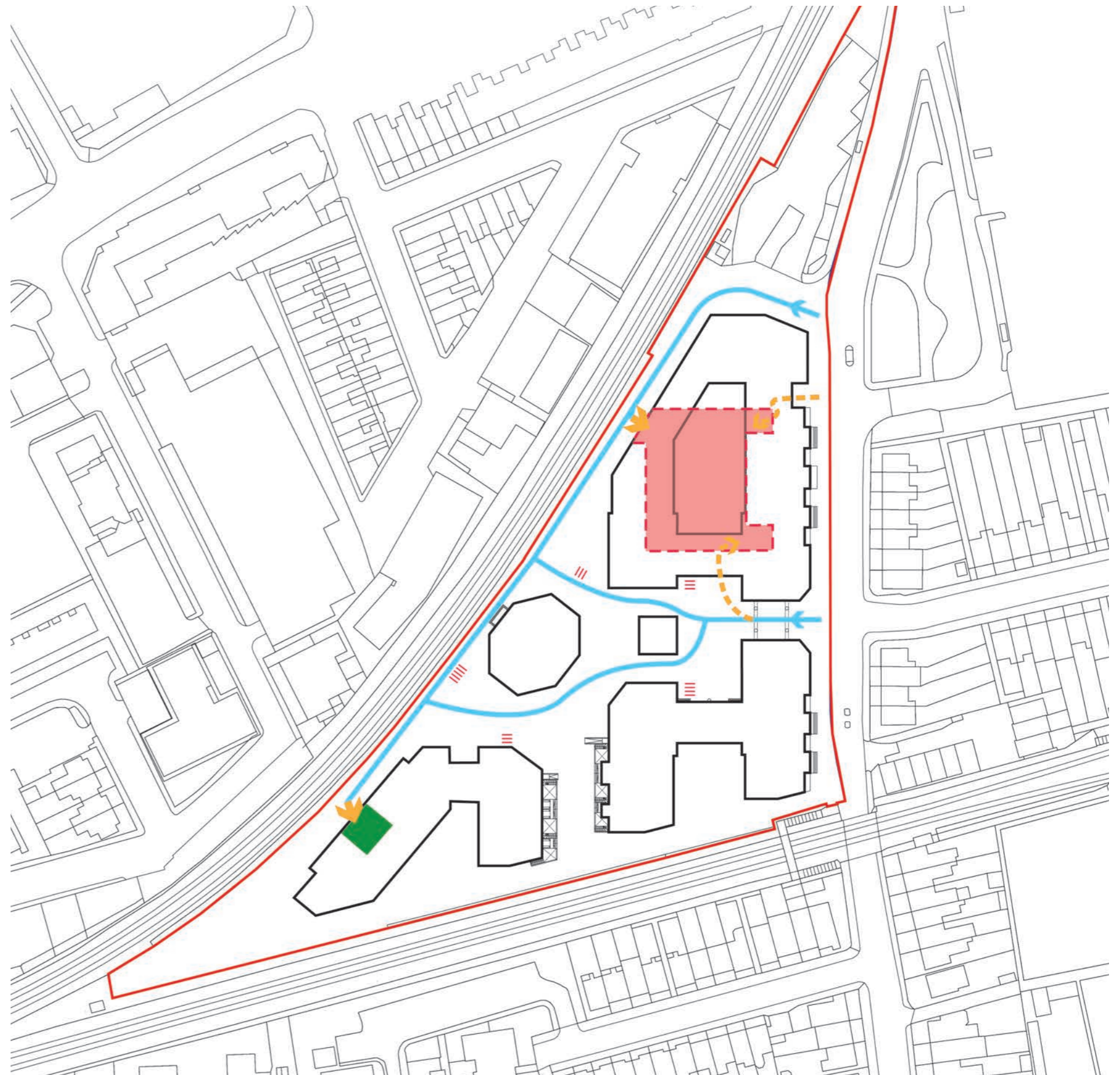








1.29 Cycle Strategy

The site allows cycle access through different points along Manor Road. It provides short and long term cycling parking, being the long-stay dedicated for residents within Block A basement and Block C cycle store at ground-floor. For the short term 35 bicycle spaces have been located in convenient locations along the site to cover both commercial and residential visitors. The commercial long-stay will be accommodated within each unit with a provision of a cycle hanger in a storage area.



KEY

	Cycle Access Routes
	Bins/Cycles Basement
	Cycle store at ground floor
	Main cycle access to the Basement and Cycle store at ground floor
	Secondary cycle access to the Basement
	Short-term cycle stands (18 no. - 35 cycle spaces)

Cycle strategy

1.30 Hardscape strategy

The landscape design aims to build upon the masterplan design concept to ensure that both the public and private realm are of a quality and robustness that is appropriate to the physical disposition of the site, as well as conveying a unifying character within the context of the existing surroundings. Importance is given to the appropriateness of the materials with regard to place making and their long term performance, including the selective use of high quality materials to enhance the settings of the buildings and footways.

Design principles:

- Elements in the public areas reflect the different uses, assist orientation around the site and tie the space together into a cohesive whole.
- The design and placement of all the elements respond to the architecture of the development through sympathetic, appropriate and consistent materials, textures and scales.
- The combined suite of high quality elements create a positive, inclusive and inspiring residential environment.
- The designed components of the residential realm include an appropriate level of lighting and contribute to the creation of a secure environment by minimising the potential for concealment.
- All elements are suitably robust and able to tolerate the stresses of a residential environment over a long period of time.

All elements are to provide a sufficient level of comfort and amenity but also aim to minimise clutter and visual confusion. The broader public realm offers continuous, distinct civic spaces. High quality landscaping will carry across all aspects of the urban realm within the site. A palette of materials is identified which, together with the streetscape elements specified, define the character of the area. Surface treatments will be continuous across the scheme to unify the area and assist in orientation. The materials and finishes will complement the paving materials.

Typical hard materials

A robust palette of materials is proposed. The materials selected are hard wearing, easy to maintain, and responsive to the site design concept. The durability of materials is vital due to the high levels of anticipated footfall, vehicular movements and regular cleaning of the hard landscape areas. Vehicle access routes (service and emergency) into the site will use a consistent finish to link between the Service Access Road and central courtyard, while prioritising pedestrian movement along these routes. These shared surfaces are proposed as permeable (resin bound gravel) to increase permeability of overall site and improve water infiltration as well as delineate shared areas for pedestrian use.

