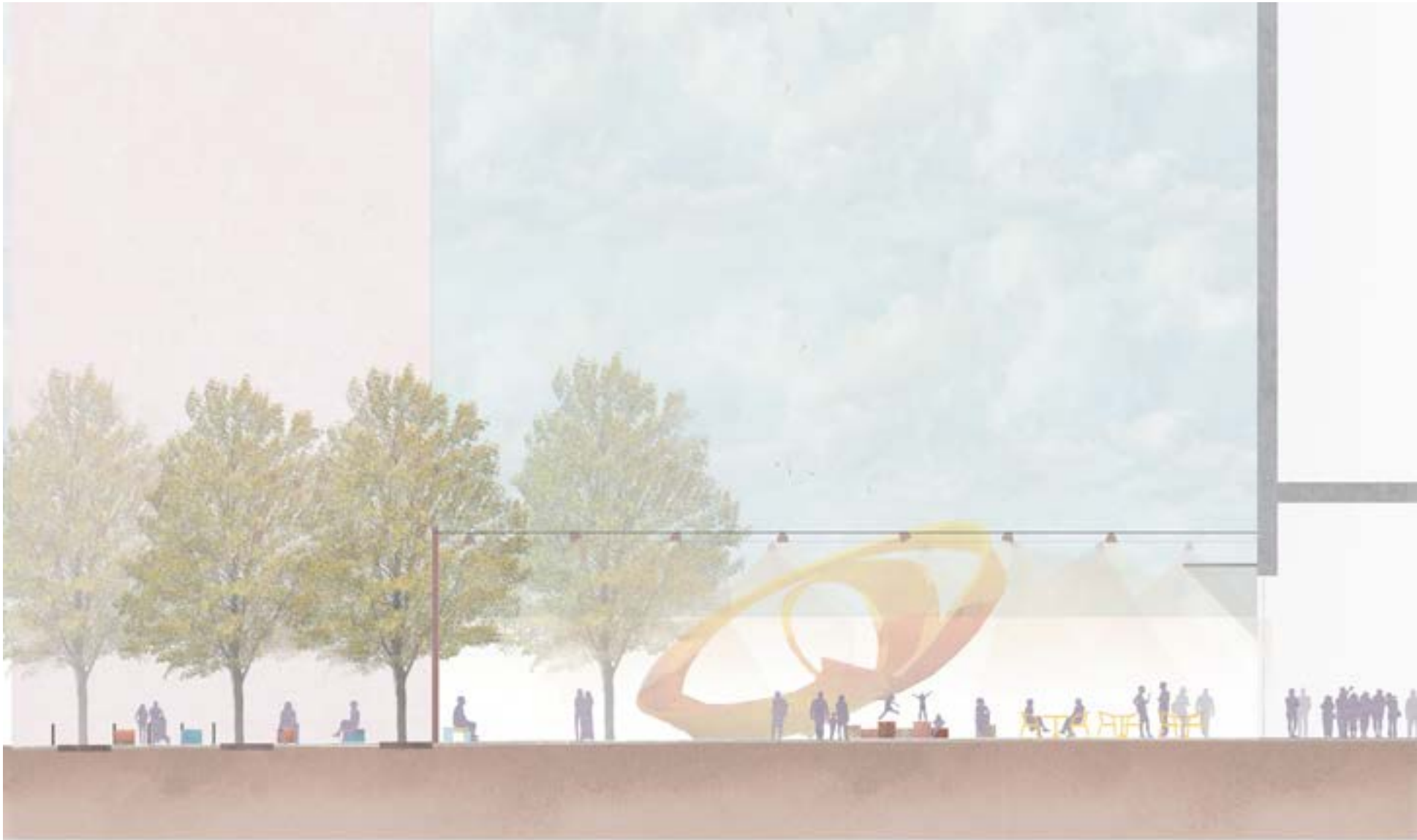
Slot drain
- 8

Spill-out from buildings



Illustrative plan of the Square

The adjacent illustrative section shows the green threshold off Ashley Road South and the Square, looking north.



Berol House
Public realm - 24m
2 Berol Yard

The adjacent illustrative section shows the Square, looking west.



Building Public realm - 23m 2 Berol Yard

9.3.3 Berol Walk

Berol Walk is defined by Berol House and 2 Berol Yard. It is an intimate route that is animated by the adjacent retail activities and the movement of people. A line of street trees creates further intimacy and sense of greenery. Seating and tables sit between the trees creating places for people to dwell, or have a coffee from one of the nearby retails, etc.

The paving along the edges is granite laid in two gauges which gives way to hexagonal granite slabs that playfully move between the trees. At the north end of the Walk several of the hexagonal units are extracted to become informal seating and play elements - marking the approach to the Square.

- 1 Street trees
- 2 Tables, benches and chairs
- 3 Activity spilling out from buildings
- 4 Sculptural elements
- 5 Insitu concrete paving



Illustrative plan of Berol Walk

The adjacent illustrative section shows Berol House with Ashley Road South to the left and Berol Walk to the right, with 2 Berol Yard. The section is looking north.



Ashley Road South Berol House Public realm - 10.4m 2 Berol Yard

9.3.4 Berol Walk (North)

Berol Walk extends north along the Berol House elevation. The formal line of trees is extended along the facade with seating and space for activities to spill out and activate the space. It will be a welcoming space for workers, shoppers, residents, and visitors to dwell.

The new link through Berol House joins Berol Walk at the southern end, into an open flexible space to orientate or meet friends by the long linear bench.

