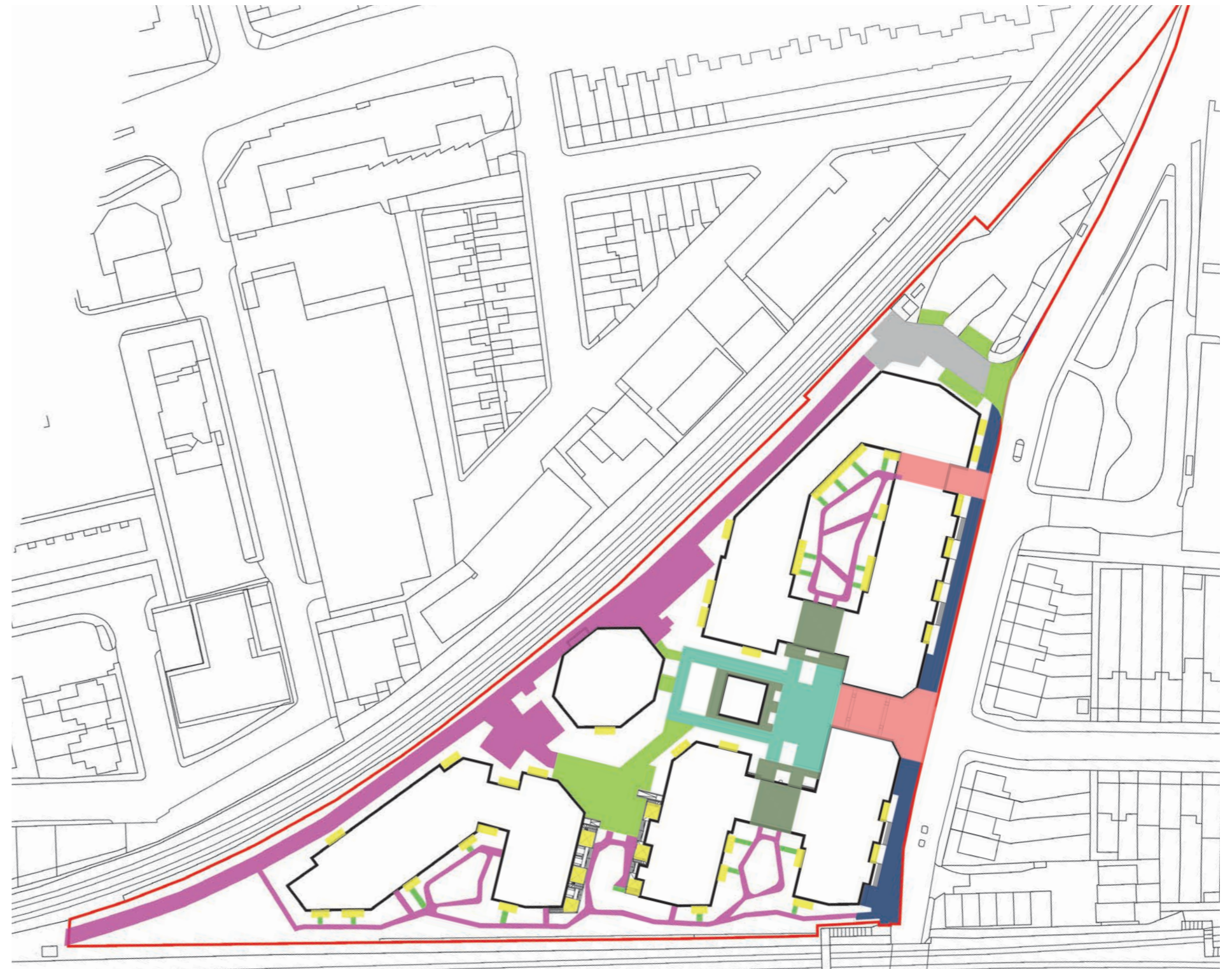











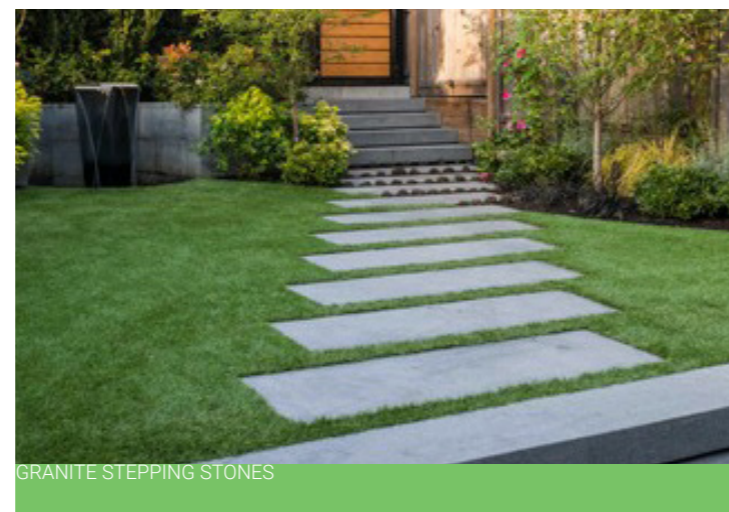
1.30 Hardscape Strategy - Materials Palette