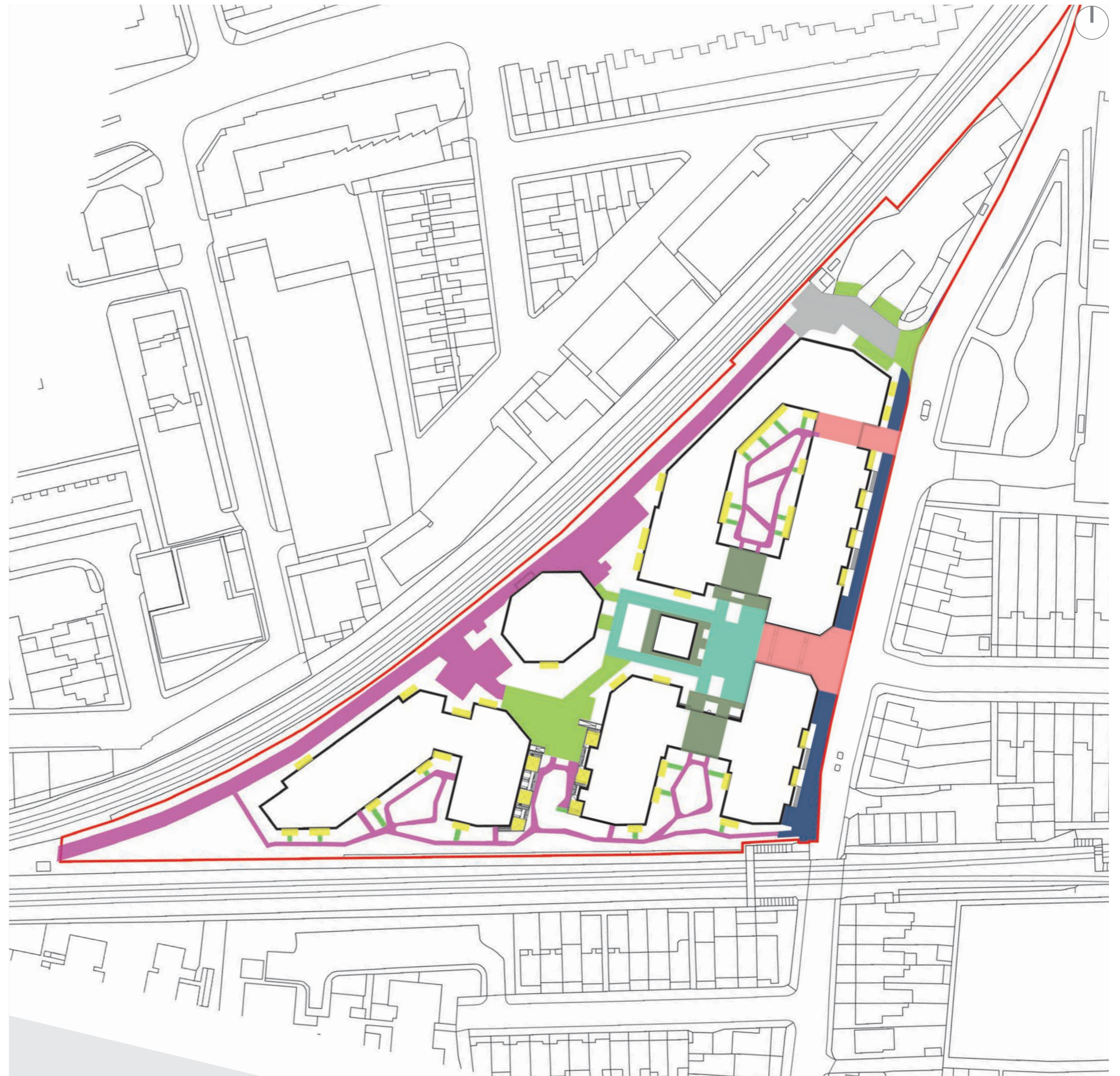
Pedestrian pathways through courtyards and soft landscape areas are also permeable resin bound gravel or stepping stone paths through planting.

The central public courtyard which forms the 'front entrance' to the development will be paved using high quality paving linking with the predominant public realm pavement materials. Communal courtyard areas and private terraces will use complementary paving. Furniture within the public realm will be simple and solid, capable of withstanding large amounts of wear and tear. The materials and finishes will complement the paving and building materials palette.

1.31 Hardscape strategy - materials palette

Key

	Concrete flags
	Granite paving with frame
	Granite slabs
	Granite setts
	Granite setts (colour mix)
	Resin bound gravel (permeable)
	Granite stepping stones
	Decking (private terraces)
	High quality block paving



Materials layout



Concrete flags



Granite paving with frame



Granite slabs



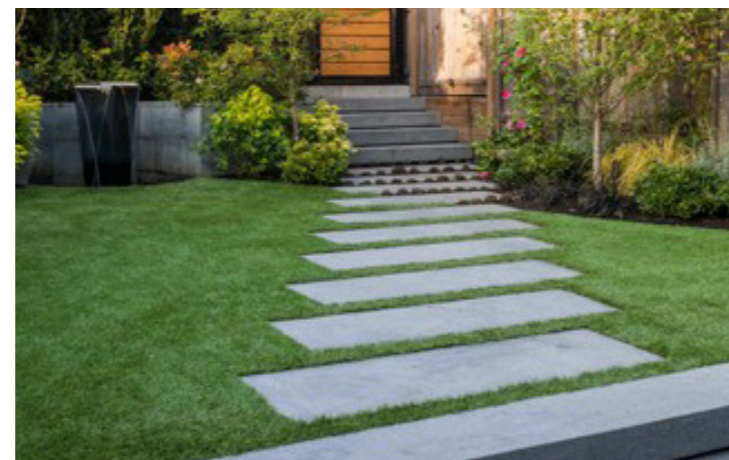
Granite setts



Granite setts (Coloured mix)



Resin bound gravel



Granite stepping stones



Decking



High quality block paving

1.32 Planting strategy

1.32.1 Soft landscape strategy

Tree planting

Planting softens the built form, humanises space, mitigates the microclimate and provides a seasonal sense of place. Tree planting can respond to residential structures and the choice of a particular tree species for an area is intended to establish an association for each. Planting plays a central role in softening the structure of outdoor spaces. The contrasts between soft and hard materials create diversity of experience.

Street tree planting forms a key element within the public realm. The selected tree species are located long the length of the frontage to provide a coherent streetscape and have been carefully located to ensure that they make a positive contribution to the public realm without impeding pedestrian flow or conflict with existing services. The trees within the public realm have been specified sufficiently large to resist vandalism from day one and also provide an immediate visual impact.

Trees within the site courtyards will be established at smaller sizes and will be selected from a palette of smaller growing, more ornamental trees with attractive forms, good flowering, autumn colour or winter bark colour to provide residents with interest through the year by giving a sense of changing seasons and to improve biodiversity. The tree species proposed are illustrated in the palette on the following pages.

Design principles

- Suitability in the form and eventual scale of the planting in relation to the spaces and elevations.
- The use of tree, shrub and perennial planting to enhance the design by strengthening the articulation of the space through helping to frame views and provide wayfinding.
- Appropriate in terms of settings and not pose threat or nuisance, for example with the specification of clear stem trees adjacent to public routes.
- Use of planting for wildlife enhancement
- The planting will be designed to promote a low maintenance regime that requires minimal attendance and watering once established.
- Follow National Joint Utilities Guidelines requirements when planting trees in the vicinity of services and buildings.

Ornamental planting

Distinct plant lists have been prepared to support the aspirations of the character of each space and are selected to be suitably robust and appropriate to the specific microclimate of the spaces. Native plants will be used where possible, and supplemented by additional drought, shade and wind tolerant species as the conditions dictate.



