# 4 THE PROPOSED DEVELOPMENT

## Introduction

4.1 This chapter of the ES provides a description of the proposed development for the purposes of identifying and assessing the potential environmental impacts and likely environmental effects of the development proposals in the technical assessments of ES Volume 1 (Chapters 6 - 12) and ES Volume 2.

4.2 In accordance with the EIA Regulations, this chapter sets out the physical characteristics of the development.

4.3 A general description of the application site is provided in ES Chapter 1: Introduction, with more detailed descriptions provided in each technical assessment within ES Volume 1 and ES Volume 2, and is therefore not repeated here.

## Planning Application

4.4 Leopard Guernsey Anchor Propco Limited (referred to as the 'Applicant') is submitting a full planning application to enable the redevelopment of the VIP Trading Estate and the VIP Industrial Estate Anchor and Hope Lane, London SE7 7TE.

4.5 The application seeks permission for the following:

*'Demolition of existing buildings and erection of nine buildings ranging from 2 to 28 storeys in height for Class C3 residential use, with Class B1 employment space and flexible uses comprising Class A1 (retail), Class A3 (Café/Restaurant), Class D1 (Community Use) and Class D2 (Leisure) at ground floor and first floor level, alterations to existing vehicular access and creation of new pedestrian access from Anchor and Hope Lane and the riverside, creation of new areas of open space and landscaping together with the provision of associated car parking, cycle space, refuse and recycling storage, plant and all other associated works.'*

## Proposed Development

### Site Arrangement

4.6 The buildings are located on two adjacent Plots and are described as follows:

- Plot A
  - Building AEN: Residential and commercial;
  - Building AES: Residential and commercial;
  - Building A1: Residential and amenities;
  - Building A2: Residential and amenities;
  - Building AWN: Residential;
  - Building AWS: Residential; and
  - Basement: Parking and plant.
- Plot B
  - Building B3: Residential;
  - Building BW: Residential, amenities and commercial;
  - Building BE: Residential; and
  - Plinth: Amenities, commercial, parking and plant.

4.7 The proposed development building locations are shown in Figure 4.1.

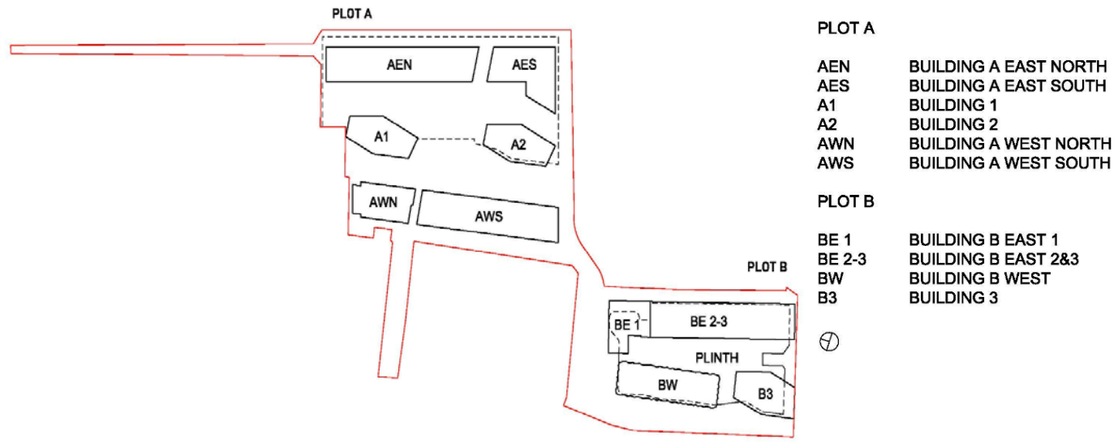


**Figure 4.1: Proposed Development Building Locations**

### Composition

4.8 The location of the buildings on the two Plots was developed from the desire to create an extensive green space in the centre of each Plot. Pedestrian links are envisaged to connect Charlton with the River Thames and also provide east-west routes connecting with the wider masterplan area.

4.9 Residential blocks are situated along the eastern and western boundaries orientated on a north-south axis in order to minimise north facing units and maximising daylighting.

4.10 To the northern and southern boundary of Plot A two buildings have been carefully placed to provide both a street edge and the necessary permeability on ground floor maintaining the pedestrian route through the application site and sufficient daylight penetration to the central park area.

4.11 The buildings have been set out to correspond with the perimeter blocks and cores have been placed to minimise overlooking.

4.12 The southern end of the southern Plot, located close to the Charlton train station and at the end of Bugsby's Way arriving from the Blackwall Tunnel, provides a strategic provision for a taller element marking the entrance to the masterplan.

4.13 The composition of the proposed development is shown in Figure 4.2 and Figure 3.2.

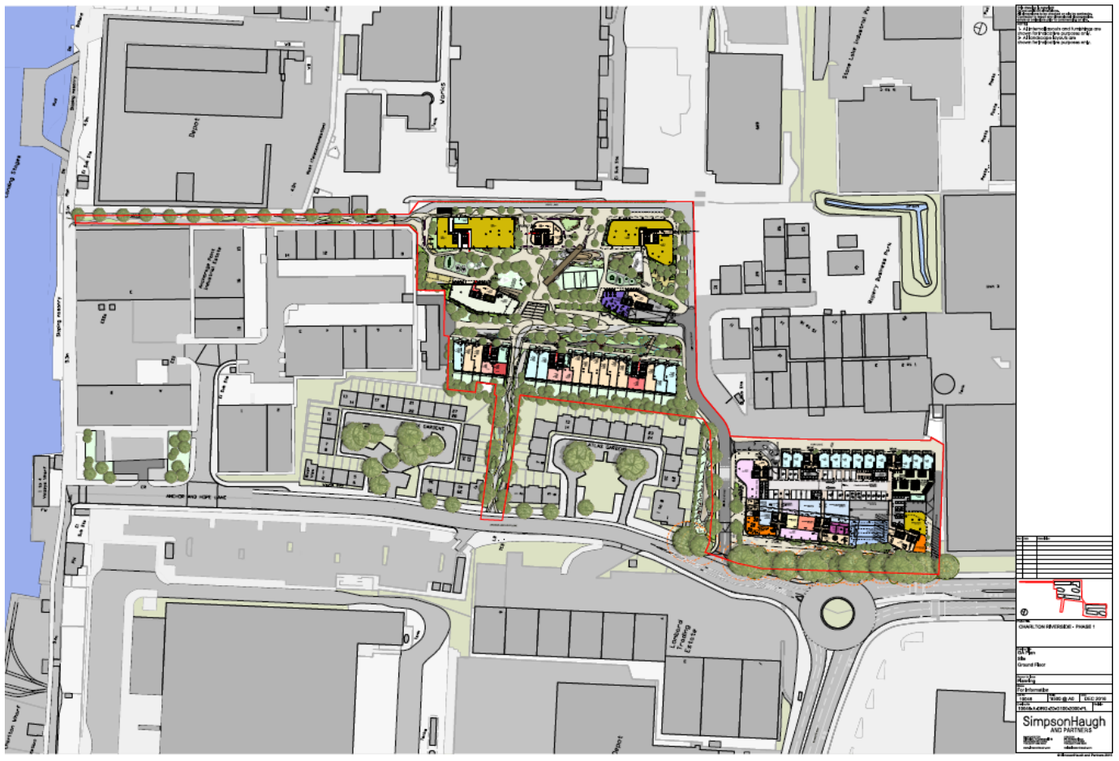

Figure 4.2: Proposed Development Composition (ground floor)

Figure 4.3: Proposed Development Composition (level 1)

## Access

4.14 Both Plots are accessed via an existing road from Anchor and Hope Lane which also provides access to the car parking areas in the basement on Plot A and within the plinth on Plot B.

