



# CHARLTON RIVERSIDE

PHASE 1

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ENVIRONMENTAL STATEMENT  
NON-TECHNICAL SUMMARY



Date

**November 2016**


Project Number

**UK11-23110**

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# 1. INTRODUCTION

## Purpose of this NTS

- 1.1 This is the Non-Technical Summary (NTS) of the Environmental Statement (ES) which has been prepared by Ramboll Environ UK Limited in accordance with the statutory procedures set out in the Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2011 (as amended in 2015). It has been prepared to accompany a full planning application made to the Royal Borough of Greenwich (RBG) by Leopard Guernsey Anchor Propco Limited for the redevelopment of a site in the Charlton area of south-east London.
- 1.2 In summary, the proposals include the demolition of existing buildings and erection of 9 buildings ranging from two 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.
- 1.3 Plans illustrating the location and boundaries of the application site are included as Figure 1.
- 1.4 This NTS is a summary of the main findings of the ES. The NTS provides:
- a description of the proposed development and surrounding area;
  - an outline of the main development alternatives considered by the Applicant and an indication of the main reasons for their choice, taking into account the potential environmental effects;
  - a summary of the likely significant environmental effects predicted; and
  - a summary of the measures proposed that would help avoid, reduce or control any significant adverse environmental effects.
- 1.5 The aim of the NTS is to summarise the content and main findings of the ES in a clear and concise manner to assist the public in understanding what the likely significant environmental effects of the proposed developments are likely to be.

## Viewing the ES and Application

- 1.6 The full ES comprises:
- Volume 1: Main Text;
  - Volume 2: Townscape, Heritage and Visual Impact Assessment (THVIA);
  - Volume 3: Technical Appendices; and
  - Non-Technical Summary (this document).
- 1.7 This NTS and the full ES, together with the planning application and other supporting documents are available for viewing by the public in the Planning Department of the RBG during normal office opening hours and on the RBG's online planning portal.
- 1.8 CD versions of the ES are available for purchase at a cost of £25 from Ramboll Environ.

## Commenting on the Application

1.9 Comments on the planning application should be forwarded to the RBG at: Royal Borough of Greenwich, The Woolwich Centre, Wellington Street, Woolwich, SE18 6HQ

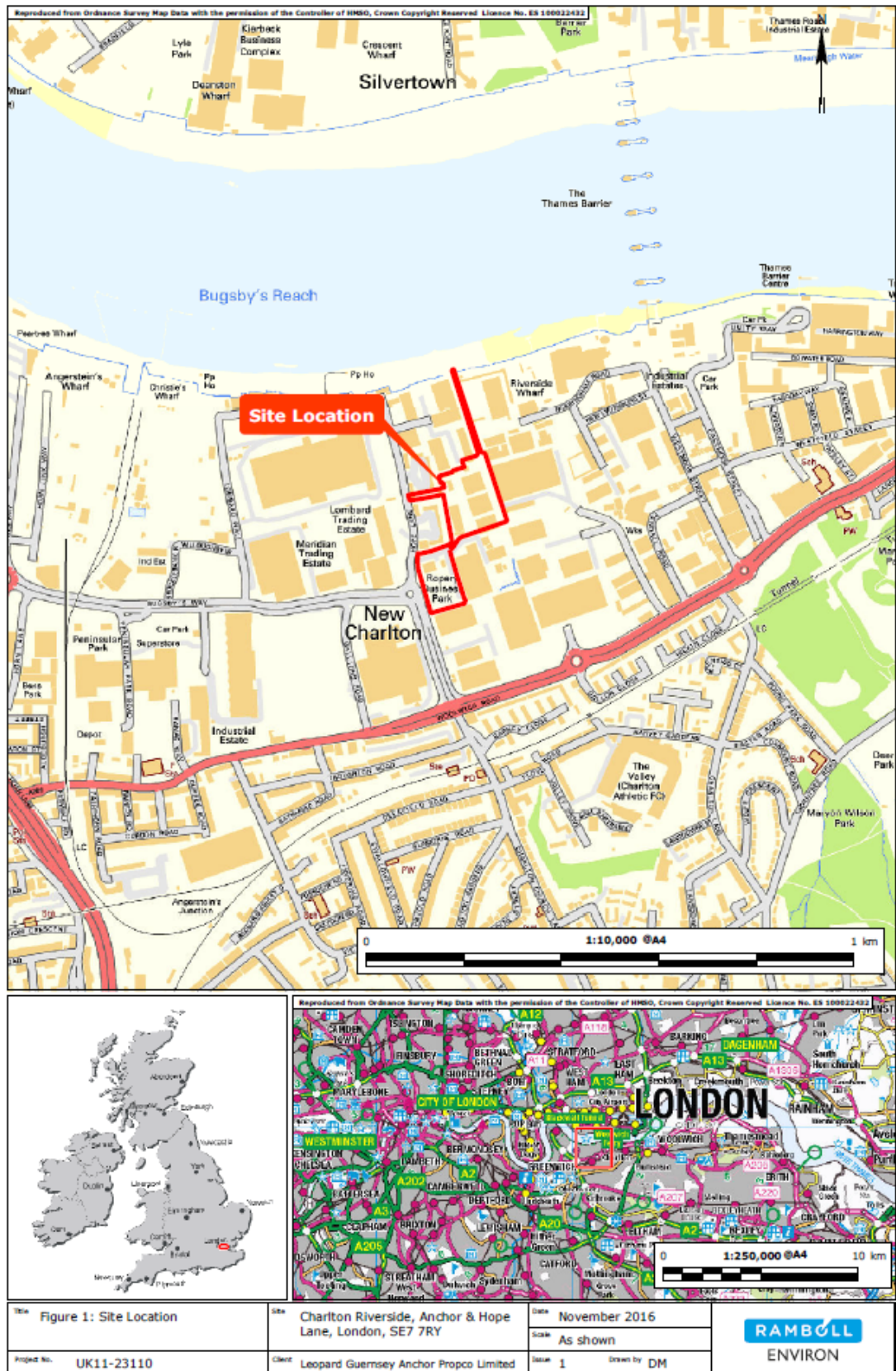


Figure 1: Site Location

## 2. THE EXISTING SITE AND SURROUNDING CONTEXT

### The Application Site

- 2.1 The application site comprises two parcels of land referred to as 'Plot A' and 'Plot B', Plot A being the northern most plot, and Plot B being to the south-west of Plot A. Together they form the application site, at a total area of 2.53 hectares (ha). The location and application site boundary is shown in Figure 1.
- 2.2 Plot A is bound by:
- commercial units comprising Anchorage Point Industrial Estate and Imex House to the north;
  - commercial and industrial units including a casting foundry and depot to the to the east;
  - commercial and light industrial units comprising Ropery Business Park to the south; and
  - an electricity substation, residential properties at Atlas Gardens and Derrick Gardens, and Anchor and Hope Lane with a distribution centre and units comprising Lombard Trading Estate beyond to the west.
- 2.3 Plot B is bound by:
- residential properties at Atlas Gardens to the north;
  - commercial and light industrial units comprising Ropery Business Park to the east;
  - commercial and retail properties comprising Charlton Gate Business Park to the south; and
  - Anchor and Hope Lane and commercial units comprising Lombard Estate and Anchor and Hope Business Park to the west.
- 2.4 As shown in Figure 1, the application site is irregularly shaped. It is currently hardstanding with limited vegetation, occupied by industrial warehouse and business park units, as shown in Figure 2. Due to its proximity to the River Thames, the application site has been designated as an 'Area of High Archaeological Potential' within the RBG's Local Plan.
- 2.5 There are no known previous planning applications on this site.