PERENNIALS

Carex laxiculmis 'Bunny Blue'
(Creeping sedge 'Bunny Blue')



Phlox divaricata 'Blue Moon'
(Sweet william 'Blue Moon')



Carex divulsa
(Grey sedge)



Tiarella cordifolia
(Foam flower)



Liriope muscari 'Ingwersen'
(Big blue lilyturf 'Ingwersen')



Hakonechloa macra
(Japanese Forest Grass)



Euphorbia amygdaloides var. *robbiae*
(Mrs Robb's bonnet)



Penstemon digitalis 'Husker Red'
(Penstemon 'Husker Red')



Carex pendula
(Pendulous sedge)



Pachysandra terminalis
(Japanese spurge)



Polystichum polyblepharum
(Japanese lace fern)



Campanula trachelium
(Nettle-leaved bellflower)



Dryopteris affinis
(Golden shield fern)



Helleborus foetidus
(Stinking hellebore)



SHRUBS

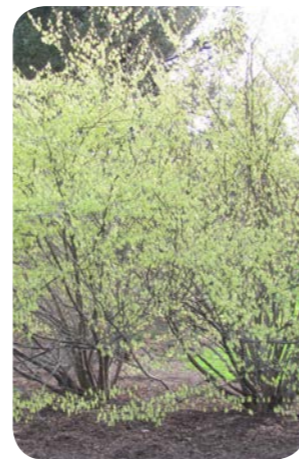
Sarcococca hookeriana 'Winter Gem'
(Sweet box 'Winter Gem')



Hydrangea quercifolia 'Sikes Dwarf'
(Oak-leaved hydrangea 'Sike's Dwarf')



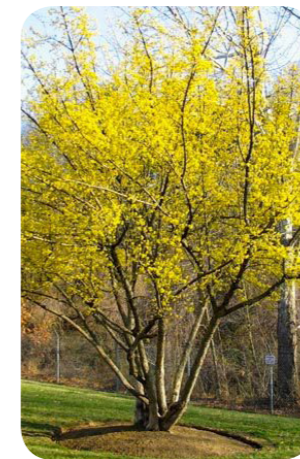
Corylopsis glabrescens
(Fragrant winter hazel)



Sarcococca confusa
(Sweet box)



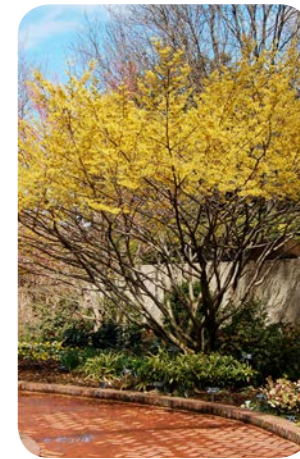
Cornus mas
(Cornelian cherry)



Viburnum opulus
(Guelder rose)



Hamamelis x intermedia 'Arnold Promise'
(Witch hazel 'Arnold Promise')



1.33 Tree planting strategy

Tree planting across the site relates closely to the character areas described above. Tree species will be selected from the recommended palette to suit the purpose and situation within each location and to achieve the desired effect.

Street trees will comply with Local Authority recommendations. Central courtyard tree layout is based on a grid of feature trees framing the space and supported by a secondary range of planting to the edges, containing the visual extent of this area.





Screen planting trees have been used to augment retained existing trees and hedge vegetation along the rail corridors and to create a visual buffer to the edges of the development.

Courtyards contain a range of colourful deciduous trees to add feature and colour to the landscape and to shade and frame use areas.



Tree strategy plan

KEY

	Streetscape trees (Semi-mature trees - 5-7m height)
	Feature trees in Public square (Semi-mature trees - 5-7m height)
	Mix of medium size Single-stem and Multi-stem trees (3-5m height)
	Existing trees to be retained



Amelanchier lamarckii



Acer ginnala



Malus everest



Prunus serrula



Betula nigra 'heritage'



Gleditsia triacanthos



Acer freemanii



Acer campestre 'Elsrijk'

1.34 Living roof strategy






The architectural forms of the buildings across the site are based on perimeter block forms around a central courtyard, offering a number of elevated spaces for residential amenity for private and communal use. The link buildings provide a landscaped terrace space for relaxation, active and passive recreation at fourth floor level, retaining a visual and physical connection to the ground level and adjacent landscape.

A number of taller buildings step back as they rise, creating additional private terraces at upper levels, typically facing south. The majority of these are private terraces for the contiguous units, while the larger space on Building B provides communal amenity for the residents of the development. Roof terraces are combined with building plant and equipment and sustainable energy devices (photovoltaic cells), as well as areas for living roofs.

The living roofs across the site contain wildflower mixes, which provide a large biomass with a range of plant species, offering biodiversity in flowers, habitat and food sources for a variety of local fauna.



KEY

	Living roof
	Flats/Townhouses Private Terraces
	Communal Residential Amenity
	PhotoVoltaic cells with brown roofs
	Core/Plant area

