7 RESIDENTIAL
This chapter explains the residential component in more detail, including the distribution of the mix, the design aspirations and strategic distribution of amenity space.

The residential units are configured around a single, central core. The tower element is articulated to read as three individual smaller towers, each with a distinct individual character, to break down the mass of the building and to help accentuate longer, slender, more elegant proportions. The towers, along with the offices below, are intended to read as a ‘family’ of buildings, but each with their own articulation and composition, a variation on a theme. The main residential entrance is located in a prominent location on the corner of Deal Porters Way and Surrey Quays Road.
The residential component of Plot A1 consists of 186 residential units distributed over 33 storeys. The three residential ‘towers’ are designed to be at different heights to further emphasise the impression of a family of individual, yet complimentary, buildings. While the tower facing the Dock (tower A) provides purely one bed units and the tower facing Canada Water station (tower C) provides purely two bed units, the layout of the third tower (tower B) has been designed to allow for a variety of plan types which helps accommodating the unit mix and allows for a degree of flexibility for the internal configuration. All wheelchair adaptable units are also located in tower B across lower and higher floors.

With residential units starting from the second floor, a double height main entrance hall at ground floor of tower C also provides internal communal amenity space for working/socialising areas. In addition, communal external amenity is provided in three roof locations: 6th floor (internal and external), 29th floor (external), 32nd floor (external). A landscape design has been set out to allow for a mix of spaces with different uses such as play space, urban gardens, seating areas, lookouts, tree pots, all set out with localised wind protection measures to extend use of these spaces for most parts of the year.

Bicycle provision is located in the basement in proximity to the main residential core and accessed separately from the main entrance. Most of the building plant is shared with the office buildings.

<table>
<thead>
<tr>
<th>Towers</th>
<th>Residential NIA (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Area</td>
<td>13,424</td>
</tr>
<tr>
<td>Residential Mix</td>
<td>No. of Units</td>
</tr>
<tr>
<td>1 Bed 1 Person Studio</td>
<td>10</td>
</tr>
<tr>
<td>1 Bed 2 Person</td>
<td>82</td>
</tr>
<tr>
<td>2 Bed 4 Person</td>
<td>78</td>
</tr>
<tr>
<td>3 Bed 5 Person</td>
<td>5</td>
</tr>
<tr>
<td>3 Bed 6 Person</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>186</td>
</tr>
<tr>
<td>Wheelchair Adaptable Units</td>
<td>19</td>
</tr>
<tr>
<td>Dual Aspect Units</td>
<td>176</td>
</tr>
<tr>
<td>TOWER A</td>
<td>Residential NIA (m²)</td>
</tr>
<tr>
<td>Floor Area</td>
<td>2,536</td>
</tr>
<tr>
<td>Residential Mix</td>
<td>No. of Units</td>
</tr>
<tr>
<td>1 Bed 2 Person</td>
<td>46</td>
</tr>
<tr>
<td>TOTAL</td>
<td>46</td>
</tr>
<tr>
<td>Wheelchair Adaptable Units</td>
<td>0</td>
</tr>
<tr>
<td>Dual Aspect</td>
<td>46</td>
</tr>
</tbody>
</table>

Residential summary schedules
7.3 Amount

The residential buildings will create a total of 186 new dwellings. The schedule alongside presents the detailed unit mix within the 3 towers.

Unit mix

The overall unit mix is compliant with Southwark Council policy, with over 42% of units being 2 bedroom or larger and circa 9% of the units sized as 3 bedroom units.

Wheelchair housing

A total of 19 of the dwellings - representing 10% of the total units - are for wheelchair users and have been designed in compliance with Building Regulations Part M4 Category 3. The remaining 90% are adaptable dwellings and they have been designed in compliance with Part M4 Category 2.

<table>
<thead>
<tr>
<th>TOWER B</th>
<th>Residential NIA (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Area</td>
<td>5,958</td>
</tr>
<tr>
<td>Residential Mix</td>
<td>No. of Units</td>
</tr>
<tr>
<td>1 Bed 1 Person Studio</td>
<td>10</td>
</tr>
<tr>
<td>1 Bed 2 Person</td>
<td>36</td>
</tr>
<tr>
<td>2 Bed 4 Person</td>
<td>18</td>
</tr>
<tr>
<td>3 Bed 5 Person</td>
<td>5</td>
</tr>
<tr>
<td>3 Bed 6 Person</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>80</td>
</tr>
<tr>
<td>Wheelchair Adaptable Units</td>
<td>19</td>
</tr>
<tr>
<td>Dual Aspect</td>
<td>70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOWER C</th>
<th>Residential NIA (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Area</td>
<td>4,930</td>
</tr>
<tr>
<td>Residential Mix</td>
<td>No. of Units</td>
</tr>
<tr>
<td>2 Bed 4 Person</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60</td>
</tr>
<tr>
<td>Wheelchair Adaptable Units</td>
<td>0</td>
</tr>
<tr>
<td>Dual Aspect</td>
<td>60</td>
</tr>
</tbody>
</table>
7.4 Layout

7.4.1 GROUND FLOOR

Marked with a protective canopy, the main building entrance leads to a generously arranged double height space. From here, access to the central lift lobby is in a straight line of vision.