### The Surrounding Area

- 2.6 The application site's surrounding context is of a predominantly industrial nature. This is characterised by existing warehouses and retail outlets that border the application site, with the exception of the Imex House and residential properties of Atlas Gardens and Derrick Gardens which are located directly adjacent.
- 2.7 Beyond the northern boundary lies the River Thames, the closest surface water resource, and beyond the southern boundary lies the A206 dual carriageway. A large Sainsbury's distribution centre is located further west of the application site, comprising a warehouse, an energy centre, a vehicle wash and an area for refuelling. Stone Lake Retail Park is located to the south-east.
- 2.8 Charlton Railway Station is located approximately 350m to the south. The station is situated on the Southeastern Line, providing a direct service to London Bridge, London Charing Cross and London Cannon Street. The nearest underground station is North Greenwich, which is approximately 2.6km north-west of the application site. The application site is situated within an accessible road network, with Anchor and Hope Lane adjacent to the north which connects with

Charlton Church Lane and Woolwich Road (A206) to the south. To the west, Bugsby’s Way links the application site with the Greenwich Peninsula and the Blackwall Tunnel (A102).

2.9 In addition, five bus routes are within easy access of the application site with bus stops on Bugsby’s Way, Anchor and Hope Lane or Woolwich Road. There are also suitable pedestrian and cycle routes in the vicinity of the application site to important destinations including the National Cycle Network Route 1 which directly connects with the application site and runs along the Thames Path, connecting to other local and national cycle routes.

2.10 Three safeguarded wharves, designated under GLA planning policy, are located within 900m of the application site. The closest is Riverside Wharf, approximately 150m to the north-east.

2.11 The application site is located within Charlton Riverside – a Strategic Development Location allocated for a new mixed use urban quarter by the RBG Core Strategy (2014).



**Figure 2: Existing Site**

**Environmental Baseline Sensitivities**

2.12 The environmental character and sensitivity of the application site is described below:

- The application site is not located within a conservation area;
- The application site does not contain any nationally designated (protected) heritage assets, such as scheduled monuments, listed buildings or registered parks and gardens;

- The entire application site lies within the Greenwich Peninsula and Foreshore Area of High Archaeological Potential, which is characterised by the potential for prehistoric to medieval remains within alluvial deposits;
- There are no areas of ecological value on or around the application site;
- The application site is located within an Air Quality Management Area (AQMA) declared under the Environment Act 1995, which incorporates the whole RBG; and
- The nearest significant noise sources are associated with road traffic and commercial and industrial premises in proximity to the application site.

### 3. DESIGN EVOLUTION AND ALTERNATIVES

3.1 In line with the EIA Regulations, the ES provides a description of the main alternatives to the proposed development, considered by the Application. These include:

- The 'No Development' Option;
- Alternative sites; and
- Alternative designs through design evolution.

#### **No Development Option**

3.2 The 'do nothing' alternative refers to the option of leaving the application site in its current state. This option would be undesirable and inappropriate for a number of reasons including:

- The application site is located within the Charlton Riverside Opportunity Area which is identified by the London Plan for significant residential growth (including a minimum 3,500 homes);
- Redevelopment of the application site is required to unlock access to adjacent development sites within the Opportunity Area; and
- It would represent a lost opportunity to open up the application site for greater public accessibility and significant improvements to the public realm.

3.3 Consequently, the 'do nothing' scenario was rejected by the Applicant.

#### **Alternative Sites**

3.4 The Applicant purchased the application site having regard to its location within an area identified for significant redevelopment and growth. The application site is highly accessible and available for delivery. No other sites were considered by the Applicant.

#### **Design Evolution**

3.5 Various design options were considered by the Applicant during 2015/2016 that evolved into the residential-led development being sought for approval. These options were discussed with the RBG and the GLA, and a number of points were considered in relation to the proposed scale of development, relationship to the wider masterplan area, the quantum of residential accommodation and associated issues relating to residential amenity, employment area, servicing strategy access, parking provision and sunlight and daylight. Public consultation events were also a key process for gaining stakeholder feedback.

3.6 Early proposals for the application site focused on generating a variety of design ideas and options that would deliver the required density of accommodation to secure redevelopment of the application site.

3.7 A number of potential block forms and layouts were examined, prior to discussion with key stakeholders, and the development of these initial options allowed the Applicant and design team to formulate a shared understanding of the key design issues, opportunities and constraints associated with the application site.

3.8 Whilst the evolution of the proposed development took place continuously up until this point, for ease, the alternative designs have been summarised into 2 key design stages as follows:

***Phase 1: September 2015 – April 2016***

- 3.9 A diagrammatic layout was established to create a framework for the detailed development of key routes and spaces, and to inform key urban design principles. The layout of the built form responded to the existing context, particularly the adjacent housing, and created frontages to the key public spaces. The building heights responded to existing contextual 2-storey houses and the hierarchy of proposed building heights stepped up from the west at 4 storeys, increasing in height towards the east of the application site up to 26 storeys. The disposition of building heights also maximised sunlight penetration to key public spaces. Existing and future routes were considered to allow flexibility for connection to future masterplan phases.
- 3.10 A rich variety of garden spaces at ground level and at building roof levels were proposed, comprising green pedestrian streets, pocket squares, small green courtyard spaces, urban SUDS, river walkway, and landscaped edge conditions to Anchor and Hope Lane. The diversity of character and typology of gardens, streets and squares was intended to create spaces at a human scale that reflected the wider masterplan principles and objectives to establish a safe environment for people to live, work and play and inspire and educate the new local community.

***Phase 2: May 2016 - November 2016***

- 3.11 Following the considerable period of time spent on design development, revision, and consideration of alternatives, and based on the feedback received from key stakeholders during the evolution of the various design proposals a new approach and concept was established, considering the adjacent existing and future development. The key principles established were:
- A rich variety of residential typologies and characterful mix of public spaces, informed by view and orientation.
  - A 'structured informality' with the potential for future connections to the evolving Charlton Riverside masterplan area.
  - A green place – maximising opportunities.
  - A place people want to live in.
  - Clear hierarchy in terms of massing and height, and relationship to existing and future context and routes.
  - High quality, residential-led.
  - An exemplar for development of the wider masterplan area.
  - A density that responds to the site's urban location, suitable to establish the initial phase of this important new place.
- 3.12 Initial proposals were based on a series of streets running on a north-south orientation to allow sunlight to pass through. Building heights ranged from 4 to 26 storeys, lowest at the west near existing homes and rising to the east furthest away from these. However, there were concerns that the tall buildings to the east of the application site might compromise future neighbouring development sites.
- 3.13 It was recognised that there was a need to see more activity at ground level. Therefore, the second iteration increased the amount of public space and routes through the application site, aiming to better integrate it into the existing and future neighbourhood.

- 3.14 The second iteration also saw the introduction of a nursery and a range of active ground floor uses, including business spaces as well as a focus on family homes and the inclusion of town houses. Building heights were redistributed to lower buildings at the edges of the site, locating the tall buildings in the centre of the scheme.
- 3.15 Further along the design process, building heights were reduced in the centre of the scheme and redistributed to one landmark building at the south of the application site.
- 3.16 A pedestrian route cutting east-west through the site was also added to increase permeability and access to the park area.

### ***Environmental Influences***

Environmental factors have influenced the proposals as they have evolved. Key environmental factors relate to:

- Wind microclimate – shaping the landscaping proposals and location of buildings entrances;
- Acoustics – affecting the façade design and influencing the location of winter gardens, when considering existing local noise sources;
- Daylight and Sunlight - most importantly affecting the massing height and footprints in relation to nearby existing residential properties;
- Drainage Strategy - influencing the design in respect of the local townscape;
- Playspace requirements – affecting the landscaping proposals to ensure sufficient playspace; and
- Ecology – enhancing local biodiversity was a key consideration in the landscaping proposals.

## 4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

- 4.1 The proposed development will involve the demolition of existing buildings and construction of nine buildings ranging from two 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 Hope and Anchor 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.
- 4.2 The proposed development would provide:
- 975 residential units;
  - 1,560m<sup>2</sup> (GIA) of office space;
  - Ancillary residential facilities including gym, swimming pool, changing rooms totalling 864m<sup>2</sup> (GIA);
  - 690m<sup>2</sup> (GIA) of flexible retail/restaurant/café/leisure use;
  - 407m<sup>2</sup> (GIA) of community uses (intended for a crèche and healthcare facility);
  - 1,652 residential and commercial cycle spaces; and
  - 198 car parking spaces provided in a partial basement-level car park.
- 4.3 The landscape proposals for the proposed development would deliver considerable public realm, biodiversity and amenity enhancement.
- 4.4 The details of the proposed development are provided in Tables 1 – 3 below with breakdowns of areas, and tenure and unit mix in relation to the residential units.