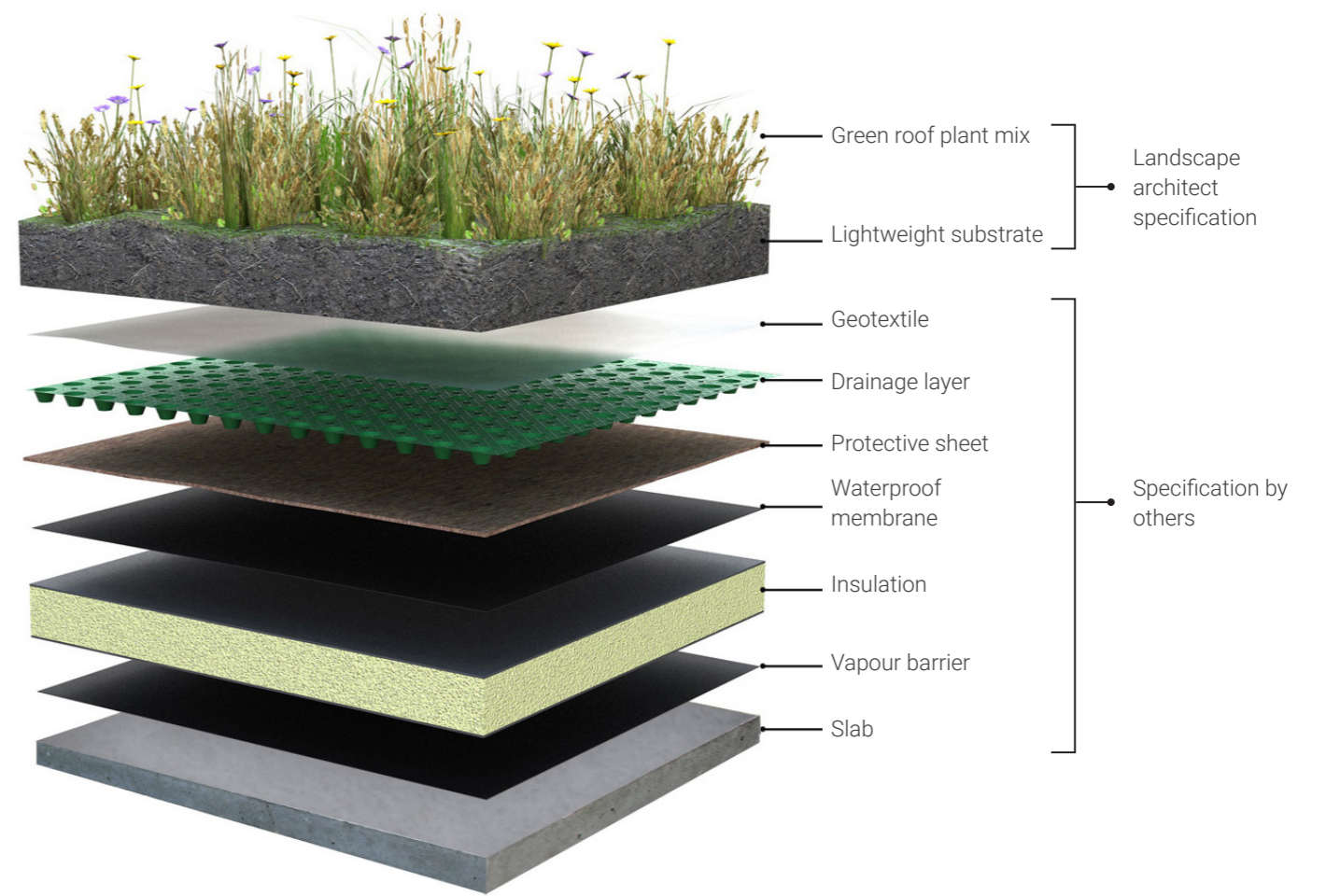
Living roofs and amenity terraces



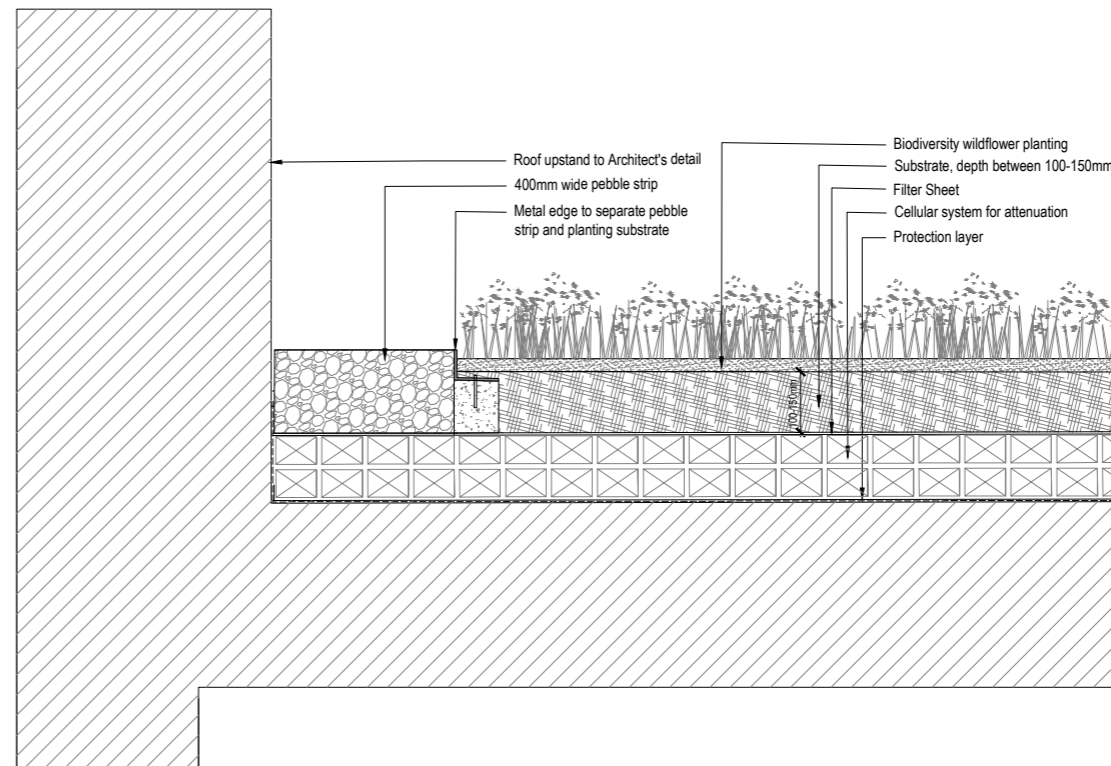
Botanical Name	Height	Blossom	Flowering Season
<i>Achillea millefolium</i>	8-40 cm	White	June-August
<i>Armeria maritima</i>	5-20 cm	Pink	April-October
<i>Bellis perennis</i>	3-12cm	White / Yellow	March-October
<i>Campanula glomerata</i>	3-30 cm	Blue	June-October
<i>Campanula rotundifolia</i>	15 cm	Blue	July-September
<i>Centaurea cyanus</i>	20-50 cm	Blue	June-August
<i>Centaureum erythrea</i>	10-40 cm	Pink	July-August
<i>Dianthus deltoides</i>	15-30 cm	Pink	April-October
<i>Echium vulgare</i>	30-60 cm	Blue	June-September
<i>Galium verum</i>	15-60 cm	Yellow	July-August
<i>Geum rivale</i>	20-40 cm	Pink	April-August
<i>Linaria vulgaris</i>	20-40 cm	Yellow	July-September
<i>Lotus corniculatus</i>	10-20 cm	Yellow	June-September
<i>Lychnis flos-cu-culi</i>	50-60 cm	Pink	May-August
<i>Papaver rhoeas</i>	20-60 cm	Red	June-August
<i>Pilosella aurantiaca</i>	20-60 cm	Orange	July-October
<i>Prunella vulgaris</i>	5-20 cm	Purple	June-October
<i>Rhianthos minor</i>	30-50 cm	Yellow	May-August
<i>Saponaria officianalis</i>	20-40 cm	Light Pink	July-September
<i>Scabiosa columbaria</i>	15-50 cm	Blue	July-October
<i>Sedum acre</i>	5-10 cm	White / Yellow	July-August
<i>Silene uniflora</i>	8-25cm	White	June-August
<i>Silene vulgaris</i>	25-50 cm	White	June-August
<i>Thymus polytricus</i>	4-10 cm	Mauve	May-August