4.15 Building lines have been pulled back from the site boundaries to allow for sufficient distance between the application site and neighbouring plots and to allow for new routes within the site boundaries. This includes new access routes along the southern and eastern boundaries of both Plots.

4.16 The routes along the eastern boundary has been developed to facilitate possible future connection to the major east-west and north-south links as identified in the masterplan as the surrounding area is developed.

4.17 Service access is provided within Plot A along the western blocks. In the long term, and in response to the anticipated future context, areas on the street facing edges of the application site are intended for public use. The layout ensures that the application site will provide a suitable level of activity, both on the perimeter of the application site and within the central park, as other surrounding sites within the masterplan are developed.

4.18 The proposed development access and connections are shown in Figure 4.4.

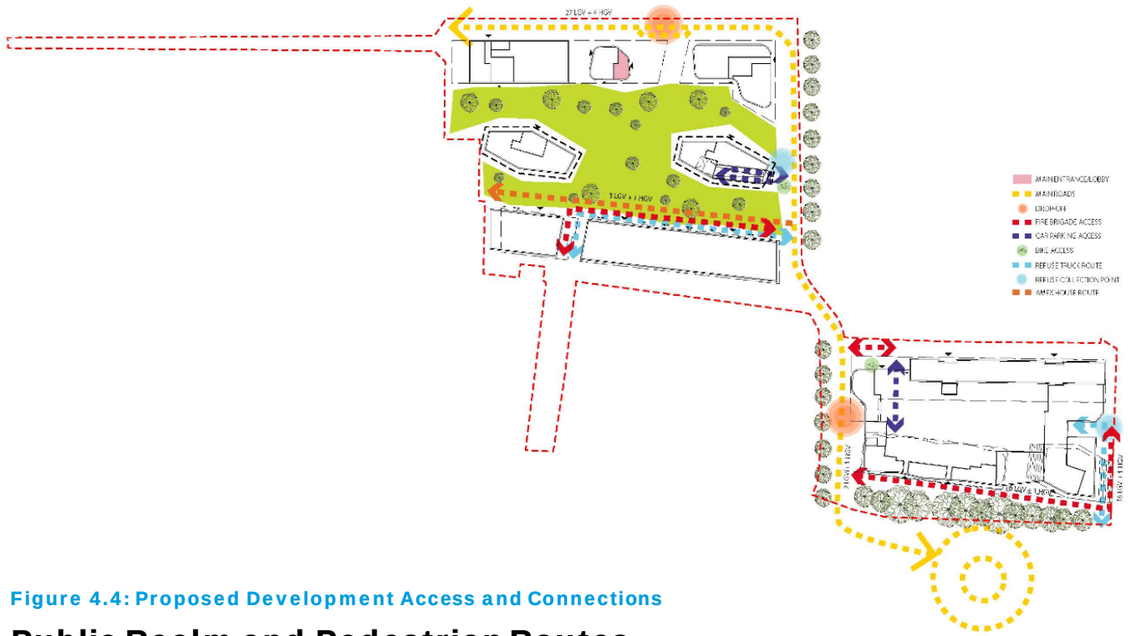


Figure 4.4: Proposed Development Access and Connections

## Public Realm and Pedestrian Routes

4.19 The site layout includes significant and distinct areas of clearly defined landscaped spaces on the ground floor of Plot A. The park landscape is provided for residents of the proposed development and also encourages it to be used by the surrounding developments or pedestrians passing through on the way to the river. The public landscaped area on Plot B sits elevated on the first floor providing a buffer between Bugsby's Way and Anchor and Hope Lane. The garden space provides a more private area for residents. Access can be gained via the concierge area and business units.

4.20 There are two main pedestrian routes crossing the Plots providing the starting point for a network of green spaces within the wider masterplan area. The primary south-north route runs from the tree lined edge of Anchor and Hope Lane, along the landscaped areas and between the freestanding buildings within the park. The other major route runs from Anchor and Hope Lane between the townhouses through the centre of the park to the eastern boundary of the application site.

4.21 Further green spaces and amenity spaces are provided on the roof terraces of the perimeter buildings. These can only be accessed by residents.

# Built Form, Height and Massing

4.22 The buildings on Plot A are formally arranged along the eastern and western site perimeter leaving an extensive open park landscape. The buildings predominantly step up in height from the perimeter to the centre providing the lower blocks along the site boundaries.

4.23 Buildings AWN and AWS to the western boundary have been developed to maximise daylighting to existing residential properties and step in height from the adjacent townhouses towards the centre of the application site. A variety of external spaces and apartment layouts have been provided within this Plot.

4.24 Buildings AWN and AWS are stepped in height to provide a dynamic shape whilst breaking up the form and indicating the entrance to the application site. Extensive private and shared roof terraces are another result of the proposed massing.

4.25 The shape, massing and location of the buildings are carefully set out in conjunction to core locations and distances between buildings.

4.26 Building BW and B3 in Plot B run parallel to Anchor and Hope Lane creating a buffer to the greens space behind. The top floor of Building BW is set back to create a transition in height. The block to the east (BE) steps in height from the location closest to the townhouses towards the southern edge, thereby providing roof terraces. The block is split into five horizontal elements which are slightly shifted providing a dynamic form.

4.27 The buildings of Plot B sit adjacent and on top of a plinth which houses car parking and plant to the centre and commercial spaces along the southern, western and northern edges.

4.28 The massing of the proposed development is shown in Figure 4.5.

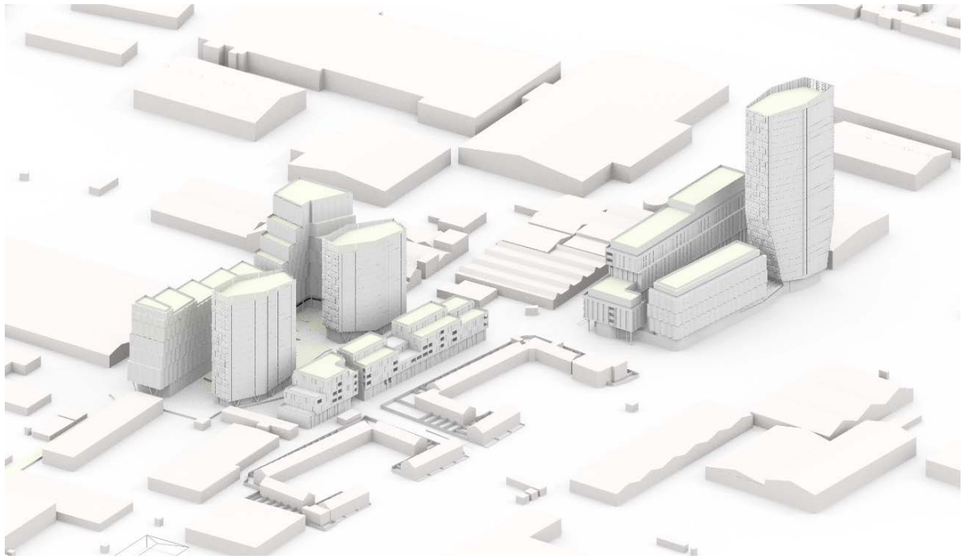

**Figure 4.5: Proposed Development Massing**

4.29 The relative storey heights of the buildings and the depth of the basement within the proposed development are detailed in Table 4.1. The basement plan is shown in Figure 4.6, and a selection of building sections are shown in Figure 4.7 and 4.8.