<b>Table 1: Proposed Development Area Schedule</b>		
<b>Land Use</b>	<b>GEA (m<sup>2</sup>)</b>	<b>GIA (m<sup>2</sup>)</b>
Office space	1,957	1,560
Ancillary residential facilities including gym, swimming pool, changing rooms	1,142	864
Flexible retail/restaurant/café/leisure use	1,000	690
Community uses	490	407

<b>Table 2: Proposed Development Tenure Mix</b>	
<b>Tenure</b>	<b>Units</b>
Private	832 (85.3%)
Intermediate	40 (4.1%)
Affordable rent	103 (10.6%)
<b>TOTAL</b>	<b>975 (100%)</b>

<b>Table 3: Proposed Development Unit Mix</b>	
<b>Unit Type</b>	<b>Total</b>
1 bed 1 person	168 (17.2%)
1 bed 2 person	227 (23.3%)
2 bed	306 (31.4%)
3 bed	253 (25.9%)
4 bed	21 (2.2%)
<b>TOTAL</b>	<b>975 (100%)</b>

4.5 The main components of the proposed development are shown in a series of plans and images that are submitted as part of the full planning application. A selection are presented in this section (Figures 3 – 5).

### **Site Arrangement**

4.6 The buildings are located on two adjacent plots; Plot A (north) and Plot B (south). The built footprints within the application site are presented in Figure 3 and are described as follows:

- Plot A
  - Building A- East (North): Residential and commercial;
  - Building A- East (South): Residential and commercial;
  - Building A1: Residential and amenities;
  - Building A2: Residential and amenities;
  - Building A- West (North): Residential;
  - Building A- West (South): Residential; and
  - Basement: Parking and plant.
- Plot B
  - Building B3: Residential;
  - Building B- West: Residential, amenities and commercial;
  - Building B- East: Residential; and
  - Plinth: Amenities, commercial, parking and plant.

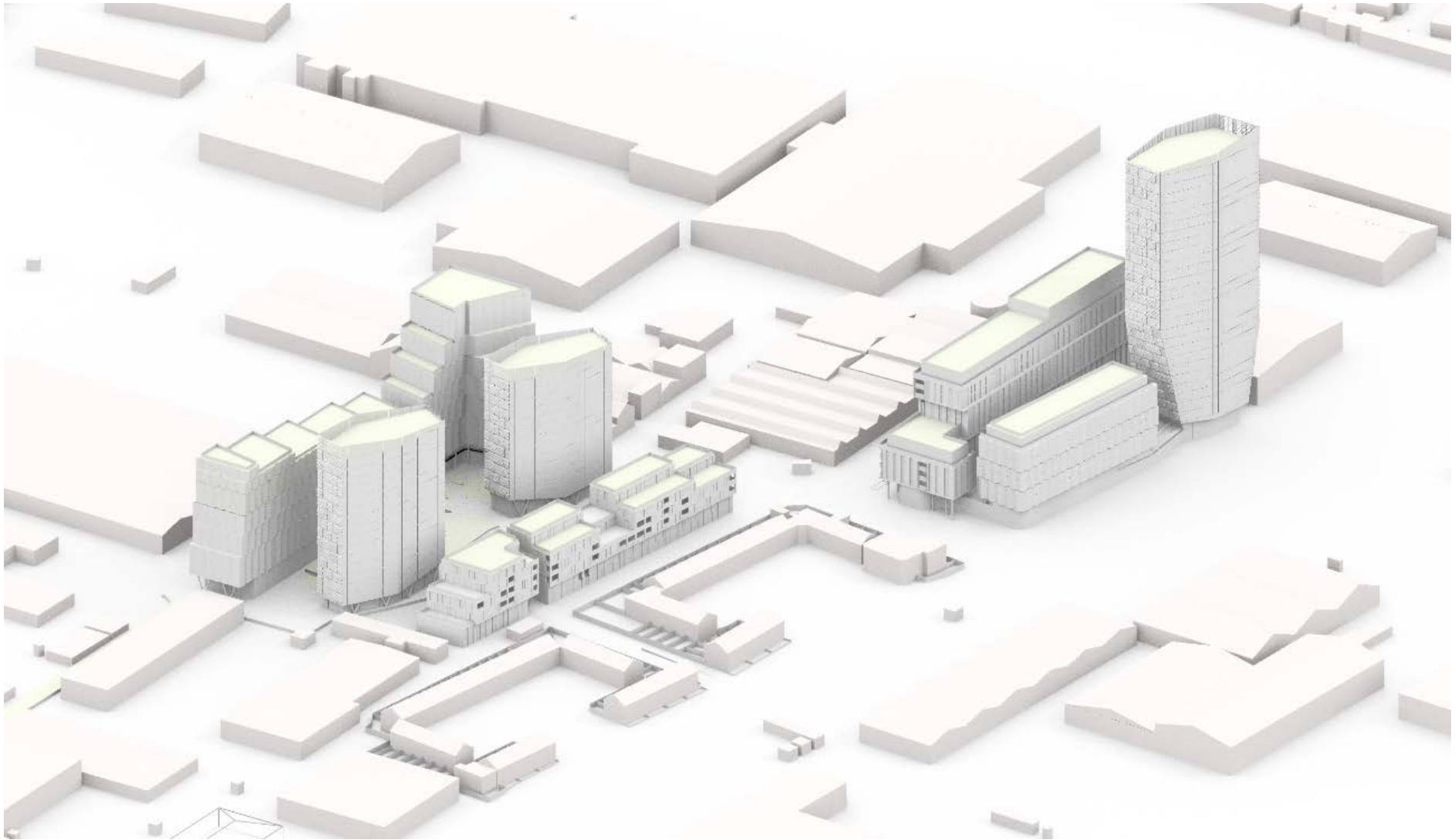


Figure 3: Massing Model of the Proposed Development

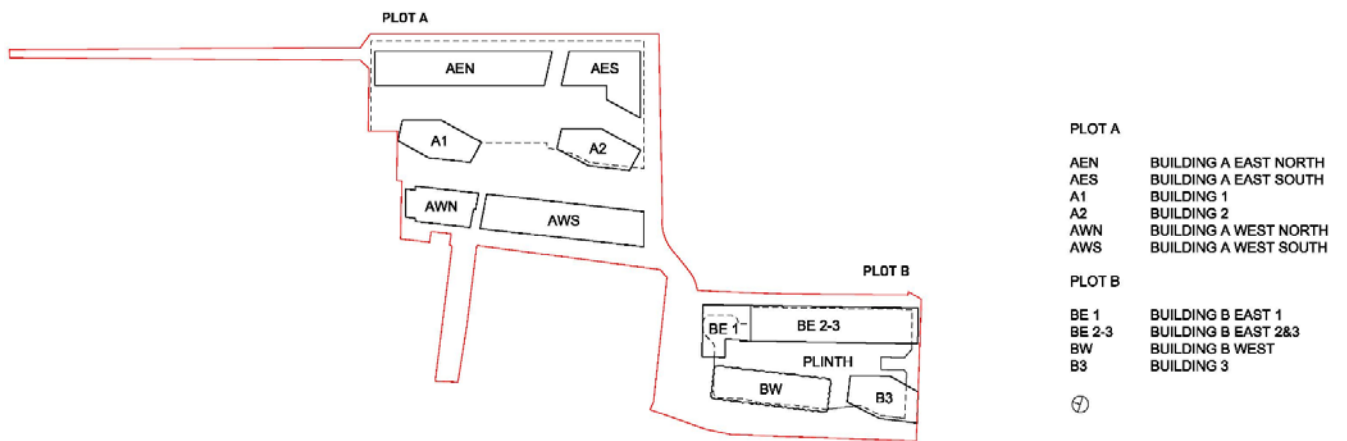


Figure 4: Building Layout Plan with Building Names



Figure 5: Internal Amenity Area of the Proposed Development

## Proposed Development Composition

4.7 Figure 3 shows a visual representation of the proposed development. 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. The building locations and corresponding names are shown in Figure 4, and details are provided in Table 4 below.