Materials layout



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



### 1.31 Planting Strategy

#### 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)



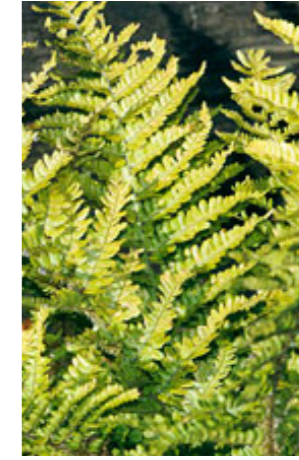
Polystichum polyblepharum  
(Japanese lace fern)



Campanula trachelium  
(Nettle-leaved bellflower)



Dryopteris affinis  
(Golden shield fern)



Helleborus foetidus  
(Stinking hellebore)



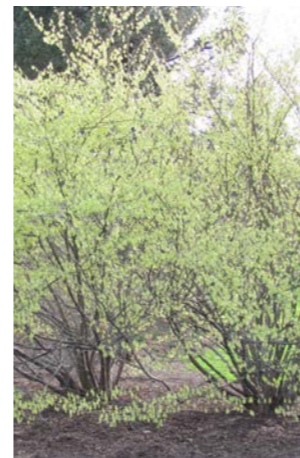
Sarcococca hookeriana  
'Winter Gem' (Sweet box  
'Winter Gem')



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



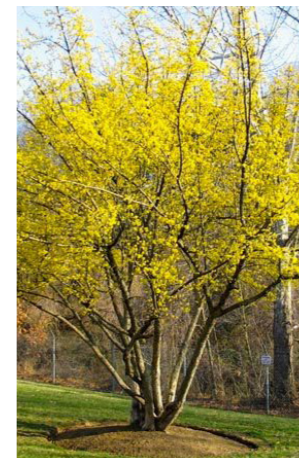
Corylopsis glabrescens (Fragrant  
winter hazel)



Sarcococca confusa (Sweet  
box)



Cornus mas  
(Cornelian cherry)



Viburnum opulus (Guelder  
rose)



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



SHRUBS

### 1.32 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.



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



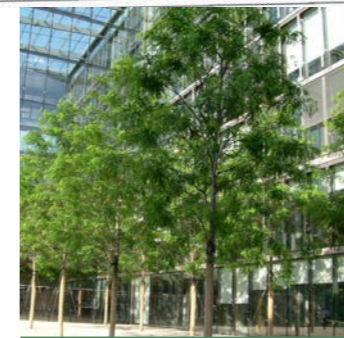
Malus everest



Prunus serrula



Betula nigra 'heritage'



Gleditsia triacanthos



Acer freemanii



Acer campestre 'Elsrijk'

### 1.33 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.



living roofs and amenity terraces



KEY

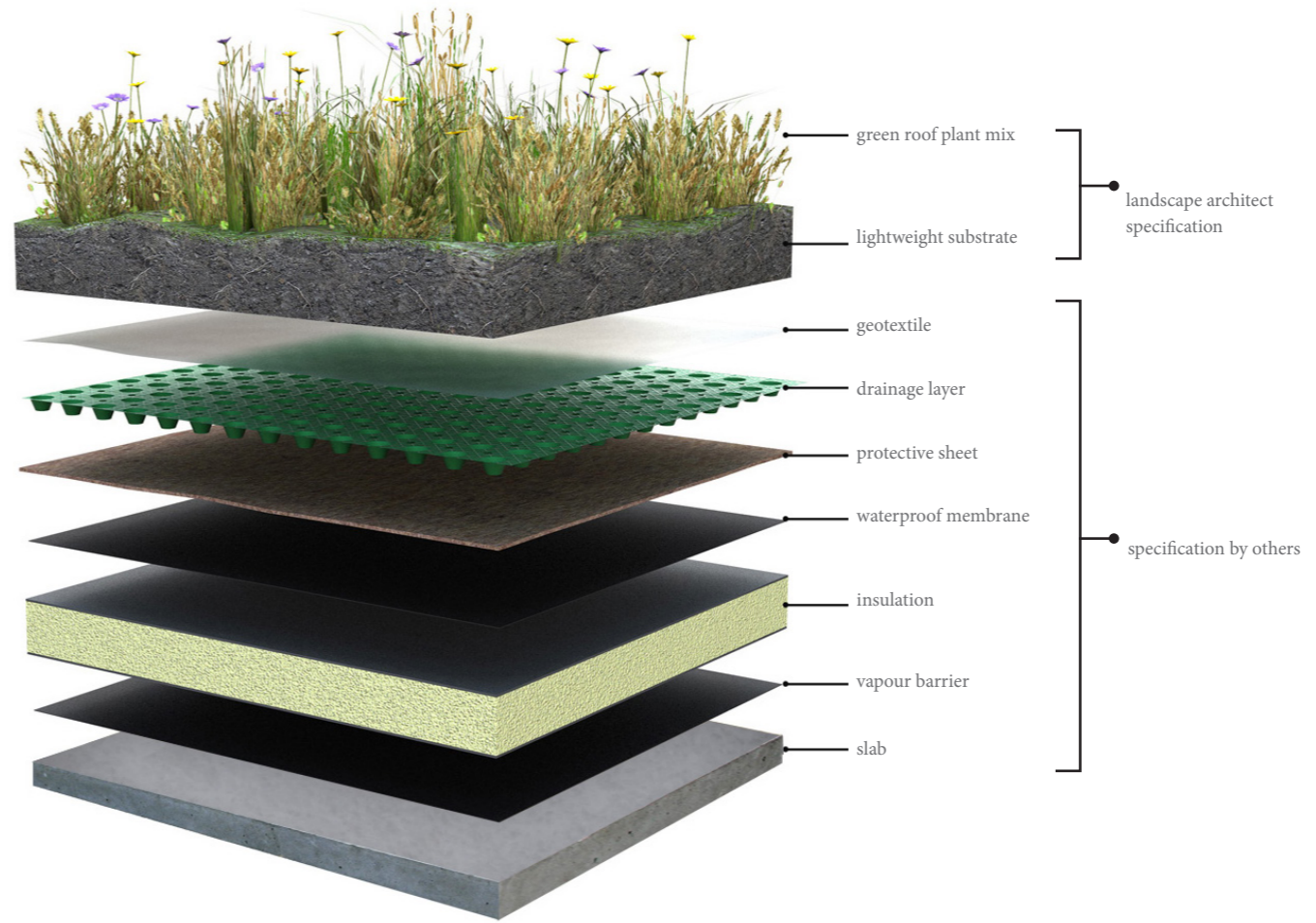
	Living roof
	Flats/Townhouses Private Terraces
	Communal Residential Amenity
	PhotoVoltaic cells with brown roofs
	Core/Plant area