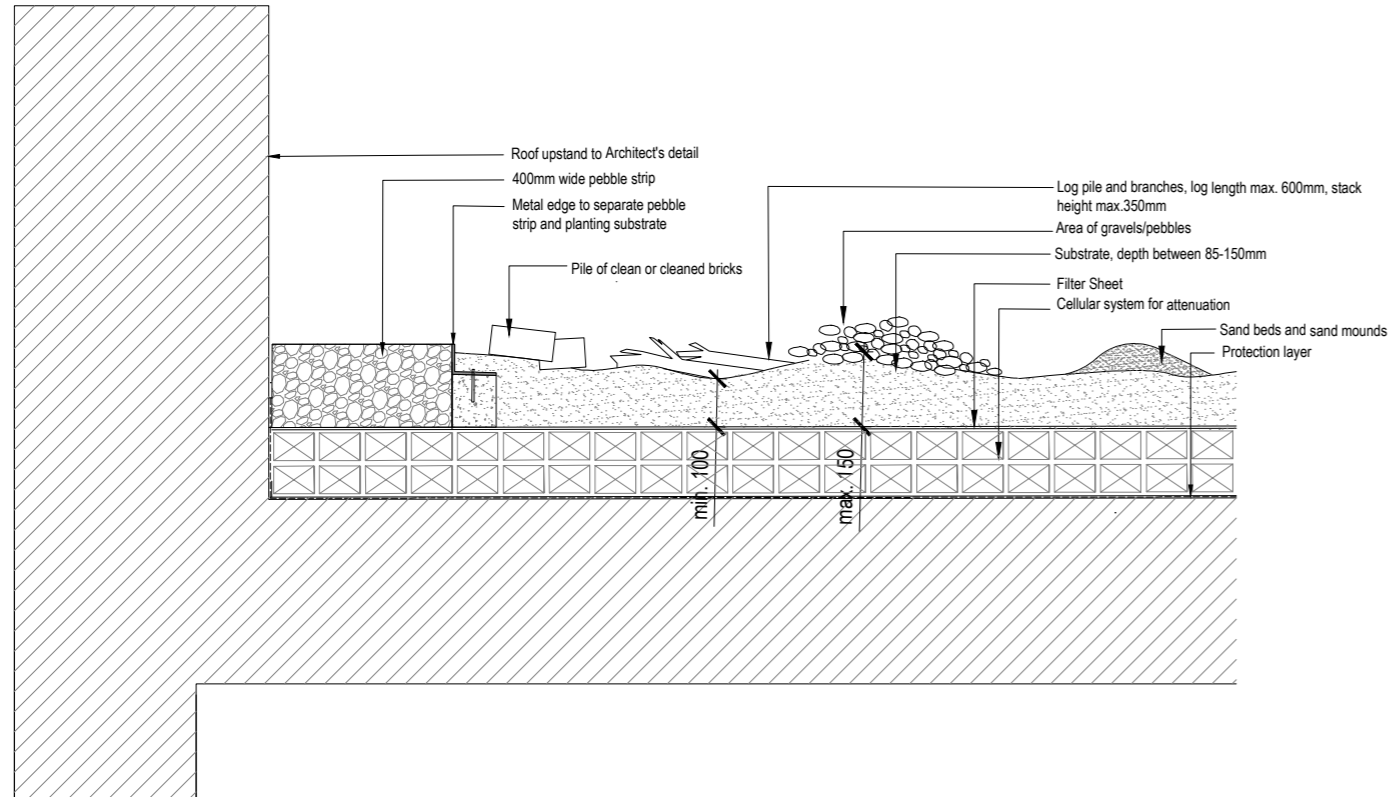
Green roof planting indicative species list



Green roof planting typical build up



Green roof typical detail



Brown roof typical detail



Alliaria petiolate



Echium vulgare



Papaver rhoeas



Galium verum



Brown roof precedent images



Daucus carota
 Native wild flower species



Prunella vulgaris



Silene vulgaris



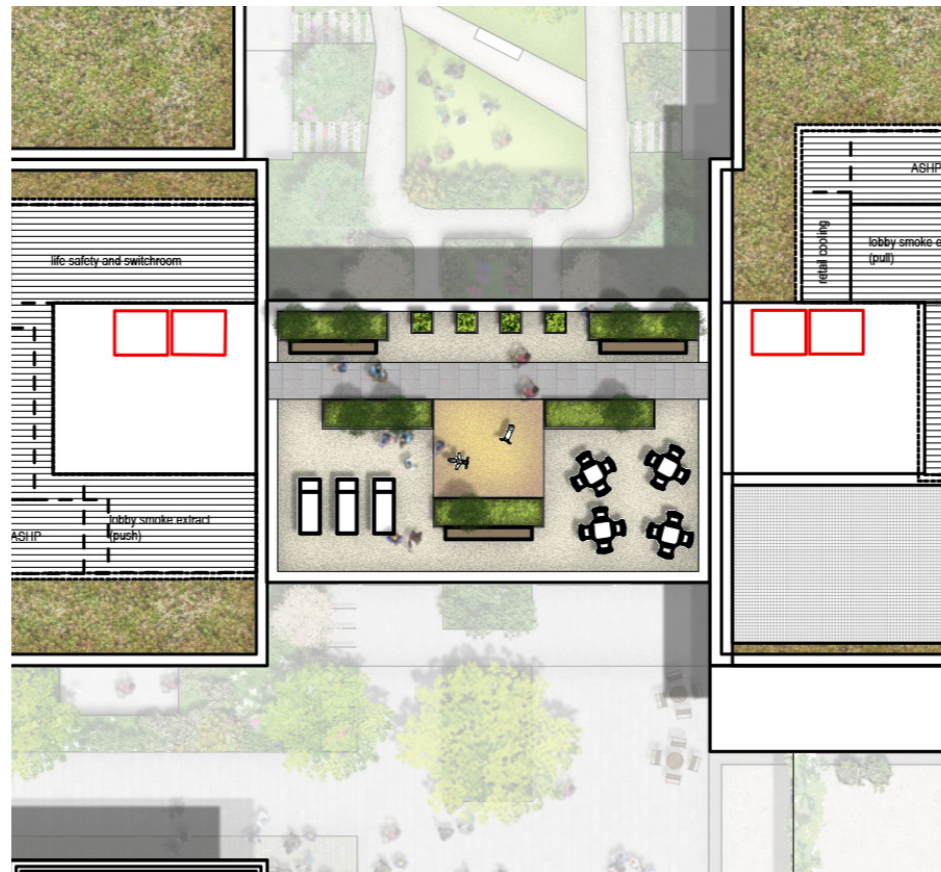
Rhianthos minor

1.35 Communal roof terraces

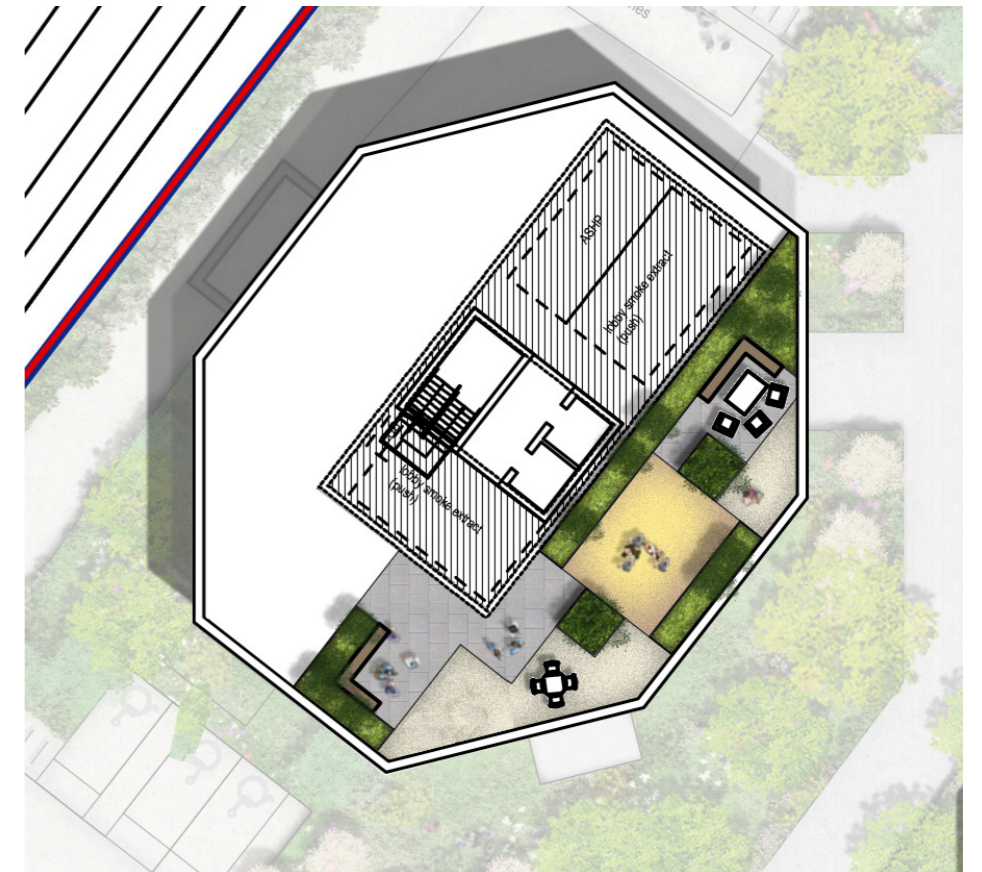
The roof terraces offer a private outdoor amenity space for residents, providing a unique and tranquil place on the top of the buildings. The design of each, feature a series of enclosed spaces defined for different uses. The simplicity of shapes is delineated by the disposition of raised planters which will provide protection from the wind while adding seasonal interest.