<b>Table 4: Building Names, Heights and Basement Depth</b>			
<b>Building</b>	<b>No. of Storeys</b>	<b>Building Height/Basement Depth (mAOD)</b>	<b>Building Height/Basement Depth (m) Above Ground Level</b>
		<b>Parapet/Roof Height</b>	<b>Parapet/Roof Height</b>
Plot A Building AEN	9-11	47.845m/46.010m	44.295m/42.460m
Plot A Building AES	9-16	56.200m/54.880m	52.650m/51.330m
Plot A Building A1	16	58.655m/54.226m	55.105m/50.675m
Plot A Building A2	14	52.595m/48.165m	49.045m/44.615m
Plot A Building AWN	2-6	24.130m/22.830m	20.580m/19.280m
Plot A Building AWS	3-6	24.130m/22.830m	20.580m/19.280m
Plot A Basement	1	1.150m (FFL)	-2.400m (FFL)
Plot B Building B3	28	94.130m/89.585m 95.930m (Top of flues)	90.580m/86.035m 92.380m (Top of flues)
Plot B Building BW	9-11	33.530m/32.230m	29.980m/28.680m
Plot B Building BE	6-12	43.300m/42.200m	39.750m/38.650m
Plot B Plinth	1	7.550m (FFL)	4.000m (FFL)

4.8 The following two images (Figures 6 and 7) show visualisations of the proposed development during the day and night respectively.



**Figure 6: View of the Proposed Development during the Day**



**Figure 7: View of the Proposed Development at Dusk**

#### 4.9 The distribution of land uses comprises the following:

- Plot A Residential Blocks
  - 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.
  - 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.
  - 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
  - The buildings to the eastern boundary BW provide 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.
  - 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
  - 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.
- Active Frontages
  - 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 have access.
- Flexible Retail/Commercial Space
  - Flexible retail space is located to the most eastern edge of the proposed development providing space on ground floor to the north and over two floors to the south.
  - Further space is provided on the perimeter on the southern plot located in close proximity to Anchor and Hope Lane.
- Residential Amenities
  - A residential lounge is located within the southern park building for flexible use facing the garden. Also a gym and swimming pool are located within the ground and first floor of Plot B.
- Crèche
  - A crèche is located within the park building on ground floor with an associated private garden.

- Concierge and Lobbies
  - Both plots provide a concierge area and associated drop-off to service the buildings.
- Entrances
  - 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 which is access via a private road within the application site.
- Parking
  - Covered car and cycle parking is provided on Plot B accessed from the north-east corner of the application site.
- Plant
  - 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
  - Townhouses are located backing onto the existing row of townhouses on Plot A to the western boundary and on Plot B the townhouses are located towards the eastern boundary with the gardens located on the Level 1 courtyard.
- Public Realm
  - Extensive public realm is provided as part of the development and extends to 1.5ha and 61% of the overall site area.
- Private and Shared Roof Terraces
  - Private and shared landscaped roof terraces are provided across the buildings of the development.
- Basement Level
  - The basement level on Plot A 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.

## Landscape Masterplan

- 4.10 The ground floor landscape masterplan has been provided in Figure 8. The proposed development will bring forward approximately 1.5ha of publically accessible amenity space on-site comprising the following:
- 1ha neighbourhood park within Plot A;
  - 1,444m<sup>2</sup> podium garden within Plot B; and
  - 3,260m<sup>2</sup> ground floor space within Plot B.
- 4.11 Within this space, playspace provision requirements are always an important driver for the development of the landscape proposals. Creating safe, inviting spaces for children and families has been a core principle of the scheme since the beginning. The design team has carefully considered where to best place play areas for the range of target age groups. The proposed development looks to locate playspace within close proximity to block cores, away from vehicular routes and in sheltered areas of the scheme.

There will also be private gardens within the proposed development, totalling 1,869m<sup>2</sup>.

The following areas of playspace will be brought forward on-site:

- Under five year olds: 1,675m<sup>2</sup>;
- 5-11 year olds: 1,314m<sup>2</sup>; and
- Over 12 year olds: 877m<sup>2</sup>.

4.12 Information received from the ecological assessments has greatly informed the development of the landscape proposals. The landscape scheme has evolved and adapted to support (and enhance) local biodiversity through changes to the soft landscape palette, by incorporating specific habitats for birds and various invertebrates, and by establishing particular maintenance operations to ensure continued success. The whole landscape scheme stems from some basic ecological principles relating to connectivity, increased biodiversity, and careful landscape management.



**Figure 8: Ground Floor Landscape Plan**

## 5. DEMOLITION AND CONSTRUCTION WORKS

### Overview

- 5.1 At this stage the full details as to how the demolition and construction works would be undertaken and the timescales associated with these works have not yet been settled, as these are affected by very many different factors. The demolition and construction effects are therefore based on the following reasonable assumptions.
- 5.2 It is assumed that demolition and construction works would take place in one continuous phase, over a period of approximately 62 months. This would begin in 2018 with demolition of Plot B followed by demolition works in Plot A. Construction works are expected to commence in mid-2018 for Plot B and early 2020 for Plot A. It is anticipated that all works will be complete by early 2023.
- 5.3 Whilst the actual construction programme is likely to be driven by market demand for the buildings, these assumptions represents a reasonable 'worst case' scenario in terms of the scale of construction works taking place at the same time, an approach that is in accordance with best practice in EIA methodology.
- 5.4 Figure 9 shows the expected indicative construction works programme for the proposed development.
- 5.5 In general terms, the proposed works comprise the following:
- site preparation (diversion of existing services including telecoms, electricity and water and erection of hoarding);
  - demolition of existing structures;
  - substructure (below ground works including piled foundations and basement construction);
  - superstructure (above ground including steel and/or concrete structures and cladding);
  - fit-out; and
  - public realm works.
- 5.6 Prescribed hours of work would be agreed with the RBG. It is envisaged that, in general, the hours of work would be as follows:
- 08:00 – 18:00 hours Monday to Friday;
  - 08:00 – 13:00 hours Saturday;
  - No working on Sundays or Bank Holidays.
- 5.7 It is recognised there is residential accommodation in close proximity to the parts of the application site where noisy works or other activities would be undertaken, which could cause disruption. Ongoing liaison with the neighbours would ensure that they are informed of the works being undertaken and that consideration is taken of any concerns they may have.