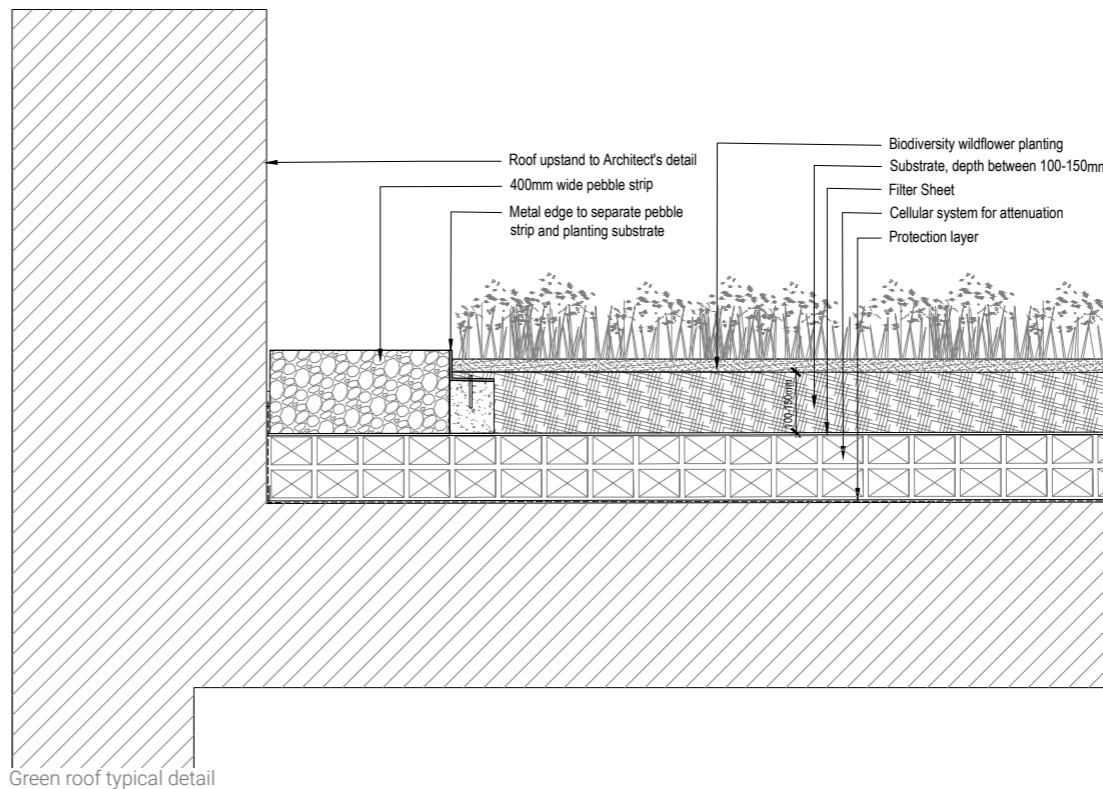
Botanical Name	Height	Blossom	Flowering Season
<i>Achillea millefolium</i>	8-40 cm	White	June-August
<i>Armeria maritima</i>	5-20 cm	Pink	April-October
<i>Bellis perennis</i>	3-12c m	White / Yellow	March-October
<i>Campanula glomerata</i>	3-30 cm	Blue	June-October
<i>Campanula rotundifolia</i>	15 cm	Blue	July-September
<i>Centaurea cyanus</i>	20-50 cm	Blue	June-August
<i>Centaurium erythraea</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 rhoes</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