**Table 4.1: Proposed Development Building Heights and Basement Depth**

| Building | No. of Storeys | Building Height/Basement Depth (mAOD) | Building Height/Basement Depth (m) Above Ground Level |
|---|---|---|---|
| | | Parapet/Roof Height | Parapet/Roof Height |
| Plot A<br>Building AEN | 9-11 | 47.845m/46.010m | 44.295m/42.460m |
| Plot A<br>Building AES | 9-16 | 56.200m/54.880m | 52.650m/51.330m |
| Plot A<br>Building A1 | 16 | 58.655m/54.226m | 55.105m/50.675m |
| Plot A<br>Building A2 | 14 | 52.595m/48.165m | 49.045m/44.615m |
| Plot A<br>Building AWN | 2-6 | 24.130m/22.830m | 20.580m/19.280m |
| Plot A<br>Building AWS | 3-6 | 24.130m/22.830m | 20.580m/19.280m |
| Plot A<br>Basement | 1 | 1.150m (FFL) | -2.400m (FFL) |
| Plot B<br>Building B3 | 28 | 94.130m/89.585m<br>95.930m (Top of flues) | 90.580m/86.035m<br>92.380m (Top of flues) |
| Plot B<br>Building BW | 9-11 | 33.530m/32.230m | 29.980m/28.680m |
| Plot B<br>Building BE | 6-12 | 43.300m/42.200m | 39.750m/38.650m |
| Plot B<br>Plinth | 1 | 7.550m (FFL) | 4.000m (FFL) |

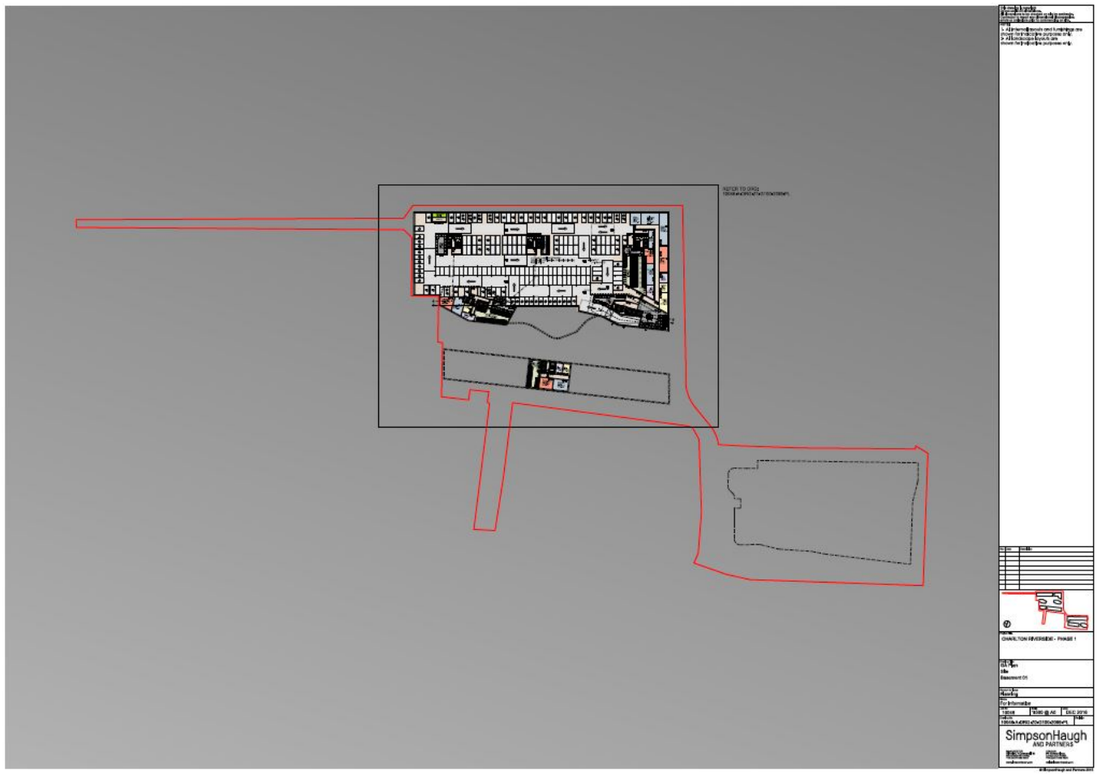

Figure 4.6: Basement Floor Plan

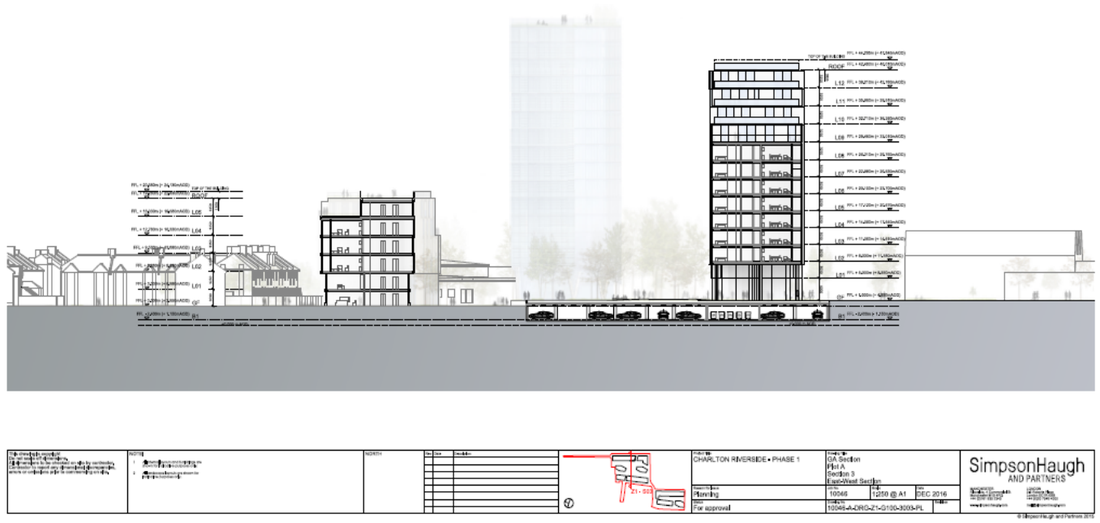

Figure 4.7: East West Section – Plot A

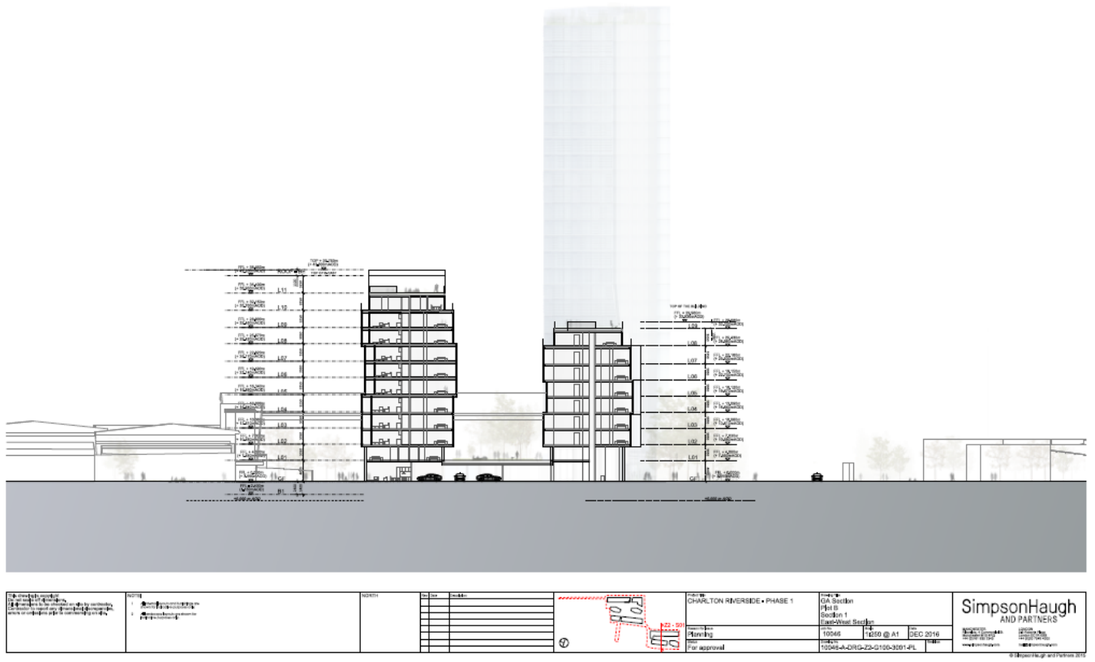

Figure 4.8: East West Section – Plot B

## Landmark

4.30 The location of Building B3 to the southwestern boundary of Plot B responds to the close location to Charlton train station and is acting as marker for the overall development.