Beyond the first tree is an accessible car parking bay for Berol House, accessed via the controlled route off Ashley Road South.

The majority of the area is set out as flexible space that can accommodate tables and chairs. This space benefits from the proximity of Gessner Gardens immediately to the east.

At the north end of Berol Walk are visitor cycle spaces, including spaces for large cycles and buggies.

The finishes follow the established design delivered with the Gessner building

- 1 The 'link' through Berol House
- 2 Orientation space
- 3 Commercial use
- 4 Cycle store
- 5 Controlled vehicle access point
- 6 Visitor cycle parking
- 7 Accessible parking bay
- 8 'Spill-out' area



Illustrative plan of Berol Walk (North)

There is a need to safe-guard space for potential future additional accessible car parking if the demand requires it. The adjacent plan illustrates the location of the potential accessible bays. An additional eight spaces could be provided located between the proposed street trees.



Potential future accessible car parking bay



Proposed accessible car parking bay for Berol House



Illustrative plan of Berol Walk (North) with potential accessible parking bays

9.3.5 Green Link

The Green Link forms part of the wider strategic route between Tottenham High Road and the Lea Valley. The intent is that this piece of public realm facilitates this important connection, whilst providing a gateway to the Berol Quarter site.

The Green Link provides green thresholds to the Square with tree planting, creating a sense of compression to contract the openness of the Square. The west approach off Ashley Road South is planted with two rows of street trees to create a canopy over the route. Seating is placed between the trees to encourage people to dwell along the Green Link.

The central route, between the trees, is envisaged as the shared pedestrian and cycle route, with the side routes being narrower and pedestrian oriented. The hexagonal paving pattern in the Square, with its varying colour palette, looks to visually indicate to cyclists passing through the space to slow down.

Visitor cycle parking and wayfinding is located at this threshold.

- 1 Street trees create threshold
- 2 Benches and seats under trees
- 3 Visitor cycle parking
- 4 Vehicle control bollards
- 5 Linear bench under the trees
- 6 Hexagon pattern across route
- 7 Spill-out area



Illustrative plan of the Green Link (west)

9.3.6 Materials Strategy

The material strategy can be divided into two areas. The first is the north section where the public realm follows the established material palette and details. This includes the black granite sett banding and insitu exposed aggregate concrete paving.

The south section, that includes the Square and Berol Walk, is intended to tie in with the granite paving specification established by the adjacent 2 Ashley Road development. The majority of the public realm paving is two gauge, random length granite paving with a simple 400mm banding to the base of the buildings.

However, within the Square and through the centre of Berol Walk the rectangular paving gives way to hexagonal paving units of granite - some of which are a matching silver grey and others different shades of pink or blush granite.

The public spaces in the under-storey of the buildings will be paved in natural stone.

Permeable block paving is proposed for the Gessner carriageway.



1 — Black granite setts paving bands



2 — Black granite setts





3 — Silver grey granite



4 — Granite hexagonal paving



5 — Permeable paving



Example of faceted paving units - New Ludgate, London



5 — Exposed aggregate concrete as existing



6 — Natural stone paving to undercrofts



7 — River washed gravel and steel edge



9.3.7 **Furniture strategy**

The furniture strategy looks to provide a variety of seating opportunities for people who live, work or visit Berol Quarter. There are benches with backs and arm supports, as well as benches that can be used in ‘conversation’ with the benches or separately. A long linear bench defines the southern edge of the Square, providing a place to watch the life of the Square and the movement along the Green Link. Additional seating is provided in the north section of Berol Walk.

Cycle racks provide convenient visitor parking at the south and north arrival points into Berol Quarter.

Sculptural informal seating and play is formed by the inclusion of coloured granite forms created by the extrusion of the hexagonal paving.



1 — Timber Seating block with back rest



2 — Timber Seating block





3 — Timber Seating long block



4 — Hexagonal Seating



5 — Sheffield Cycle Stands



9.4 Biodiversity and urban greening

9.4.1 Biodiversity

The landscape design looks to enhance the biodiversity of Berol Quarter through increasing the areas of urban greening and the integration of wildlife refuges and similar features.

The tree and other planting species are selected typically for the wildlife benefits, such as habitat creation and food sources. The different orientation of the rooftop gardens and their modelling will provide a further richness of micro-habitats.

The proposed variety of plant species looks to provide resilience to the risks of future pests and diseases.