On the ground floor there is provision for a waiting and reception area as well as informal lounge space. Functional commodities include post boxes, storage and access to the basement via lift. A secondary door to the west leads to a little garden area, from where cyclists can enter the building from the street and access the lift or stair leading to the basement storage, without the need of crossing the lobby.

In addition, a mezzanine floor accessed via a staircase and with lift access from the core, provides further communal amenity space for residents. The mezzanine makes provision for meetings, functions and informal working.
Ground floor plan
7.4.2 RESIDENTIAL CORE
The proposed plan layout has been designed to allow for a variety of plan types.

The central core consists of 3no. lifts, including a combined passenger/fire-fighting lift, and an escape stair. Space provision is currently made for a waste chute within the residential core. The lift lobby area is kept clear of entrance doors to allow for an adequate arrival experience and waiting area away from private doors. With tower A and tower C stopping at levels 29 and 32, the lift lobby area and the corridor will start benefiting from natural light from large openings facing the dock and the north London skyline. Upper terraces on levels 29 and 32 are accessed from this space.

The core walls allow for flexibility in locating residential entrances, which simplifies and improves the internal flat design. A sufficient ceiling zone for services distribution has been allowed for in the design, leaving a clear internal height of 2.4m.

7.4.3 RESIDENTIAL UNITS
The proposed internal layout is a result of extensive options testing, in particular of tower B. As summarised by the diagrams alongside, there are a number of key properties of this proposed typology and layout which will ensure the delivery of housing of exemplary standards:

- All units with the exception of west facing studio flats are dual aspect with corner living rooms. This results in excellent access to daylight and sunlight.
- All rooms have been designed with good proportions for uniform daylight distribution.
- 92% of the tested rooms meet or exceed the recommended levels of daylight (ADF) and 99% offer sky visibility (NSL) in line with or in excess of the guidance level.
- The number of flats sharing lift/stair core does not exceed the recommended maximum of 8 set out within the Mayor’s Housing SPG.
- Flats are generously sized, all exceeding the minimum floorspace standards. More than 80% of all units exceed the minimum space standards by more than 10%.
- In addition, the buildings also achieve excellent floor to ceiling heights, typically 2.6m within habitable rooms, increased to ca 2.8m in selected areas where the concrete ceiling is exposed. This is significantly above the minimum height of 2.3m required by the Building Regulations.
- The 6th level roof garden will be complemented by another two upper level communal roof terraces/gardens with excellent views and suitable protection from winds in these elevated areas. The 6th floor external amenity area is complemented by adjacent internal amenity space overlooking the roof garden.

In addition, all dwellings with the exception of studio flats have private amenity spaces provided through a mixture of shallow, deep and inset balconies, all set out following microclimate studies with a focus on wind mitigation with suitable geometry to allow for use of these spaces most times of the year.

Inside out approach
All residential units are designed to be dual aspect and with private amenity space allocated to each flat in form of projecting or inset balconies with the exception of studio flats. A key driver for the arrival experience of the flats is to have a view out ideally upon entering the flat. Where this is not the case, access to a view out is provided from within the adjacent corridor. Common amenity spaces include an internal space on the 6th floor and three external terraces on floor 6, 29 and 32. Residential unit areas and key dimensions are
Key
- Fire-fighting lift
- Escape stair
- Refuse chute

Three towers

Fixed and flexible party walls

Dual aspect
based upon the Nationally described Space Standard for England (NdSS) and Southwark Council Housing Design Standards.

Wheelchair User Dwellings
The approach to the provision of wheelchair user dwellings within the scheme is summarised below:

- A total provision of 19 no. wheelchair user dwellings - to meet the policy requirement for 10% of units within the development, comprising:
  6 no. 2-bedroom flats, 10 no. 1 bed flats and 3 no. 3 bed flats, all distributed within the height of the tower.

- Wheelchair adaptable dwellings will be designed to allow for easy adaptation to wheelchair accessible user dwellings (Building Regulations category M4(3) (2)(a) - wheelchair adaptable).