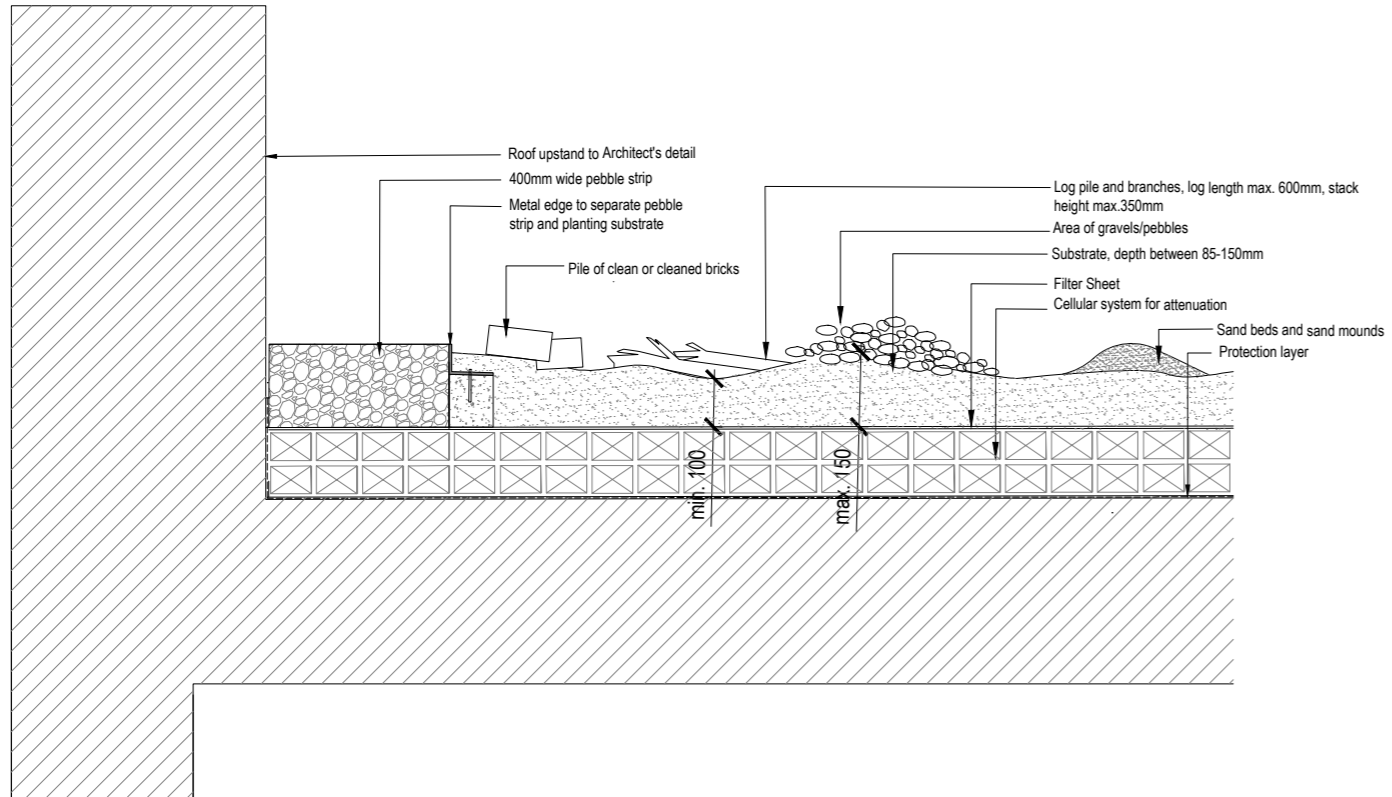
green roof planting indicative species list