1 — Wildlife Refuge



2 — Biodiverse Roof



3 — Nectar-Rich Perennials



4 — Large-Scale Trees

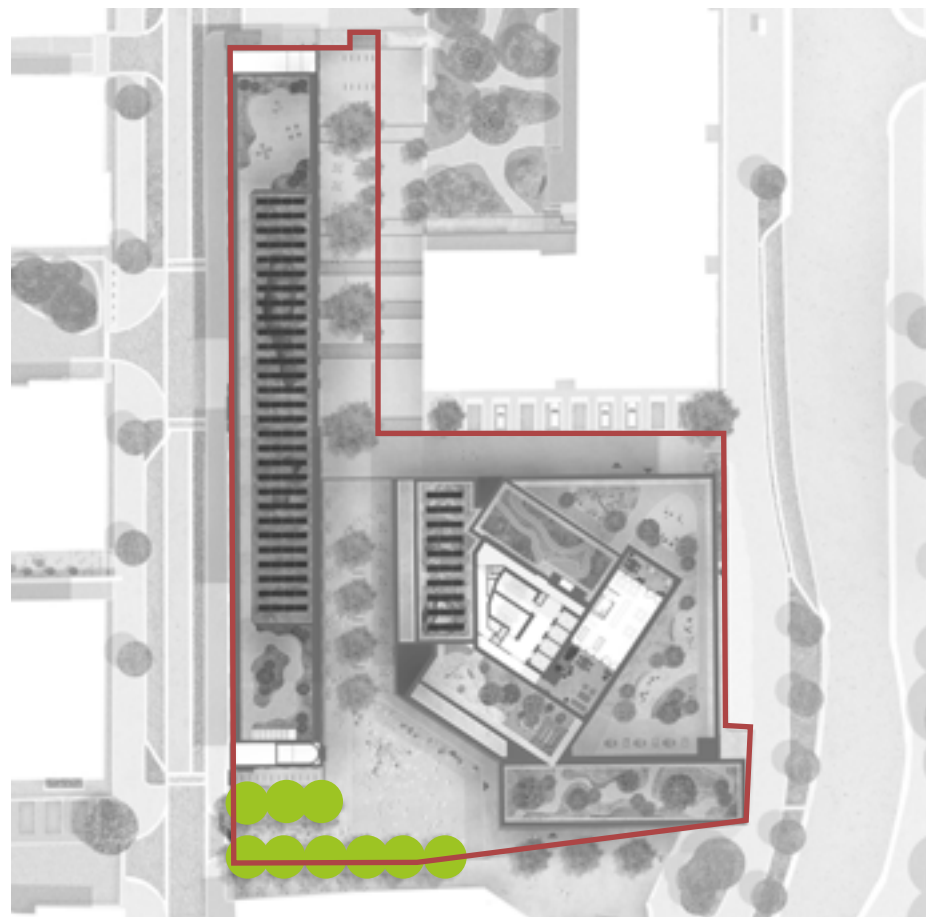
9.4.2 Tree Strategy

The tree strategy looks to create use the selection of tree species to reinforce the legibility of the landscape design of Berol Quarter, whether that be the thresholds, focal points or rooftops.

The proposals have been developed to create suitable spaces for tree planting that will allow long term benefits to the community within the public realm and rooftop gardens.

The variety of species is intended to improve the biodiversity and provide future resilience to pests and diseases.

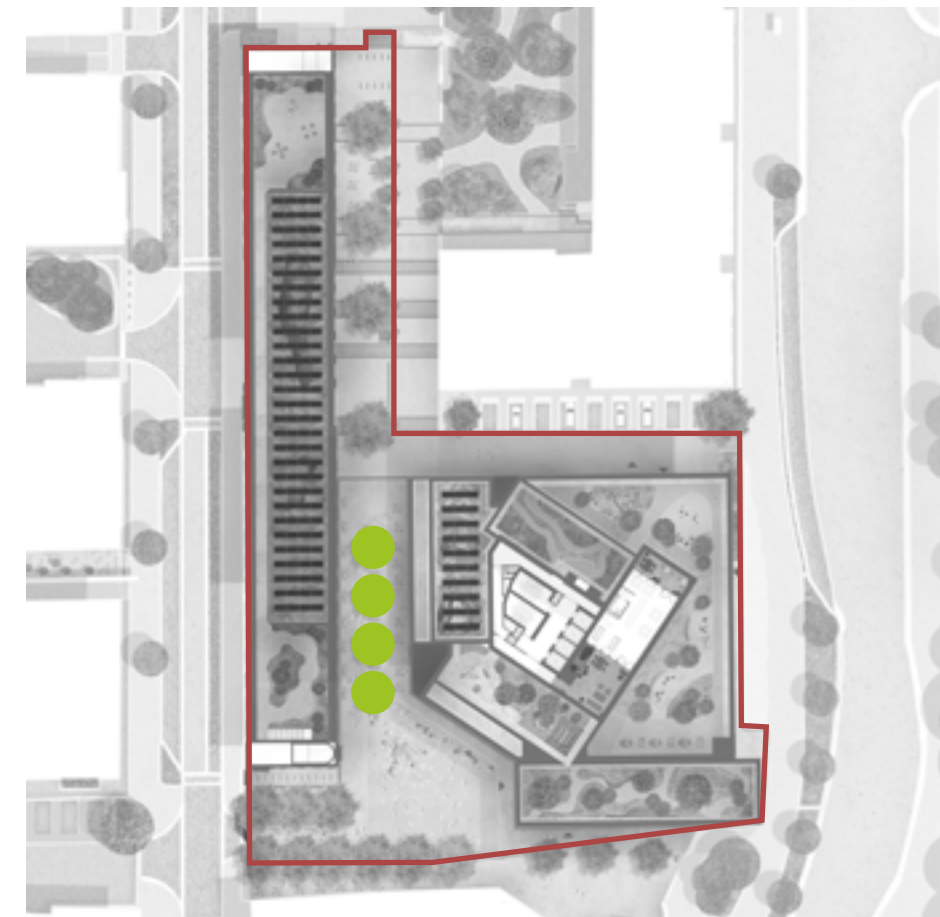
Careful species selection and tree pit design to ensure that all trees are capable of flourishing through periods of drought.



1 — Green Link



Medium sized clear stem trees with string seasonal interest, planted in a tight grid for maximum impact at the western gateway. 2-3 species of similar sizes and habit.