A combination of dining areas, with flexible spaces that could be either dedicated for yoga classes or other types of sports, or either as a stage for small theatre shows for children, is proposed. Calm spaces are provided with chaise longues to contemplate the view, or enclosed spaces with seating elements.

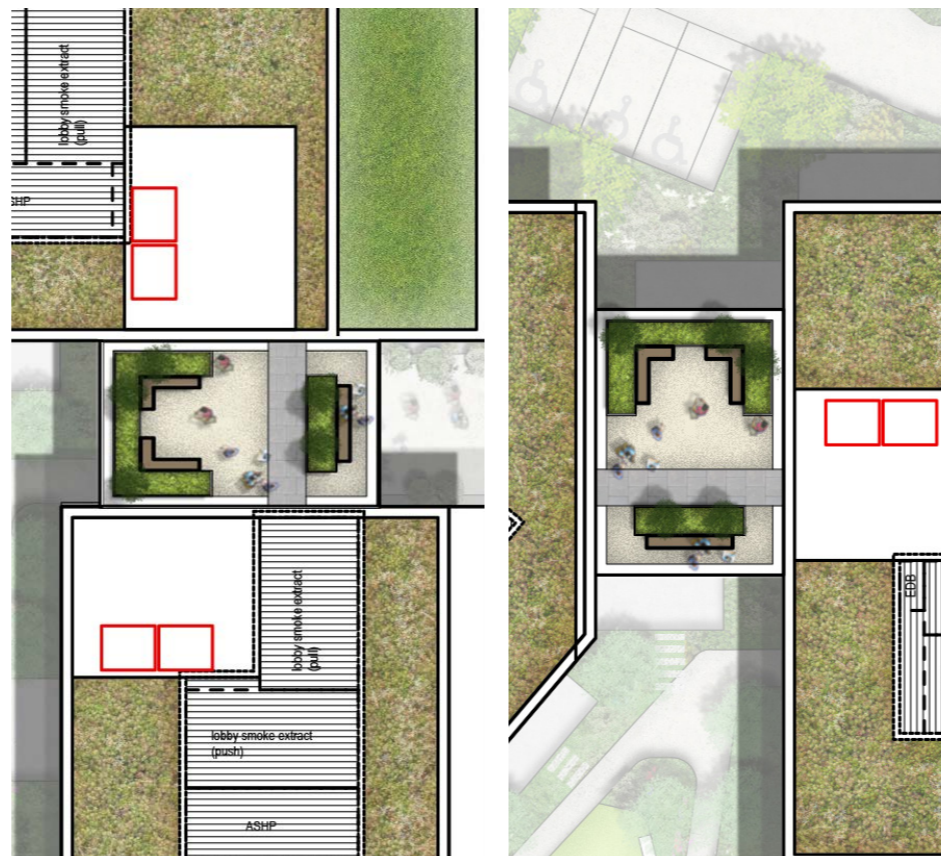
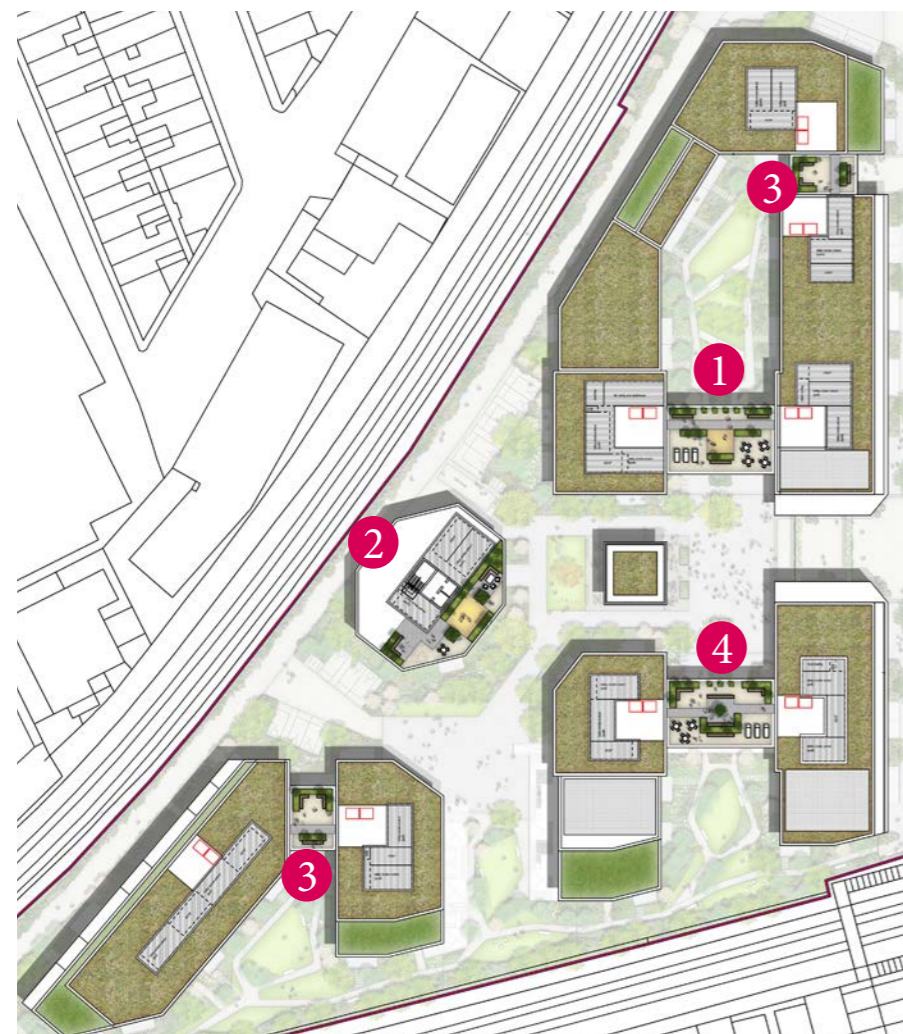
The material palette is simple, with the use of timber decking, concrete textured paving on pedestals, and timber in all the furniture.