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



Prunella vulgaris



Silene vulgaris



Rhianthos minor

native wild flower species

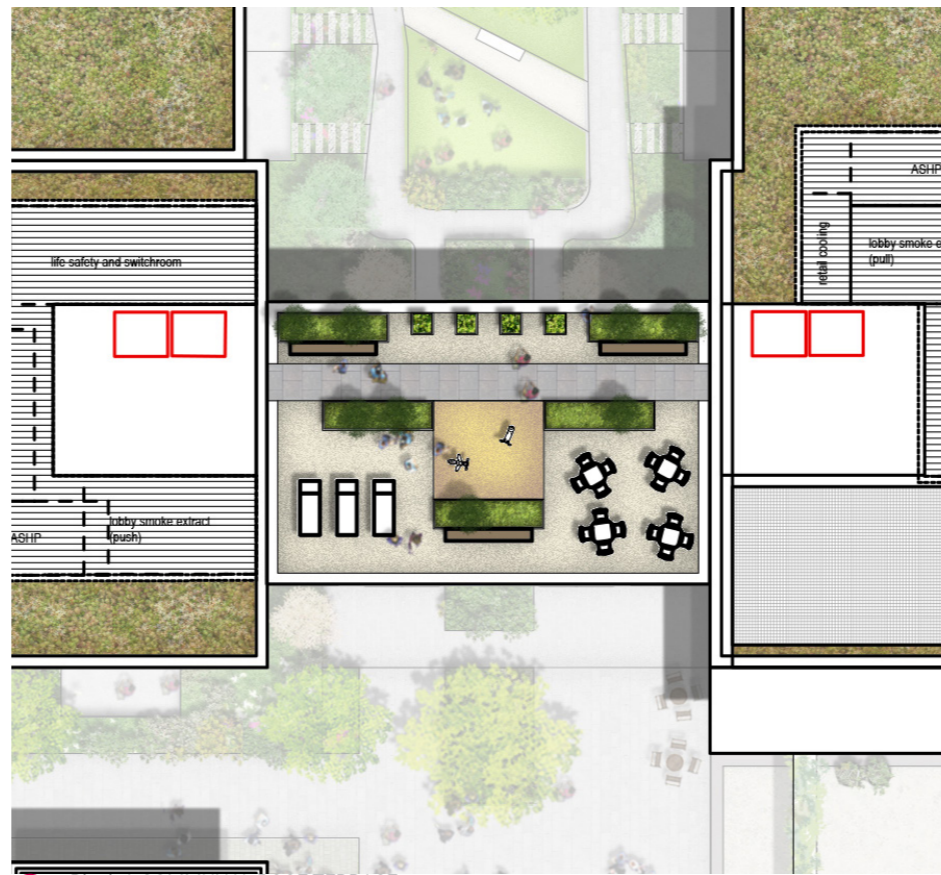


### 1.34 Communal Roof Terraces

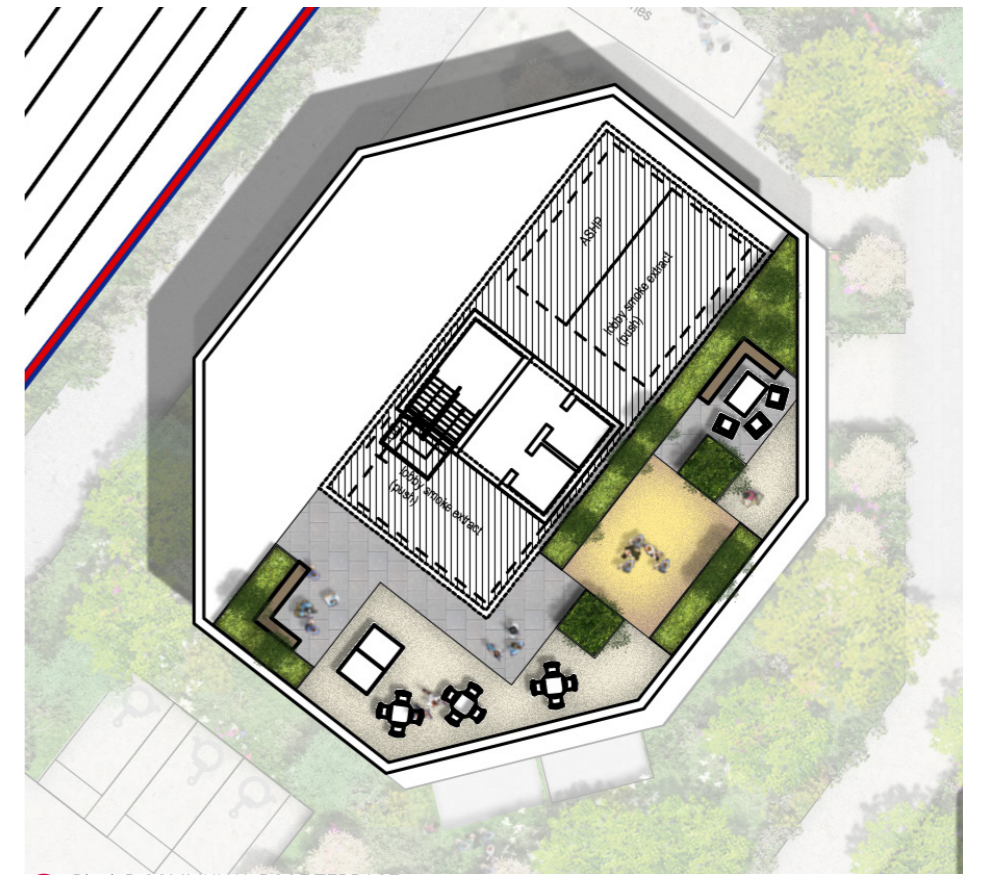
The roof terraces offer a private outdoor amenity space for residents, providing a unique and tranquil place on the top of the buildings. The design of each, feature a series of enclosed spaces defined for different uses. The simplicity of shapes is delineated by the disposition of raised planters which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