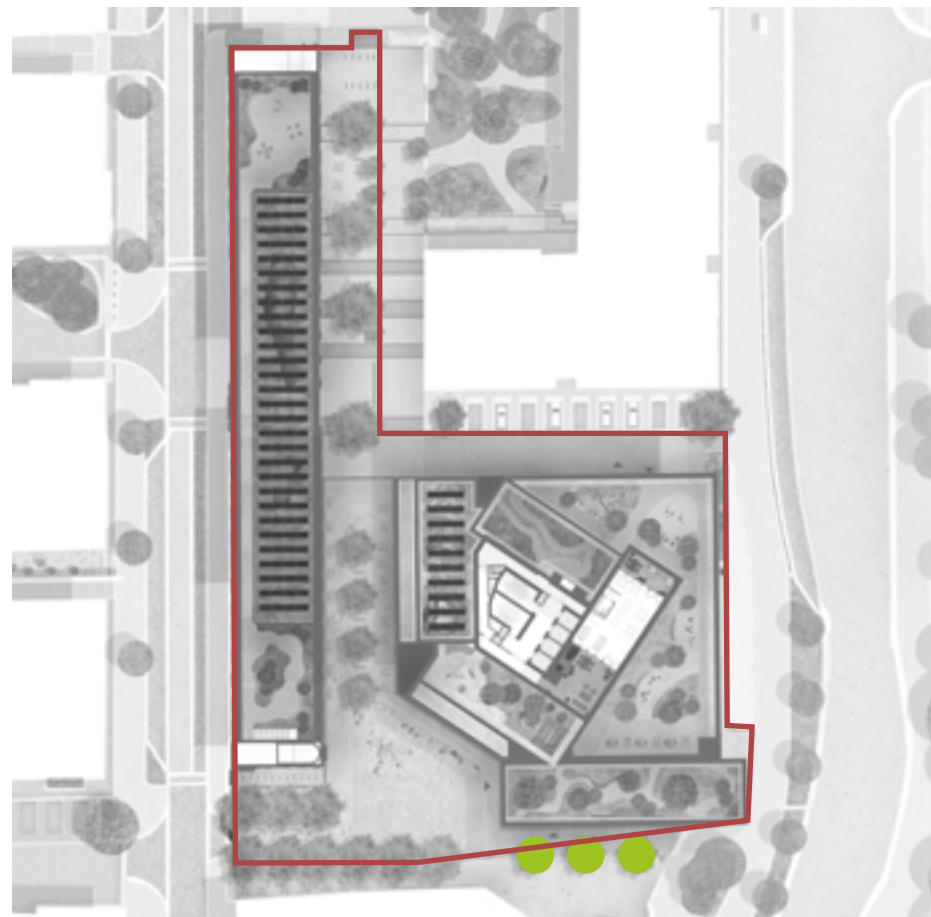
2 — Berol Walk



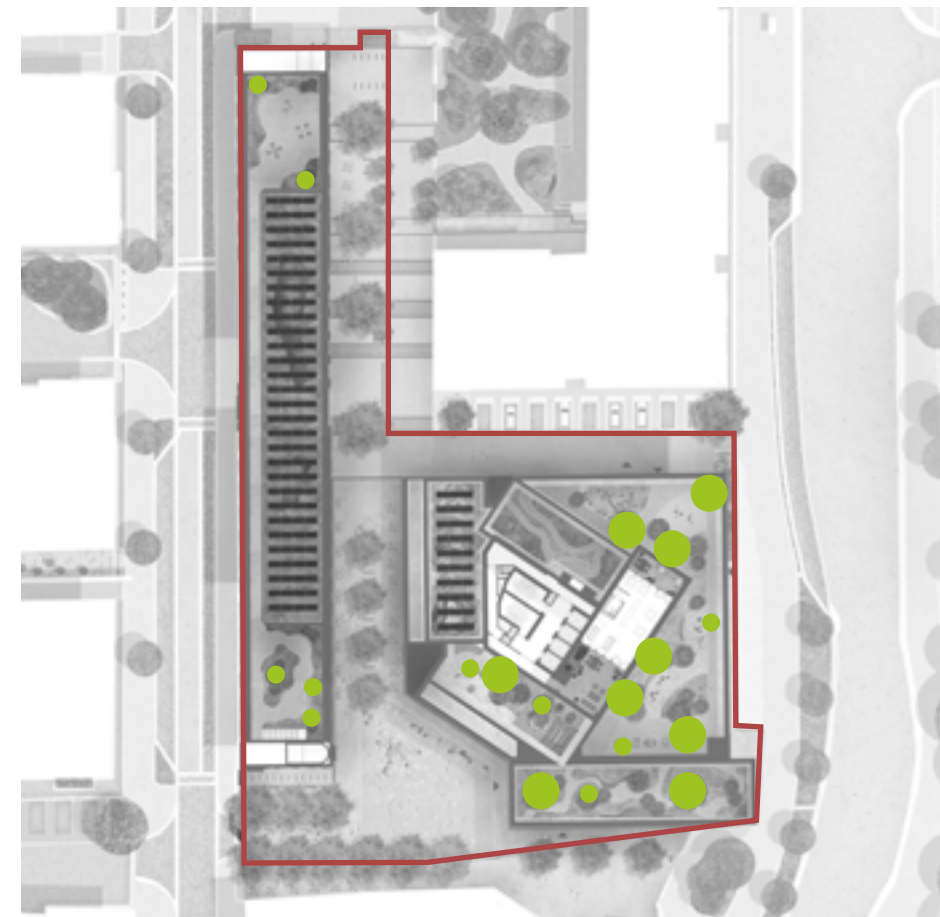
Narrow canopy street trees on the north south axis, informal shapes and forms to create a naturalistic character.