4.31 Collectively the buildings are expressed as a cohesive sculptural grouping and across all the buildings care has been taken to conceal 'roof top' plant and lift overruns within building envelopes to maintain integrity of form and ensure that clean lines are maintained across the skyline.

4.32 The individual building elements add further articulation to the overall composition. Gaps between the buildings, the stepped roofs and the folded elevations of the buildings break down the overall scale of the development and reinforce the sense of movement.

## Permeability

4.33 Careful consideration has been given to the impact that the proposed development has with regard to sunlight and daylight access and shadowing both within the application site itself and through to the surrounding area.

4.34 The layout of the blocks has been developed to provide sufficient space between the buildings and to ensure that the northern aspect of the buildings are afforded sufficient outlook and daylight.

4.35 The eastern and western perimeter block massing on Plot B have been broken with gaps, introduced to afford views both into and out of the central green space and facilitate sunlight and daylight access. This creates strong visual and physical connection with the immediate surrounding context.

4.36 Variations in height within the western blocks AWS and AWN between two and six storeys and a set-back on the top floors have been introduced to create sufficient permeability to the neighbouring housing complex.

4.37 All internal layouts have been developed to address privacy issues associated with block separation and to mitigate overlooking issues and maintain a sense of privacy.

# Land Use

## Land Use Types and Use Classes

4.38 The proposed development comprises 975 residential units provided within nine buildings ranging in height from two to 28 storeys, including extensive public realm area, private gardens and roof terraces.

4.39 The non-residential uses floor areas within the proposed development are detailed in Table 4.2.

**Table 4.2: Proposed Development Area Schedule**

| Land Use | GIA ($m^2$) | GEA ($m^2$) |
|---|---|---|
| Office space | 1,560 | 1,957 |
| Ancillary residential facilities including gym, swimming pool, changing rooms | 864 | 1,142 |
| Flexible retail/restaurant/café/leisure use | 690 | 1,000 |
| Community uses | 407 | 490 |

## Residential Use

4.40 The residential tenure mix and unit mix are provided in Tables 4.3 and 4.4 respectively.

**Table 4.3: Proposed Development Tenure Mix**

| Tenure | Units |
|---|---|
| Private | 832 (85.3%) |
| Intermediate | 40 (4.1%) |
| Affordable rent | 103 (10.6%) |
| **TOTAL** | 975 (100%) |

**Table 4.4: Proposed Development Unit Mix**

| Unit Type | Total |
|---|---|
| 1 bed 1 person | 168 (17.2%) |
| 1 bed | 227 (23.3%) |
| 2 bed | 306 (31.4%) |
| 3 bed | 253 (25.9%) |
| 4 bed | 21 (2.2%) |
| **TOTAL** | 975 (100%) |

## Apartment Layouts

4.41 The layouts are arranged to maximise double aspect apartments and minimise single aspect and north facing apartments. There are different arrangements of the floorplates of the various buildings. There are six to eight apartments per core and the core provides an adequate number of lifts.

4.42 All apartments within the proposed scheme meet or exceed the minimum apartment sizes as defined by the London Housing SPG, and are designed to meet the requirements of Lifetime Homes.

4.43 The layouts of the residential apartments are open plan, to maximise the sense of space. Floor to ceiling windows will provide generous natural light.

4.44 Apartments will be provided with a good level of storage, and well-proportioned rooms and spaces.

4.45 All apartments will be provided with generous private amenity space in the form of private roof terraces, open loggias and enclosed balconies or winter garden spaces, which provide an extension to the living space, create a thermal buffer increasing energy efficiency, and create space that is usable all year round.

## Wheelchair Accessible Units

4.46 All homes will be designed with reference to the RBG Inclusive Design Advice. In accordance with the London Plan, 10% of the apartments will be designed as wheelchair adaptable layouts, based on the wheelchair space standards set out within Part M of the Building Regulations, and with reference to the Wheelchair Housing Design Guide.

# Land Use Distribution

## Above Ground Land Use

### Plot A Residential Blocks

4.47 The buildings to the western boundary AWN and AWS provide 2-storey 3-bedroom townhouses with private gardens on the ground floor and a variety of 1, 2 and 3 bedroom apartments and studios on the upper floors. All are provided with either a private winter garden, loggia space or private roof terrace.

4.48 Buildings A1 and A2 provide community and residential facilities on the ground floor and a mix of 1, 2 and 3 bedroom apartments and studios on the upper floors. All apartments are provided with winter gardens.

4.49 Buildings AEN and AES also provide commercial space on the ground floor and a mix of 1, 2 and 3 bedroom apartments and studios on the upper floors.

### Plot B Residential Blocks

4.50 The building to the eastern boundary BW provides 2-storey 4-bedroom townhouses with private gardens on the ground floor and a variety of 1, 2 and 3 bedroom apartments and studios on the upper floors. All are provided with either a private winter garden, loggia space or private roof terrace.

4.51 Buildings B3 and BW provide residential facilities and commercial space on the lower two floors and a mix of 1, 2 and 3 bedroom apartments and studios on the upper floors. All apartments are provided with winter gardens or loggias.

### Ground Level

4.52 The ground level includes areas of active frontage across the two Plots located at the perimeter along current and future access roads providing space for retail, café, restaurant, leisure and community use together with significant areas of public realm and some private secure gardens associated with the townhouses. Some of the spaces extend over two floors with access to the garden on plinth level on Plot B.

4.53 A diagram of the ground floor and first floor functions (i.e. non-residential areas) are shown in Figure 4.9 and 4.10.