- The units have been designed to comply with the South-East London Housing Partnership Wheelchair Housing Design Guide (SELWHDG) with respect to unit sizes - above and beyond the requirements of Part M4(3) - in accordance with LB Southwark’s 2015 Technical Update to the Residential Design Standards (2011) Supplementary Planning Document.

All of the wheelchair units have been reviewed in detail with the Access Consultant, David Bonnett Associates. Please refer to the Access Statement in chapter 8 for more detail.
7 Residential

- Living rooms
- Kitchens and services
- Bedrooms
- Bathrooms
- Private Amenity
7.5 Amenity provision

Private amenity
Following a review with Southwark Council during the pre-application process and a number of studies in relation to wind, quality of space and usability of the external spaces, the proposed strategy can be described with the following parameters:

- Deep projecting balconies with 1.5m clear depth and 5m² to the east facade where areas are better protected from predominant wind
- Shallow projecting balconies between 0.9 and 1.1m clear depth and min. 3m² to the south facade of tower B and west facade of tower C
- A mix of shallow balconies and 5m² inset balconies on the west elevation of tower B

Early sketches exploring the potential character of the balconies
A selection of local buildings which represent the private amenity character in industrial buildings
The distribution and layout of private external amenity has been established to maximise the usability of the balconies externally without compromising the view out and quality of internal living spaces. The distribution of balconies and loggias has been designed with the following principles:

- Larger units have inset balconies, smaller units have projecting balconies
- All units have oversized living rooms
- 95% of all units have access to private external amenity
- Only studios have no private amenity (5% of units)
- All 3 bed units have access to an inset balcony
- All 2 bed and 1 bed units have a choice between inset balcony (7%), deep balcony (48%) or shallow balcony (45%)
- Private amenity typology distributed in response to prevailing wind studies.

Diagrams showing the prevailing wind directions and how it changes its pressure depending on the height.
7 Residential

- Unit Size in compliance with minimum space standards
- Oversized additional area
- External Amenity

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Additional Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B 2P</td>
<td>50 m²</td>
<td></td>
</tr>
<tr>
<td>2B 4P (DDA)</td>
<td>115 m²</td>
<td>+5 m² +6 m² +14 m²</td>
</tr>
<tr>
<td>2B 4P</td>
<td>85 m²</td>
<td>+5 m² +10 m² +3 m²</td>
</tr>
<tr>
<td>1B 2P</td>
<td>50 m²</td>
<td>+5 m² +10 m² +3 m²</td>
</tr>
</tbody>
</table>
Section view 1. Inset balcony

Section view 2. Deep balcony

Section view 3. Juliet balcony
Deep balcony

Shallow balcony

Inset balcony
Communal amenity
External communal residential amenity is provided in three roof locations: 6th floor, 29th floor, 32nd floor. A landscape design has been set out to allow for a mix of spaces with different uses such as play space, urban gardens, seating areas, lookouts, tree pots, all set out with localised wind protection measures to extend use of these spaces for most parts of the year. Further wind testing will be carried out post-planning in order to refine these areas including the review of a canopy structure that will be required where the tower meets the 6th floor terrace, and ensure the best possible wind conditions on the terrace can be achieved.

All three areas meet or exceed BRE's recommendation for overshadowing. In particular the south facing main amenity deck on the sixth floor exceeds requirements with 98.5% of the terrace receiving two or more hours of direct sunlight on the equinox, where a minimum of 50% is recommended.
SOUTHWARK COUNCIL REQUIREMENTS

COMMUNAL AMENITY SPACE REQUIRED BY LBS

<table>
<thead>
<tr>
<th></th>
<th>Per development</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50m²</td>
<td></td>
</tr>
</tbody>
</table>

PLAYSPACE REQUIRED BY LBS

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Area</th>
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<tbody>
<tr>
<td>Under 5’s</td>
<td>80 sqm</td>
</tr>
<tr>
<td>5-11</td>
<td>30 sqm</td>
</tr>
<tr>
<td>12+</td>
<td>20 sqm</td>
</tr>
<tr>
<td>Total</td>
<td>130 sqm</td>
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</tbody>
</table>

80sqm of doorstep play for under 5’s will be provided on the roof. 5-11 and 12+ is provided in the ground floor public realm of zone A.