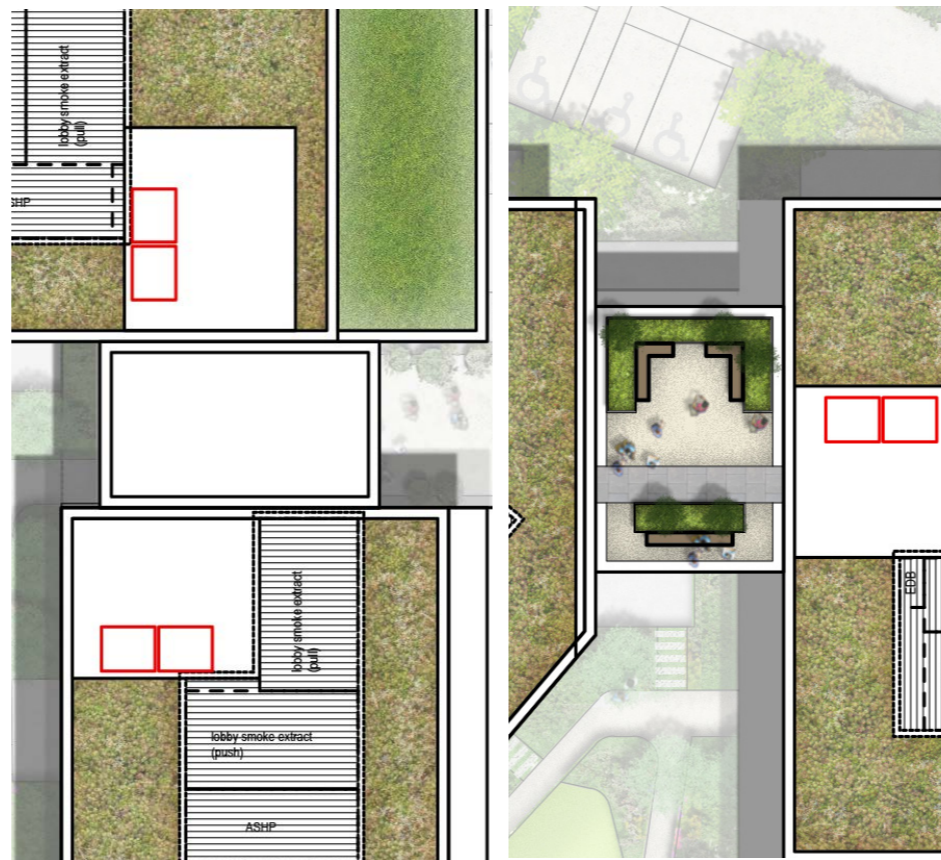
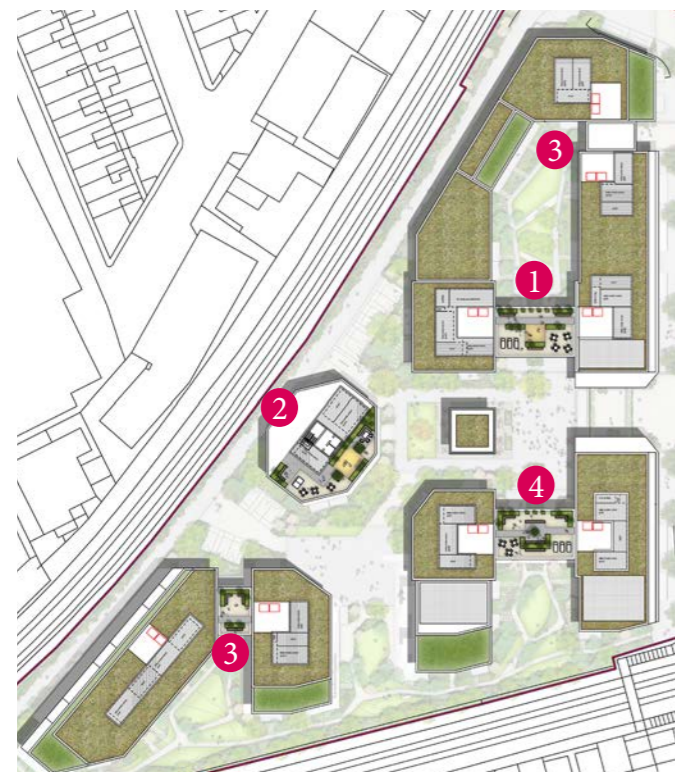
The material palette is simple, with the use of timber decking, concrete textured paving on pedestals, and timber in all the furniture.