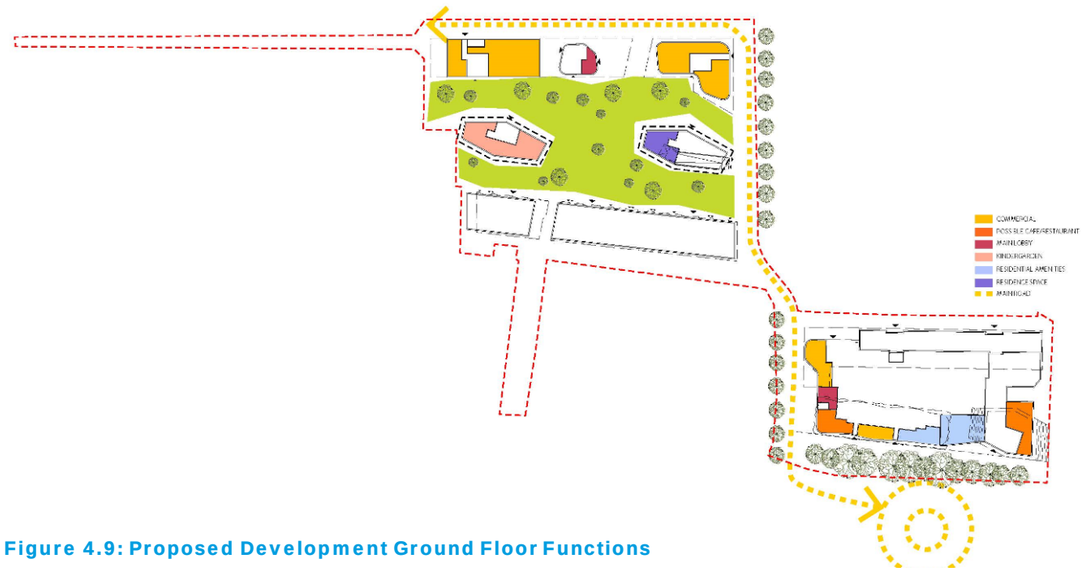


**Figure 4.9: Proposed Development Ground Floor Functions**

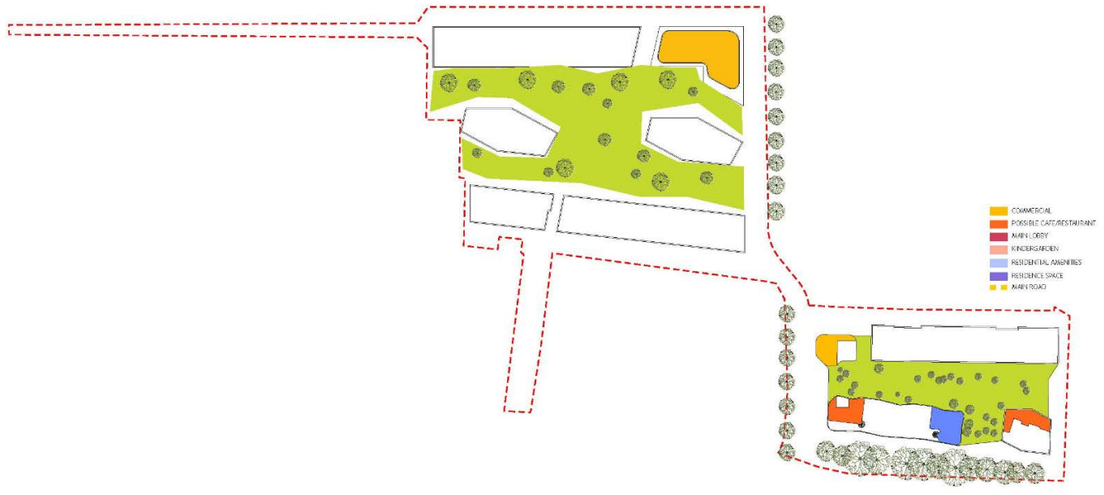


**Figure 4.10: Proposed Development 1st Floor Functions**

### Active Frontages

4.54 Considerable care has been taken to establish linkages and physical and visual permeability across the application site and to maximise the area of internal and external space to which the public has access.

### Flexible Retail/Commercial Space

4.55 Flexible retail space is located to the most eastern edge of the proposed development within Plot A (AES/AEN), providing space on ground floor to the north and over two floors to the south.

4.56 Further space is provided on the perimeter on the southern Plot located in close proximity to Anchor and Hope Lane.

### Residential Amenities

4.57 A residential lounge is located within Building A2 for flexible use facing the garden, within Plot A. Also a gym and swimming pool are located between B3 and BW in the plinth within Plot B.

### Crèche

4.58 A crèche is located within Building A1 on ground floor with an associated private garden.

### Concierge and Lobbies

4.59 Both Plots provide a concierge area and associated drop-off to service the buildings.

### Entrances

4.60 The building entrances are located along the perimeter of the application site along current and future roads. The only exception is the western block on Plot B (BW) which is accessed via a private road within the application site.

### Parking

4.61 Covered car and cycle parking is provided on Plot B accessed from the north-east corner of the application site.

### Plant

4.62 The energy centre for the entire development is provided on the ground floor of Plot B. Further plant space is located within the basement of Plot A.

### Townhouses

4.63 Townhouses (AWN/AWS) are located backing onto the existing row of townhouses on Plot A to the western boundary and on Plot B the townhouses (BE) are located towards the eastern boundary with the gardens located on the Level 1 courtyard.

### Public Realm

4.64 Extensive public realm is provided as part of the proposed development and extends to 1.5ha and 61 % of the overall application site area. The concept is described in more detail within the landscaping and public realm section.

### Private and Shared Roof Terraces

4.65 Private and shared landscaped roof terraces are provided across the buildings of the development. The detail is described within the landscaping and public realm section.

## Below Ground Land Use

### Basement Level

4.66 The basement level on Plot B accommodates parking, cycle parking, refuse stores and local plant space and takes up approximately half of the application site. The half basement creates a transition between the current levels of the application site and the approximately 1m higher adjacent site to the east.

# Material Palette and Façade Detailing

4.67 The material strategy has been developed to reinforce the architectural expression of each block together with the composition of the proposed development.

4.68 Contrasting, but compatible, materials are used to differentiate the external, perimeter facing blocks, the internal shaped courtyard located blocks and the blocks adjacent to existing residential developments.

4.69 Materials to be used on each block will provide articulation, depth, animation and richness to the elevational treatment. The composition has been considered carefully reflecting the surrounding conditions.

4.70 Figure 4.11, 12 and 13 show the different façade treatments which are described in more detail in the following sections.

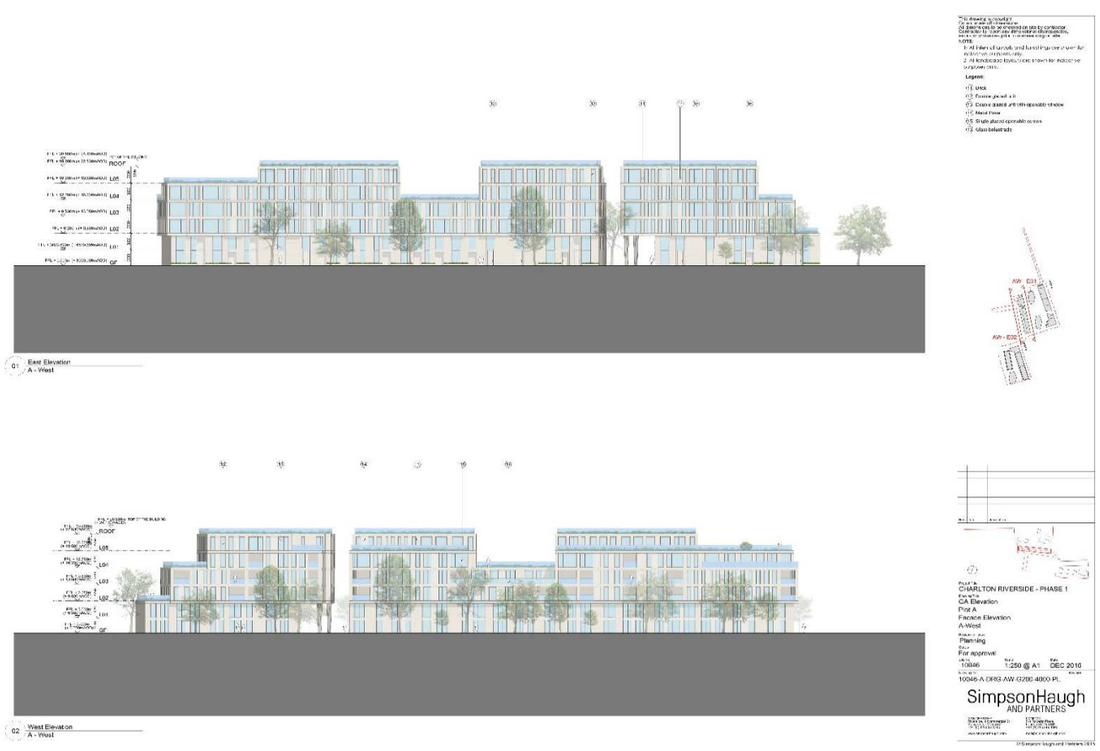


**Figure 4.11: Plot A, Building AW Proposed Façade Treatment**


**Figure 4.12: Plot B, Building West / 3 Proposed Façade Treatment**


**Figure 4.13: Plot B, Building BE Proposed Façade Treatment**

# Façade Type 1: Brick

4.71 The material chosen for the two buildings to the western boundary AWS and AWN respond to the adjacent existing townhouses on Derrick and Atlas Gardens.