3 — Berol Walk and Gressner Lane



4 — West approach



5 — Roof gardens



Large sized clear stem tree to match tree line adjacent to and within Gessner Gardens.



Large multi-stem trees to be planted in oversized plant pots.



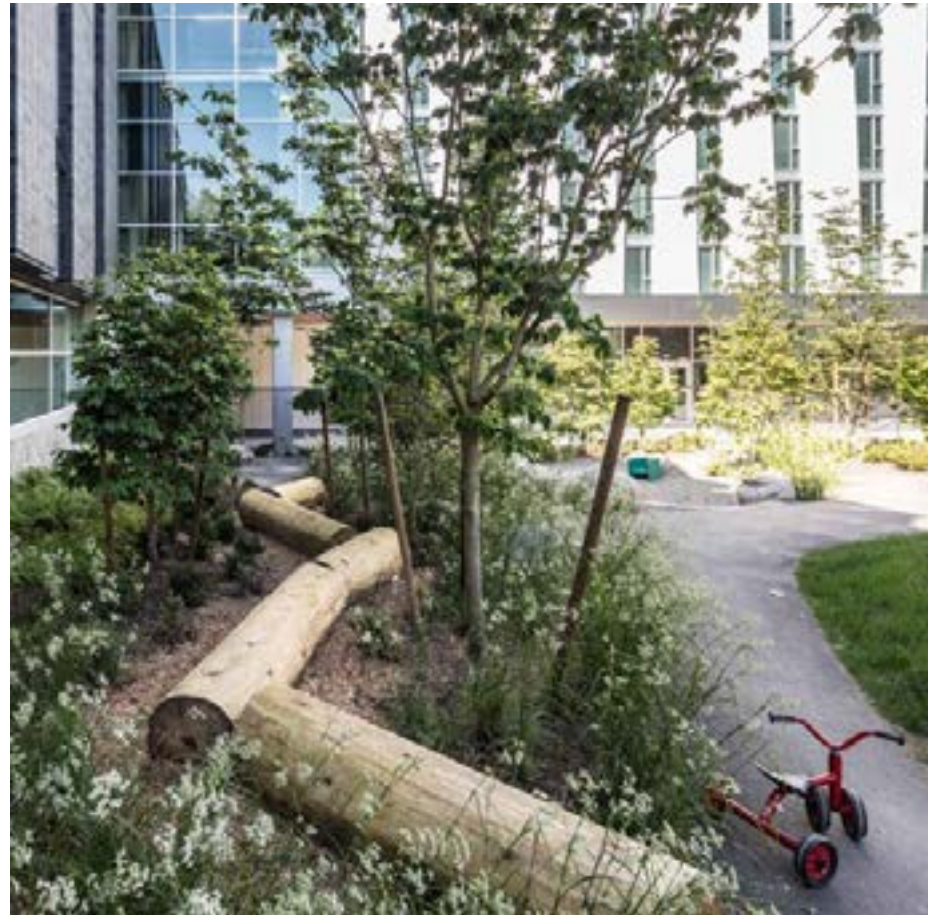
Small multi-stem trees with sculptural forms suited to rooftop gardens. 2-3 species of similar sizes and habit.

9.4.3 Planting for Biodiversity

Planting under the trees is designed to be low maintenance and functional.

Grass mixes will be selected to be suitable for the space taking consideration of the amount of light and water.

Ground cover planting is used to create a rich, attractive low maintenance alternative to lawn and helps to define areas and increase the biodiversity across the site.