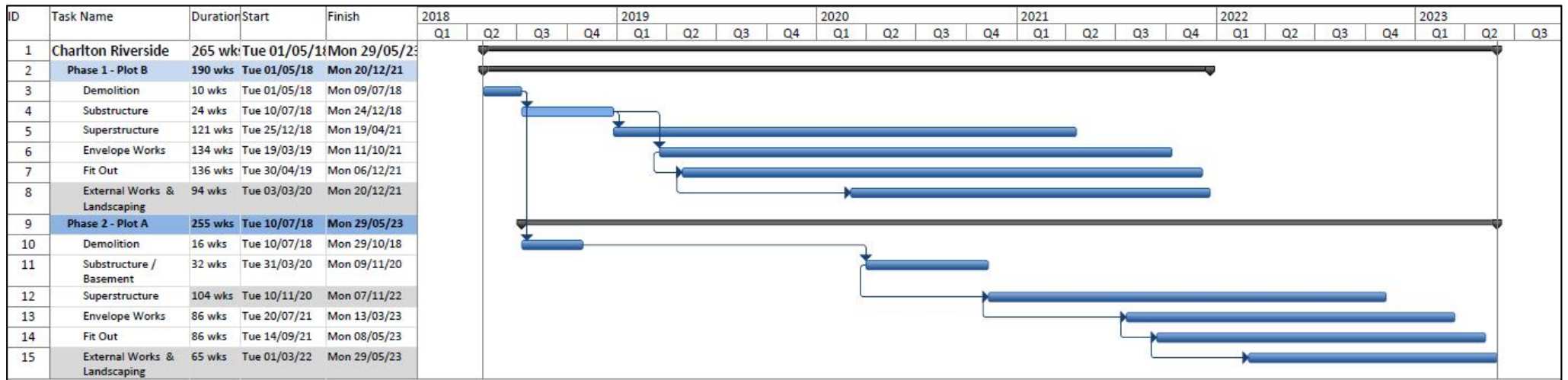


Figure 9: Anticipated Demolition and Construction Programme

## 6. ENVIRONMENTAL IMPACT ASSESSMENT

### EIA Process and Methodology

- 6.1 This NTS reports on the findings of the Environmental Impact Assessment (EIA) process. EIA is a process that identifies the potential significant environmental effects (both beneficial and adverse) of a proposed development and proposes mitigation to avoid, reduce and offset any likely significant adverse environmental effects.
- 6.2 The EIA process adopted for the proposed development has followed best practice guidelines, as set out by the Institute of Environmental Management and Assessment (IEMA) Quality Mark scheme. The process involved a number of key steps as follows:
- Consultation was undertaken with key stakeholders such as the RBG, the GLA and CABE on the issues to be considered by the EIA;
  - The most up-to-date information on the nature of the sensitivity of the environment was gathered and assessed where applicable;
  - The EIA used best practice methods to predict the potential nature, size and significance of any environmental change; and
  - The results of the EIA process have been reported in the ES in a transparent way, to provide the information required to support the decision making process.

### Topics Included in the EIA

- 6.3 A number of environmental studies were carried out as part of the EIA. Key issues assessed were:
- Socio-Economics;
  - Transport;
  - Air Quality;
  - Noise and Vibration;
  - Archaeology (Buried Heritage);
  - Daylight, Sunlight, Overshadowing and Solar Glare; and
  - Wind Microclimate.
- 6.4 The ES provides assessments of potential significant environmental effects during demolition and construction and once the proposed development is complete and operational. Each technical assessment considers a range of different types of effects including direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, beneficial and adverse effects.
- 6.5 Each of the above issues are addressed in the ES, with a chapter dedicated to each of these issues. In each chapter, a description of the assessment methodology is given together with current Site conditions. This is followed by an assessment of the likely significant effects of the proposed development (both beneficial and adverse) and any measures that should be adopted to reduce or offset any significant adverse effects identified during the assessment. The ES also provides an assessment of the residual effects that would remain after mitigation measures have been implemented, as well as the cumulative effects of the proposed development. The likely significant environmental effects attributed to the proposed development are confirmed.

### ***Cumulative Effects***

6.6 Two types of Cumulative Effects have been assessed:

- Intra-Project effects of different types of impacts from the proposed development that could interact to jointly affect a particular receptors at the application site. Potential impact interactions could include the combined effects of noise and dust during demolition and construction activities on a particular sensitive receptor; and
- Inter-Project effects which are combined effects generated from the proposed development with other committed or planned developments ('other developments'). These 'other developments' may generate their own individually insignificant effects but when considered together could amount to a significant cumulative effect, for example, combined townscape and visual impacts from two or more (proposed) developments.

6.7 The 'other developments' identified for the purpose of the cumulative impact assessment are as follows:

- 12/0022/O: Greenwich Millennium Village (Phases 3, 4 & 5), Peartree Way, Greenwich;
- 13/3281/R: Parcel 2, Sub-Phase 1, Greenwich Millennium Village Phases 3, 4 & 5;
- 14/0127/O: Morris Walk Estate (North), north of Pett Street, SE18;
- 14/0126/O: Morris Walk Estate, south of Maryon Road, SE7;
- 13/3285/O: Sainsbury's and former Comet Stores, 55 & 57 Bugsby's Way, Greenwich, SE10;
- 13/2086/F: Brocklebank Industrial Estate;
- 16/0132/F: Valley House, 445 Woolwich Road, Charlton, SE7;
- 13/2016/F: Former Matalan Site, 30 Bugsby Way, Charlton, SE7;
- 11/0868/F: Land to north of Woolwich Road;
- 14/2550/F: Land to north of Woolwich Road; and
- 14/0117/O: Maryon Road and Grove Estate.

### **Topics Excluded from the EIA**

6.8 The EIA Scoping process identified the environmental topic areas which are not likely to give rise to potential significant environmental effects and therefore would not need to be assessed as part of the EIA:

- Light Spillage;
- Waste;
- Telecommunication Interference;
- Ecology;
- Water Resources and Flood Risk;
- Ground Conditions;
- Health and Wellbeing; and
- Aviation.

6.9 It was considered that waste and health and wellbeing would be addressed across the ES as a whole, in a variety of different technical and non-technical chapters.

- 6.10 Light spillage, telecommunication and aviation were not considered to require any form of assessment, as effects were not considered likely. London City Airport has however been consulted on the proposals.
- 6.11 Whilst it was not expected that ecology, flood risk and hydrology, and ground considerations would experience any likely significant environmental effects, none the less technical information relating to these topic areas have been included within the ES, as technical appendices.
- 6.12 This approach has been agreed with the RBG through the EIA Scoping process.

## 7. DEMOLITION AND CONSTRUCTION MANAGEMENT AND CONTROL

### Construction Environmental Management Plan

7.1 It is proposed that a Construction Environmental Management Plan (CEMP) would be prepared for the proposed development which would include all details of relevant environmental management controls necessary for environmental protection during the works. This would be discussed and agreed with the relevant planning officers at the RBG following the approval of the detailed planning application. It is envisaged that the CEMP would address as a minimum the following:

- the control and management of construction wastes;
- housekeeping procedures and environmental control measures relating to water, waste, noise, air quality, incidents, archaeology and contamination;
- details of any environmental monitoring proposed;
- details of prohibited or restricted operations (location, hours etc.);
- the details of proposed routes for HGVs travelling to and from the site; and
- details of all works involving interference with a public highway, including temporary carriageway / footpath closures, realignment and diversions.

### Community Liaison

7.2 Measures for community liaison would be implemented by the contractor to co-ordinate the dissemination of information. Communication methods typically used would include newsletters, phone helpline, liaison meetings, notice boards/hoarding information and personal contact particularly prior to abnormal work.

7.3 The CEMP would set out the arrangements for dealing with incidents or complaints. In general, all complaints would be logged and reported to the appropriate authority where required. Measures to remedy the complaint would also be recorded and reported back to the complainant.

### Potential Construction Environmental Effects

7.4 The main sources of potential environmental effects during construction of the proposed development have been identified as transport, dust, noise and vibration and archaeology. Potential effects and associated mitigation measures to reduce potential effects are set out in Table 5.