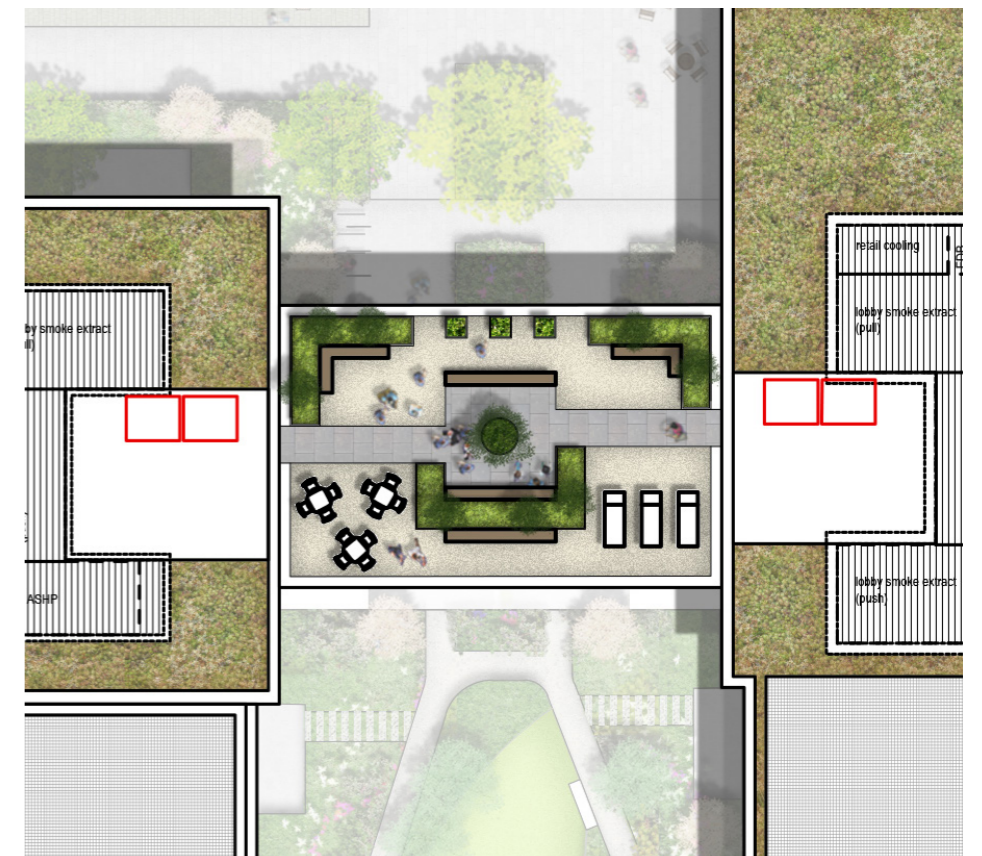
1 Block A communal roof terrace



2 Block B communal roof terrace



3 Block A and C communal roof terrace



4 Block D communal roof terrace

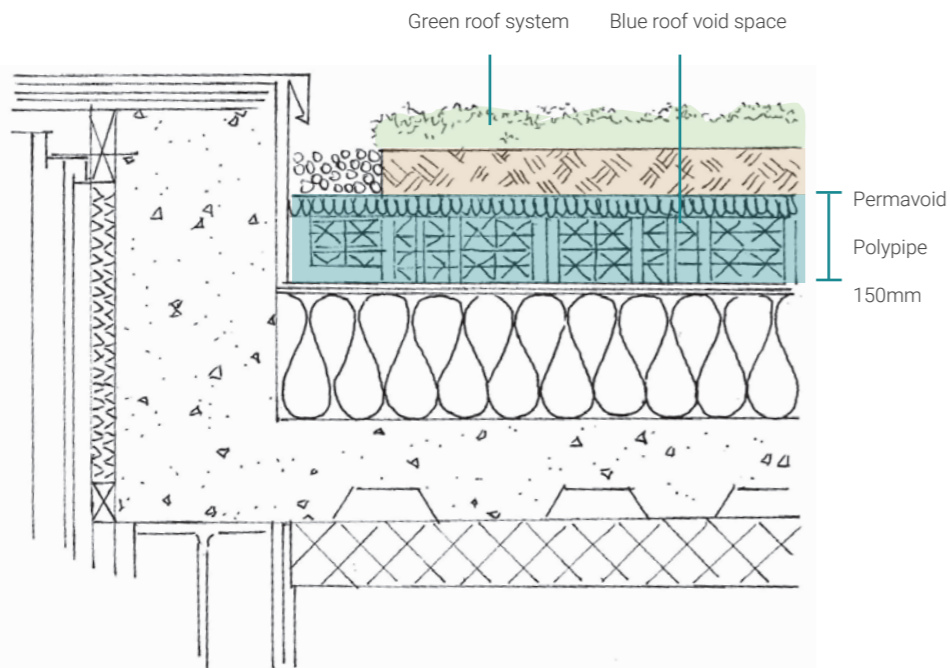
1.36 Rain water attenuation

The drainage strategy for the site is predicated on the lack of a connection to Mains Sewer and the need to capture and infiltrate all storm water on site. (Refer Building Services section of this report)

All building roofs contain a blue roof storage capacity and two Attenuation tanks are provided in locations as shown to hold and infiltrate captured storm water. The blue roof storage extends under all other roof finishes - Living roofs, plant areas or communal terrace pavements and planting. Refer to Engineer's Preliminary Drainage Strategy Drawing.



Blue roofs and attenuation tank



Blue roof detail

KEY

	Blue Roofs
	Attenuation tank

1.37 Existing local play provision

KEY

	Site Boundary
	Allotments
	Recreational Green Spaces
	Park/Gardens
	Multi-Sports Pitches
	Golf Courses
	Rugby Pitches
	Cricket Pitches
	Archery Pitches
	Tennis Pitches
	Pool
	Cemetery
	Woodland
	Actual Walking Distance
	Playgrounds



Google Earth

500 m

1.38 Play Strategy

KEY

	0-5 Play (Doorstep)	400 m2
	5-11 Play (Local)	280 m2
	12+ Play	0 m2

Play space benchmarks used :

0-5yrs Play (Doorstep) - 10 sqm per child

5-11yrs Local Play - 10 sqm per child

Assessing child occupancy and play space requirements

Size of your development:

Number of FLATS

	Studio	1 bed	2 bed	3 bed	4 bed	5 bed	Total
Social rented/affordable	0	6	13	19	0	0	38
Intermediate	0	46	48	0	0	0	94
Market	0	101	116	33	0	0	250
Total	0	153	177	52	0	0	382

Number of HOUSES

	1 bed	2 bed	3 bed	4 bed	5 bed	Total
Social rented/affordable	0	0	2	0	0	2
Intermediate	0	0	0	0	0	0
Market	0	0	1	0	0	1
Total	0	0	3	0	0	3

Proportion of children

	Number of children	%
Under 5	40	47%
5 to 11	28	33%
12+	17	20%
Total	86	100%

Play space requirements

GLA benchmark (sqm)*	Alternative local benchmark (sqm)**	Total (sqm play space) required
10		857.8
	5	428.9

* GLA benchmark standard=minimum of 10sqm of dedicated play space per child

** Borough's local benchmark



Play spaces - doorstep and local play

1.39 Play Strategy - Required Areas

Open Space and Play :

The site lies in close proximity to a number of open spaces and recreational facilities in the immediate area. Extensive open space and recreational grounds south of the canal can be readily accessed from the site and offer a variety of sporting facilities for the older children (12yrs +) from the site.