4.72 The external elevations are formed by using a brick grid which supports the massing of the terraced buildings and emphasis on a grounded form.

4.73 The brick grid walls are formed of traditional bricks using a combination of lighter and darker earthy tones.

4.74 All windows across the external, perimeter facing elevation are recessed behind the line of the brick cladding adding further texture and shadow definition.

4.75 The square opening is further broken down into insulated metal panels and full height fixed and openable windows. The colour of the aluminium window frame and solid panels matches the colour of the brick.

4.76 Amenity spaces are recessed and provided with either a glass balustrade or single glazed partially openable screen where winter gardens are indicated.

4.77 The facades of the two storey townhouses on the ground floor are composed of alternating vertical bands of brick and glazed aluminium framed window units.

# Façade Type 2: GRC

4.78 The external elevations of buildings AES/AEN and BW located on existing and future main routes within the masterplan are formed using a combination of vertically configured GRC rainscreen panels and glazed aluminium framed window units.

4.79 The GRC rainscreen system incorporates a variety of different surface finishes and is composed using a combination of smooth and textured tiles in white/ grey shades to create visual interest and a sense of movement across the façades of the buildings.

4.80 The vertical bands are grouped in two to three floors and break the building massing down horizontally.

4.81 The offset vertically banding of the GRC composition helps to break down the scale of the elevations, whilst maintaining a consistent and minimal approach to surface treatment, and introduces an additional layer of visual activity across the folded elevations.

4.82 Amenity spaces are recessed and provided with either a glass balustrade or single glazed partially openable screen where winter gardens are indicated. The upper floors are floating on a fully glazed base enhancing the permeability of the development and the active frontage on the ground floor along the perimeter.

## Façade Type 3: Artificial stone

4.83 The external elevations of buildings BE follows a similar approach to Façade Type 2 but using a different materials and colour shades. The building is broken down into bands grouping two to three floors and steps back towards the top.

4.84 The facades are formed using a combination of vertically configured artificial stone rainscreen panels and glazed aluminium framed window units.

4.85 The artificial rainscreen system incorporates a variety of different surfaces finishes and is composed of a combination of smooth and textured tiles in dark grey shades to create visual interest and a sense of movement across the façades of the buildings.

4.86 The offset vertically banding of the composition helps to break down the scale of the elevations, whilst maintaining a consistent and minimal approach to surface treatment, and introduces an additional layer of visual activity across the folded elevations.

4.87 Amenity spaces are recessed and provided with either a glass balustrade or single glazed partially openable screen where winter gardens are indicated. The facades of the two storey townhouses on ground floor are composed of alternating vertical bands of artificial stone and glazed aluminium framed window units.

## Façade Type 4: Glass

4.88 The elevations of the hexagonal buildings within the park and at the south end of the site A1/A2/BE are composed of a combination of ~~coloured~~ backpainted glass rainscreen panels and glazed aluminium framed window units.

4.89 The proposed glass rainscreen system incorporates a safety glass laminated cladding panel. These 'fully glazed', folded, elevations will create a dynamic animated façade which will respond to shifting viewpoints and changing environmental conditions.

4.90 The shorter ends of the hexagonal buildings A1 and A2 accommodate winter gardens which are enclosed with a horizontal openable louvre panel. All windows across the internal elevations are in plane with the glass rainscreen and the façade will be detailed to achieve a flush appearance. The colour of aluminium window frames to the internal courtyard elevations will be grey to match the colour on the solid panels.

4.91 This lighter 'softer' material treatment to the elevations has been developed to fit in with and compliment the design of the landscaped park space and to contrast with the visually heavier and more textured elevations of the perimeter buildings. In so doing, it emphasises the material qualities inherent to each façade treatment.

## Ground Floor Façade

4.92 The facades on the ground floor stretching over two levels are articulated with a set-back. There are two general facade principles on the ground floor, the townhouse facades and the shopfront façade within areas of active frontage.

4.93 Large areas of clear glazing are incorporated within the set-back areas across the ground floor to create active frontage adjacent to principal movement routes.

4.94 Across the set-back areas at ground and first floor the external envelope is generally formed using a clear glazed aluminium curtain walling system.

4.95 The crèche, residents lounge, leisure entrance area, concierge and lobby spaces are fully glazed providing animated active frontage and allowing views into the landscaped areas within the proposed development.

4.96 Façade detailing across the areas of active frontage is minimal and clean lines will be maintained throughout.

4.97 The townhouse facades respond to the cladding principles and design of the upper floors.

# Landscaping and Public Realm

4.98 Figure 4.14 is designed to convey how the two Plots are arranged, and to highlight the relationship between key locations within the proposed development masterplan. Those elements depicted in green relate to specific landscape interventions.

4.99 Figure 4.15 – 4.17 presents the landscaping proposals.


**Figure 4.14: Landscape Orientation Diagram**


**Figure 4.15: Landscape Masterplan (ground)**


**Figure 4.16: Landscape Masterplan (first floor)**


**Figure 4.17: Landscape Masterplan (upper levels)**

# Access Arrangements

4.100 The design team have adopted an approach that will ensure that measures are taken to facilitate access and use by all people who occupy or move around the buildings including those with mobility, sensory or cognitive impairments.

## Access

4.101 A Transport Statement prepared by TPP and submitted in support of the planning application sets out the access and servicing strategy for the proposed development on the Charlton Riverside site.

4.102 The application site is accessed via Rope Lane, Mirfield Street and Yarn Lane. Mirfield Street and Yarn Lane serve the entrance and exit to the car park. Rope Lane is the main access and provides one drop off zone serving A-East buildings and the main lobby from which the rest of buildings in Plot A are served. There is a second drop-off zone in Mirfield Street serving the main lobby of Plot B. The refuse collection on Plot A is made from the servicing route on Marsh Mews and on Plot B from Yarn Lane.

## Parking

4.103 Car and cycle parking will be provided within the constructed one storey basement car park on Plot A which cars and bicycles will access from Mirfield Street. Car and cycle parking is also provided on grade on Plot B within the plinth, accessed from Yarn Lane.

## Car Parking

4.104 The Plot A basement car park provides 172 spaces and Plot B plinth car park provides 26 spaces. 59 of the car parking spaces will be designed for disabled access, in line with the GLA requirements and 40 spaces are provided with electric charging points. All spaces will be private.

## Cycle Parking

4.105 It is proposed to provide cycle parking for each of the proposed land uses. In total 1,652 cycle parking spaces are provided within the development; 42 cycle parking spaces are proposed for the commercial units; there are 24 spaces for residential visitors and 30 spaces for commercial visitors and 1,556 spaces within the residential bike store.