<b>Topic</b>	<b>Potential Effects</b>	<b>Potential Mitigation/Enhancement Measures</b>
Transport	<ul style="list-style-type: none"> <li>• Effects of traffic flows from construction vehicle movements upon the local highway network;</li> <li>• Effects of construction activities on pedestrian movement and capacity, severance, delay, fear and intimidation, amenity;</li> <li>• Effects of construction on cyclists;</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Management Plan (EMP) and Construction Logistics Plan (CLP) prior to commencement;</li> <li>• Management of walkways, any temporary closures and routing would be agreed with the RBG through the CLP and EMP post-</li> </ul>

<b>Table 5: Key Potential Construction Environmental Effects</b>		
	<ul style="list-style-type: none"> <li>Effects of increased number of public transport trips as a result of construction workers' travel.</li> </ul>	<p>planning and prior to commencement; and</p> <ul style="list-style-type: none"> <li>Management of road closures and routing would be agreed with the RBG through the CLP and EMP post-planning and prior to commencement.</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>Nuisance dust.</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate mitigation measures from the IAQM Guidance on the assessment of dust from demolition and construction, such as dust monitoring, using solid screens around dusty activities and stockpiles, and ensuring adequate water supply for effective dust suppression.</li> </ul>
Noise and Vibration	<ul style="list-style-type: none"> <li>Construction noise, vibration and traffic.</li> </ul>	<ul style="list-style-type: none"> <li>Standard best practice measures, such as regularly maintaining all plant used on-site, provision of rest periods during any long prolonged noisy activities, and installing an acoustic barrier.</li> </ul>
Archaeology (Buried Heritage)	<ul style="list-style-type: none"> <li>New piled foundations would locally remove remains within their footprints; and</li> <li>Preliminary site strip and excavation of new basement level.</li> </ul>	<ul style="list-style-type: none"> <li>Following a written scheme of investigation, if any buried heritage is found preservation by record would be undertaken comprising a geoarchaeological borehole survey and sub- surface deposit model to greater understand the nature of the underlying geology and topography, and any potential prehistoric landscapes.</li> </ul>

7.5 The overall potential environmental impacts of the demolition and construction phase have been considered. These would be mitigated as far as practicably possible by the control and management of all potential factors in accordance with legislative requirements, best practice and an agreed CEMP.

## 8. WHAT ARE THE LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED DEVELOPMENT?

### Socio-Economics

- 8.1 A socio-economic assessment has been undertaken using a wide range of nationally recognised research and survey information and previous professional experience of similar schemes.
- 8.2 The construction works associated with the proposed development would generate approximately 263 jobs throughout the 62 month construction period. Taking into account the proportion of employment that would be outside of the local target area, the net annual construction employment to the target area is estimated to be 35.
- 8.3 It has been estimated that the commercial floorspace proposed within the proposed development would accommodate approximately 140-150 FTE jobs. Taking into account the proportion of employment that would be outside of the local target area, the net operational employment to the target area is estimated to be 37-39.
- 8.4 The proposed development will bring forward up to 975 new residential units with affordable housing. A population forecast and child yield forecast has been undertaken in order to assess the potential effect that the new population will have on educational facility capacity and primary healthcare provision.
- 8.5 In addition, the building has been designed to facilitate reduction in crime and fear of crime, and amenity space including playspace will be brought forward. A total of 1.5ha of publically accessible amenity space will be brought forward on-site, including 3,866m<sup>2</sup> of playspace, exceeding GLA standards.
- 8.6 By implementing appropriate mitigation and enhancement measures, the adverse effects of the proposed development can be reduced whilst beneficial effects are enhanced. Therefore, there are no identified likely significant adverse environmental effects associated with socio-economics. However, there are likely significant beneficial effects identified including the provision of new housing, provision of playspace and improvements to site safety.

### Transport

- 8.7 The proposed development has been assessed against relevant criteria for all modes of transport and for the construction works and once the proposed development is complete and operational.
- 8.8 Consideration has been given to the likely numbers of construction vehicles and the routes to and from the application site. The construction vehicles would be managed in accordance with a Construction Logistics Plan (CLP) and an Environmental Management Plan (EMP). These documents would be agreed with the RBG prior to the commencement of works.
- 8.9 The level of construction traffic is likely to be less than the traffic already generated by the application site. Given the predicted level of peak hourly volumes of construction vehicles associated with demolition and construction activities on the application site, the control measures within the CLP and EMP that would be implemented, and the fact that construction workers would be travelling outside of the peak periods due to their normal working hours, the majority of the transport effects within the construction phase are likely to be not adversely significant. Instead,

there is a likely significant beneficial effect associated with the highway network due to the reduction in traffic.

- 8.10 The pedestrian environment within the application site will be of high quality with the provision of an attractive open space, well maintained and legible pathways and lighting, thus providing natural/passive surveillance. The pedestrian environment will be further enhanced by providing new crossing points on Anchor and Hope Lane and additional pedestrian/cycle only links to the Thames Path and Anchor and Hope Lane.
- 8.11 Proposed cycle parking facilities will encourage an increase in the use of cycling. Any increases would be monitored as part of the Travel Plan surveys and ongoing monitoring. Overall, the completed development would provide a well-designed pedestrian and cyclist environment.
- 8.12 TfL will require contributions towards improving bus service frequencies as part of the proposed development to accommodate the additional patronage predicted which will be secured through a financial contribution to bus services. As this would increase service frequencies or the number of services provided it would also benefit the wider public within the area.
- 8.13 There will be highway enhancement works at the Site Access and Anchor and Hope Lane to reduce the adverse effects relating to operational traffic flows. In addition, the completed development will be subject to a Travel Plan, a Car Park Management Plan and a Delivery and Servicing Plan detailed as follows:
- Travel Plan – a Residential Travel Plan would aim to encourage public transport use, walking and cycling amongst occupants of the proposed development with the aim of reducing private car use;
  - Car Park Management Plan – this will set out the management and operation of the on-site parking provision. This would be in combination with a permit-free agreement; and
  - Delivery and Servicing Plan – this will manage the arrival and departure of delivery and servicing vehicles and their activities when on-site.
- 8.14 By implementing appropriate mitigation and enhancement measures, the adverse effects of the proposed development can be reduced whilst beneficial effects are enhanced. Therefore, there are no identified likely significant adverse environmental effects associated with transport. However, there would be likely significant beneficial effects associated with the demolition and construction traffic in terms of the highway network and pedestrians, given the reduction in in traffic flows and improvements in pedestrian crossings.

## **Air Quality**

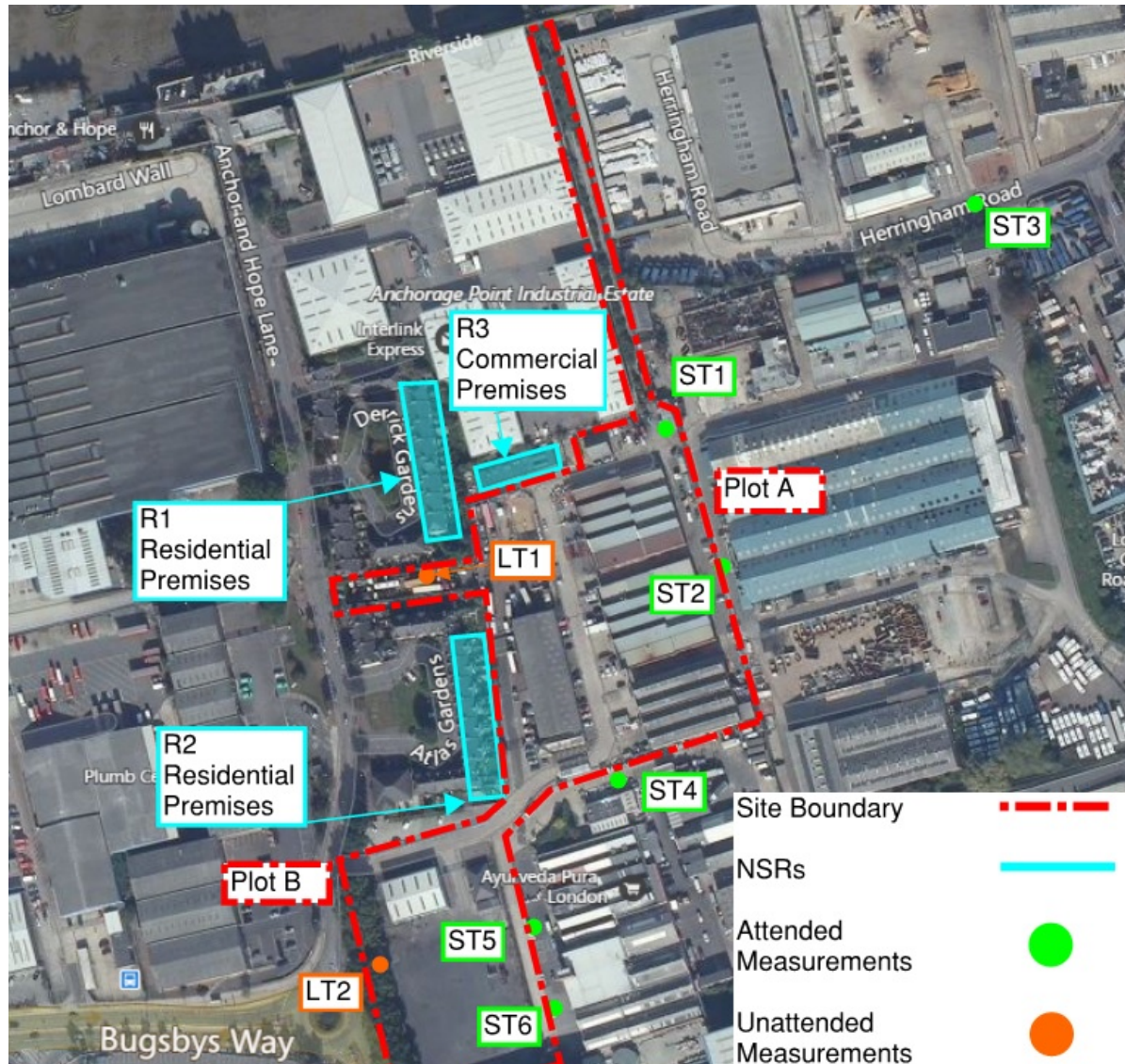
- 8.15 The application site is located within an Air Quality Management Area (AQMA).
- 8.16 An assessment of the potential significant environmental effects for air quality has been undertaken for the proposed development. This has considered both the demolition and construction works and the proposed development when it is complete and operational. The assessment focuses on NO<sub>2</sub> and PM<sub>10</sub> as these are air pollutants most associated with development.
- 8.17 A qualitative assessment of the construction phase effects has been undertaken following guidance published by the IEMA. The main effect on local air quality during demolition and construction works relates to dust, which is most likely to be generated from demolition activities and earthworks. A range of measures to minimise or prevent dust, such as the use of solid screens