1 — University of British Columbia, Vancouver



2 — Austin Nichols Warehouse, NY



3 — Project 60 London Wall by Churchman Thornhill Finch



4 — Delfland Water Authority, NL

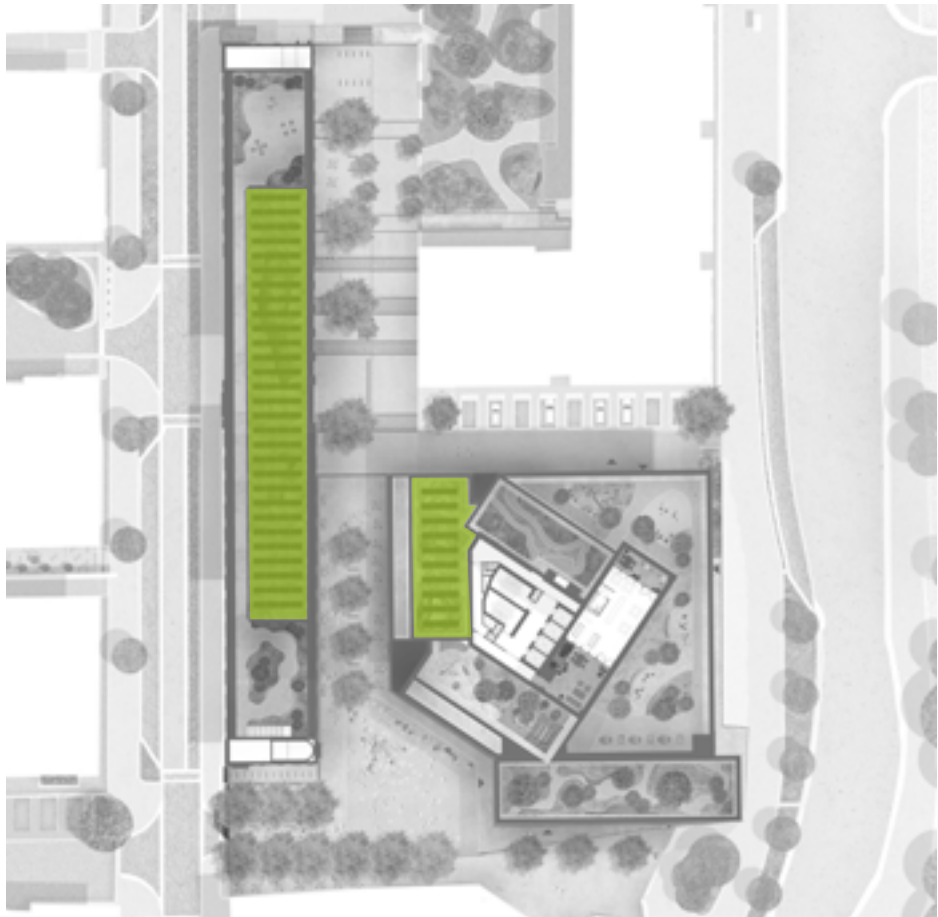
9.4.4 **Bio-Solar Roofs**

Bauder Flora 3 Seed mix

- UK Native British Provenance Seed Mix
 - 49 Species
 - 31 species of which eight are annuals
 - 8 Grasses/Sedge
 - 2 Sedum species
- Mix percentages; 65% perennial wildflowers, 20% annuals & 15% grasses

Key plants

- Wild Red Clover
- Vetch
- Bird’s foot Trefoil
- Kidney Vetch
- Black Knapweed
- Common Toadflax
- Rough Hawkbit
- Mousear Hawkweed
- Sedums
- Wild strawberry



1 — Location of biosolar roofs



2 — Example of a biosolar roof



3 — Indicative plant species



4 — Use of crushed aggregate for the substrate

9.4.5 Biodiverse Roofs

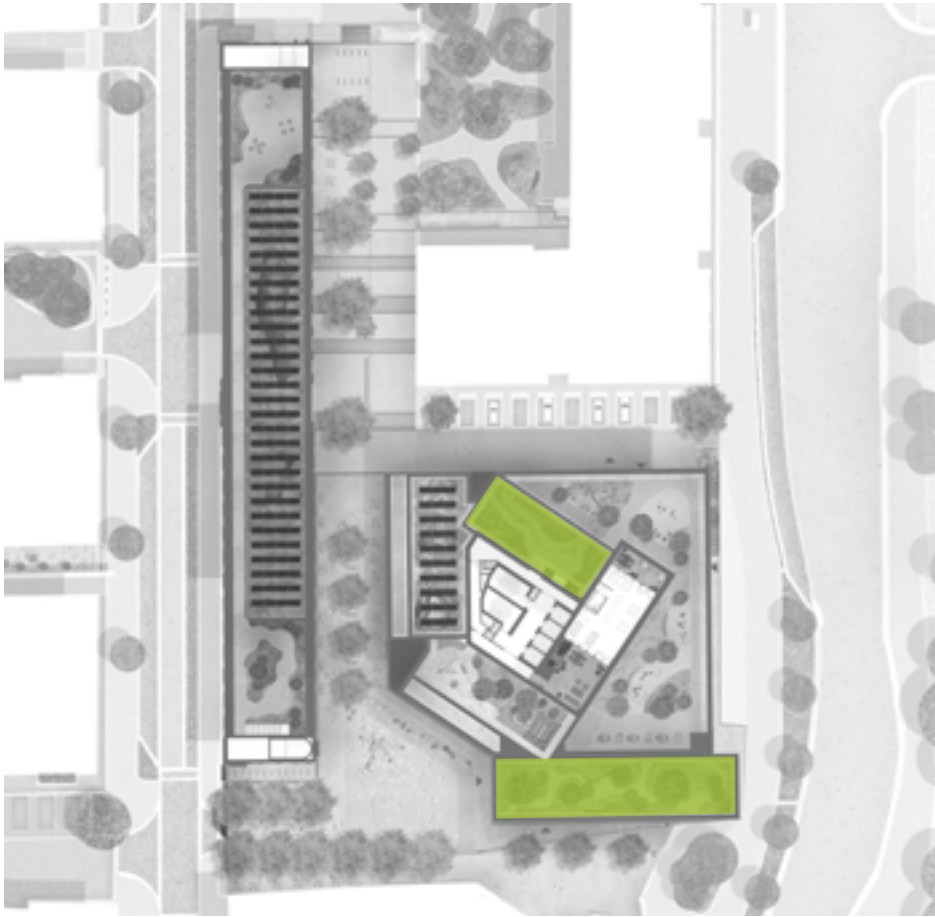
Bauder Flora 5 Seed mix

- UK Native British Provenance Seed Mix
- 38 Species
 - 28 wildflowers
 - 6 Annuals
 - 2 sedge and grasses
 - 2 Sedum species

• Mix percentages; 80% perennial wildflowers, 10% annuals & 10% grasses

Key plants

- Red Valerian
- Wild Red Clover
- Vetch
- Bird's foot Trefoil
- Kidney Vetch
- Red Fescue
- Quaking Grass
- Wild Marjoram
- Black knapweed
- Wild Teasel
- Common Toadflax
- Evening Primrose



1 — Location of biodiverse roofs



2 — Quaking Grass



3 — Indicative plant species



4 — Red Valerian

9.4.6 Podium Garden

Key plants

Structure shrubs / trees

Planted as 2.5-3m high specimens planted into 600mm depth growing medium.