Subtotal: 80m²

PRIVATE AMENITY REQUIRED LBS

<table>
<thead>
<tr>
<th>Flat type</th>
<th>OAS* average</th>
<th>No. units</th>
<th>Total OAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>10m²</td>
<td>10</td>
<td>100m²</td>
</tr>
<tr>
<td>1B</td>
<td>10m²</td>
<td>82</td>
<td>820m²</td>
</tr>
<tr>
<td>2B</td>
<td>10m²</td>
<td>78</td>
<td>780m²</td>
</tr>
<tr>
<td>3B</td>
<td>10m²</td>
<td>16</td>
<td>160m²</td>
</tr>
</tbody>
</table>

Subtotal: 186, 1860m²

TOTAL amenity space required: 1990m²

* Outdoor Amenity Space

COMMUNAL AMENITY SPACE PROVIDED

<table>
<thead>
<tr>
<th></th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal roof gardens excluding play area</td>
<td>840m²</td>
</tr>
<tr>
<td>Subtotal</td>
<td>840m²</td>
</tr>
</tbody>
</table>

PLAYSPACE PROVIDED

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Playspace is provided on the 6th floor roof terrace.</td>
</tr>
</tbody>
</table>

Subtotal: 80m²

PRIVATE AMENITY PROVIDED

<table>
<thead>
<tr>
<th>Flat type</th>
<th>OAS* average</th>
<th>No. units</th>
<th>Total OAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>0.0m²</td>
<td>10</td>
<td>0m²</td>
</tr>
<tr>
<td>1B</td>
<td>4.1m²</td>
<td>82</td>
<td>338m²</td>
</tr>
<tr>
<td>2B</td>
<td>4.1m²</td>
<td>78</td>
<td>318m²</td>
</tr>
<tr>
<td>3B</td>
<td>5.0m²</td>
<td>16</td>
<td>80m²</td>
</tr>
</tbody>
</table>

Subtotal: 186, 736m²

TOTAL amenity space provided: 1656m²

Summary of amenity provision

The above table demonstrates that Plot A1 provides 736m² private amenity against the LBS requirement of 1860m² private amenity. The shortfall has been offset partly by providing an additional 870m² of communal amenity space, resulting in an overall shortfall of 334m² against LBS policy.
Additional amenity features

In addition to the private and communal external amenity provision, the following features have been integrated in the design, to enhance the quality of living spaces:

- All flats have been oversized over and above minimum requirements as outlined in the Southwark Residential Design Standards. This totals as 1720 m² additional area distributed amongst all residential units and enhances the quality of internal living spaces.

- Balconies and loggias have been designed not to obstruct views out at the corner of the dual aspect units, providing outlooks to the immediate neighbourhood and the city of London.

- Further to the external communal amenity spaces, two internal areas provide additional amenity space, one on the 6th floor (67m²) adjacent the roof terrace, and one on the mezzanine floor (100m²) linked with the main entrance to the residential tower.

- On ground floor, all surrounding public realm will be upgraded, and in particular the redesigned Dock Office courtyard will provide excellent outdoor space in immediate proximity to the residential uses.
The proposed roof gardens located on floors 6, 29 and 32 are characterised by planted raised beds and protected seating areas.

The main roof garden on the 6th floor provides an area with lawn and play equipment for families to enjoy. There is an opportunity to provide flexible space for fitness, yoga and informal playspace. Pocket seating areas amongst planting will help to create sheltered areas from wind.

Soft planting areas will provide visual interest throughout the year. Evergreen planting will create a year round structure of green whilst a range of herbaceous planting will provide injections of colour throughout the seasons. Raised beds for communal food growing can also be provided.

Hedge planting and pergola structures are proposed in the roof gardens to reduce the impact of wind and create more intimate spaces to relax.

Key
1. Play area
2. Covered seating area/communal table
3. Raised bed and herb planting for communal planting
4. Herbaceous and shrub planting
5. Programmable space for fitness, yoga, informal children’s play
6. Hedge Planting
7. Trees in pots
8. Controlled access point
9. Stepping stone trail

80m² playable space for under 5’s
Key
1. Covered seating area
2. Herbaceous and shrubs planting

Seating area
Usable roof terraces with planting
Stepping stone trail

Play area
Programmable space for fitness, yoga, children’s play
Pergola, covered seating areas.
7.6 Summary residential design quality

The residential buildings will be of outstanding quality and have been designed to an exemplary standard. Specifically, the design achieves the following:

- Flat sizes significantly exceed minimum floorspace standards, with all units exceeding the minimum space standards by more than ca 10%.

- The building delivers a predominance of dual aspect (95%) units.

- Floor-to-ceiling heights significantly exceed the minimum height of 2.3 metres required by the Building Regulations - with a typical ceiling height of 2.6m to habitable rooms and ca 2.8m in selected areas where the concrete ceiling is exposed.