around dusty activities, would be implemented through the adoption of the CEMP. Effects on local air quality associated with demolition and construction traffic are not anticipated to be significant.

- 8.18 Computer modelling was carried out to predict the impact of future traffic-related emissions and the likely changes in local air quality following the completion of the proposed development. In addition, the CHP plant was modelled (flue on the tallest building). The impact of the proposed development on air quality was predicted for a number of existing sensitive locations surrounding the application site such as residential properties at Derrick Gardens and Atlas Gardens, Woolwich Road, and the Antigallican Hotel and also future sensitive locations within the application site such as the new residents and outdoor amenity area users.
- 8.19 Changes to pollutant concentrations were predicted to be well below levels which would be deemed as significant. Given that the assessments of operational road traffic and CHP plant emissions found that the effects would be insignificant, no mitigation measures are proposed.
- 8.20 In addition, an odour diary was kept to ascertain if there were any existing odour issues within the application site. The results demonstrated that odours close to the application site were attributable to the current on-site activities which would not be present once the proposed development was complete and operational.
- 8.21 By implementing appropriate dust mitigation, the adverse effects of the proposed development can be reduced. Therefore, there are no identified likely significant environmental effects associated with air quality.
- 8.22 In light of the air quality assessment undertaken, it is considered that the application site is suitable for its intended uses in terms of air quality and odour.

### **Noise and Vibration**

- 8.23 The effects of noise and vibration on the nearest noise sensitive receptors have been assessed during the construction works and once the proposed development is complete and operational.
- 8.24 Baseline environmental logging surveys were conducted in 2016, to establish the baseline noise climate at key locations around the application site as a basis for setting limiting noise emission criteria for noise sources associated with the proposed development. These locations also included the nearest safeguarded wharf. Figure 10 shows the nearest noise sensitive receptors and noise monitoring locations.



**Figure 10: Noise Sensitive Receptors and Measurement Locations**

- 8.25 Demolition and construction works are likely to include activities that would be likely to increase noise levels within and adjacent to the application site. Construction vibration and noise increases on local roads from construction traffic were found to be insignificant.
- 8.26 The implementation of noise and vibration control and management measures through a CEMP would help to reduce noise and vibration disturbance to occupants of nearby properties. The CEMP would include measures such as using low-noise machinery and equipment, enclosing and screening machinery and using low-vibratory foundation methods.
- 8.27 An assessment of the likely effects of predicted changes in traffic noise levels from future increases in road traffic once the proposed development is completed and operational has been undertaken and the results indicate that the effects would be insignificant. In terms of operational plant noise all fixed plant installations would have standard attenuation and acoustic screening, as required to meet the noise emissions limits and therefore the effects would also be not significant.
- 8.28 By implementing appropriate mitigation, i.e. best practice measures during demolition and construction works, the adverse effects of the proposed development can be reduced. Therefore, there are no identified likely significant environmental effects associated with noise and vibration.

- 8.29 A site suitability assessment was undertaken and it was concluded that the application site is suitable for its intended uses in terms of noise and vibration.

### **Archaeology (Buried Heritage)**

- 8.30 The likely significant effects of the proposed development on buried archaeological assets within the application site have been assessed. The assessment has been carried out in accordance with the standards specified by the Institute for Archaeologists and Greater London Archaeological Advisory Service.
- 8.31 The archaeological assessment undertaken as part of the EIA identified high archaeological potential for palaeoenvironmental remains within alluvial deposits and post-medieval industrial remains. There is moderate potential for post-medieval wetland management and prehistoric wetland exploitation. The significance (importance) of these potential remains vary between very low and medium.
- 8.32 During demolition and construction damage to, or destruction of, potential buried heritage assets might result due to works associated with the construction of basements and foundations. A geoarchaeological borehole survey and sub-surface deposit model to provide a greater understanding of the nature of the underlying geology and topography and any potential prehistoric landscapes would be undertaken post-planning to mitigate this risk. If significant prehistoric or palaeoenvironmental archaeological remains are recorded then further archaeological mitigation measures would be required comprising of either archaeological excavation or an archaeological watching brief (programme of monitoring and recording).
- 8.33 By implementing this appropriate mitigation, the adverse effects of the proposed development would be reduced or eliminated. Therefore, there are no identified likely significant environmental effects associated with archaeology (buried heritage).

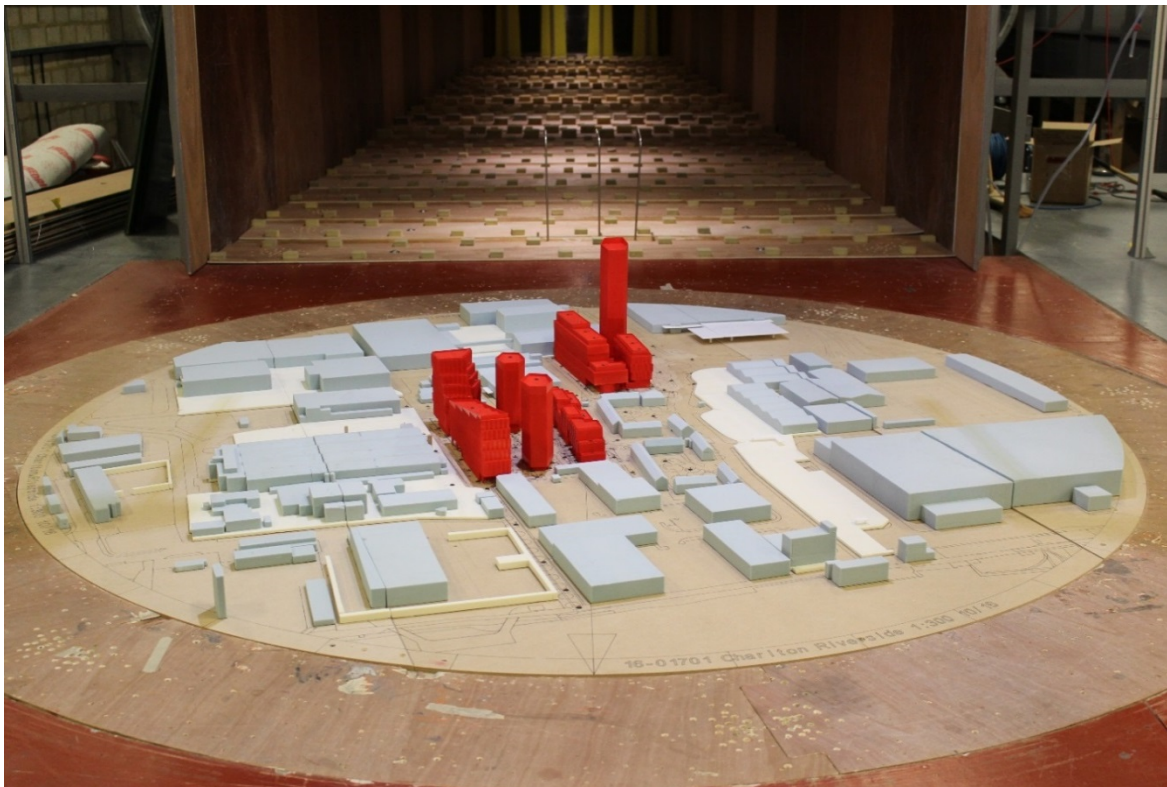
### **Daylight, Sunlight, Overshadowing and Solar Glare**