- Amelanchier
- Cornus Kousa

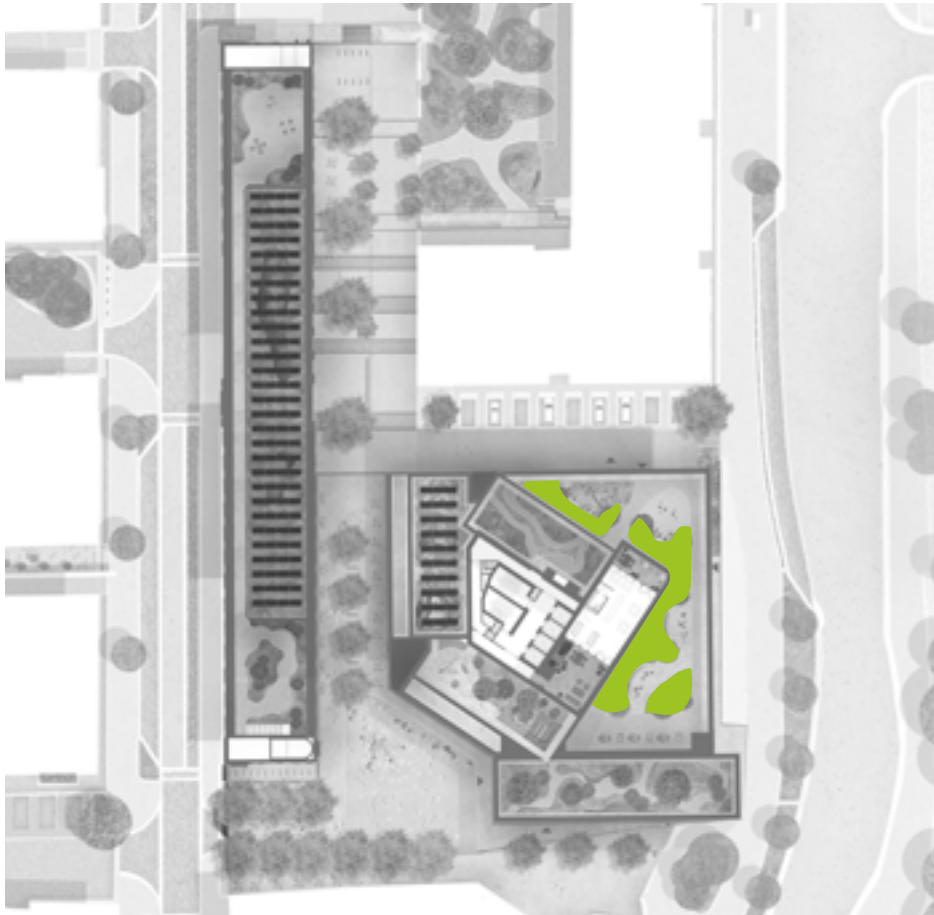
Groundcover matrix

Planted using 9cm-2L stock at a density of 11 per m2. Planted into 250-300mm depth lightweight growing medium.

- Sesleria nitida
- Sesleria autumnalis
- Luzula nivea
- Calamagrostis Karl Foerster
- Aster linosyris
- Gernanium sp.
- Stachys olympica
- Pennisetum 'Hamelm'
- Miscanthus sinensis

Seasonal

- Verbena sp.
- Anemone



1 — Location of podium planting



2 — Example of grasses and perennials



3 — Example of structural tree and grasses



4 — Example of seasonal flowering, Verbena sp.