- The design integrates a collection of communal outdoor spaces at various upper floor levels, and internal communal spaces on Ground Floor / Mezzanine and adjacent the terrace on the 6th floor, providing a diversity of amenity spaces for the use of residents.

- The dwellings benefit from excellent standards of daylighting. 92% of the tested rooms meet or exceed the recommended levels of daylight (ADF) and 99% offer sky visibility (NSL) in line with or in excess of the guidance level.

- The development has excellent accessibility within dwellings - with 10% of dwellings designed as wheelchair user homes, and all others meeting the requirements of Part M4(2) of the Building Regulations.

- The residential buildings will deliver exceptional environmental performance - contributing to an overall improvement in terms of CO2 emissions of over 35% above the Target Emission Rate (TER) defined by Part L of The Building Regulations 2013. In addition the scheme targets 3 stars in the HQM assessment.
View from Surrey Quays Road
7.7 Appearance

7.7.1 ORDER AND ARTICULATION

The three residential tower components wrapped around one core are designed distinctly from one another in order to articulate their individual autonomy and to enhance the appearance of a collection of elements. At the same time, distinct details such as window profiles and balustrades are designed with common details to link the three towers together as a family.

While metal cladding is proposed as the material for the three towers, each tower has been designed with a different articulation. Tower A emphasises the verticality; Tower B has a grid facade with expressed column and spandrel casings; and Tower C puts its emphasis on the horizontality.

The column casings of Tower A are fluted. The cladding of Tower B is inspired by exposed steel structures, with expressed flanges, stiffeners and webs.

Windows and opaque facade areas used for ventilation are recessed within the primary facade grid and coloured in a dark tone. This becomes particularly evident on Tower B. Equally, balconies and loggias are coloured in a dark tone so that their perception is in harmony with the windows and any contrast is minimised.

The top floors of the three towers are articulated as ‘crowns’, which are illuminated at night. The night time illumination will enable Plot A1 to be recognised/viewed when seen from afar and may help becoming a point of reference for the new development of the Canada Water Masterplan.

Three orders
Top of residential tower facing east
Facade order Towers B, A, C (from left)
Bay Study - Tower B
Bay Study - Tower C
7.7.2 **ELEMENTS AND DETAILS**

The proposed residential towers are rich in detail. Inspired by Victorian structures in the local area, particular attention is drawn to the entrances, canopies, balconies and balustrades. Metal profiles and patterned panels add detail and depth to the development.

- The old Pump House
- Detail of the Pump House
- Bascule bridge on Redriff Road
Details of bascule bridge on Rotherhithe Street
Top floors
A tall building bears the necessity to have a distinctive top. With the three tower components articulated as pieces with individual character, a variation of a theme is applied to the tops. In principle, the main elements of the facade carry on to frame the top of the building. These ‘crowns’ are one storey high on Tower A, two storeys on Tower C, and three storeys on Tower B.

Towers A and C provide amenity space on top, protected from wind with glass screens and allowing for stunning views over the city.

The top floor of Tower B is fitted with exposed service plants. These are disguised behind perforated metal screens which will be illuminated at night.
**Windows**

Reference is made through the use of Crittall-style windows, historically used on large warehouse openings. These characteristic windows are used on both office buildings and the residential tower and help tie together the different buildings.
1:200 model showing Crittall-style windows
Metalwork

All metalwork on the residential towers is designed consistent for all buildings, and adds detail to the overall appearance.

Reference is made through the use of Crittall-style windows, historically used on large warehouse openings. These characteristic windows are used on both office buildings and the residential tower and help tie together the different buildings.

Where metal panels are used, a distinctive ornamental pattern [to be further developed] will link these elements together. This will range from balustrades, plant screens, window screens and gates to perforated ventilations louvres. The pattern will accommodate various required openings in the screens for its different purposes such as air flows and visibility.
Patterned metal panels
Canopies

The main entrance to the residential tower is marked out by a generous, suspended canopy. Its design is inspired by historic canopies, with an expressed structure and refined connection details.
Main residential entrance with canopy
Ground floor

In order to add an element of robustness to the landing of the towers, each tower base is clad in prefabricated concrete panels rather than metal panels which adds an element of robustness on the ground floor. These panels are aesthetically interlocked with the metal panels above.

Similar to the office buildings, the tower base has large window areas designed with a fenestration to create an atmosphere of privacy and intimacy for the internal space whilst still allowing views out. It is believed that this level of transparency will contribute to a safer environment, particularly at night.
Ground floor of Tower A

Ground floor of Tower C

Tower C base study - extent and articulation of prefabricated concrete