- 8.34 The likely significant effects of the proposed development on daylight, sunlight, overshadowing and solar glare have been assessed. Daylight and sunlight effects on the surrounding residential properties of Atlas Gardens, Derrick Gardens, and 1-8 Anchor and Hope Lane have been assessed. Existing surrounding and proposed amenity areas have been assessed for overshadowing implications. Potential solar glare effects at key local road locations have been assessed.
- 8.35 The construction of the proposed development would have a gradually increasing impact on the levels of daylight, sunlight, overshadowing and solar glare on areas surrounding the application site as the construction progresses. Those impacts that are perceptible as the superstructure progresses would be similar to those of the completed development. Light pollution issues are not expected during demolition and construction.
- 8.36 As the proposed development is of a significant scale and it is located immediately adjacent to existing residential properties, the potential for adverse daylight and sunlight effects is high. In this case the scheme replaces low rise buildings and as such the proportional reduction of daylight available to adjacent residential buildings, on which significance is based, is considerable. However, the number of properties that would experience any effects with the proposed development in place would be low, as only a small number of neighbouring properties are of residential use. As such there is a limited impact.

- 8.37 The proposed development has been designed to step back to respect the adjacent residential properties such that the impacts to the majority of the surrounding residential receptors will be negligible. As there is little external obstruction to daylight and sunlight caused by the existing buildings, any significant redevelopment of the application site would cause a substantial loss of light to some residences. The proposed development buildings have been designed to respect their neighbours' light where possible and where there are adverse impacts, these are generally to single aspect, secondary bedrooms which have the lowest requirement for daylight.
- 8.38 The assessment of overshadowing found that there will be no significant effects on the receptors. The assessment of solar glare has shown that there will be solar reflections from the top floors of one building which would cause significant adverse effects, however through mitigation by using low reflectivity glass these effects have been reduced to an acceptable level.
- 8.39 Therefore there are identified likely significant adverse environmental effects in regards to daylight on a small number of residential properties. However, no adverse effects are identified for sunlight, overshadowing or solar glare.

### Wind Microclimate

- 8.40 An assessment of the likely wind conditions as a result of the proposed development both on the application site and within the local surrounding context has been assessed in terms of pedestrian comfort and safety. The assessment has been informed by appropriate meteorological data and testing of a physical model within a wind tunnel (see Figure 11).



**Figure 11: Proposed Development Model in the Wind Tunnel**

- 8.41 With the implementation of design measures agreed with the project team, (i.e. site hoarding, recessed entrances, landscaping and balustrades) wind conditions within and around the proposed development are rated as suitable, both in terms of pedestrian comfort and safety, for the intended

uses. There are therefore no likely significant environmental effects on wind conditions as a result of the proposed development.

### **Townscape, Heritage and Visual**

- 8.42 The application site in its existing state, closed off to the public and largely occupied by light industrial buildings and areas of hardstanding, offers nothing positive to local and wider views and townscape. The proposed development would comprehensively redevelop the application site with a series of high quality buildings and public realm, and would represent a substantial improvement on the existing state of the application site in townscape and visual terms.
- 8.43 The overall scale and massing of the proposed development, while a considerable increase on the prevalent scale of development in the area around the application site, would be brought forward in the context of regional and local planning policy which envisages comprehensive redevelopment of the Charlton Riverside area, including the potential for tall buildings. The scale of the proposed buildings would be comparable with that in regeneration areas such as the Royal Docks and, taken as a whole, would provide the proposed development with sufficient visual 'critical mass' to form an identifiable place in its own right.
- 8.44 Overall, the Proposed Development would enhance the Charlton Riverside Townscape Character Area (TCA) within which it is located through its high quality architecture and public realm. The proposed development would provide significant new public space. It would result in urban design benefits including increased permeability, with new routes enhancing connections between Anchor and Hope Lane, the application site, and the riverside walkway, and improved definition and animation of Anchor and Hope Lane. The routes within the proposed development could also facilitate wider connections in future, forming part of longer routes envisaged within the illustrative masterplan produced by the architects of the scheme.
- 8.45 In respect of heritage assets, there are none located on the application site or near it. Where visible in views towards heritage assets in the wider area, the proposed development would be understood as being distinct from the heritage assets in question, located in the middle distance or distance, and generally seen in an incidental manner.
- 8.46 There are a small number of identified likely significant adverse environment effects in regards to views, however the majority are beneficial.

### **Cumulative Effects**

- 8.47 A number of 'other developments' which in construction or have been submitted for planning which are located within close proximity to the application site have been considered cumulatively.
- 8.48 The cumulative effects of the 'other developments' have been assessed in each technical area. The only technical area which has significant cumulative effects is socio-economics, which are beneficial in relation to provision of housing, provision of open space and playspace and improvements in site safety. The townscape cumulative effects are considered to be exactly the same as the proposed development. There were no significant cumulative effects in relation to the other technical areas due to the fact that it can be assumed that the 'other developments' would mitigate their own effects either through design or further mitigation measures, or the "other developments" were too far away to have any effect.

8.49 The 'in combination' cumulative effects assessment shows that there is the potential for both adverse and beneficial combined cumulative effects. The identified adverse and beneficial combined cumulative effects occur throughout the demolition and construction phase of the proposed development. The combined cumulative effects have the potential to affect local residents in the neighbouring residential properties. The identified adverse combined cumulative effects that could occur once the completed development is operational would have the potential to affect existing local residents and the existing highway network. The mitigation measures will reduce the potential adverse and enhance the potential beneficial combined cumulative effects with the result that overall the effects will not be significant.

## 9. SUMMARY

- 9.1 Overall, the EIA process has demonstrated that likely significant environmental adverse effects are limited to specific neighbouring residential properties lacking daylight and experiencing negative views during the operation of the proposed development. This is to be expected with a scheme of such significant scale. In addition, it is likely that there will be some significant adverse environmental effects in relation to views during construction which are also to be expected, however these would be only of a temporary nature. There are no other significant adverse effects predicted by socio-economics, transport, air quality, noise and vibration, archaeology (cultural heritage) or wind.
- 9.2 There are a number of significant environmental beneficial effects associated with the proposed development in relation to socio-economics. These comprise provision of new housing, the provision of playspace, and the improvements in site safety. In addition, there will be significant beneficial effects in relation to improved pedestrian movement and capacity, improved wind conditions and improved views of the application site. Furthermore, during construction there will be significant beneficial effects in relation to traffic flows from construction vehicle movements upon the local highway network.
- 9.3 The proposed development will bring forward high quality residential units with ancillary residential facilities and associated public and private open space. The commercial and leisure space will generate local employment and community facilities will benefit the local residents. In addition, the proposed development will improve the existing highway network and public realm which will benefit the wider local area.