9.4.7 Mediterranean Garden

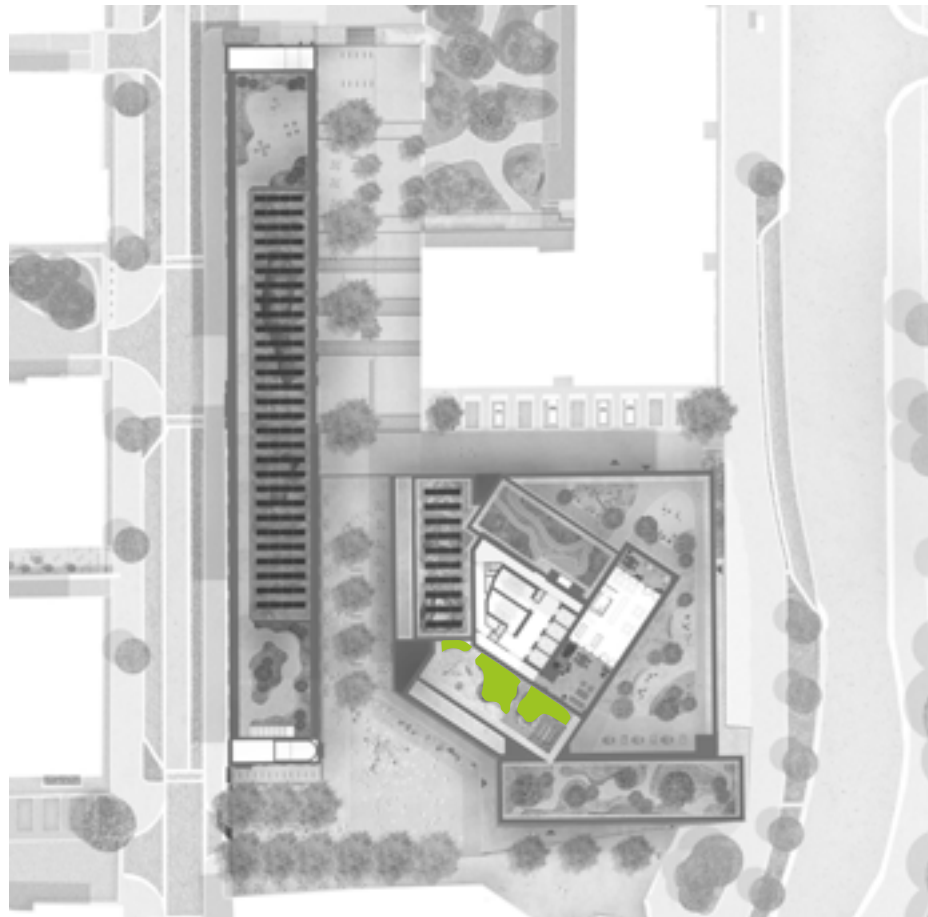
Key plants

Scented and sensory planting for structure

- Evergreen scented jasmin
- Rosemary
- Lavender
- Sage
- Lemon Verbena
- Santolina
- Thyme
- Phlomis fruticosa
- Phlomis russeliana
- Videos
- Sanguisorba 'Tanna'

Shrubs and small trees

- Trachycarpus sp.
- Chamaerops sp.
- Pinus nigra
- Pinus pinea
- Arbutus unedo, multi-stem
- Cistus x corbariensis
- Nepeta sp



1 — Location of mediterranean garden planting



2 — Example of scented shrub, Santolina



3 — Example of dry garden perennials



4 — Sanguisoba and Trachycarpus sp.

9.4.8 Berol House Gardens

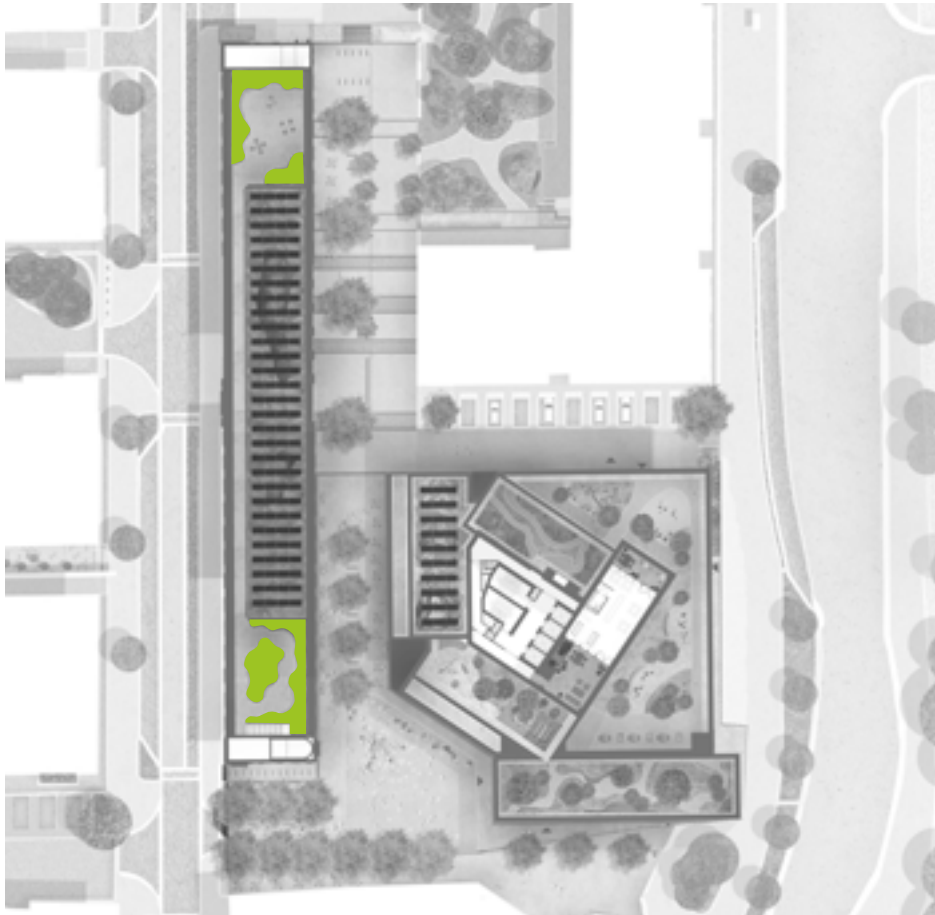
Key plants

Perennials and grasses

- *Acanthus spinosa*
- *Ajuga reptans*
- *Asplenium scolopendrium*
- *Astilbe koreana*
- *Deschampsia cespitosa*
- *Euphorbia amygdaliodes* 'Purpurea'
- *Geranium phaeum* var. *phaeum* 'Samobor'
- *Heleborus argutifolius*
- *Molinia caerulea* subsp. *caerulea* 'Varietata'
- *Anemone x hybrida* 'Honorine Jobert';
- *Hakonechloa macra*

Shrubs and small trees

- *Acer tataricum*
- *Betula albosinensis*
- *Mahonia x media* 'Winter Sun'
- *Sarcococca confusa*
- *Taxus baccata*



1 — Location of Berol House Gardens