The preceding diagram indicates locations and travel distances from the site to each of these open spaces and details the facilities available at each location.

Site Play Provision:

Allocation has been made within each courtyard, including the public central space, for provision of play facilities and a playable landscape treatment incorporating a range of furniture and play elements for children aged from 0-11yrs. The designated areas (as recommended by SPG 'Shaping Neighbourhoods: Play and Informal Recreation') have been distributed across the site to suit current unit numbers and mix. (Refer diagram)

Doorstep Play:

- Required within 80M of all units front doors
- Age group (0-5 yrs)
- Climbable / balancing elements
- Playable landscapes
- Informal play in public spaces

This age group is fully catered for, at required 10 Sqm / child (400 Sqm) with on-site areas distributed through the courtyards as indicated.

Local Playable Space:

- Required within 400m of unit / site
- Age group (0-11 yrs)
- Recommended space based on child numbers (10 Sqm / child) – 200 Sqm

The design includes recommended space for this age group within the site (200 Sqm), distributed in private courtyards and common spaces, including the central public courtyard. In addition to this, some public playgrounds exist within proximity of the site as indicated on plan - at Raleigh Road (500m walk) and North Sheen Recreation Ground (550m walk) – just outside the recommended travel distances for this type of facility.

Neighbourhood Play:

- Required within 800m walk of the site
- Age Group (12 yrs +)
- Adventure playgrounds, Sport and recreation space – ball courts, pitches, MUGA fitness trails etc
- Provision recommended based on unit mix and numbers – 170 Sqm

No Neighbourhood Play Space is provided on site due to restrictions in available site area and the intent to cater for a more organised sports form of recreation for this age group, as well as casual gathering spaces and informal play activities.

Wider Context Open Space:

Consideration has been made of the existing available play and recreational facilities for older children (12 yrs +) in the local area and the Context Plan indicates existing facilities within the recommended travel distances for the site and the current recreational and play facilities included at each location. These facilities predominantly cater for older children (10yrs +) with organised sports and recreation (cricket, rugby, archery, golf, swimming classes etc).

It is considered that a wide range of facilities exist in the locality and these are generally accessible from the site via local streets, with proposed improvements to the existing cycle path network assisting in providing safer and easier access. Given the constrained nature of the site layout and the creation of a series of private courtyards wrapped by built form, the strategy for play is based on the following provisos and the current unit mix and numbers:

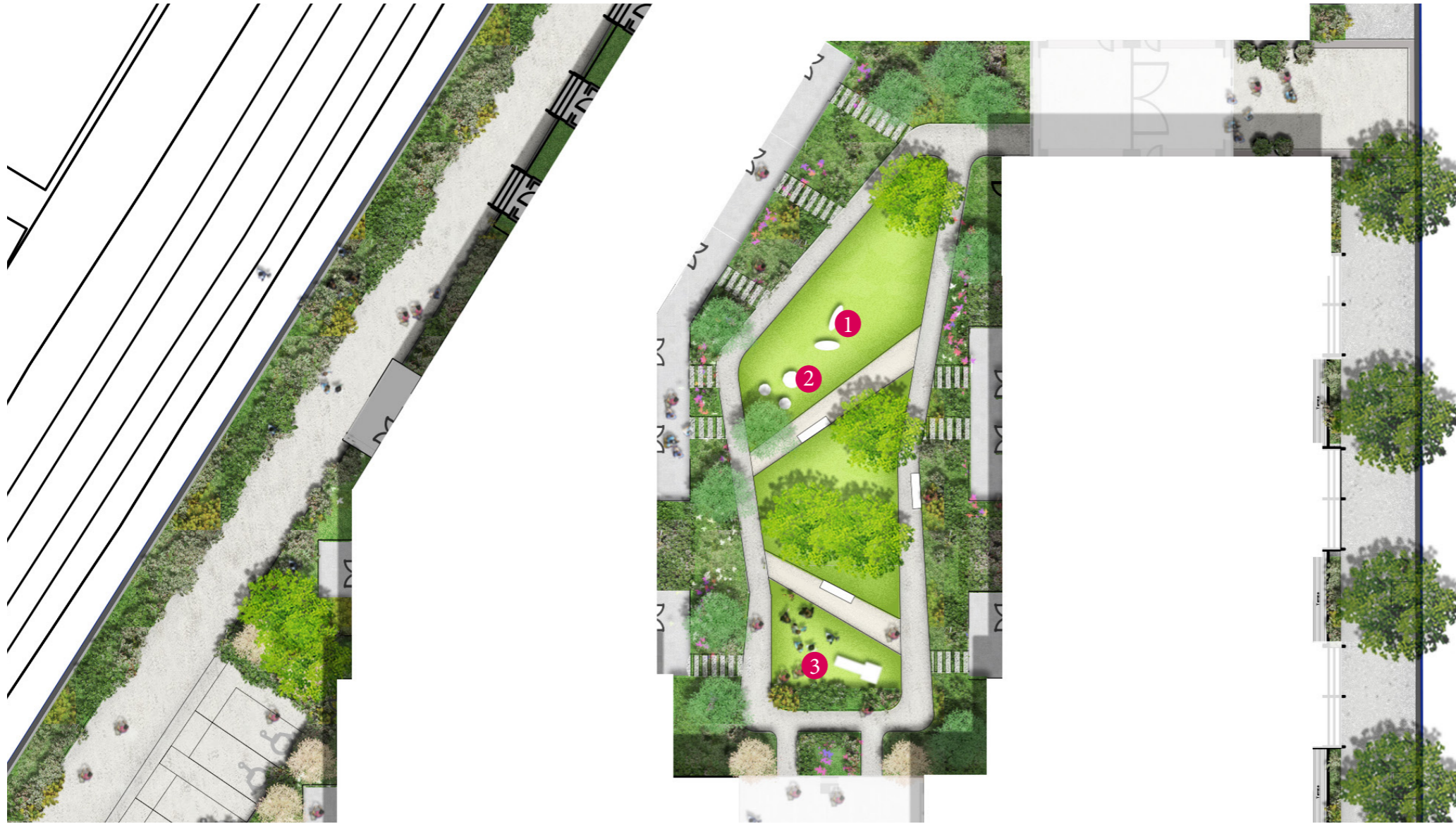
Existing Facilities within the catchment of the site:

- Richmond Cricket/Archery/Tennis Clubs
- Richmond Green
- Little Green
- Old Deer Park Pool
- Richmond Athletic Association
- Richmond Rugby
- Royal Mid Surrey Golf Club
- Royal Botanic Gardens Kew
- Richmond Park

1.40 Play Strategy - Reference Images



1.41 Play Strategy - Residential amenity courtyards - Block A design



Play spaces - doorstep and local play