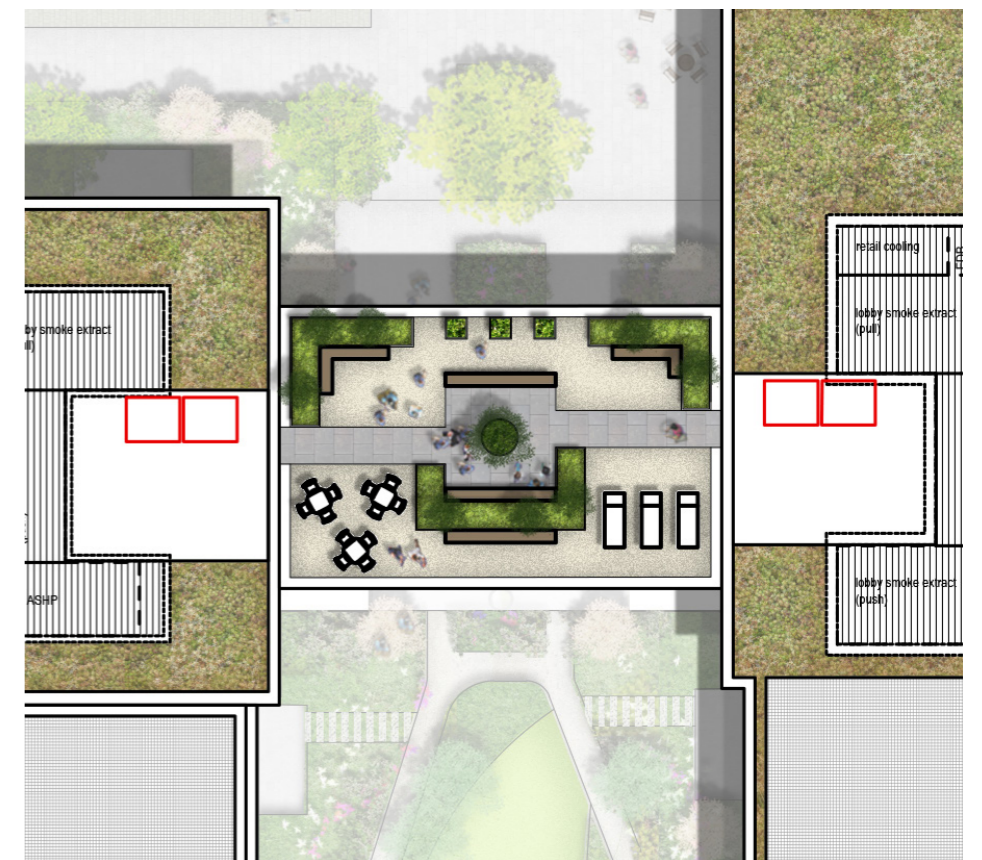
1 Block A COMMUNAL ROOF TERRACE



2 Block B COMMUNAL ROOF TERRACE



3 Block A and C COMMUNAL ROOF TERRACE

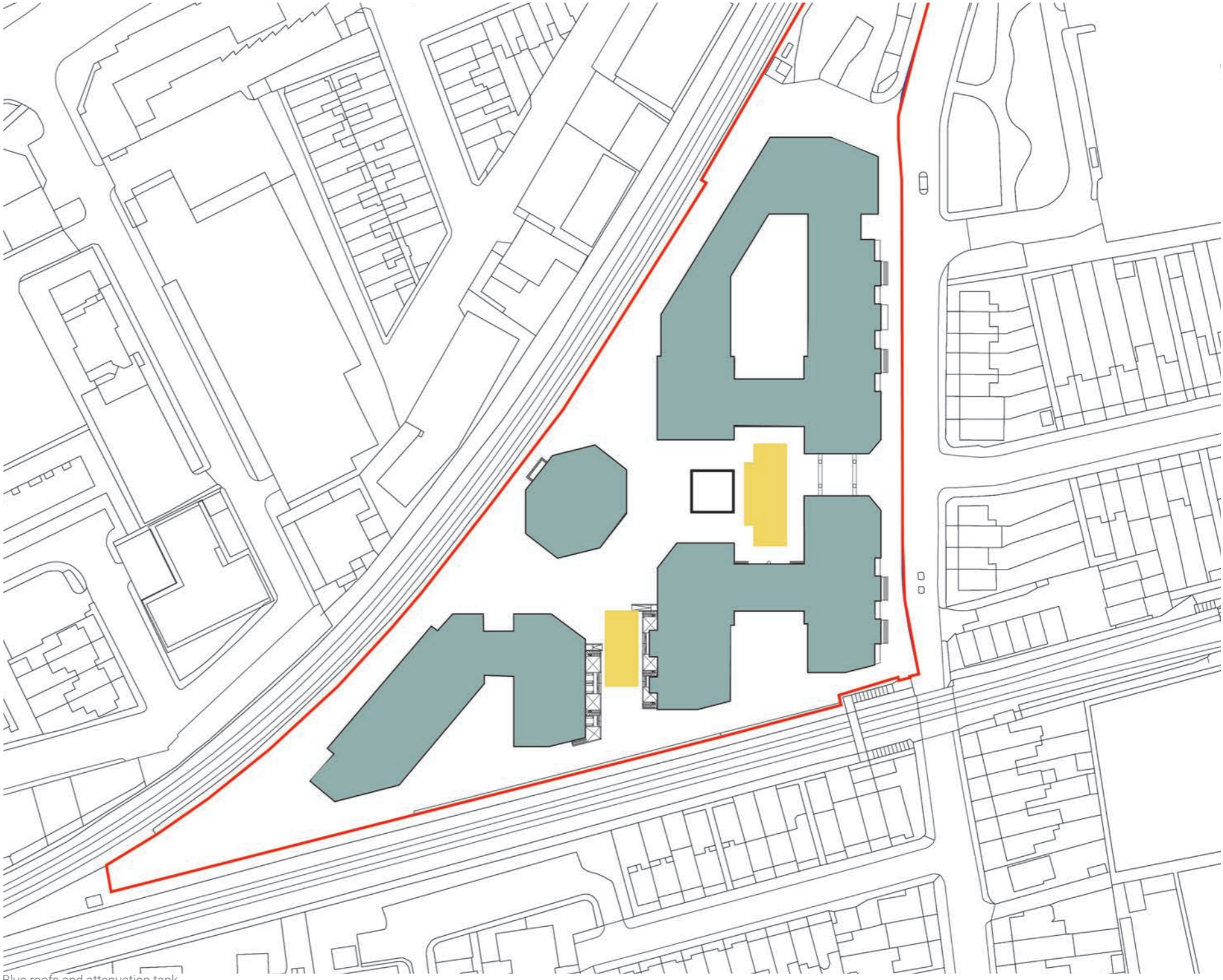
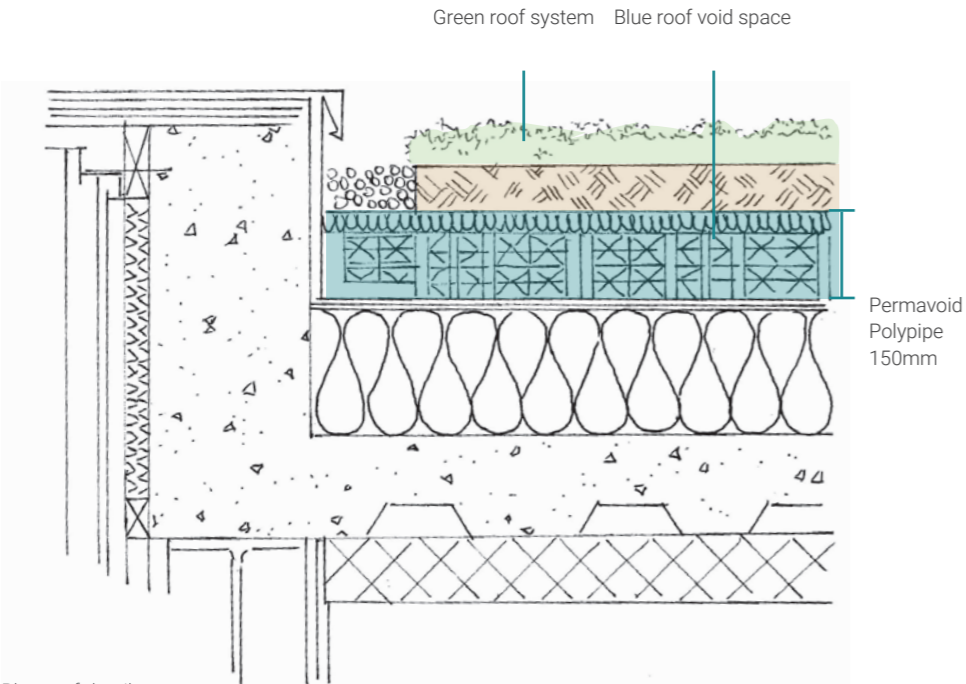