## Access at Site Boundary

4.106 Building levels have been dictated by the existing pavement levels. Taking into account these constraints, the design ensures that all primary entrances (either to retail units, cafes or to residential and car parking entrance lobbies) can be accessed from flat and level approaches with inclines of 1 in 40 or less.

4.107 Ramps are incorporated within the park to ensure that full access is available to the public route through the application site.

## Circulation and Access to Primary Entrances

4.108 The widths of all access routes from pavement to main entrances are at least 1,500mm wide (typically wider) and comply with or exceed statutory guidance. Similarly the gradients of access routes are either 'flat' (cross falls introduced for drainage only) or are set at no more than 1 in 40. All access routes will be finished in hard landscaping with an appropriate slip resistance and textured surfaces to thresholds as required. In addition, access to primary entrances will include the following:

- High Contrast hardscape to clearly define the pedestrian route to main entrance; and
- High visibility signs to identify building and entrances.

## Reception Desk / Waiting Area / Entrance Lobbies

4.109 Main reception areas and concierge facilities are located at ground floor in all buildings. Further detailed design will be undertaken with the end users to determine a suitable fit out and interior design for this space. Reception desks will include a low level desk area for wheelchair users and a hearing loop for the cognitively impaired. Any seating or waiting areas will be spaced to enable suitable clear circulation and passing places in line with statutory guidance. In addition, waiting areas and entrance lobbies will include the following:

- Materials selected to reduce surface glare;
- Upon entrance the interior layout will be clearly signposted;
- Video entry controls will be provided at the entrances to the main cores, set at a height between 750mm and 1,000mm from floor level;
- The use of lighting and a clear high contrast signs to aid way finding;
- Tactile and visual surface guides to denote path from entrance to lifts; and
- Solid floor surfaces to facilitate ease of wheel chair movement.

## Communal Stairs and Lifts including Lobbies

4.110 Communal stairs to all cores have been designed to comply with all appropriate Building Regulations. All buildings will be provided with fully accessible lifts which are equipped to act as evacuation lifts.

4.111 Communal stairs and lobbies will include the following:

- A minimum width of 900mm (between door stops) when fully open;
- Doors fitted with vision panels;
- Doors fitted with lever type handles or 'D' pull handles at a height user 1,000mm from floor level;
- Doors to be of a weight suitable to be used by people with limited strength or reduced mobility;
- All glazed walls and doors are to have high contrast manifestation;
- On certain primary circulation routes doors to be on hold open systems;
- Lighting to help define space, fixtures, signs;
- Increased number and legibility of signs;
- Deliberate use of colour and surface treatment to enable vision impaired people;
- Ergonomically user friendly and visually distinct ironmongery, fixtures, fittings and equipment;
- User-friendly handrails to all stairs and landings, tactile count downs on underside of handrails to indicate changes in direction and presence of landings;
- The stairs will have enhanced lighting and glare will be minimised; and
- To ensure that the lifts are accessible to visually impaired people the lifts are to include high contrast signage and tactile controls.

## Deliveries and Servicing

4.112 A Transport Statement prepared by TPP and submitted in support of the planning application sets out the access and servicing strategy for the proposed development (ES Volume 3: Technical Appendix 7.1).

4.113 Rope Lane is the main access and provides 1 drop off zone serving A-East buildings and the main lobby from which the rest of buildings in Plot A are served. A second drop-off zone in Mirfield Street serves the main lobby of Plot B.

4.114 The refuse collection on Plot A is made from the servicing route on Marsh Mews and on Plot B from Yarn Lane.

4.115 Car and cycle parking will be provided within the constructed one storey basement car park on Plot A to where cars and bicycles will access from Mirfield Street. Car and cycle parking is also provided on grade on Plot B within the plinth, accessed from Yarn Lane.

## Deliveries and Servicing

4.116 Two drop off/service bays will be provided, one on Rope Lane in close proximity to the residential lobby and 24-hour reception desk on Plot A and one on Mirfield Street, in front of the commercial units and in front of the Plot B main lobby and concierge area. The service bays have been designed to provide drop-off/delivery and service access to the proposed development.

4.117 Commercial deliveries for the retail and restaurant units will be carefully managed with deliveries timed to ensure that disruption is not caused to the surrounding streets and public spaces. Goods will be transferred from the on street service bays to the individual commercial units by staff. The management of this process will be overseen and coordinated by the 24-hour on-site management staff.

4.118 Infrequent deliveries of large items will be coordinated by the on-site 24-hour management staff.

4.119 Roofs are accessed and serviced via the main core. There is smoke extraction plant located on the roofs of building A1, A2 and B3. A BMU unit for maintenance is proposed for building B3.

4.120 The energy centre for the entire development is provided on the ground floor of Plot B. Further plant space is located within the basement of Plot A. There is a combined basement providing refuse stores, plant and parking for buildings AEN, AES, A1 and A2. Small local basement areas for plant and cycle storage are located below AWS and AWN. All basement areas have direct stair and lift access.

## Post

4.121 Post for residential properties will be delivered to dedicated post rooms within each ground floor lobby for collection by residents. Large items of post will be delivered to the concierge.

# Refuse Strategy

4.122 Residents from A1, A2 and eastern buildings on Plot A will bring the bin bags to the basement refuse stores. Residents from the western buildings will bring the bags to the refuse stores on ground floor. On Plot B, all residents will bring the bags to the refuse stores located on grade within the plinth.

4.123 Purpose built refuse stores are included at basement and ground floor/plinth levels within each building, which have been designed to accommodate the appropriate number of Eurobins, as indicated on the application drawings. The Eurobins on Plot A for the eastern buildings are collected at basement level and moved to the ground floor refuse holding area on Mirfield Street via a dedicated refuse lift and for the western buildings are collected at ground floor and wheeled to Marsh Mews, where the refuse truck will make short stops. On Plot B, the bins are collected on grade level and moved to the refuse holding area on Yarn Lane.

4.124 The process of refuse collection will be carefully coordinated by the 24-hour on site management staff.

4.125 Commercial units will each contain their own individual refuse store.

4.126 Refuse collections will be made early in the morning, and the management company will ensure that bins are brought to the service bay prior to the refuse vehicle's arrival. The bins would then be returned to storage immediately afterwards. Sufficient space is provided for refuse vehicles to manoeuvre safely. Infrequent collections for large items will be coordinated by the management company.

4.127 Calculations to forecast the quantities of waste that will be generated by the proposed development have been undertaken using Greenwich's waste collection recommended guidance. The calculations are included for reference within Appendix B of this document. This has been used to calculate refuse store sizes, and demonstrates that the buildings contain sufficient storage based on number of collections per week.