4 Block D COMMUNAL ROOF TERRACE

1.35 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.



KEY

	Blue Roofs
	Attenuation tank



1.36 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



### 1.37 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
<b>Total</b>	<b>0</b>	<b>153</b>	<b>177</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>382</b>

###### 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
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

##### Proportion of children

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

##### Play space requirements

GLA benchmark (sqm)*	Alternative local benchmark (sqm)**	Total (sq m 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

### 1.38 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:

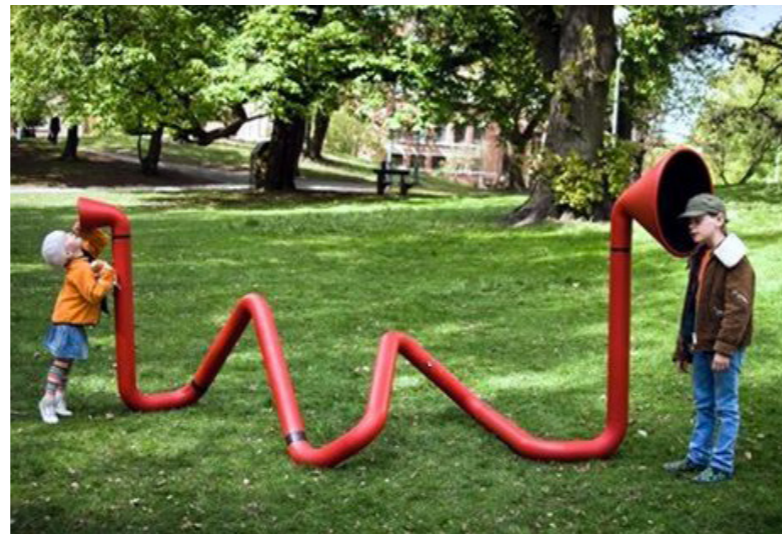
Consideration has been made of the existing available play and recreational facilities for older children (12 yrs +) in the local area and the Context Plan indicates existing facilities within the recommended travel distances for the site and the current recreational and play facilities included at each 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

1.39 Play Strategy - Reference Images



1.40 Play Strategy - Residential amenity courtyards - Block A design



Play spaces - doorstep and local play