**Table 4.5: Proposed Development Predicted Operational Waste Arisings**

| Use | Waste Arising per week (litres and $m^3$) General / Recyclable |
|---|---|
| Building A1 | 15675 / 15675 |
| Building A2 | 13475 / 13475 |
| A-East North Core 1 | 11687.5 / 11687.5 |
| A-East North Core 2 | 8387.5 / 8387.5 |
| A-East South | 13887.5 / 13887.5 |
| A-West North | 3300 / 3300 |
| A-West South Core 1 | 3025 / 3025 |
| A-West South Core 2 | 4400 / 4400 |
| Building 3 | 25987.5 / 25987.5 |
| B-East Core 1 | 3162.5 / 3162.5 |
| B-East Core 2 | 9350 / 9350 |
| B-East Core 3 | 10862.5 / 10862.5 |
| B-West Core 1 | 5912.5 / 5912.5 |
| B-West Core 2 | 4675 / 4675 |

4.128 The refuse strategy diagram for the ground floor is presented in Figure 4.18.

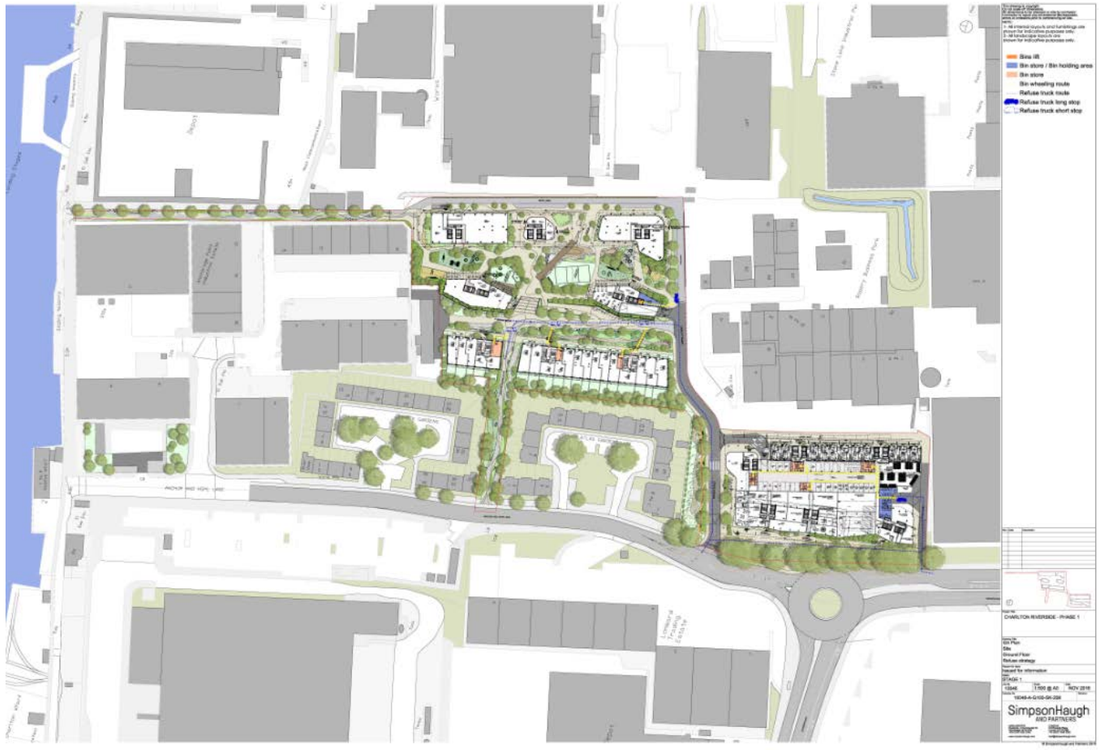


**Figure 4.18: Proposed Development Ground Floor Refuse Strategy**

# Plant and Ventilation

## Main Plant

4.129 A Main electrical substation (1 per Plot) will provide an LV electrical supply to main LV switchboards provided to all buildings.

4.130 An Energy centre located in Plot B serving both Plots A&B will be provided which will include a a lead CHP and top-up/standby Boilers providing LTHW (low temperature hot water) to pre-heating substations provided to all buildings.

4.131 Domestic cold water storage and associated booster pump sets will be provided to all buildings.

4.132 Any sprinkler supplies (required for buildings >30m high) would be served from the domestic water services system and would therefore not require additional storage tanks and pump sets.

4.133 A wet riser will be provided to building B3 only, and would include as associated storage tank (67.5$m^3$) and pumps.

4.134 Communications room provision has been allowed for all buildings. Corridor smoke extract fans will be located at roof level on all buildings.

4.135 Standby power generators (serving firefighting lifts, smoke extract fans, emergency lighting and wet riser plant (Building B3 only)) will be located at roof level on all buildings.

## Car Park Ventilation

4.136 Plot A: Fresh air will be drawn in via the main car entrance ramp. Shunt fans fixed to the soffit will be utilised to distribute air through the car park. Twin extract fans located in far corner of the basement will

extract air (general & smoke) into an exhaust shaft which will distribute and expel the air/smoke above the commercial units.

4.137 Plot B will be naturally ventilated via the main entrance car entrance ramp and louvres located at the opposite end of the car park.

# Utilities

## Gas

4.138 Incoming gas will enter the application site and be distributed into the boiler/CHP plantrooms. The location of gas meters will be confirmed during the detailed design stage. It is likely that the connection will enter the application site at 400mm depth below the ground floor levels.

4.139 No gas supply will be provided to apartments. Each apartment will be provided with a heat interface units (HIU).

## Surface Water

4.140 Surface water runoff from the proposed development will be attenuated through the introduction of new green spaces, green roofing, retention/detention swales, landscaped planting and underground storage tanks so that rainfall runoff rates associated with a 1 in 100 (1%) annual probability storm (including an allowance for climate change) can be accommodated on-site without causing above ground surcharging and without exceeding the proposed discharge rates.

4.141 These measures will attenuate surface water runoff by significantly more than 50% (up to 86%) of the existing pre-development rate (taking into account an 30% increase in rainfall to factor in the effects of climate change over the lifetime of the development). The improved management of surface water on the site, the reduction in peak runoff rates and the sustainable method of providing the storage result in a significant benefit in reducing flood risk to on-site and off-site receptors.

# Cleaning and Maintenance

## Maintenance Principles

4.142 The design and layout of the buildings will be able to accommodate both day to day cleaning and maintenance of the buildings along with façade replacement, taking into account building use, height, adjacencies and facade types and implementing an appropriate strategy for each individual building.

### Buildings A-East North and South

4.143 The cleaning strategy consists predominantly of a Rope Access. There are opportunities to use Mobile Elevating Work Platforms (MEWP's) covering almost all the perimeter of the two buildings on the lower floors; at heights of 31m and above, Rope Access will be needed.

4.144 All facade panels are full height (floor to ceiling) double glazed units and will therefore need replacing externally using a MEWP or a lorry mounted crane.

### Buildings A1, A2, A-West north and South, B-East and B-West

4.145 The cleaning strategy consists of a Rope Access.

4.146 Façade panels for A1, A2, B-East and B-West are full height (floor to ceiling) double glazed units and will therefore need replacing externally with Rope Access. A-West North and South facades are brick and double glazed windows which will be also need to be replaced using Rope Access.

### Building B3

4.147 The cleaning strategy consists of a static, self-elevating, telescopic building maintenance unit (BMU), with a maximum reach requirement of 19.75m.

4.148 Facade panels are full height (floor to ceiling) double glazed units and will therefore need replacing externally using the BMU crane.

### Roofs

4.149 All roofs can be accessed via stairs and maintenance equipment should be stored in close proximity.

# Operational Management Controls

## Operational Management

4.150 A management company will oversee the site operations once complete. This would include landscaping, refuse, facilities, servicing etc.

## Delivery and Servicing Management Plan

4.151 For delivery and servicing, all waste collection activities will take place within the site, away from the public highway. All servicing vehicles will access the site using the private access road off Anchor and Hope Lane and turning areas are provided within the development so that vehicles can enter and exit the public highway in forward gear.

4.152 Dedicated refuse storages will be provided within each Plot and concierge services will be provided to manage deliveries for residents and to manage waste collections as necessary. Further details of servicing and waste collection, including servicing routes and zones, are set out in the Delivery and Servicing Plan (DSP).

## Travel Plan

4.153 A Framework Travel Plan has been prepared for the proposed development. This is to encourage sustainable travel patterns. The Framework Travel Plan has been prepared to reflect accessibility at the time when the development is complete.